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Friends of Famosa Slough
Attn: Mr. Tim Fleming
P.O. Box 87280
San Diego, CA 92138

Biological Resources Memo for the Famosa Slough Water Quality Treatment Wetland Sedimentation Basin Maintenance Project

Dear Mr. Fleming:

Merkel & Associates, Inc. has prepared the following biological memo to support the request by Friends of Famosa Slough in collaboration with the City of San Diego to implement the Famosa Slough Water Quality Treatment Wetland Sedimentation Basin Maintenance Project (Project).

The purpose of this memo is to document areas within the current Project area that may be regulated by the California Department of Fish and Wildlife pursuant to Sections 1600 et al. of the California Fish and Game Code and to quantify impacts to these resources from the proposed action.

If you have any questions concerning this memo, please do not hesitate to contact me (agonzales@merkelinc.com) or Mr. Keith Merkel (kmerkel@merkelinc.com) at (858) 560-5465.

Sincerely,

Amanda K. Gonzales
Associate Principal

Keith W. Merkel
Principal Consultant

INTRODUCTION

Merkel & Associates, Inc. (M&A) conducted a biological investigation and aquatic resources delineation in support of the Famosa Slough Water Quality Treatment Wetland Sedimentation Basin Maintenance Project (Project). The purpose of this memo is to document areas within the Project area that may be regulated by the California Department of Fish and Wildlife (CDFW) pursuant to Sections 1600 et al. of the California Fish and Game Code and to quantify impacts to these resources from the proposed action.

The proposed Project is depicted in the site plan included as Appendix A. All figures referenced within this memo are included as Appendix B and overview photographs are included as Appendix C. Formal wetland data points and corresponding photo points are included as Appendix D.

Project Background

The Famosa Slough Water Quality Treatment Wetland (also referred to as a Treatment Basin) consists of a three chambered storm water treatment wetland system near the southern boundary of Famosa Slough near the intersection of Famosa Boulevard and Valeta Street in the Point Loma/Peninsula community of the City of San Diego (City). The Treatment Basin was constructed through cooperative efforts of the City and Friends of Famosa Slough in 1999-2000 with design and approvals dating back to the early 1990s with the creation of the *Famosa Slough Enhancement Plan* (Pacific Southwest Biological Services et al., 1993) which identified the proposed creation of the Treatment Basin.

The creation of the Treatment Basin involved converting ruderal wetlands to a three chambered storm water treatment wetland system consisting of Pond 1, 2, and 3 with the intent to capture trash and sediment and to improve water quality prior to discharge into the tidal waters of Famosa Slough. The pond bottoms were designed to have very flat slopes within an overall gradual drainage to the north. The Treatment Basin intercepts flows from three large storm drains as well as surface drainage from Valeta Street, Montalvo Street (i.e., swale with inlet drop structure), and the Point Loma Tennis Club (i.e., sheet flow). In total, the Treatment Basin collects run-off from approximately 135 acres of the 369-acre watershed.

The Treatment Basin is a non-tidal area open to the public via designated trails and a designated parking lot, located at the foot of Famosa Boulevard and Valeta Street. The Pond 1 basin is principally a sediment trap prior to water passing northward to Ponds 2 and 3 and ultimately out to Famosa Slough through a series of standpipe drains/weirs and spillways. Pond 1 is the largest basin and is the recipient of all drainage into the basins except for minor flows off of the tennis court area of the Point Loma Tennis Club which drain into Pond 2. Pond 1 receives input from a concrete lined channel located between the Famosa Slough parking lot and the Point Loma Tennis Club. It also receives input from two buried storm drain pipes, one located in the southwest corner of the basin and the other in the northeast corner of the basin. Lastly, Pond 1 receives input from a drop inlet structure, located west of the basin. The inlet structure is at the northern terminus of a constructed swale, which drains surface flow from Famosa Boulevard and Valeta Street as well as from Montalvo Street.

The Treatment Basin makes use of managed wetlands to provide water quality treatment benefits. Thus, these wetlands are designed to be bulrush-dominated (e.g., *Schoenoplectus*, *Bolboschoenus*) freshwater/brackish marsh. The marsh provides several treatment benefits. First it slows water flow through ponds and increases turbulence that promotes sediment deposition. Second, it provides a large surface area to support microbial growth that serves as a bio-filter which effectively consumes, decomposes, or transforms many contaminants to less toxic forms. Finally, the marsh plants themselves

take-up some of the contaminants binding such materials as metals in complex molecules stored within plant tissues reducing their biological availability until such time as marsh vegetation dies and decays. The basin slopes were also planted with native riparian associated plants, with the intent to reduce erosion. In addition, as part of the mitigation to offset impacts to wetlands as a result of the construction of the Treatment Basin, a minimum of 18 willows were required to be planted along with a variety of other riparian species and riparian vegetation occupying an area of not less than 0.35 acre along the slopes of the basins. The mitigation was established along the eastern edge of Pond 1 and the southern edge of Pond 2.

Funding for the construction of the Treatment Basin was provided by the City and Friends of Famosa Slough as well as significant grant support from an U.S. Environmental Protection Agency (EPA) Clean Water Act (CWA) Grant managed by the Regional Water Quality Control Board (RWQCB), Region 9, and the U.S. Fish and Wildlife Service (USFWS) Coastal Wetlands Program. Regulatory approvals for the creation of the Treatment Basin were issued by the U.S. Army Corps of Engineers (USACE), RWQCB, and CDFW (CDFW Streambed Alteration Agreement [SAA] #5-189-99 and included as Appendix E). The SAA approved creation as well as maintenance of the Treatment Basin to maintain its function.

Maintenance of the Treatment Basin is guided by the *Operations, Maintenance and Monitoring Plan for the Famosa Slough Treatment Wetland* (M&A 2001). Maintenance was most recently implemented through cooperative efforts of Friends of Famosa Slough and the City in February 2011. Appropriate regulatory notifications and/or approvals were issued by the USACE, RWQCB, and CDFW for the maintenance. Specific to the CDFW, the CDFW provided a letter dated January 19, 2011, verifying the continued applicability of SAA #5-189-99 to the maintenance action (included as Appendix F).

Current Project Description

The Friends of Famosa Slough sought and were awarded a San Diego Association of Governments (SANDAG) 2022 Threat Reduction Stewardship Grant to implement the operations, maintenance, and monitoring program for the Treatment Basin. As such, Friends of Famosa Slough are currently proposing another maintenance cleanout of the Treatment Basin. To accomplish the cleanout, Friends of Famosa Slough and M&A (serving as the Project Biologist) propose substantially the same maintenance activity as completed in 2011. This includes entering Pond 1 with a tracked loader to remove sediment. Once the sediment is removed, the area would be replanted using harvested material from the onsite extraction areas to restore sediment trapping and water treatment function. The lower ponds (Pond 2 and 3) are not normally expected to receive sediment removal maintenance, only vegetation extraction and harvest to remove complexed metals and to prevent senescence of vegetation and thus reduced treatment function. No sediment removal from these lower ponds is presently proposed, although vegetation extraction is proposed to remove senescent vegetation and exotics, as well as to clear vegetation barriers from locations at inlets and outlets to allow for intended function of the sedimentation basins. Native plants such as *Typha* and *Schoenoplectus* species within these lower ponds would be extracted/harvested such that they could be replanted within the disturbance areas to help restore the treatment function.

The anticipated limits of work associated with the Project are depicted in Appendix A. The order of activity is expected to consist of the following:

- 1) The Project Biologist and Friends of Famosa Slough would lead an onsite field meeting to discuss the Project, identify the Project Maintenance Area and if needed delineate the Maintenance

Area with flagging or similar, and provide an onsite educational session to the Project team regarding the need to avoid impacts outside of the approved Project area.

- 2) Stage equipment (e.g., small tracked loader, dumpster, and maintenance vehicles with hand held equipment, etc.) within the existing parking lot.
- 3) Using hand tools, all vegetation occurring within the limits of the basin and the access route will be cut to ground level. All cut vegetation would be transported to the parking lot where it would be trucked away for landfill disposal; as feasible, native riparian trees occurring within the basin that are deemed by the Project Biologist to not impede sediment trapping and treatment function would be left in place and/or their canopies would be lifted such that only the lower growing branches would be cut.
- 4) Sediment removal from the basin will occur via driving a small, tracked loader in and using hand shovels to remove and fill the bucket of the loader. Where roots occur within the sediment, the blade of the bucket will be used to remove the material. All sediments/roots will be transported via the loader to the upland parking lot to be deposited in dumpsters for landfill disposal.
- 5) Once the sediment is removed, the area would be replanted with native herbaceous wetland plants (e.g., California bulrush [*Schoenoplectus californicus*] broadleaf cattail [*Typha latifolia*]) taken from the onsite area.

Implementation of the proposed maintenance Project is dependent on funding. As such, multiple maintenance events could occur under the proposed Project (e.g., funded by the current SANDAG 2022 Threat Reduction Stewardship Grant and a second event, if needed, funded by alternative non-grant funds). The initial round of maintenance would focus on priority areas, specifically within the bottom of Pond 1 to restore sediment trapping capabilities and at the outlets in Ponds 2 and 3 to ensure flow. The secondary maintenance event(s), if needed, would focus on the remaining areas.

The Project's activity to remove accumulated sediment is expected to result in no more than incidental fall back and as such, the activity would not be regulated under Sections 404 and 401 of the CWA. M&A submitted notification letters to the USACE, RWQCB, and CDFW in September 2023 outlining the Project's activity. The USACE and RWQCB San Diego Region provided concurrence on October 17, 2023, and October 18, 2023, respectively. The CDFW response was that a SAA would be required.

All maintenance activities are scheduled to occur between September 16 and February 14, outside of the avian breeding season. Maintenance activities are tentatively scheduled to begin on September 16, 2024, after the 2024 avian breeding season. Maintenance event(s) are expected to occur over a period of 5 – 10 days during normal daylight hours and under the supervision of M&A (or other qualified biologist), serving as the Project Biologist. Work would not occur within standing water, if present.

Project Location

The Project lies within unsectioned lands, Township 16 South, Range 3 West of the San Bernardino Base and Meridian, U.S. Geological Survey (USGS) Point Loma, California Quadrangle (Figure 1). The Project occurs on portions of Assessor Parcel Numbers (APN) 449-870-02 (State Lands Commission), 449-780-35 (Point Loma Tennis Club), and public right-of-way.

The Project is located at the southernmost end of Famosa Slough (Figure 2). Famosa Slough is managed as a wetland preserve by the City Parks and Recreation Department with the help of the Friends of Famosa Slough. The City owns the 12-acre channel portion that connects to the San Diego River channel and the 25-acre southern portion of the Slough south of West Point Loma Boulevard. The Slough is

designated by the CDFW as a State Marine Conservation Area (No-Take). This designation does not extend into the Treatment Basin; therefore, the proposed Project would not encroach into the No-Take area.

The Project is located within the boundary of the City’s Multiple Species Conservation Program (MSCP) Subarea Plan and encroaches into lands designated as Multi-Habitat Planning Area (MHPA) Preserve (Figure 2). In addition, the site lies entirely within the California Coastal Overlay Zone.

Directions to the Project area are as follows: from Interstate-15 South, Take California State Route 163 South, Take Interstate-8 West, Exit left on Sunset Cliffs Boulevard to Nimitz Boulevard, Stay Left Nimitz Boulevard, Exit Right on Famosa Boulevard and turn left, and enter the Famosa Slough parking lot at the intersection of Famosa Boulevard and Valeta Street.

METHODS

Prior to the field survey, the following available resources pertaining to the Project area were reviewed to assist in determining potential biological resources for the site:

- Aerial imagery from various dates (Google Earth Pro/Street View, Nearmap 2023)
- Federally designated critical habitat for the Project vicinity (USFWS 2023a)
- CDFW California Natural Diversity Database (CNDDDB) and USFWS special status species records for the Project vicinity (CDFW 2023a and USFWS 2023b, respectively)
- Citizen science data of special status species records for the Project vicinity (e.g., iNaturalist 2023 Research Grade only; eBird Top eBirder observations 2023; Friends of Famosa Slough Checklist 2021)
- Previous biological reports/data associated with Famosa Slough were also reviewed, including the following: *Multiple Wetland Treatment Basins Wetland Habitat Mitigation Plan, Famosa Slough Enhancement Plan* (M&A 1999); *Operations, Maintenance and Monitoring Plan for the Famosa Slough Treatment Wetland* (M&A 2001); and *A Decade of Change Under the Famosa Slough Enhancement Plan* (M&A 2003).

M&A biologists, Amanda Gonzales and Kyle Ince conducted a general biological survey and jurisdictional aquatic resources delineation of the site in July and August 2023. Table 1 summarizes the survey dates, times, and conditions.

Table 1. Survey Dates, Times, and Conditions

Date	Biologists/ Delineators	Purpose
July 27, 2023	Amanda Gonzales, Kyle Ince	Biological Survey Onsite and Weather Conditions: 12:00 p.m.–2:15 p.m., 0%–0% cloud cover, 0–5 miles per hour wind, 76°F–76°F
August 18, 2023	Amanda Gonzales	Aquatic Resources Delineation Onsite and Weather Conditions: 11:50 a.m.–3:00 p.m., 90%–15% cloud cover, 4–7 miles per hour wind, 72°F–75°F
August 24, 2023	Amanda Gonzales, Kyle Ince	Aquatic Resources Delineation Onsite and Weather Conditions: 9:00 a.m.–2:00 p.m., 100%–5% cloud cover, 0–3 miles per hour wind, 70°F–74°F

The general biological survey and aquatic resources delineation was conducted on-foot, throughout the Project area. Vegetation communities were mapped in accordance with the City's *Biology Guidelines* (2018), which utilizes the classifications provided in Holland as revised by Oberbauer et al. (2008). A minimum mapping unit of 0.01 acre was used for the vegetation mapping. Communities were mapped onto a color aerial photograph of the site while significant and sensitive resources were noted on the field map and/or recorded using a mobile mapping application on a hand-held device (i.e., Avenza). Data collected from the survey were digitized in Environmental Systems Research Institute (ESRI) Geographical Information System (GIS) software, using ArcGIS for Desktop. Photographs of the Project area were taken to record the biological resources present within the study area.

