

# **ATTACHMENT 2**

**Delineation of Waters of the US and the State  
of California (Merk, 2016)**

**SOUTH SAN LUIS OBISPO COUNTY SANITATION  
DISTRICT WASTEWATER FACILITY  
REDUNDANCY PROJECT**

**DELINEATION OF WATERS OF THE UNITED STATES  
AND STATE OF CALIFORNIA**



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## **1.0 INTRODUCTION**

Kevin Merk Associates, LLC (KMA) conducted a delineation of potential waters of the United States and State of California on the South San Luis Obispo County Sanitation District's (SSLOCSD) Wastewater Facility Redundancy Project study area. The Wastewater Facility is situated in the south coast of San Luis Obispo County in the town of Oceano, California (Please refer to Figures 1 and 2). The site is located at 1600 Aloha Place, west of the Oceano County Airport, north of Arroyo Grande Creek and east of the Pacific Ocean. The town of Oceano is located to the north and northwest of the site.

The investigation was conducted on an approximately 11.5 acre study area, including the fenced and developed portions of the site, as well as the undeveloped areas along the western and southern edges of the property. The purpose of the delineation was to evaluate the extent of wetland and riparian habitat subject to Sections 404 and 401 of the Clean Water Act and Section 1600 et seq. of the California Fish and Game Code. In addition, the investigation evaluated onsite habitats to determine if they meet the definition as Environmentally Sensitive Habitat pursuant to the California Coastal Act.

The delineation was conducted to determine the location and extent of area within the study area boundaries that meet the jurisdictional criteria for the following federal and state agencies:

- U.S. Army Corps of Engineers (Corps) criteria as waters of the United States, including wetlands, pursuant to Section 404 of the Clean Water Act (1972);
- Regional Water Quality Control Board (RWQCB) jurisdiction under Section 401 of the Clean Water Act, and under the Porter-Cologne Water Quality Act;
- California Department of Fish and Wildlife (CDFW) jurisdiction, under the California Fish and Game Code Section 1600 et seq.; and,
- California Coastal Commission and the County of San Luis Obispo pursuant to the California Coastal Act and Local Coastal Plan (LCP) criteria as Environmentally Sensitive Habitat Area (ESHA).

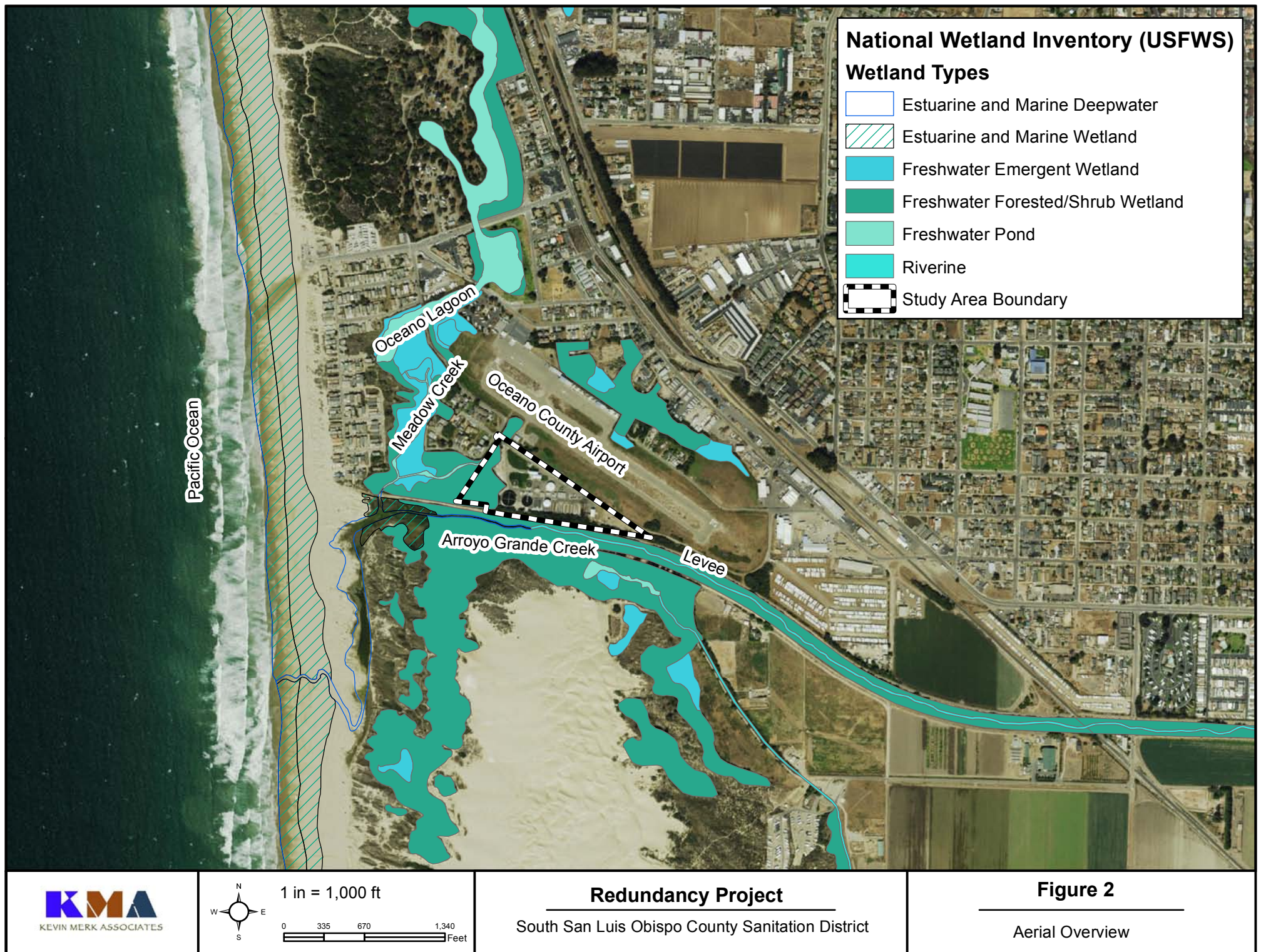
The Redundancy Project would construct a secondary clarifier and aeration tank within the existing footprint of the Wastewater Facility, to provide system redundancy necessary to ensure compliance with current and future treatment standards. All aspects of the project will occur within and adjacent to the existing facilities, within the fenced and developed portions of the site.

The preliminary jurisdictional determination used standard Corps methodology as detailed in Section 3.0 to identify federal and state boundaries. KMA also reviewed relevant background documents, recent and historic aerial photographs of the site, regional and site-specific topographic maps, and U.S. Department of Agriculture soils data to better characterize the nature and extent of potential regulatory agency jurisdiction within the study area. The findings included in this report are subject to review by the affected agencies and should be submitted to the Corps, CDFW, RWQCB, and CCC for verification as needed during the environmental review and future permitting phases of the project.









## **2.0 REGULATORY OVERVIEW AND DEFINITIONS**

### **2.1 Federal Regulatory Authority**

The U.S. Army Corps of Engineers (Corps), under provisions of Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act, has jurisdiction over “waters of the United States” and authorization to issue permits for the discharge of dredge or fill material into “waters of the U.S.” “Waters of the U.S.” are defined to include: all waters used in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide; all interstate waters and wetlands; all other waters such as intrastate lakes, rivers, streams, mudflats, sandflats, wetlands, sloughs, wet meadows, playa lakes, or natural ponds, that could affect interstate or foreign commerce; all impoundments of waters otherwise defined as “waters of the U.S.”; tributaries of waters otherwise defined as “waters of the U.S.”; territorial seas; and wetlands adjacent to “waters of the U.S.”

Waters generally not considered to be Corps-jurisdictional include non-tidal drainage and irrigation ditches excavated on dry land, artificially-irrigated areas, artificial lakes or ponds excavated on dry land used for irrigation or stock watering, small artificial water bodies such as swimming pools, and water filled depressions (51 Fed. Reg. 41, 217 1986).

In 2001, the Supreme Court (*Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*) ruled that the Corps exceeded its statutory authority by asserting Clean Water Act jurisdiction over “an abandoned sand and gravel pit in northern Illinois, which provides habitat for migratory birds.” The Supreme Court determined that “non-navigable, isolated, intrastate” waters were not subject to federal jurisdiction based solely on the use of such waters by migratory birds (i.e., solely invoking the “Migratory Bird Rule” was insufficient justification) (Guzy/Anderson 2001).