A list of detectable flora species was recorded in a field notebook. Plant identifications were either resolved in the field or later determined through verification of voucher specimens. Wildlife species were determined through direct observation (aided by binoculars), identification of songs, call notes and alarm calls, or by detection of sign (e.g., tracks, scat, etc.).

Taxonomic nomenclature for plants follows the *Checklist of the Vascular Plants of San Diego County* (Rebman and Simpson 2006) in conjunction with *The Jepson Manual: Vascular Plants of California*, second edition (Baldwin et al. 2012) as updated by the Jepson eFlora (Jepson Flora Project 2023). The scientific and common names used for wildlife species, if detected were noted according to the following scientific nomenclature: butterflies, Klein and San Diego Natural History Museum (2002); amphibians and reptiles, Crother (2017); birds, American Ornithologists' Union (1998 and 2023); and mammals, (species level) Wilson and Reeder (2005) as updated by Mammal Diversity Database (2023) and (sub-species level) Hall (1981).

The aquatic resources delineation was conducted using the routine onsite determination methods noted in the USACE *Wetland Delineation Manual* (Environmental Laboratory 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008).

Evidence supporting the delineation was recorded on USACE wetland determination data forms and depicted in photographs taken at the location of the data points. Data points were taken in areas that were both accessible and visually determined to best represent the characteristics of each potential wetland community type and/or jurisdictional resource identified within the Survey Area. Data collected from the survey were digitized in ESRI GIS software, using ArcGIS for Desktop.

The USACE routine onsite determination methods require the presence of three parameters to define an area as a wetland 1) hydrophytic vegetation, 2) hydric soils, and 3) wetland hydrology; however, procedural deviations are required and allowed for under the delineation methods where normal circumstances do not exist [i.e., some wetland indicators of one or more of the parameters can be periodically lacking due to normal seasonal or annual variations in environmental conditions (i.e., problem areas) or effects of recent human activities or natural events (i.e., atypical situations)]. At each data point location, the area was first assessed to determine if normal environmental conditions were present. Each data point was then evaluated for indicators of each of the wetland parameters as described in the Results Chapter of this memo.

Information on the overall delineation process and regulatory jurisdictions may be found in the USACE *Wetland Delineation Manual* (Environmental Laboratory 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008), as well as applicable federal, state, and local enacting legislation, or through guidance provided by judicial interpretation, solicitors

opinions, and regulatory guidance issued to jurisdictional agencies. The subsection below provides the regulatory background and aquatic resource delineation methods used by the CDFW.

California Department of Fish and Wildlife – Regulatory Information

Under Section 1602 of the California Fish and Game Code, the CDFW has regulatory authority over any proposed activity that may “substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.”

The CDFW regulates alterations of lakes or streambeds that may “substantially adversely affect fish and wildlife resources” through the development of a SAA under the Lake and Streambed Alteration (LSA) Program. Unlike the USACE process, the SAA is not a discretionary permit, but rather an Agreement developed between an applicant and the CDFW. This Agreement may include conditions of mitigation, impact reduction, or avoidance measures. These measures are subject to acceptance by the applicant or may be countered with alternative measures. If an Agreement cannot be reached between the CDFW and applicant, an arbitration process exists.

Under the LSA Program, California Fish and Game Code Section 1602 applies to “all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state.” Areas subject to CDFW regulation differ from USACE jurisdiction in that a “streambed” is not limited to the ordinary high water mark (OHWM), but rather generally encompasses the entire width of the streambed, from bank to bank, regardless of the water level. CDFW regulatory authority extends not only to the bed and bank of streams or lakes, but also to “adjacent riparian habitats” that are supported by a river, stream, or lake, regardless of the riparian area’s federal wetland status. For practical purposes of defining “adjacent riparian habitats,” these habitats include the extent of the canopy for stream-associated vegetation that is rooted within and dependent on the jurisdictional streambeds, as well as all adjacent hydrophytic vegetation. In some instances, small disjunctions between the stream course and adjacent riparian stands may occur where prior disturbance has occurred to fragment the riparian corridor. Adjacent riparian habitat does not include isolated trees or groves, or other wetland vegetation types in absence of proximate streambeds or lakes; and Section 1602 does not extend to isolated wetlands and waters such as small ponds not located on a drainage, wet meadows, vernal pools, or tenajas.

RESULTS

Environmental Setting

Famosa Slough is the receiving waters for drainage from an approximate 369-acre fully urbanized watershed. Famosa Slough is an approximate 30-acre remnant wetland of a once larger estuary complex and is currently connected to tidal portions of the San Diego River Flood Control Channel, a traditional navigable water that drains directly to the Pacific Ocean. Famosa Slough is often described by two components termed the “Channel” and “Slough”. The Channel portion extends southward from Interstate 8 at the San Diego River Flood Control Channel to West Point Loma Boulevard. The Slough occurs south of West Point Loma Boulevard.

Famosa Slough and most notably the Project area is actively managed by Friends of Famosa Slough, a California non-profit corporation which organizes and leads events including clean-up events, removal of invasive plants, and replacement planting. Socially, Famosa Slough is identified as extremely valuable.

Educational classes and school field trips often take place within the Slough, staging at the parking lot within the Project area, and there are informational resources onsite to help educate those who walk along the public trail system.

The Project area is within the U.S. Geological Survey San Diego (18070304) hydrologic unit code 8-digit sub-basin and the Smiley Lagoon-Mission Bay (180703041102) hydrologic unit code 12-digit sub-watershed. In addition, the Project area as classified by the State Water Resources Control Board San Diego Region, is within the San Diego Hydrologic Unit (907.00), the Lower San Diego Hydrologic Area (907.10), and Mission San Diego Bay Hydrologic Subarea (907.11) (SWRCB 2021).

The deep water basin of Famosa Slough and its connecting Channel to the San Diego River located north of the Project area, are recognized under section 303(d) of the CWA as an impaired waterbody for Oxygen Dissolved and Eutrophic (SWRCB 2022).

Based on the Natural Resources Conservation Service (NRCS) soils data, two soil map units occur within the Project area: Made Land and Marina Loamy Coarse Sand, 2 to 9 percent slopes (USDA NRCS 2004). Made Land occurs throughout most of the Project area while Marina Loamy Coarse Sand occurs within a portion of the parking lot. Neither soil type is classified as a hydric soil per the NRCS Field Office List of Hydric Soil Map Units for San Diego Area, California (USDA NRCS 2023)

Biological Resources

Botanical Resources – Vegetation Communities

The Survey area encompasses the existing parking lot, the concrete-lined channel that drains into Pond 1, as well as Ponds 1, 2, and 3 and the public trail system around the ponds. Eight vegetation types were identified within the Project area (Figure 3). The below paragraphs provide a short description of the site. Photographs of the Project site are included as Appendix C.

Urban/developed has been mapped for residential areas surrounding the Treatment Basin as well as the paved driveway leading into the parking lot while disturbed habitat has been mapped for the parking lot and public trail system.

Diegan coastal sage scrub occurs west of the parking lot as well as along portions of the Pond slopes. Low-growing subshrubs such as flat-top buckwheat (*Eriogonum fasciculatum* var. *fasciculatum*), California encelia (*Encelia californica*), California sagebrush (*Artemisia californica*), and Menzies's goldenbush (*Isocoma menziesii* var. *vernonioides*) are common in most mapped Diegan coastal sage scrub areas. Taller woody shrubs such as lemonade berry (*Rhus integrifolia*) and laurel sumac (*Malosma laurina*) occur sporadically in this habitat or in some cases form dense monotypic clusters. This habitat also includes several patches of big saltbush (*Atriplex lentiformis*), a native halophytic shrub with weedy tendencies.

Alkali seep is mapped for a relatively small patch of San Diego marsh elder (*Iva hayesiana*), which was planted in a swale that occurs just west of the parking lot. A few southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*) are also included in this habitat. Both San Diego marsh elder and the southwestern spiny rush are considered special status species.

Southern willow scrub occupies most of Pond 1 and the concrete-lined channel draining into it. Sediment build-up due to the lack of regular maintenance has allowed for arroyo willow (*Salix lasiolepis*) trees to establish in the basin and sandbar willow (*S. exigua*) to spread within the concrete-lined channel. Understory shrubs within the basin include mule fat (*Baccharis salicifolia*), blue elderberry (*Sambucus mexicana*), and non-native species such as Brazilian pepper (*Schinus terebinthifolius*) and Australian laurel (*Pittosporum tobira*). The herbaceous layer includes both native and non-native forbs and grasses including yerba mansa (*Anemopsis californica*), beardless wildgrass (*Elymus triticoides*), kikuyu grass (*Cenchrus clandestinus*), and panic veldt grass (*Ehrharta erecta*). Non-native vines including garden nasturtium (*Tropaeolum majus*) and florist's-smilax (*Asparagus asparagoides*) sprawl over shrubs below the tree canopy.

Non-native riparian is mapped for areas dominated by non-native plant species that have invaded native habitat from adjacent urban development. This habitat includes relatively tall trees such as shamel ash (*Fraxinus uhdei*) and golden raintree (*Koelreuteria paniculata*) found within Pond 1. Also included in this habitat are ground cover ornamental landscaping plants such as baby sun rose (*Mesembryanthemum cordifolia*) and ivy (*Hedera* sp.) which occur just above the inlet to the concrete-lined channel that empties into this basin.

Coastal and valley freshwater marsh is mapped for the southern end of the concrete-lined channel and within Pond 3. Permanently saturated soils within these areas facilitate the growth of southern cattail (*Typha domingensis*) and to a lesser extent California bulrush (*Schoenoplectus californicus*). Lower-growing, alkaline soil adapted species including salt marsh bulrush (*Bolboschoenus maritimus*), fat hen (*Atriplex prostrata*), and annual saltmarsh aster (*Symphotrichum subulatum*) occur along the periphery of this habitat.

Southern coastal salt marsh habitat is mostly represented by mid to high elevation occurring marsh species including Pacific pickleweed (*Salicornia pacifica*) and alkali heath (*Frankenia salina*). At elevations where prolonged soil saturation occurs, salty Susan (*Jaumea carnosa*), saltwort (*Batis maritima*), and salt marsh bulrush are present. At higher elevations including Pond slopes and adjacent terraces, this habitat is comprised of saltgrass (*Distichlis spicata*), alkali weed (*Cressa truxillensis*), and occasional Parish's pickleweed (*Arthrocnemum subterminale*). Salt marsh habitat and/or non-native grassland (i.e., dominated by non-native grasses including *Avena*, *Hordeum*, *Festuca* species) is also along bordering walking trails.

Special Status Species

Three special status species were identified within the Project area; all species identified are plants (Figure 3): San Diego marsh elder (California Rare Plant Rank [CRPR] 2B.2), San Diego sagewort (*Artemisia palmeri*) (CRPR 4.2), and southwestern spiny rush (CRPR 4.2). Additional special status plants are known to occur throughout the Famosa Slough area, but they are not present within the Project area. All of the above-listed species have a relatively low sensitivity ranking. In addition, all of them, except potentially San Diego sagewort were included as part of the original construction of the Treatment Basin and/or follow-up replacement planting effort. In addition, there is no potential for any state or federally listed species to occur within the Project area.

No special status wildlife species were detected within the Project area; however, there is at least a moderate potential for some special status wildlife to utilize the area including: Cooper's hawk (*Accipiter cooperii*) (CDFW Watch List, MSCP Covered Species), great blue heron (*Ardea herodias*) (foraging only), northern harrier (*Circus hudsonius*) (foraging only) (MSCP Covered Species), yellow warbler (*Dendroica*

petechia) (summer resident) (CDFW Species of Special Concern), reddish egret (*Egretta rufescens*) (foraging only) (MSCP Covered Species), white-tailed kite (*Elanus leucurus*) (foraging only) (CDFW Fully Protected), osprey (*Pandion haliaetus*) (foraging only) (CDFW Watch List, MSCP Covered Species), and western bluebird (*Sialia mexicana*) (MSCP Covered Species).

No state or federally listed avian species, including light-footed Ridgway's rail (*Rallus obsoletus levipes*), least Bell's vireo (*Vireo bellii pusillus*), and coastal California gnatcatcher (*Polioptila californica californica*), have a moderate or greater potential to occur in the Project area based on the lack of or limited potentially suitable habitat and/or known occurrences within the Project area (iNaturalist 2023, eBird 2023, Friends of Famosa Slough Checklist 2021).

Aquatic Resources Delineation

Two aquatic resource features, Famosa Slough (tidally influenced and located north of the Treatment Basin) and the Treatment Basin are expected to be subject to the regulation of CDFW.

Feature 1, Famosa Slough within the defined lateral limits of the OHWM, is expected to be regulated by CDFW pursuant to Section 1602 of the California Fish and Game Code as a vegetated streambed in areas mapped as southern coastal salt marsh. Areas above the OHWM including the bordering slope mapped as southern coastal salt marsh are expected to be regulated by CDFW as adjacent riparian habitat.

Feature 2, the Treatment Basin is comprised of the concrete-lined channel draining into Pond 1 as well as Ponds 1, 2, and 3 and the surrounding area. The concrete-lined channel is expected to be regulated by CDFW as a vegetated/concrete-lined streambed. The lateral limits of the streambed were delineated based on the width of the top of the bank, extending to a width of approximately 22 feet. Riparian canopy extending beyond the lateral limits of the streambed is also expected to be regulated by CDFW as adjacent riparian habitat.

The basin floor of Ponds 1, 2, and 3 within the defined lateral limits of the OHWM is expected to be regulated by the CDFW as a vegetated streambed based on the presence of hydrophytic vegetation, hydric soils, and wetland hydrology. The slopes of the ponds, mapped as coastal and valley freshwater marsh, southern coastal salt marsh, and southern willow scrub, are expected to be regulated as adjacent riparian habitat.