The Supreme Court further addressed the extent of the Corps’ jurisdiction in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (June 19, 2006), referred to as “*Rapanos*.” In *Rapanos*, a sharply-divided Court issued multiple opinions, none of which garnered the support of a majority of Justices. This created substantial uncertainty as to which jurisdictional test should be used in routine jurisdictional determinations. The Ninth Circuit Court of Appeal, which encompasses California, answered this in *Northern California River Watch v. City of Healdsburg* (August 11, 2006). In this case, the Court held that Justice Kennedy’s opinion in *Rapanos* provided the controlling rule of law. Under that rule, wetlands or other waters that are not in fact navigable are subject to Corps jurisdiction if they have “a (significant nexus) to waters that are navigable in fact.” Presence of a “significant nexus” must be decided on a case-by-case basis, depending on site-specific circumstances. The U.S. Environmental Protection Agency (EPA) and Corps subsequently developed an instructional guidebook on how to apply these rulings for all future jurisdictional determinations (U.S. Army Corps of Engineers and U.S. EPA 2007), and a memorandum providing guidance to implement the Supreme Court’s decision in *Rapanos* (Grumbles and Woodley 2007).

Waters of the U.S. determined by KMA to be under the jurisdiction of the EPA and Corps under the Clean Water Act have thus conformed to the instructional guidebook and memorandum providing guidance to implement the U.S. Supreme Court’s decision in *Rapanos*. Delineated wetland features that are not adjacent to (i.e., bordering, contiguous, or neighboring) a traditional navigable water (TNW) or abutting a relatively permanent water (RPW) that is tributary to a TNW are not likely to be subject to federal jurisdiction and are thus determined to not be subject to federal jurisdiction. It is advised to note that the U.S. Supreme Court determined that jurisdictional waters of the U.S. shall

be determined on a case-by-case basis, by the Corps (and EPA), based on a determination of whether a particular wetland or “other water” has a “significant nexus” to a TNW.

To summarize, the jurisdictional status determination for a potential waters of the U.S. feature was evaluated in accordance with the Rapanos guidance as follows. If the feature did not have a hydrologic surface connection to a TNW (e.g., a seasonally inundated wetland abuts an RPW and subject RPW conveys surface water to a TNW) or did not demonstrate a “significant nexus” to a TNW, it was not considered subject to federal jurisdiction. This report describes the observed features that exhibit the physical characteristics of wetlands or other waters and documents the maximum areal extent of such features that may qualify as “waters of the United States” and be subject to Corps jurisdiction.

## **2.2 State Regulatory Agencies**

The federal rulings discussed above do not alter the extent of State jurisdiction over “waters of the State” (which are subject to Regional Water Quality Control Board jurisdiction), “rivers, lakes or streams” subject to California Department of Fish and Wildlife jurisdiction, and areas subject to the California Coastal Act. State regulatory authority over wetlands and other waters are discussed below.

### ***Regional Water Quality Control Board***

The State Water Resources Control Board and nine Regional Water Quality Control Boards regulate discharges of fill and dredged material in California, under Section 401 of the Clean Water Act, and under the State Porter-Cologne Water Quality Control Act, through the State Water Quality Certification Program. State Water Quality Certification is necessary for all projects that require a Corps permit, or fall under other federal jurisdiction, and have the potential to impact waters of the State. Waters of the State are defined by the Porter-Cologne Act as: “. . . any surface water or groundwater, including saline waters, within the boundaries of the state.”

In order for a Section 404 permit to be valid, Section 401 of the Clean Water Act requires a Water Quality Certification or waiver to be obtained. The Water Quality Certification (or waiver) determines that the permitted activities will not violate water quality standards individually or cumulatively over the term of the action. Water quality certification must be consistent with the requirements of the Federal Clean Water Act, California Environmental Quality Act (CEQA), California Endangered Species Act, and Porter-Cologne Act.

### ***California Department of Fish and Wildlife***

The CDFW has regulatory authority over any work within rivers, lakes and streams in the State of California (California Fish and Game Code Sections 1601-1603) on public, private and agricultural lands. Features that are regulated by the CDFW include all rivers, streams, or lakes including man-made watercourses with or without wetlands, if they contain a definable bed and bank and support fish or wildlife resources or contribute to that support. The riparian vegetation associated with the rivers, streams, and lakes is also typically included within CDFW jurisdiction.