The alkali seep associated with the swale constructed between the Famosa Slough parking lot and residential development parking lot is not expected to be regulated by CDFW due to the lack of a defined streambed. However, the southern willow scrub associated with the swale is located immediately adjacent to Pond 1 and thus is expected to be regulated by CDFW as adjacent riparian habitat.

In summary, approximately 0.94 acre of CDFW vegetated streambed and 0.37 acre of adjacent riparian habitat occur within the Project area (Figure 4, Table 2). Wetland determination data forms and photo points have been included with this report in Appendix D.

Table 2. CDFW Aquatic Resources within the Project Area

Vegetation Community	Existing Potential CDFW Acreage		
	Vegetated Streambed	Adjacent Riparian Habitat	Total
Southern Coastal Salt Marsh	0.40	0.09	0.49
Coastal and Valley Freshwater Marsh (concrete-lined)	0.01	<0.01	0.01
Coastal and Valley Freshwater Marsh	0.19	0.03	0.22
Southern Willow Scrub (concrete-lined)	0.04	0.02	0.06
Southern Willow Scrub	0.28	0.23	0.51
Non-native Riparian	0.02	0.00	0.02
Total:	0.94	0.37	1.31

PROJECT IMPACT ANALYSIS

Implementation of the Project would require staging of equipment within the existing parking lot, driving a small, tracked loader along the public trail system, trimming of vegetation with all cuts above ground level, sediment removal, and replanting with native herbaceous plants within the removal area. Table 3 quantifies the area where this work would take place (i.e., Project Maintenance Area depicted in Appendix A).

Table 3. Project Maintenance Area

Vegetation Community	Holland/ Oberbauer Code	Acreage
Southern Coastal Salt Marsh	52120	0.09
Coastal and Valley Freshwater Marsh (concrete-lined)	52410	0.01
Coastal and Valley Freshwater Marsh	52410	0.03
Southern Willow Scrub (concrete-lined)	63320	0.04
Southern Willow Scrub	63320	0.22
Non-native Riparian	65000	0.02
Disrupted Habitat	11300	0.20
Urban/Developed	12000	0.08
Total:		0.69

Implementation of the Project may require removal of two special status plants present within the Project Maintenance Area (associated with Pond 1): one individual San Diego sagewort and one individual southwestern spiny rush. If feasible, these plants would be avoided; however, if avoidance were not feasible, the loss of these individual plants would not be expected to affect the long-term success of the population within the local San Diego region; thus, their loss would not be significant. No other special status plants would be impacted.

All maintenance activities are scheduled to occur between September 16 and February 14, outside of the avian breeding season. As a result, the Project is not expected to “take” nesting birds protected by the federal Migratory Bird Treaty Act (MBTA) or California Fish and Game Code Sections 3503 and 3515. Regardless, the onsite Project Biologist would inspect the area prior to start of work to ensure that no nesting birds are present within the Project Maintenance Area. If active bird nests were found, then all maintenance activities undertaken for the Project must comply with regulatory requirements of the

federal MBTA and California FGC Sections 3503 and 3513. This would require protection of the nest, eggs, chicks, and adults until such time as the nestlings have fully fledged and are no longer dependent upon the nest site.

Maintenance activities occurring within areas subject to the regulation of CDFW are quantified in Table 4. This area represents the maximum area of potential maintenance. However, as detailed in the Project Description native riparian trees occurring within the basin that are deemed by the Project Biologist to not impede sediment trapping and treatment function would be left in place and/or their canopies would be lifted such that only the lower growing branches would be cut. In addition, the level of maintenance (i.e., acreage) is dependent on funding. As such, multiple maintenance events could occur under the proposed Project which would effectively result in a sediment and vegetation management approach that would leave strips or areas of sediment/vegetation until such time that they are removed in accordance with the Project.

Table 4. Project Maintenance Area Subject to CDFW Aquatic Resources

Vegetation Community	Project Maintenance Area - CDFW Acreage		
	Vegetated Streambed	Adjacent Riparian Habitat	Total
Southern Coastal Salt Marsh	0.09	0.00	0.09
Coastal and Valley Freshwater Marsh (concrete-lined)	0.01	0.00	0.01
Coastal and Valley Freshwater Marsh	0.03	0.00	0.03
Southern Willow Scrub (concrete-lined)	0.04	0.00	0.04
Southern Willow Scrub	0.21	0.01	0.22
Non-native Riparian	0.02	0.00	0.02
Total:	0.40	0.01	0.41

The parking lot and public trail system would be returned to pre-impact condition. All disturbed areas within the Ponds would be replanted with native herbaceous plants. Follow-up inspections would be conducted by Friends of Famosa Slough as part of their regular oversight of Famosa Slough. No additional restoration is proposed at this time.

Implementation of the Project could result in indirect impacts to the Treatment Basin, most notably from potential erosion due to the maintenance within the Ponds. However, returning the trail system to pre-maintenance condition (e.g., recompacting any ground disturbance) and replanting of the removal area would reduce this potential impact to less than significant.

Implementation of the Project would remove accumulated sediment, cut/trim vegetation, and replant the removal areas with native herbaceous wetland vegetation. As a result, implementation of the Project would not result in a net loss of aquatic resources. Post implementation of the Project, the Treatment Basins are expected to have an improved sediment retention function and biologically, the Treatment Basins are expected to continue to support habitat (e.g., nesting, foraging, and passive transit) for wildlife. Implementation of the Project as designed is not expected to result in cumulative impacts to biological resources.

ADDITIONAL INFORMATION

The aquatic resources acreages estimated in this memo represent the existing conditions during the time of the field survey. The information and results included herein document the investigation, best professional judgment, and conclusions of M&A. It is correct and complete to the best of our knowledge and should be considered preliminary until reviewed and approved by the regulatory agencies. CDFW representatives can access the site via Famosa Boulevard to field verify the results of this memo or alternatively may request a field meeting with the Friends of Famosa Slough and/or M&A.

Report Preparer(s) and Persons/Organizations Contacted

Merkel & Associates Inc.

Amanda Gonzales, Project Manager, Project Field Biologist, Certified Wetland Delineator, Report Author

Kyle Ince, Senior Biologist and Restoration Division Manager, Project Field Biologist, Certified Wetland Delineator, Contributing Report Author

Brad Kelly, GIS Specialist/Graphics Preparation and Numeric Analyses

Jenny Nicholson, Clerical Support, Report QA/QC

Keith Merkel, Principal Consultant

REFERENCES

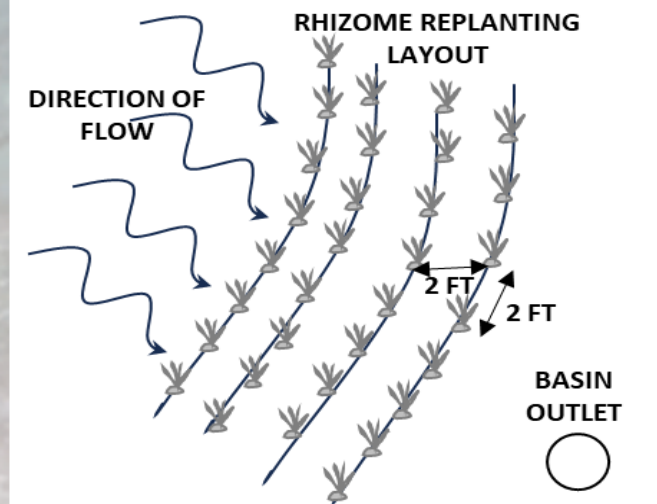
- American Ornithologists' Union, et al. 1998. Check-list of North American Birds, 7th ed. American Ornithologists' Union, Washington D.C.
- _____. 2023 July. Sixty-fourth Supplement to the American Ornithologists' Union Check-list of North American Birds (Internet). Volume 140, Issue 3, 11 July 2023, pp 1-11. Available from: <http://americanornithology.org/>
- California Department of Fish and Wildlife (CDFW). 1999 Dec. South Coast Region. Streambed Alteration Agreement #5-189-99. Applicant/Permittee, City of San Diego, Park and Recreation Department.
- _____. 2011 Jan. South Coast Region. Continued Applicability of Existing Streambed Alteration Agreement for Ongoing Maintenance of the Famosa Slough Treatment Wetland Basins Notification No. 5-189-99.
- _____. 2023. California Natural Diversity Database (CNDDDB). Biogeographic Data Branch. RareFind; GIS shapefile update, 2023. Sacramento, California.
- Crother, B.I. (ed.). 2017. Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence In Our Understanding. pp. 1-102. SSAR Herpetological Circular. 43.
- eBird. Famosa Slough, San Diego County, CA, US - eBird Hotspot (eBird-Cornell Lab of Ornithology). Accessed December 2023.
- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual [Internet]. Technical Report Y-87-1, U.S. Army Corps of Engineers Waterways Experiment Station. Vicksburg, Mississippi. 92 pp + Appendices. Available from: <http://www.spl.usace.army.mil/Missions/Regulatory/Jurisdictional-Determination/Wetland-Delineations/>.
- Friends of Famosa Slough. 2021. The Birds of Famosa Slough. 8th Edition. Available from: <https://www.famosaslough.org/wp-content/uploads/2021/09/Famosa-Slough-Bird-List-7-4-21-8th-Edition.pdf> Accessed: 2023
- Google Earth Pro™. 7.3.6.9345 [Software]. Available from: <http://www.earth.google.com>. Accessed 2023 and 2024.
- Hall, E.R. 1981. The Mammals of North America. 2nd Edition. John Wiley & Sons. New York, New York. Two volumes. 1,181 pp.
- Jepson Flora Project (eds.). 2023. Jepson eFlora, <https://ucjeps.berkeley.edu/eflora/>. Accessed 2023.
- Klein, M.W., San Diego Natural History Museum. 2002. Butterflies of San Diego County (Internet). Available from: <http://www.sdnhm.org/science/entomology/projects/checklist-of-butterflies-of-san-diego-county/>

- Merkel & Associates, Inc (M&A). 1999 Nov. Multiple Wetland Treatment Basins Wetland Habitat Mitigation Plan, Famosa Slough Enhancement Plan. Prepared for Friends of Famosa Slough and City of San Diego Park & Recreation Department.
- _____. 2001 Dec. Operations, Maintenance and Monitoring Plan for the Famosa Slough Treatment Wetland, Famosa Slough Enhancement Program. Prepared for City of San Diego Park & Recreation Department, Friends of Famosa Slough, Regional Water Quality Control Board San Diego Region, and U.S. Fish and Wildlife Service.
- _____. 2003 Jul. A Decade of Change Under The Famosa Slough Enhancement Plan: An Analysis of Change Since Plan Adoption. Prepared for Friends of Famosa Slough.
- Nearmap. 2023. 9" resolution imagery for the San Diego region. Imagery was acquired as part of the San Diego regional aerial imagery acquisition partnership. Image source is Nearmap, and is a resampled regional dataset developed for public access.
- Oberbauer, T., M. Kelly, and J. Buegge. 2008, Revised 1996 and 2006. Draft Vegetation Communities of San Diego County (Internet). Based on "Preliminary Descriptions of the Terrestrial Natural Communities of California", Holland RF, PhD., 1986.
- Pacific Southwest Biological Services, KTU+A, Philip Williams & Associate, Lintvedt McColl Associate. 1993 Nov. Famosa Slough Enhancement Plan. Prepared for The City of San Diego and The State Coastal Conservancy.
- Rebman, J. P. and M.G. Simpson. 2006. Checklist of the Vascular Plants of San Diego County, 5th Edition. Available from: <https://www.sdnhm.org/science/botany/projects/checklist/>
- State Water Resources Control Board (SWRCB). 2021. San Diego Region - The Basin Plan. San Diego Region Hydrologic Basin Plan Area Map. Available from: https://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/. Accessed: 2023
- _____. 2022. 2020/2022 Clean Water Act Section 303(d) and 305(b) Integrated Report. Interactive Map. Accessed 2023. Available from: https://www.waterboards.ca.gov/rwqcb9/water_issues/programs/303d_list/index.html
- U.S. Army Corps of Engineers (USACE). 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), ed. [Internet]. JS Wakeley, RW Lichvar, and CV Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center. Available from: <http://www.spl.usace.army.mil/Missions/Regulatory/Jurisdictional-Determination/Wetland-Delineations/>
- U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2004. Geology, Generalized Soil Download (zip) updated 2004 [Internet]. Available from: <http://www.sangis.org/>. Data source: U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS).

- _____. 2023. State Soil Data Access (SDA) Hydric Soils List. Available from:
https://efotg.sc.egov.usda.gov/references/Public/IL/State_List_NRCS_Hydric_Soils_Report_Dynamic_Data.html Accessed: 2023
- U.S. Fish and Wildlife Service (USFWS). 2023a. Critical Habitat Portal (Internet). Data Download (zip) updated 2023. Available from: <http://criticalhabitat.fws.gov/>.
- _____. 2023b. Carlsbad Fish and Wildlife Office (CFWO), GIS Division Species Occurrence Data Download (zip) updated 2023 (Internet). Available from:
<https://www.fws.gov/carlsbad/GIS/CFWOGIS.html>.
- Wilson, D.E, and D.M. Reeder (eds). 2005. Mammal Species of the World. Johns Hopkins University Press. 2,142 pp. Available from Johns Hopkins University Press at: 1-800-537-5487 or (410) 516-6900, or <http://www.press.jhu.edu/> or <http://nmnhgoph.si.edu/msw/>.

**APPENDIX A: FAMOSA SLOUGH WATER QUALITY TREATMENT WETLAND SEDIMENTATION BASIN
MAINTENANCE PROJECT – MAINTENANCE SHEET**

FAMOSA SLOUGH STORMWATER TREATMENT PONDS RESTORATION AND ENHANCEMENT PROJECT PLAN
SAN DIEGO, CA



SEDIMENT BASIN REPLANTING CONFIGURATION



FRIENDS OF FAMOSA SLOUGH
PO BOX 87280
SAN DIEGO, CA 92138-7280

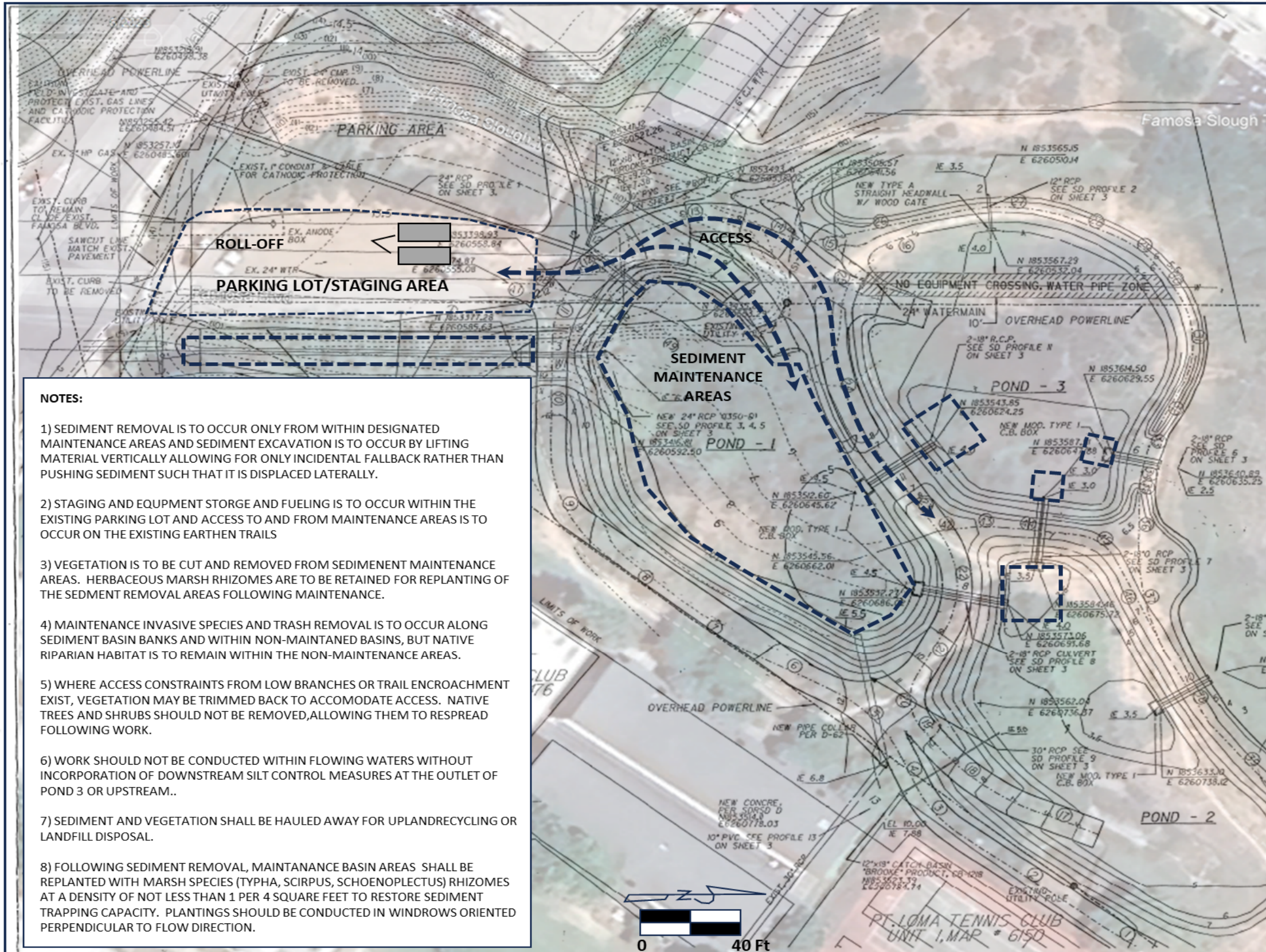


MERKEL & ASSOCIATES, INC.
5434 RUFFIN ROAD, SAN DIEGO, CA 92123
(858) 560-5465

FAMOSA SLOUGH STORMWATER TREATMENT POND RESTORATION PROJECT IS BEING FUNDED THROUGH A SANDIEGO ASSOCIATION OF GOVERNMENTS (SANDAG) TRANSET ENVIRONMENTAL MITIGATION PROGRAM (EMP) GRANT TO FRIENDS OF FAMOSA SLOUGH. ADDITIONAL FUNDING AND SUPPORT COMES FROM THE FRIENDS OF

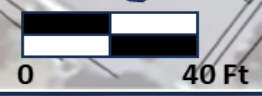


DIG ALERT MUST BE CONTACTED PRIOR TO PERFORMING EXCAVATION. CONTACT 811.



NOTES:

- 1) SEDIMENT REMOVAL IS TO OCCUR ONLY FROM WITHIN DESIGNATED MAINTENANCE AREAS AND SEDIMENT EXCAVATION IS TO OCCUR BY LIFTING MATERIAL VERTICALLY ALLOWING FOR ONLY INCIDENTAL FALLBACK RATHER THAN PUSHING SEDIMENT SUCH THAT IT IS DISPLACED LATERALLY.
- 2) STAGING AND EQUIPMENT STORGE AND FUELING IS TO OCCUR WITHIN THE EXISTING PARKING LOT AND ACCESS TO AND FROM MAINTENANCE AREAS IS TO OCCUR ON THE EXISTING EARTHEN TRAILS
- 3) VEGETATION IS TO BE CUT AND REMOVED FROM SEDIMENT MAINTENANCE AREAS. HERBACEOUS MARSH RHIZOMES ARE TO BE RETAINED FOR REPLANTING OF THE SEDIMENT REMOVAL AREAS FOLLOWING MAINTENANCE.
- 4) MAINTENANCE INVASIVE SPECIES AND TRASH REMOVAL IS TO OCCUR ALONG SEDIMENT BASIN BANKS AND WITHIN NON-MAINTAINED BASINS, BUT NATIVE RIPARIAN HABITAT IS TO REMAIN WITHIN THE NON-MAINTENANCE AREAS.
- 5) WHERE ACCESS CONSTRAINTS FROM LOW BRANCHES OR TRAIL ENCROACHMENT EXIST, VEGETATION MAY BE TRIMMED BACK TO ACCOMODATE ACCESS. NATIVE TREES AND SHRUBS SHOULD NOT BE REMOVED, ALLOWING THEM TO RESPREAD FOLLOWING WORK.
- 6) WORK SHOULD NOT BE CONDUCTED WITHIN FLOWING WATERS WITHOUT INCORPORATION OF DOWNSTREAM SILT CONTROL MEASURES AT THE OUTLET OF POND 3 OR UPSTREAM..
- 7) SEDIMENT AND VEGETATION SHALL BE HAULED AWAY FOR UPLAND RECYCLING OR LANDFILL DISPOSAL.
- 8) FOLLOWING SEDIMENT REMOVAL, MAINTANANCE BASIN AREAS SHALL BE REPLANTED WITH MARSH SPECIES (TYPHA, SCIRPUS, SCHOENOPLECTUS) RHIZOMES AT A DENSITY OF NOT LESS THAN 1 PER 4 SQUARE FEET TO RESTORE SEDIMENT TRAPPING CAPACITY. PLANTINGS SHOULD BE CONDUCTED IN WINDROWS ORIENTED PERPENDICULAR TO FLOW DIRECTION.



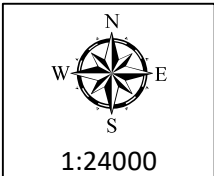
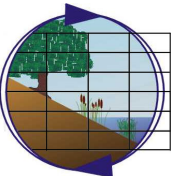
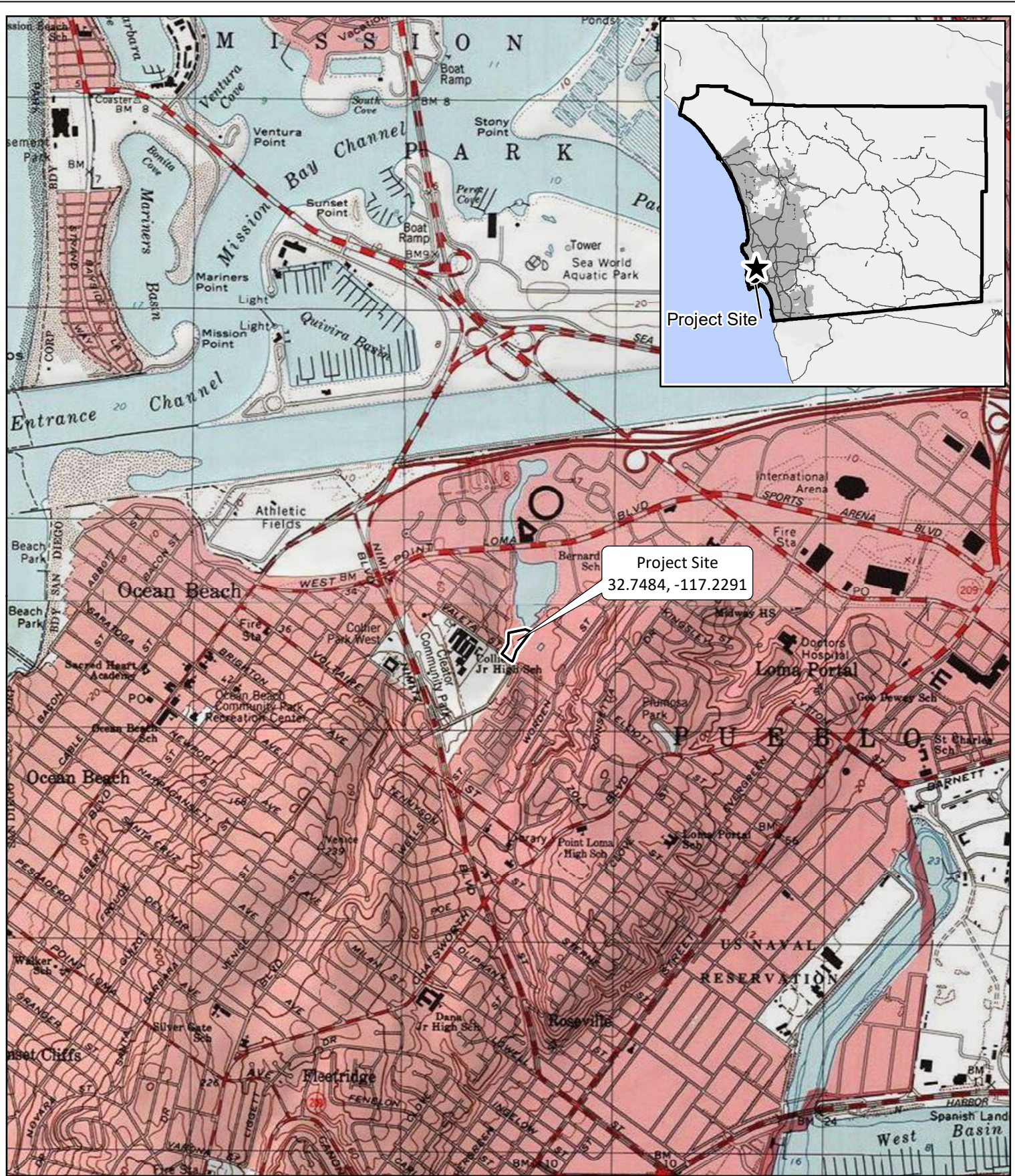
APPENDIX B: FIGURES

Figure 1 – USGS California Quadrangle Map

Figure 2 – Local Vicinity Map

Figure 3 – Biological Resources Map

Figure 4 – CDFW Delineation Results Map



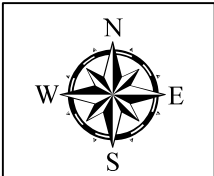
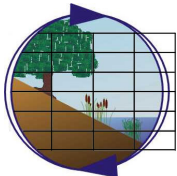
USGS Topography Map
Famosa Slough Water Quality Treatment
Wetlands Sedimentation Basin Maintenance Project
Source: USGS 7.5' Point Loma, CA Quadrangle