### ***California Coastal Commission***

The California Coastal Commission, in partnership with coastal cities and counties, plans and regulates the use of land and water in the coastal zone. The Coastal Act includes specific policies (see Division 20 of the Public Resources Code) that address issues, including terrestrial and marine habitat protection. The policies of the Coastal Act constitute the statutory standards applied to



planning and regulatory decisions made by the CCC and by local governments, pursuant to the Coastal Act. Because a CCC-approved Local Coastal Program is in place, the County of San Luis Obispo issues permits for development or projects within the coastal zone area under its jurisdiction.

The CCC, with the assistance of CDFW, is responsible for determining the presence of wetlands subject to regulation under the Coastal Act. The CDFW as stated above essentially relies on the USFWS wetland definition and classification system (Cowardin et al., 1979, *Classification of Wetlands and Deep Water Habitats of the United States*), with some minor changes in classification terminology, as the methodology for wetland determinations. The CDFW and the CCC require the presence of only one wetland parameter (e.g., hydrology, hydric soils, or hydrophytic vegetation) for an area to qualify as a wetland. Section 30121 of the California Coastal Act (1976), the statute governing the CCC, broadly defines wetlands as:

*"Lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, or fens."*

However, the CCC Administrative Regulations (Section 13577 (b)) provides a more explicit definition:

*"Wetlands are lands where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent or drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salt or other substance in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deepwater habitats."*

Habitats containing sensitive plant or animal species, or dominated by wetland and/or riparian plants or native grasses are also typically regulated by the CCC as Environmentally Sensitive Habitat Areas (ESHAs) as defined in the California Coastal Act of 1976.

The Coastal Act defines ESHA as "any area in which plant or animal life or their habitats are either rare or especially valuable because of their nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments." Under this definition, unique plant habitats; rare and endangered animal habitats; wetlands; coastal streams; rocky points; intertidal areas; and kelp beds are typically considered ESHA.

## **2.3 Local Regulatory Authority**

The South San Luis Obispo County Sanitation District is the Lead Agency for the project. The California Coastal Act established a comprehensive plan to protect resources and regulate development along California's coast, and requires every city and county located partly or wholly within the designated Coastal Zone to prepare a Local Coastal Program (LCP), which is reviewed and certified by the California Coastal Commission. The San Luis Obispo County Local Coastal Program (LCP) as certified by the CCC, provides the guidelines and policies for development and use of coastal resources in the area per California Coastal Act requirements.

## 2.4 Federal Criteria for Wetlands and Other Waters

**Hydrophytic vegetation** occurs in areas where frequency and duration of inundation and/or soil saturation exerts a primary controlling influence on plant species composition. Plant species are assigned a wetland indicator status according to the probability of occurrence in wetlands. More than fifty percent of the dominant plant species must have a wetland indicator status of Facultative, Facultative Wetland, or Obligate Wetland to meet the hydrophytic vegetation criterion. The National Wetland Plant List: 2016 Wetland Ratings (NWPL), separates vascular plants into the following four basic categories based on plant species frequency of occurrence in wetlands:

- Obligate wetland (OBL). Occur almost always (estimated probability >99%) under natural conditions in wetlands.
- Facultative Wetland (FACW). Usually occur in wetlands (estimated probability 67%-99%), but occasionally found in non-wetlands.
- Facultative (FAC). Equally likely to occur in wetlands or non-wetlands (estimated probability 34%-66%).
- Facultative Upland (FACU). Usually occur in non-wetlands (estimated probability 67%-99%), but occasionally found in wetlands (estimated probability 1%-33%).
- Obligate Upland (UPL). May occur in wetlands in another region, but occur almost always (estimated probability >99%) under natural conditions in non-wetlands in the region specified.

An area is considered to have hydrophytic vegetation when greater than 50 percent of the dominant species in each vegetative stratum (tree, shrub, and herb) are assigned with the FAC, FACW, and/or OBL status categories. Any species not appearing on the current NWPL is assumed to be an upland species, which almost never occurs in wetlands (<1%).

**Hydric soils** occur in areas that are saturated and/or inundated for a sufficient duration during the growing season to develop anaerobic or reducing conditions. Sufficient duration cannot be defined due to the vast differences in chemistry and mineral composition in soils from site to site and region to region, but can be as short as two weeks during the growing season. Field indicators of hydric soils include, but are not limited to observation of redoximorphic features (e.g., concentrations of oxidized minerals such as iron) and detection of hydrogen sulphide gas. Documentation of a soil as hydric must be verified in the field.

**Wetland hydrology** typically occurs in areas subject to inundation and/or soil saturation with a frequency and duration long enough to cause the development of hydric soils and plant communities dominated by hydrophytic vegetation. If direct observation of wetland hydrology is not possible (as in seasonal wetlands) or records of wetland hydrology are not available (such as stream gauges), assessment of wetland hydrology is frequently supported by primary and secondary indicators such as surface soil cracks and drainage patterns.

**Ordinary High Water Mark (OHWM)** is the line on the shore or bank of a feature that is established by fluctuations and/or flow of water. The OHWM is located through examination of physical characteristics such as a clear natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, and other appropriate physical characteristics that consider the nature of the surrounding area.

### **3.0 METHODS**

KMA principal biologist Kevin Merk and senior biologist Bob Sloan conducted the delineation of potential Corps “waters of the United States,” CCC and RWQCB “waters of the State,” and CDFW jurisdictional areas on the study area in May 2016. The delineation followed the routine methodology as detailed in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and refined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0; U.S. Army Corps of Engineers 2008).

The *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin 1979) and *Wetlands of the Central and Southern California Coast and Coastal Watershed: A Methodology for Their Classification* (Ferren et al. 1995) were also utilized to assist in characterizing on-site wetlands, other waters, and other potential jurisdictional areas. In addition, KMA reviewed recent and historical aerial photographs of the study area (ESRI, Google Earth), the U.S. Geological Survey (USGS) Oceano, California 7.5-minute topographic quadrangle (USGS 1993), the *Soil Survey for San Luis Obispo County, Coastal Part, California* (National Resources Conservation Service), and the Hydric Soils List for San Luis Obispo County, California to analyze the nature and extent of potential jurisdictional areas on the site.

All potential waters of the U.S. within the study area were mapped based on the presence of positive indicators for hydrophytic vegetation, hydric soils and wetland hydrology for wetlands, and presence of an OHWM pursuant to Corps regulations (33 CFR 328.3 and 33 CFR 328.4) for other waters. The final determination of potential waters of the U.S. within the site was based on the presence of three parameter wetlands with hydrologic connectivity to a TNW or RPW. CDFW jurisdiction was determined based on the extent of the bed, bank, and associated riparian vegetation of drainages within the project area. The presence of a single wetland parameter, such as a predominance of wetland plants and/or the presence of hydric soils or hydrology indicators was employed to determine the extent of CCC jurisdiction under the California Coastal Act.

Data observation points were placed in representative potential wetland features and adjacent upland areas to characterize the boundaries of federal and State jurisdiction (i.e., identify the wetland edge). This examination utilized the Arid West wetland data forms to characterize the presence or absence of wetland criteria on-site. Information recorded at each data point location included plant species composition (to determine the presence/absence of hydrophytic vegetation), presence/absence of indicators of wetland hydrology, and in areas containing potential wetland habitat, indicators of hydric soils in accordance with *Field Indicators of Hydric Soils in the United States* (U.S. Department of Agriculture, Natural Resources Conservation Service 2006). A soil pit was excavated at each data observation point to examine the soil for positive indicators of hydric soils and wetland hydrology. Soil pits were excavated to a depth of 12-16 inches during the delineation. Hydric soils were presumed absent in areas devoid of hydrophytic vegetation and lack of direct observation of any hydrologic indicators. Evidence of wetland hydrology was evaluated in the field, based on presence or absence of observable indicators, such as saturated soils in the upper 18 inches and the presence of oxidized rhizospheres. Colors of moist soils and redoximorphic features were compared with the Munsell® soil color chart and recorded on wetland determination data forms.

A data point was considered to be within a Corps-defined wetland (an “in” point) if the area contained all three wetland parameters (i.e., criteria), which included a dominance of wetland plant



species, positive wetland hydrology indicators, and presence of hydric soil indicators. If one or more of these parameters was not met, the area was considered to not be within a Corps-defined wetland. Areas containing only one of the wetland criteria, such as the predominance of hydrophytes (i.e.: greater than 50% of wetland plants), positive indicators of hydric soils, or wetland hydrology were sufficient to meet the CCC/County LCP one parameter wetland criterion.