Figure 1



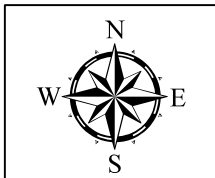
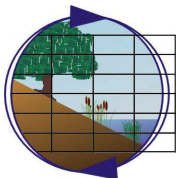
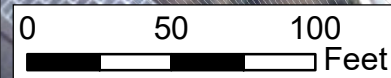
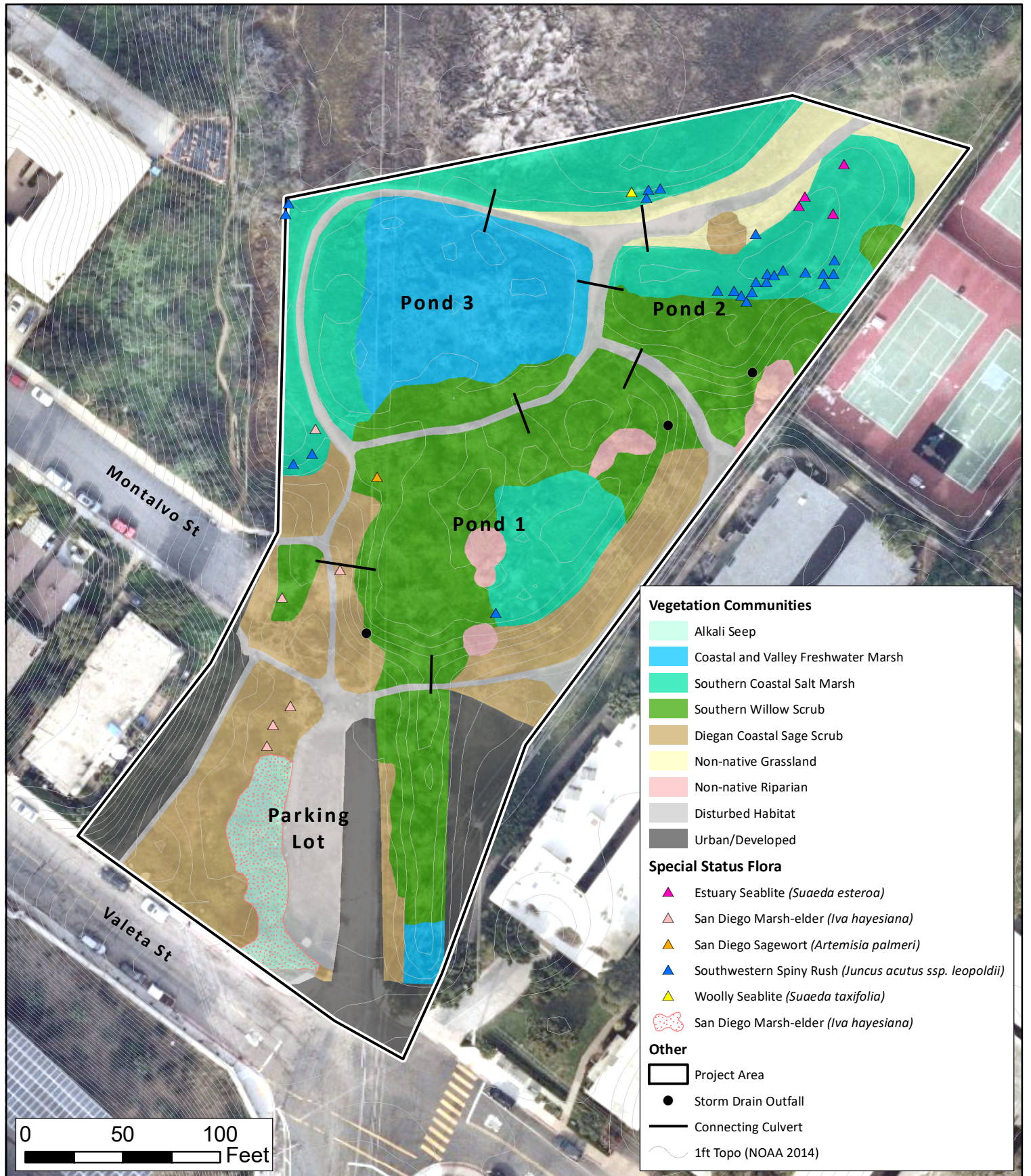
0 50 100 Feet

- Project Area
- Photo Point
- Storm Drain Outfall
- Connecting Culvert
- City of San Diego MHPA (SANGIS 2024)
- Parcel Boundary (SANGIS 2024)
- 1ft Topo (NOAA 2014)



Local Setting Map
Famosa Slough Water Quality Treatment
Wetlands Sedimentation Basin Maintenance Project
Aerial Source: Nearmap 2023
Created on March 21, 2024

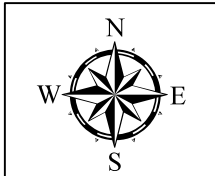
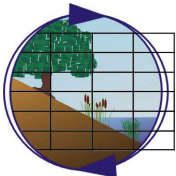
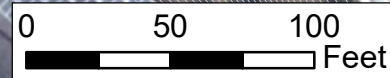
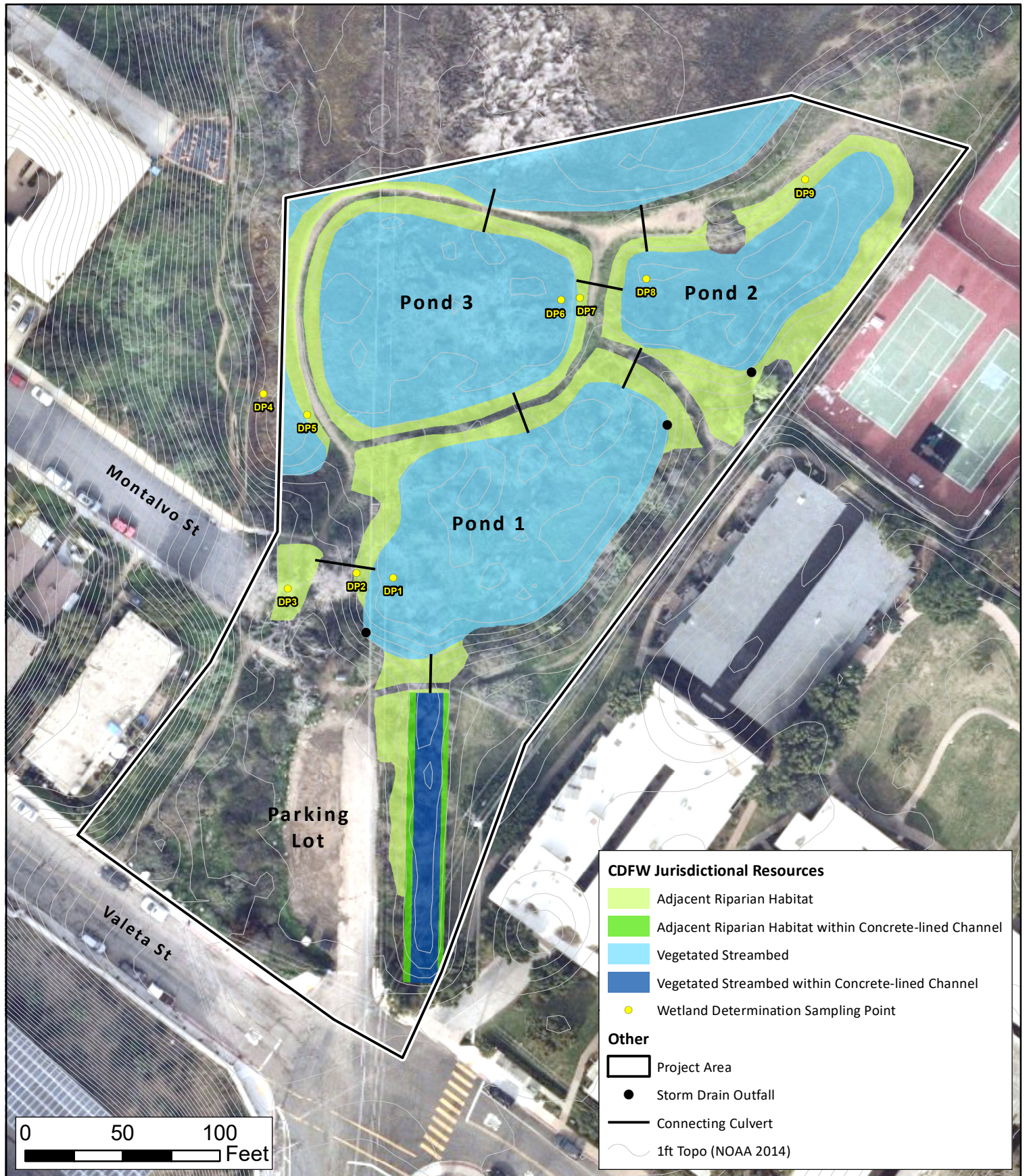
Figure 2



Biological Resources Map
 Famosa Slough Water Quality Treatment
 Wetlands Sedimentation Basin Maintenance Project

Aerial Source: Nearmap 2023 Created on March 21, 2024

Figure 3



CDFW Delineation Results Map
Famosa Slough Water Quality Treatment
Wetlands Sedimentation Basin Maintenance Project

Aerial Source: Nearmap 2023
Created on March 21, 2024

Figure 4

APPENDIX C: OVERVIEW PHOTOGRAPHS



Photo Point 1. View of sediment filled culvert inlet in Pond 1. Photo date: 8/8/23. Direction: south.



Photo Point 2. View of sediment filled basin in Pond 1. Photo date: 8/24/23. Direction: southeast.



Photo Point 3. View of sediment filled basin Pond 1. Photo date: 7/27/23. Direction: northwest.



Photo Point 4. View of sediment filled basin in Pond 3 (foreground) and Pond 2 (background). Photo date: 7/27/23. Direction: east.



Photo Point 5. View of parking lot. Photo date: 7/27/23. Direction: northwest.



Photo Point 6. View of concrete lined channel that drains the urban watershed into Pond 1. Channel choked with sediment and vegetation. Photo date: 8/24/23. Direction: north.

APPENDIX D: WETLAND DETERMINATION DATA FORMS AND PHOTO POINTS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Famosa Slough City/County: San Diego/San Diego Sampling Date: 8/18/2023
 Applicant/Owner: City of San Diego State: CA Sampling Point: 1
 Investigator(s): Amanda K. Gonzales, Kyle L. Ince Section, Township, Range: Unsectioned, Township 16S, Range 3W
 Landform (hillslope, terrace, etc.) Water Treatment Basin Local relief (concave, convex, none): Concave Slope (%): <1
 Subregion (LRR): LRR-C Lat: 32.74826 Long: -117.22930 Datum: WGS84
 Soil Map Unit Name: Made Land NWI classification: R2SB7

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: The Data Point is located within Pond 1 of the Famosa Slough Water Quality Treatment Basin. Construction of the Treatment Basin was completed in March 2000 and is comprised of a 3 treatment pond system and was designed to be maintained (e.g., removal of accumulated sediment and vegetation maintenance). Pond 1 is principally a sediment trap prior to water passing into Ponds 2 and 3 by pipes and overflow spillways which ultimately drain north to Famosa Slough. Pond 1 receives input via 3 storm drain pipes located in the southern portion of the pond; all from the surrounding urban watershed to the west and south/southeast.	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: 20' x 30')																				
1. <u>Salix lasiolepis</u>	90	Y	FACW	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)																
2. <u>Salix exigua</u>	5	N	FACW																	
3. _____																				
4. _____																				
	95	= Total Cover																		
Sapling/Shrub Stratum (Plot size: 20' x 30')																				
1. <u>Pittosporum tobira</u>	10	Y	UPL	Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Total % Cover of:</td> <td style="text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>5</u></td> <td>x 1 = <u>5</u></td> </tr> <tr> <td>FACW species <u>108</u></td> <td>x 2 = <u>216</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>80</u></td> <td>x 4 = <u>320</u></td> </tr> <tr> <td>UPL species <u>19</u></td> <td>x 5 = <u>95</u></td> </tr> <tr> <td>Column Totals: <u>212</u> (A)</td> <td><u>636</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.0</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>5</u>	x 1 = <u>5</u>	FACW species <u>108</u>	x 2 = <u>216</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>80</u>	x 4 = <u>320</u>	UPL species <u>19</u>	x 5 = <u>95</u>	Column Totals: <u>212</u> (A)	<u>636</u> (B)	Prevalence Index = B/A = <u>3.0</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>5</u>	x 1 = <u>5</u>																			
FACW species <u>108</u>	x 2 = <u>216</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>80</u>	x 4 = <u>320</u>																			
UPL species <u>19</u>	x 5 = <u>95</u>																			
Column Totals: <u>212</u> (A)	<u>636</u> (B)																			
Prevalence Index = B/A = <u>3.0</u>																				
2. <u>Salix exigua</u>	8	Y	FACW																	
3. _____																				
4. _____																				
5. _____																				
	18	= Total Cover																		
Herb Stratum (Plot size: 20' x 30')																				
1. <u>Cenchrus clandestinus</u>	80	Y	FACU																	
2. <u>Anemopsis californica</u>	5	N	OBL																	
3. <u>Cyperus eragrostis</u>	5	N	FACW																	
4. <u>Schoenoplectus californicus</u>	5	N	OBL																	
5. <u>Tropaeolum majus</u>	5	N	UPL																	
6. <u>Sonchus oleraceus</u>	2	N	UPL																	
7. <u>Ehrharta erecta</u>	2	N	UPL																	
8. <u>Solanum nigrum</u>	<1	N	FACU																	
9. <u>Rumex crispus</u>	<1	N	FAC																	
	99	= Total Cover																		
Woody Vine Stratum (Plot size: 20' x 30')																				
1. -																				
2. _____																				
	<5	= Total Cover																		
% Bare Ground in Herb Stratum <u>5</u> % Cover of Biotic Crust _____																				
Remarks: Salix dominates the tree canopy at this location but there is a high inclusion of non-native plants. The area currently meets the hydrophytic vegetation indicator via the Prevalence Test.				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 2/1	100					Loam	Some roots and trash
4-7	7.5YR 3/3	90	10YR 5/6	5	C	M	Silty clay loam	Some Trash
7-12	10YR 3/1	90					Loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

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

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

Remarks:
Hydric soils are present. The Data Point is located within the basin of Pond 1. The Pond was designed to serve as a sediment trap and was designed to be maintained. The most recent maintenance occurred in February 2011.

HYDROLOGY

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

Field Observations:	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Aerial Photos. Previous delineation for Famosa Slough conducted by M&A in 2002 (M&A 2003).

Remarks:
Overall, the basin bottom is uneven, with low spots near the culvert outfall pipes and northward (evidence of previous sediment removal maintenance). Pockets of water in the low spots, near the culvert outfall structures (just outside of the DP plot size but depth of about 4") . Some drift line is also present in the low areas but not necessarily throughout the basin. The soil was moist but not saturated. M&A conducted the delineation on 8/18/23 prior to the arrival of Tropical Storm Hilary which made land fall in San Diego on 8/20/23. M&A revisited the survey area on 8/24/23 to reassess conditions; during the follow-up survey the water table was encountered at about 6".

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Famosa Slough City/County: San Diego/San Diego Sampling Date: 8/18/2023
 Applicant/Owner: City of San Diego State: CA Sampling Point: 2
 Investigator(s): Amanda K. Gonzales, Kyle L. Ince Section, Township, Range: Unsectioned, Township 16S, Range 3W
 Landform (hillslope, terrace, etc.) Basin Slope Local relief (concave, convex, none): Convex Slope (%): >5
 Subregion (LRR): LRR-C Lat: 32.74827 Long: -117.22936 Datum: WGS84
 Soil Map Unit Name: Made Land NWI classification: Upland

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: The DP is located on the slope of Pond 1. Hydrophytic vegetation is present but hydric soils and wetland hydrology are not present.	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status																																									
Tree Stratum (Plot size: 17' x 20')																																												
1. -				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60</u> (A/B)																																								
2.																																												
3.																																												
4.																																												
	0	= Total Cover																																										
Sapling/Shrub Stratum (Plot size: 17' x 20')																																												
1. <i>Salix lasiolepis</i>	45	Y	FACW	Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 10%;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%;">Multiply by:</th> <th style="width: 30%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;">0</td> <td></td> <td style="text-align: center;">x 1 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;">90</td> <td></td> <td style="text-align: center;">x 2 =</td> <td style="text-align: center;">180</td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;">5</td> <td></td> <td style="text-align: center;">x 3 =</td> <td style="text-align: center;">15</td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;">4</td> <td></td> <td style="text-align: center;">x 4 =</td> <td style="text-align: center;">16</td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;">15</td> <td></td> <td style="text-align: center;">x 5 =</td> <td style="text-align: center;">75</td> </tr> <tr> <td>Column Totals:</td> <td style="text-align: center;">114</td> <td style="text-align: center;">(A)</td> <td></td> <td style="text-align: center;">286 (B)</td> </tr> <tr> <td colspan="4" style="text-align: right;">Prevalence Index = B/A =</td> <td style="text-align: center;"><u>2.51</u></td> </tr> </tbody> </table>		Total % Cover of:		Multiply by:		OBL species	0		x 1 =	0	FACW species	90		x 2 =	180	FAC species	5		x 3 =	15	FACU species	4		x 4 =	16	UPL species	15		x 5 =	75	Column Totals:	114	(A)		286 (B)	Prevalence Index = B/A =				<u>2.51</u>
	Total % Cover of:		Multiply by:																																									
OBL species	0		x 1 =		0																																							
FACW species	90		x 2 =		180																																							
FAC species	5		x 3 =		15																																							
FACU species	4		x 4 =		16																																							
UPL species	15		x 5 =		75																																							
Column Totals:	114	(A)			286 (B)																																							
Prevalence Index = B/A =					<u>2.51</u>																																							
2. <i>Salix exigua</i>	45	Y	FACW																																									
3. <i>Rhus integrifolia</i>	5	N	UPL																																									
4. <i>Atriplex lentiformis</i>	4	N	FACU																																									
5.																																												
	99	= Total Cover																																										
Herb Stratum (Plot size: 17' x 20')																																												
1. <i>Ehrharta erecta</i>	5	Y	UPL																																									
2. <i>Elymus triticoides</i>	5	Y	FAC																																									
3. <i>Asparagus asparagoides</i>	3	Y	UPL																																									
4. <i>Tropaeolum majus</i>	2	N	UPL																																									
5.																																												
6.																																												
7.																																												
8.																																												
9.																																												
	15	= Total Cover																																										
Woody Vine Stratum (Plot size: 17' x 20')																																												
1. -																																												
2.																																												
	0	= Total Cover																																										
% Bare Ground in Herb Stratum <u>85</u> % Cover of Biotic Crust _____																																												
Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Test is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																																								

Remarks: The slope of Pond 1, at this location is dominated by a shrub layer of *Salix* intermixed with upland and wetland associated herbaceous plants (mapped as southern willow scrub). Hydrophytic plants dominate at the DP. Note that the slope to the south of this DP is dominated by a dense layer of *Rhus integrifolia* (UPL); the area has been mapped as Diegan coastal sage scrub.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Famosa Slough City/County: San Diego/San Diego Sampling Date: 8/18/2023
 Applicant/Owner: City of San Diego State: CA Sampling Point: 3
 Investigator(s): Amanda K. Gonzales, Kyle L. Ince Section, Township, Range: Unsectioned, Township 16S, Range 3W
 Landform (hillslope, terrace, etc.) Swale Local relief (concave, convex, none): Concave Slope (%): <2
 Subregion (LRR): LRR-C Lat: 32.74825 Long: -117.22947 Datum: WGS84
 Soil Map Unit Name: Made Land NWI classification: Upland

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: The DP is located within a shallow swale. The swale was constructed early 2000 as part of the construction of the Famosa Slough Water Quality Treatment Basin. The swale drains a portion of Valeta Street, the Famosa Slough parking lot, and Montalvo Street. Runoff ultimately drains into Pond 1 via an inlet structure.	

VEGETATION – Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Tree Stratum (Plot size: 40' x 40')				Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60</u> (A/B)
1. <u>Populus fremontii</u>	95	Y	FAC	
2. <u>Quercus agrifolia</u>	5	N	UPL	
3. _____				
4. _____				
	100	= Total Cover		
Sapling/Shrub Stratum (Plot size: 40' x 40')				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>10</u> x 2 = <u>20</u> FAC species <u>114</u> x 3 = <u>342</u> FACU species <u>10</u> x 4 = <u>40</u> UPL species <u>71</u> x 5 = <u>355</u> Column Totals: <u>205</u> (A) <u>757</u> (B) Prevalence Index = B/A = <u>3.69</u>
1. <u>Encelia californica</u>	5	Y	UPL	
2. <u>Salix exigua</u>	5	Y	FACW	
3. <u>Rubus ursinus</u>	4	Y	FAC	
4. <u>Iva hayesiana</u>	<1	N	FACW	
5. _____				
	10	= Total Cover		
Herb Stratum (Plot size: 40' x 40')				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Test is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Ehrharta erecta</u>	50	Y	UPL	
2. <u>Cenchrus clandestinus</u>	10	N	FACU	
3. <u>Elymus triticoides</u>	10	N	FAC	
4. <u>Cyperus eragrostis</u>	5	N	FACW	
5. <u>Polygonum aviculare</u>	5	N	FAC	
6. <u>Tropaeolum majus</u>	1	N	UPL	
7. <u>Solanum nigrum</u>	<1	N	FACU	
8. <u>Bidens pilosa</u>	<1	N	FAC	
9. <u>Erigeron bonariensis</u>	<1	N	FACU	
	81	= Total Cover		
Woody Vine Stratum (Plot size: 40' x 40')				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. -				
2. _____				
	<5	= Total Cover		
% Bare Ground in Herb Stratum <u>20</u> % Cover of Biotic Crust _____				

Remarks: A mature *Populus* dominates the canopy coverage in this portion of the site with a mixed understory of both wetland and upland associated plants. The area meets the hydrophytic vegetation indicator requirements. Note - a thick barrier of *Rhus integrifolia* (UPL) and *Heteromeles arbutifolia* (UPL) serve as a barrier between the swale and public trail system immediately adjacent to the east. These upland shrubs, although close in proximity have been classified as coastal sage scrub.

SOIL

Sampling Point: 3

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 3/1	90					Loam	
4-12	10YR 4/3	90	7.5YR 5/8	1	C	M	Loam	Some trash

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

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

- Histosol (A1)
- Sandy Redox (S5)
- Histic Epipedon (A2)
- Stripped Matrix (S6)
- Black Histic (A3)
- Loamy Mucky Mineral (F1)
- Hydrogen Sulfide (A4)
- Loamy Gleyed Matrix (F2)
- Stratified Layers (A5) (LRR C)
- Depleted Matrix (F3)
- 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)
- Sandy Gleyed Matrix (S4)

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

The Famosa Slough Water Quality Treatment Basin including the swale was constructed via a balanced cut/fill; thus, the berms around the treatment basin including this portion of the swale are comprised of excavated sediment from Famosa Slough. Redox features are present but not enough to meet the hydric soil indicators.

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

Wetland Hydrology Present? Yes No

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

Aerial Photos. Previous delineation for Famosa Slough conducted by M&A in 2002 (M&A 2003).

Remarks:

Wetland hydrology not present. Data point located within a swale but defined drainage patterns or evidence of flow not evident. Soils cool but not saturated. M&A conducted the delineation on 8/18/23 prior to the arrival of Tropical Storm Hilary which made land fall in San Diego on 8/20/23. M&A revisited the survey area on 8/24/23 to re-assess conditions; there were no changes to the soil or hydrology conditions.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Famosa Slough City/County: San Diego/San Diego Sampling Date: 8/18/2023
 Applicant/Owner: City of San Diego State: CA Sampling Point: 4
 Investigator(s): Amanda K. Gonzales, Kyle L. Ince Section, Township, Range: Unsectioned, Township 16S, Range 3W
 Landform (hillslope, terrace, etc.) Famosa Slough Local relief (concave, convex, none): Concave Slope (%): <2
 Subregion (LRR): LRR-C Lat: 32.74852 Long: -117.22952 Datum: WGS84
 Soil Map Unit Name: Made Land NWI classification: E2EM1

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: The DP is located in the southwestern corner of Famosa Slough; the area has been mapped as southern coastal salt marsh. The area is dominated by hydrophytic vegetation and hydric soils and wetland hydrology were determined present. The slough abuts a relatively steep slope of upland habitat to the west, separated by a chain link fence.	

VEGETATION – Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Tree Stratum (Plot size: 20' x 20')				Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. -				
2.				
3.				
4.				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: 20' x 20')				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1. <i>Encelia californica</i>	<1	N	UPL	
2.				
3.				
4.				
5.				
<u><5</u> = Total Cover				
Herb Stratum (Plot size: 20' x 20')				
1. <i>Frankenia salina</i>	40	Y	FACW	
2. <i>Salicornia pacifica</i>	30	Y	OBL	
3. <i>Cressa truxillensis</i>	25	Y	FACW	
4. <i>Arthrocnemum subterminale</i>	10	N	FACW	
5. <i>Distichlis spicata</i>	5	N	FAC	
6. <i>Bromus diandrus</i>	2	N	UPL	
7. <i>Sonchus oleraceus</i>	1	N	UPL	
8. <i>Avena barbata</i>	1	N	UPL	
9.				
<u>114</u> = Total Cover				
Woody Vine Stratum (Plot size: 20' x 20')				
1. -				
2.				
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust _____				
Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Test is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: The DP is located within coastal salt marsh. Area dominated by hydrophytic vegetation.				

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 2/1	90					Clay loam	Organic layer with roots
3-12	10YR 3/4	90	5YR 3/8	5			Sandy loam	Some roots; red/grayish redox

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

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

Hydric soils assumed based on location within Famosa Slough, dominance by OBL and FACW plants and presence of Saturation within 6".

HYDROLOGY

Wetland Hydrology Indicators:

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

Field Observations:

Surface Water Present? Yes No **Depth (inches):** _____
 Water Table Present? Yes No **Depth (inches):** _____
 Saturation Present? Yes No **Depth (inches):** 6" _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Aerial Photos. Previous delineation for Famosa Slough conducted by M&A in 2002 (M&A 2003).

Remarks:

Saturation of the soils beginning at approx. 6". M&A conducted the delineation on 8/18/23 prior to the arrival of Tropical Storm Hilary which made land fall in San Diego on 8/20/23. M&A revisited the survey area on 8/24/23 to re-assess conditions; during the follow-up survey the water table was encountered at about 6".

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Famosa Slough City/County: San Diego/San Diego Sampling Date: 8/18/23
 Applicant/Owner: City of San Diego State: CA Sampling Point: 5
 Investigator(s): Amanda K. Gonzales, Kyle L. Ince Section, Township, Range: Unsectioned, Township 16S, Range 3W
 Landform (hillslope, terrace, etc.) Minor Slope Local relief (concave, convex, none): Convex Slope (%): 2
 Subregion (LRR): LRR-C Lat: 32.74849 Long: -117.22944 Datum: WGS84
 Soil Map Unit Name: Made Land NWI classification: E2EM (slope)

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: The Data Point is located on the minor/slight slope of Famosa Slough. A public trail system is at the top of the slope. Hydrophytic vegetation is present on the slope but hydric soils and wetland hydrology are not evident.	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status															
Tree Stratum (Plot size: 10' x 20')																		
1. -				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2.																		
3.																		
4.																		
	<u>0</u>	= Total Cover																
Sapling/Shrub Stratum (Plot size: 10' x 20')																		
1. -				Prevalence Index worksheet: <table style="width: 100%; border: none;"> <tr> <td style="text-align: right;">Total % Cover of:</td> <td style="text-align: left;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B)</td> </tr> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = _____																	
FACW species _____	x 2 = _____																	
FAC species _____	x 3 = _____																	
FACU species _____	x 4 = _____																	
UPL species _____	x 5 = _____																	
Column Totals: _____	(A) _____ (B)																	
2.																		
3.																		
4.																		
5.																		
	<u>0</u>	= Total Cover																
Herb Stratum (Plot size: 10' x 20')																		
1. <u>Frankenia salina</u>	60	Y	FACW	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Test is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.														
2. <u>Salicornia pacifica</u>	20	N	OBL															
3. <u>Cressa truxillensis</u>	10	N	FACW															
4. <u>Iva hayesiana</u>	10	N	FACW															
5. <u>Distichlis spicata</u>	10	N	FAC															
6. <u>Bromus diandrus</u>	1	N	UPL															
7. <u>Sonchus oleraceus</u>	1	N	UPL															
8. <u>Hordeum murinum</u>	1	N	FACU															
9.																		
	<u>110</u>	= Total Cover																
Woody Vine Stratum (Plot size: 10' x 20')																		
1. -				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														
2.																		
	<u>0</u>	= Total Cover																
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____																
Remarks: Data point located on the slope of Famosa Slough. The slope includes upland associated plants but overall the slope is dominated by hydrophytic vegetation. The slope is an extension of the southern coastal salt marsh within the basin of the slough.																		

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Famosa Slough City/County: San Diego/San Diego Sampling Date: 8/18/23
 Applicant/Owner: City of San Diego State: CA Sampling Point: 6
 Investigator(s): Amanda K. Gonzales, Kyle L. Ince Section, Township, Range: Unsectioned, Township 16S, Range 3W
 Landform (hillslope, terrace, etc.) Water Treatment Basin Local relief (concave, convex, none): Concave Slope (%): <1
 Subregion (LRR): LRR-C Lat: 32.74866 Long: -117.22902 Datum: WGS84
 Soil Map Unit Name: Made Land NWI classification: R4EM5

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: The Data Point is located within Pond 3 of the Famosa Slough Water Quality Treatment Basin. The pond is dominated by hydrophytic vegetation and hydric soils and wetland hydrology are present.	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 20' x 20')				
1. <u>Salix gooddingii</u>	<u><1</u>	<u>N</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____				
3. _____				
4. _____				
<u><5</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: 20' x 20')				
1. -				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2. _____				
3. _____				
4. _____				
5. _____				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: 20' x 20')				
1. <u>Schoenoplectus californicus</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Test is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u>Atriplex prostrata</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Salicornia pacifica</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>	
4. <u>Distichlis spicata</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
5. <u>Bolboschoenus maritimus ssp. paludosus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
6. <u>Polypogon monspeliensis</u>	<u>1</u>	<u>N</u>	<u>FACW</u>	
7. <u>Elymus triticoides</u>	<u><1</u>	<u>N</u>	<u>FAC</u>	
8. _____				
9. _____				
<u>101</u> = Total Cover				
Woody Vine Stratum (Plot size: 20' x 20')				
1. -				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____				
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>1</u> % Cover of Biotic Crust _____				
Remarks: The Data Point is located within the basin of Pond 3. Area dominated by hydrophytic vegetation.				

SOIL

Sampling Point: 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	Black	95	7.5YR 5/8					Black organic layer with redox feature
2-6	10YR 3/1	95	7.5YR 5/8	5	C	M	Silt loam	
6-12	10YR 3/4	90	7.5 YR 5/8	10	C	M	Silt loam	

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

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
Hydric soils present.

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes No **Depth (inches):** _____
 Water Table Present? Yes No **Depth (inches):** 12"
 Saturation Present? Yes No **Depth (inches):** 2"
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Aerial Photos. Previous delineation for Famosa Slough conducted by M&A in 2002 (M&A 2003).

Remarks:
Wetland hydrology present. M&A conducted the delineation on 8/18/23 prior to the arrival of Tropical Storm Hilary which made land fall in San Diego on 8/20/23. M&A revisited the survey area on 8/24/23 to re-assess conditions; during the follow-up survey surface water of approximately 2" was present within the pond.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Famosa Slough City/County: San Diego/San Diego Sampling Date: 8/18/23
 Applicant/Owner: City of San Diego State: CA Sampling Point: 7
 Investigator(s): Amanda K. Gonzales, Kyle L. Ince Section, Township, Range: Unsectioned, Township 16S, Range 3W
 Landform (hillslope, terrace, etc.) Minor Slope Local relief (concave, convex, none): Convex Slope (%): 3
 Subregion (LRR): LRR-C Lat: 32.74866 Long: -117.22899 Datum: WGS84
 Soil Map Unit Name: Made Land NWI classification: Upland

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

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input type="checkbox"/>
Remarks: The Data Point is located on the minor/slight slope of Pond 3. A public trail system is at the top of the slope. Hydrophytic vegetation is present on the slope but hydric soils and wetland hydrology not evident.	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status															
Tree Stratum (Plot size: 5' x 10')																		
1. -				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)														
2.																		
3.																		
4.																		
	<u>0</u>	= Total Cover																
Sapling/Shrub Stratum (Plot size: 5' x 10')																		
1. <i>Vachellia farnesiana</i>	NA	N	FACU	Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Total % Cover of:</td> <td style="text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>5</u></td> <td>x 2 = <u>10</u></td> </tr> <tr> <td>FAC species <u>55</u></td> <td>x 3 = <u>165</u></td> </tr> <tr> <td>FACU species <u>40</u></td> <td>x 4 = <u>160</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>335</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.35</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>5</u>	x 2 = <u>10</u>	FAC species <u>55</u>	x 3 = <u>165</u>	FACU species <u>40</u>	x 4 = <u>160</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>335</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>5</u>	x 2 = <u>10</u>																	
FAC species <u>55</u>	x 3 = <u>165</u>																	
FACU species <u>40</u>	x 4 = <u>160</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>100</u> (A)	<u>335</u> (B)																	
2.																		
3.																		
4.																		
5.																		
	<u><5</u>	= Total Cover																
Herb Stratum (Plot size: 5' x 10')																		
1. <i>Distichlis spicata</i>	40	Y	FAC	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Test is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.														
2. <i>Cynodon dactylon</i>	40	Y	FACU															
3. <i>Elymus triticoides</i>	15	N	FAC															
4. <i>Cressa truxillensis</i>	5	N	FACW															
5.																		
6.																		
7.																		
8.																		
9.																		
	<u>100</u>	= Total Cover																
Woody Vine Stratum (Plot size: 5' x 10')																		
1. -				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>														
2.																		
	<u>0</u>	= Total Cover																
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust _____																
Remarks: The slope is dominated by FAC and FACU grasses. The area failed the Dominance Test and Prevalence Index Worksheet. The area is planted.																		

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Famosa Slough City/County: San Diego/San Diego Sampling Date: 8/18/23
 Applicant/Owner: City of San Diego State: CA Sampling Point: 8
 Investigator(s): Amanda K. Gonzales, Kyle L. Ince Section, Township, Range: Unsectioned, Township 16S, Range 3W
 Landform (hillslope, terrace, etc.) Water Treatment Basin Local relief (concave, convex, none): Concave Slope (%): <1
 Subregion (LRR): LRR-C Lat: 32.74869 Long: -117.22888 Datum: WGS84
 Soil Map Unit Name: Made Land NWI classification: R4EM5

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: The Data Point is located within Pond 2 of the Famosa Slough Water Quality Treatment Basin. The pond is dominated by hydrophytic vegetation and hydric soils and wetland hydrology are present.	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 20' x 30')				
1. -				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2.				
3.				
4.				
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 20' x 30')				
1. -				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2.				
3.				
4.				
5.				
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: 20' x 30')				
1. <i>Jaumea carnosa</i>	50	Y	OBL	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Test is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <i>Salicornia pacifica</i>	50	Y	FACW	
3. <i>Bolboschoenus maritimus</i>	3	N	OBL	
4. <i>Distichlis spicata</i>	1	N	FAC	
5. <i>Elymus triticoides</i>	1	N	FAC	
6.				
7.				
8.				
9.				
	<u>105</u>	= Total Cover		
Woody Vine Stratum (Plot size: 20' x 30')				
1. -				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2.				
	<u>0</u>	= Total Cover		
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust _____		
Remarks: The Data Point is located within the basin of Pond 3. Area dominated by hydrophytic vegetation.				

SOIL

Sampling Point: 8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 2/1	90	10YR 6/8	3	C	M	Silty clay	Black, silty clay
8-12	10YR 4/6	90	10YR 6/8	3	C	M	Clay loam	Yellow/gray redox
			5YR 6/8	1	C	M		Reddish redox

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

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

Hydric soils present.

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes No **Depth (inches):** _____
 Water Table Present? Yes No **Depth (inches):** _____
 Saturation Present? Yes No **Depth (inches):** 4" _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Aerial Photos. Previous delineation for Famosa Slough conducted by M&A in 2002 (M&A 2003).

Remarks:

Wetland hydrology present. M&A conducted the delineation on 8/18/23 prior to the arrival of Tropical Storm Hilary which made land fall in San Diego on 8/20/23. M&A revisited the survey area on 8/24/23 to re-access conditions; during the follow-up survey, saturation was detected.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Famosa Slough City/County: San Diego/San Diego Sampling Date: 8/18/23
 Applicant/Owner: City of San Diego State: CA Sampling Point: 9
 Investigator(s): Amanda K. Gonzales, Kyle L. Ince Section, Township, Range: Unsectioned, Township 16S, Range 3W
 Landform (hillslope, terrace, etc.) Minor Slope Local relief (concave, convex, none): Convex Slope (%): 2
 Subregion (LRR): LRR-C Lat: 32.74851 Long: -117.22946 Datum: WGS84
 Soil Map Unit Name: Made Land NWI classification: Upland

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: The Data Point is located on the minor/slight slope of Famosa Slough. A public trail system is at the top of the slope. Hydrophytic vegetation is present on the slope but hydric soils and wetland hydrology are not evident.	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>5'x20'</u>)				
1. -				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)
2.				
3.				
4.				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>5'x20'</u>)				
1. -				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2.				
3.				
4.				
5.				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'x20'</u>)				
1. <u>Hordeum murinum ssp. glaucum</u>	30	Y	FACU	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Test is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u>Festuca perennis</u>	30	Y	FAC	
3. <u>Distichlis spicata</u>	30	Y	FAC	
4. <u>Cressa truxillensis</u>	10	N	FACU	
5.				
6.				
7.				
8.				
9.				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>5'x20'</u>)				
1. -				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2.				
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust _____		
Remarks: Data point located on the slope of Pond 2. The slope includes upland associated plants but overall the slope is dominated by hydrophytic vegetation. The slope is an extension of the southern coastal salt marsh within the basin of the slough.				



Photo Point 1a. Wetland Determination Sampling Point 1 (shovel) located in the basin floor of Pond 1. Photo date: 8/18/2023. Direction: west. Lat/Long: 32.74826, -117.22930.



Photo Point 1b. Wetland Determination Sampling Point 1. Photo of soil. Photo date: 8/18/2023.



Photo Point 2a. Wetland Determination Sampling Point 2 (shovel) located just above the toe of the basin floor of Pond 1. Photo date: 8/18/2023. Direction: west. Lat/Long: 32.74827, -117.22936.



Photo Point 2b. Wetland Determination Sampling Point 2. Photo of soil. Photo date: 8/18/2023.



Photo Point 3a. Wetland Determination Sampling Point 3 (shovel) located within the swale west of Pond 1. Photo date: 8/24/2023. Direction: north. Lat/Long: 32.74825, -117.22947.



Photo Point 3b. Wetland Determination Sampling Point 3. Photo of soil. Photo date: 8/24/2023.



Photo Point 4a. Wetland Determination Sampling Point 4 (shovel) located within the upper elevational limit of Famosa Slough. Photo date: 8/18/2023. Direction: south. Lat/Long: 32.74852, -117.22952.



Photo Point 4b. Wetland Determination Sampling Point 4. Photo of soil. Photo date: 8/18/2023.



Photo Point 5a. Wetland Determination Sampling Point 5 (shovel) located on the slope, between the basin floor of Famosa Slough and the trail system/Treatment Basin to the south and east. Photo date: 8/18/2023. Direction: west. Lat/Long: 32.74849, -117.22944.



Photo Point 5b. Wetland Determination Sampling Point 5. Photo of soil. Photo date: 8/18/2023.



Photo Point 6a. Wetland Determination Sampling Point 6 (shovel) located within Pond 3. Photo date: 8/18/2023. Direction: west. Lat/Long: 32.74866, -117.22902.



Photo Point 6b. Wetland Determination Sampling Point 6. Photo of soil. Photo date: 8/18/2023.



Photo Point 7a. Wetland Determination Sampling Point 7 (shovel) located on the slope of Pond 3. Photo date: 8/18/2023. Direction: south. Lat/Long: 32.74866, -117.22899.



Photo Point 7b. Wetland Determination Sampling Point 7. Photo of soil. Photo date: 8/18/2023.



Photo Point 8a. Wetland Determination Sampling Point 8 (shovel) located in Pond 2. Photo date: 8/18/2023. Direction: south. Lat/Long: 32.74869, -117.22888.



Photo Point 8a. Wetland Determination Sampling Point 8. Photo of soil. Photo date: 8/18/2023.



Photo Point 9. Wetland Determination Sampling Point 9 (shovel) located on the slope of Pond 2. Photo date: 8/24/2023. Direction: south. Lat/Long: 32.74851, -117.22946.

**APPENDIX E: CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
STREAMBED ALTERATION AGREEMENT NO. 5-189-99**

DEPARTMENT OF FISH AND GAME

South Coast Region
4949 Viewridge Avenue
San Diego, California 92123
(858) 467-4201
FAX (858) 467-4235



December 01, 1999

City Of San Diego
Park and Recreation Department
Attn: Robin Stribley
202 C Street M.S. 35
San Diego, CA 92101

Dear Robin Stribley:

Enclosed is Streambed Alteration Agreement #5-189-99 that authorizes work on the Famosa Slough Enhancement project impacting San Diego River in San Diego County. This action is authorized under Section 1600 of the Fish and Game Code and has been approved by the California Department of Fish and Game. Pursuant to the requirements of the California Environmental Quality Act (CEQA), the Department filed a Notice of Determination (NOD) on the project on 12/1/99. Under CEQA regulations, the project has a 30-day statute of limitations on court challenges of the Department's approval under CEQA.

The Department believes that the project fully meets the requirements of the Fish and Game Code and CEQA. However, if court challenges on the NOD are received during the 30-day period, then an additional review or even modification of the project may be required. If no comments are received during the 30-day period, then any subsequent comments need not be responded to. This information is provided to you so that if you choose to undertake the project prior to the close of the 30-day period, you do so with the knowledge that additional actions may be required based on the results of any court challenges that are filed during that period.

Please contact Terri Dickerson at (949) 363-7538 if you have any questions regarding the Streambed Alteration Agreement.

Sincerely,

C.F. Raysbrook
Regional Manager

Enclosure

cc: Terri Dickerson

CALIFORNIA DEPARTMENT OF FISH AND GAME

330 Golden Shore, Suite 50
Long Beach, California 90802

Notification No. 5-189-99

Page 1 of 5

AGREEMENT REGARDING PROPOSED STREAM OR LAKE ALTERATION

THIS AGREEMENT, entered into between the State of California, Department of Fish and Game, hereinafter called the Department, and Robin Stribley of the City of San Diego: 202 C Street M.S. 35, San Diego, CA 92101: 619-525-8230, State of California, hereinafter called the Operator, is as follows:

WHEREAS, pursuant to Section 1601 of California Fish and Game Code, the Operator, on the 28th day of June, 1999, notified the Department that they intend to divert or obstruct the natural flow of, or change the bed, channel, or bank of, or use material from the streambed(s) of, the following water(s): Famosa Slough, tributary to San Diego River; USGS Map: Point Loma.

WHEREAS, the Department has determined that such operations may substantially adversely affect those existing fish and wildlife resources within Famosa Slough, tributary to San Diego River, specifically identified as follows: Birds: Least Sandpiper, American Avocet, Cinnamon Teal, Northern Shoveler, Snowy Egret, Black-crowned Night Heron, Great Egret, Marbled Godwit, Willet, Black-necked Stilt, Long-billed Curlew, Belding's Savannah Sparrow, Orange-crowned Warbler, Yellow Warbler, Western Tanager, Rails, Common Yellowthroat, Red-winged Blackbird; willows, cattails; and all other aquatic and wildlife resources, including additional riparian vegetation which provides habitat for such species in the area.

THEREFORE, the Department hereby proposes measures to protect fish and wildlife resources during the Operator's work. The Operator hereby agrees to accept the following measures/conditions as part of the proposed work.

If the Operator's work changes from that stated in the notification specified above, this Agreement is no longer valid and a new notification shall be submitted to the Department of Fish and Game. Failure to comply with the provisions of this Agreement and with other pertinent code sections, including but not limited to Fish and Game Code Sections 5650, 5652, 5937, and 5948, may result in prosecution.

Nothing in this Agreement authorizes the Operator to trespass on any land or property, nor does it relieve the Operator of responsibility for compliance with applicable federal, state, or local laws or ordinances. A consummated Agreement does not constitute Department of Fish and Game endorsement of the proposed operation, or assure the Department's concurrence with permits required from other agencies.

This Agreement becomes effective the date of Department's signature and terminates December 31, 2004 for project construction only. This Agreement shall remain in effect for that time necessary to satisfy the terms/conditions of this Agreement.

1. The following provisions constitute the limit of activities agreed to and resolved by this Agreement. The signing of this Agreement does not imply that the Operator is precluded from doing other activities at the site. However, activities not specifically agreed to and resolved by this Agreement shall be subject to separate notification pursuant to Fish and Game Code Sections 1600 et seq.
2. The Operator proposes to alter the streambed to create a three pond (1-acre foot total capacity) storm water treatment wetland, impacting 0.56 acre of stream. Pond one will serve primarily as a sediment retention basin while ponds two and three will serve primarily to remove pollutants. These ponds will be connected by pipes and separated by 12-foot wide berms and flashboard weirs/spillways. Each pond will be planted with cattails. This vegetation will be periodically removed and replaced when pollutants can no longer be absorbed. In addition, pond 1 will be dredged to remove accumulated sediment. During storm events storm water will enter pond 1 and flows beyond capacity will be diverted around the rest of the system via a bypass at the western end of the pond in order to minimize erosional damage.

The project site is located south of interstate 8 near the intersection of West Point Loma Blvd and Famosa Blvd.

3. The agreed work includes activities associated with No. 2 above. The project area is located in the Famosa Slough, tributary to the San Diego River in San Diego County. Specific work areas and mitigation measures are described on/in the plans and documents submitted by the Operator, including "Negative Declaration DEP No. 93-0191", prepared by the city of San Diego and dated July 27, 1993; "Famosa Slough Enhancement Plan" prepared by Pacific Southwest Biological Services and dated November 1993; and shall be implemented as proposed unless directed differently by this agreement.

4. The Operator shall not impact more than 0.4 acre of freshwater marsh and 0.16 acre of southern willow scrub. No additional impacts to the stream shall occur as part of this project. This 0.56 acre area and adjacent disturbed uplands shall be replaced with approximately 1.5 acres of wetlands.

5. The Operator shall submit a Revegetation/Mitigation plan for Department review within 90 days of signing this Streambed Alteration Agreement. The Operator shall receive Department approval prior to project initiation/impacts. The plan shall: identify one or more specific, onsite habitat restoration areas and include enhancement of other identified areas; include a long-term maintenance provision; and include a plant palette. Revegetation shall use only native species.

All mitigation shall be installed within 60 days of project impact and no later than February 28, 2002.

The operator shall also submit a maintenance plan for Department review and approval by March 1, 2002 and prior to conducting any maintenance activities. The plan shall identify the following: time of year and frequency of each maintenance activity; acreage of each vegetative community to be removed and replaced; and strategy to avoid impacts to nesting birds and other fish and wildlife resources during maintenance activities.

6. The Operator shall not remove vegetation within the stream from March 15 to July 15 to avoid impacts to nesting birds.
7. No equipment shall be operated in ponded or flowing areas. When work in a flowing stream is unavoidable, the entire stream flow shall be diverted around the work area by a barrier, temporary culvert, new channel, or other means approved by the Department. Channel bank or barrier construction shall be adequate to prevent seepage into or from the work area. Channel banks or barriers shall not be made of earth or other substances subject to erosion unless first enclosed by sheet piling, rock riprap, or other protective material. The enclosure and the supportive material shall be removed when the work is completed and removal shall normally proceed from downstream in an upstream direction.
8. Disturbance or removal of vegetation shall not exceed the limits approved by the Department. The disturbed portions of any stream channel shall be restored. Restoration shall include the revegetation of stripped or exposed areas with vegetation native to the area.
9. Installation of bridges, culverts, or other structures shall be such that water flow is not impaired. Bottoms of temporary culverts shall be placed at stream channel grade; bottoms of permanent culverts shall be placed at or below stream channel grade.
10. Preparation shall be made so that runoff from steep, erodible surfaces will be diverted into stable areas with little erosion potential. Frequent water checks shall be placed on dirt roads, cat tracks, or other work trails to control erosion.
11. Water containing mud, silt or other pollutants from aggregate washing or other activities shall not be allowed to enter a lake or flowing stream or placed in locations that may be subjected to high storm flows.
12. Structures and associated materials not designed to withstand high seasonal flows shall be removed to areas above the high water mark before such flows occur.
13. The perimeter of the work site shall be adequately flagged to prevent damage to adjacent riparian habitat.
14. Staging/storage areas for equipment and materials shall be located outside of the stream.
15. The Operator shall comply with all litter and pollution laws. All contractors, subcontractors and employees shall also obey these laws and it shall be the responsibility of the operator to ensure compliance.
16. If a stream's low flow channel, bed or banks/lake bed or banks have been altered, these shall be returned as nearly as possible to their original configuration and width, without creating future erosion problems.
17. All planting shall be done between October 1 and April 30 to take advantage of the winter rainy season.

18. All planting shall have a minimum of 80% survival the first year and 100% survival thereafter and/or shall attain 75% native cover after 3 years and 90% native cover after 5 years for the life of the project. If the survival and cover requirements have not been met, the Operator is responsible for replacement planting to achieve these requirements. Replacement plants shall be monitored with the same survival and growth requirements for 5 years after planting. Also, if the Department concludes that all five year survival/cover requirements are met in three years no further monitoring shall be required.
19. An annual report shall be submitted to the Department by Jan. 1 of each year for 5 years after planting. This report shall include the survival, % cover, and height of both tree and shrub species. The number by species of plants replaced, an overview of the revegetation effort, and the method used to assess these parameters shall also be included. Photos from designated photo stations shall be included.
20. Access to the work site shall be via existing roads and access ramps.
21. Spoil sites shall not be located within a stream/lake, where spoil shall be washed back into a stream/lake, or where it will cover aquatic or riparian vegetation.
22. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances which could be hazardous to aquatic life, resulting from project related activities, shall be prevented from contaminating the soil and/or entering the waters of the state. These materials, placed within or where they may enter a stream/lake, by Operator or any party working under contract, or with the permission of the Operator, shall be removed immediately.
23. No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or washings thereof, oil or petroleum products or other organic or earthen material from any construction, or associated activity of whatever nature shall be allowed to enter into or placed where it may be washed by rainfall or runoff into, waters of the State. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any stream or lake.
24. No equipment maintenance shall be done within or near any stream channel where petroleum products or other pollutants from the equipment may enter these areas under any flow.
25. No direct or indirect impacts shall occur to any threatened or endangered species. If any threatened or endangered species could be impacted by the work proposed, the Operator shall obtain the required state and federal threatened and endangered species permits.
26. The Operator shall **provide a copy of this Agreement to all contractors, subcontractors, and the Operator's project supervisors. Copies of the Agreement shall be readily available at work sites at all times during periods of active work** and must be presented to any Department personnel, or personnel from another agency upon demand.

27. The Department reserves the right to enter the project site at any time to ensure compliance with terms/conditions of this Agreement.

28. The Operator shall notify the Department, in writing, at least five (5) days prior to initiation of construction (project) activities and at least five (5) days prior to completion of construction (project) activities. Notification shall be sent to the Department at 330 Golden Shore, Suite 50, Long Beach, CA 90802, Attn: ES.

29. It is understood the Department has entered into this Streambed Alteration Agreement for purposes of establishing protective features for fish and wildlife. The decision to proceed with the project is the sole responsibility of the Operator, and is not required by this agreement. It is further agreed all liability and/or incurred cost related to or arising out of the Operator's project and the fish and wildlife protective conditions of this agreement, remain the sole responsibility of the Operator. The Operator agrees to hold harmless the State of California and the Department of Fish and Game against any related claim made by any party or parties for personal injury or any other damages.

30. The Department reserves the right to suspend or cancel this Agreement for other reasons, including but not limited to the following:

- a. The Department determines that the information provided by the Operator in support of the Notification/Agreement is incomplete or inaccurate;
- b. The Department obtains new information that was not known to it in preparing the terms and conditions of the Agreement;
- c. The project or project activities as described in the Notification/Agreement have changed;
- d. The conditions affecting fish and wildlife resources change or the Department determines that project activities will result in a substantial adverse effect on the environment.

CONCURRENCE

(Operator's name)

California Dept. of Fish and Game

Robin Stubble 11-9-99
(signature) (date)

C. Raysbrook 12/1/99
(signature) (date)

Senior Planner, Natural Resources
City of San Diego, Park & Recreation
(title)

Regional Manager
(title)

Prepared by: Mike Landers

**APPENDIX E: CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE LETTER DATED JANUARY 19, 2011 REGARDING:
CONTINUED APPLICABILITY OF EXISTING STREAMBED ALTERATION AGREEMENT FOR ONGOING MAINTENANCE OF
THE FAMOSA SLOUGH TREATMENT WETLAND BASINS NOTIFICATION NO. 5-189-99**



State of California –The Natural Resources Agency
DEPARTMENT OF FISH AND GAME
South Coast Region
4949 Viewridge Avenue
San Diego, CA 92123
(858) 467-4201
www.dfg.ca.gov

EDMUND G. BROWN, JR., Governor
JOHN McCAMMAN, Director



January 19, 2011

Mr. Keith Merkel
Merkel & Associates, Inc.
5434 Ruffin Road
San Diego, California 92123

Subject: Continued Applicability of Existing Streambed Alteration Agreement for Ongoing Maintenance of the Famosa Slough Treatment Wetland Basins
Notification No. 5-189-99

Dear Mr. Merkel:

The purpose of this letter is to verify the continuing applicability of Streambed Alteration Agreement #5-189-99 to the maintenance of the Famosa Slough Treatment Wetlands, as directed by the *Operations, Maintenance & Monitoring Plan for the Famosa Slough Treatment Wetland* prepared by Merkel & Associates, Inc., and dated December 2001.

The construction of the Famosa Slough Treatment Wetland was a project jointly funded by grants from EPA administered by the State Water Resources Control Board acting through the Regional Water Quality Control Board and funding provided by the U.S. Fish and Wildlife Service Bays and Estuaries Program. The intent of this facility is to trap sediment and improve water quality entering Famosa Slough from various storm drains. From the time the project was designed, it was acknowledged by the City, the Department, and other resource and regulatory agencies that it would be constructed as a functional wetland specifically intended to serve as a treatment system and that it would require periodic maintenance in the form of vegetation harvesting and sediment removal to sustain the intended function.

The project impacted 0.4 acre of freshwater marsh and 0.16 acre of southern willow scrub and resulted in a total of approximately 1.5 acres of wetlands, a net gain of 0.94 acre of wetlands. The mitigation required by the Streambed Alteration Agreement took into account the periodic maintenance of the basins, and consisted of planting approximately 0.35 acre of riparian habitat located along the pond containment berms and within non-maintenance wetland areas that were created by the grading of the wetland treatment basins, and planting the maintained areas with a mix of cattails and bulrush.

Streambed Alteration Agreement #5-189-99 became effective on December 1, 1999 and expired December 31, 2004 for project construction only. The Agreement remains

Mr. Keith Merkel
January 19, 2011
Page 2 of 2

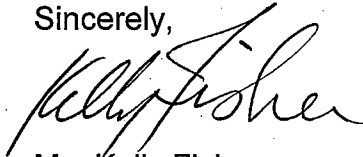
in effect for the time necessary to satisfy the terms/conditions of the Agreement. Because the Department noted the maintenance as a term of the Agreement and required the submittal of the maintenance plan as an element of the Agreement, the implementation of the maintenance in accordance with the plan remains authorized by the Agreement and no further Agreement is required to complete the maintenance.

Please note that this authorization applies only to maintenance activities described in the submitted maintenance plan, and that any work not so described may require a new Notification to the Department pursuant to Section 1600 *et seq.* of the Fish and Game Code.

I hope this clarifies the applicability of Streambed Alteration Agreement #5-189-99 to the present and future maintenance work. Please attach a copy of this letter to your Agreement, and ensure that a copy of the Agreement and this letter are readily available at the work site at all times during periods of active work.

Please contact me at (858) 467-4207 or kfisher@dfg.ca.gov if you have any questions regarding this letter.

Sincerely,

A handwritten signature in black ink that reads "Kelly Fisher". The signature is written in a cursive style with a large initial "K".

Ms. Kelly Fisher
Environmental Scientist