### **3.1 Jurisdictional Mapping**

Federal and State jurisdictional features including tops of banks, OWHMs (per the *Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region*), extent of hydric vegetation, culvert inlets and outlets, and adjacent or in-stream wetland boundaries were mapped where present during the field investigation, using a Trimble Geo XH 6000 Global Positioning System (GPS) unit capable of decimeter accuracy. Jurisdictional polygons were plotted on an aerial photograph of the project area. Perimeters of jurisdictional areas were mapped at the interface between jurisdictional indicators and dominant upland characteristics.

## **4.0 RESULTS**

### **4.1 Summary**

Wetland and riparian habitats were identified and mapped along the western and southern portion of the study area. Features observed included Corps (or USACE) wetland waters, CDFW/RWQCB top of bank and limits of riparian habitat, and CCC wetland ESHA and riparian ESHA boundaries. Three sample points were established along a transect located on the western edge of the study area to characterize the nature of the site. Two additional data points were situated on the southern edge of the site to riparian habitat near the study area growing on the Arroyo Grande Creek levee. Observations noted at data points are summarized below. Additional sample points were considered unnecessary due to the clearly defined and developed conditions within the fenced facility, the dominant cover of willow trees outside the fence, and the levee that separates the southern edge of the site from Arroyo Grande Creek.

Please refer to Figures 1 and 2 for site location information and study area boundaries. Figure 3 is a soils map illustrating the soil map units present in the area, and Figure 4 is the wetland delineation map, which identifies data point locations and illustrates the extent of Corps, RWQCB, CDFW, and CCC jurisdictional areas onsite. Appendix A contains the Wetland Determination Data Forms, and Appendix B provides a photo plate with representative photographs of the study area. The following provides a summary of observations made at each data point.

Data Point #1 documents conditions at the western portion of the site, at the fenceline within the active portion of the Facility. The area consisted of bare soils and base rock with little to no vegetative. Immediately adjacent to the fence were planted sycamore and oak trees, with small inclusions of willow and native vines at the edge of the sample area. This point contained bare sandy clay fill soils, with gravels and some larger cobbles also present. The soil did not meet the hydric soil criteria. The point location is within the 100-year flood zone, but did not exhibit any positive indicators of wetland hydrology.

Data Point #2 documents conditions at the top of a small earthen berm that generally forms the top of bank of the wetland associated with the Oceano Lagoon system, including a small roadside channel along Aloha Place. Vegetative cover consisted of a dense canopy of arroyo willows and

vines (creek Clematis and blackberry) rooted in the riparian area behind the planted sycamore trees. This point contained a layer of leaf litter above dry, single grain sand. No hydric soil indicators were observed, and therefore, did not meet the hydric soil criterion. The location could potentially flood under extreme ponding conditions in the Oceano Lagoon following large storm events, but did not exhibit any evidence of wetland hydrology during the investigation.

Data Point #3 documents conditions within the bottomlands associated with the Oceano Lagoon including hydrologic input from the small roadside channel along Aloha Place. Vegetative cover consisted of a dense canopy of arroyo willows and vines rooted in the riparian area, and a small amount of California bulrush in the lowest portion of the channel. This point contained a layer of leaf litter above moist sandy loam and sandy clay soils, with faint redoximorphic features present in the lower horizon. The soil did not meet any hydric criteria as described in the Arid West Manual, but is assumed to function as a hydric soil due to location, vegetation, prolonged saturation and adjacency to ponded water. The location contained standing water within the sample area, and is expected to contain flowing and ponded water on a seasonal basis.

Data Point #4 documents conditions on the southern side of the facility, between the fenceline and the outer edge of the levee berm. Vegetative cover consisted of a mixed canopy of Monterey cypress and arroyo willow. This point contained dry sandy and clayey soils with gravels (likely associated with the construction of the levee), and did not meet any hydric criteria. The location is within the 100-year flood zone, but did not exhibit any evidence of ponding or flowing water during the investigation, and therefore, no positive indicators of wetland hydrology were present.

Data Point #5 documents conditions within the facility fence, on the southern side of the facility, opposite Data Point 4. No vegetation was rooted in or near the data point. Vegetative cover consisted primarily of Monterey cypress canopy with a small amount of arroyo willow branches hanging over the fence. This point contained dry sandy clay fill soils with gravels and cobbles, and did not meet any hydric criteria. The location is within the 100-year flood zone, but did not exhibit any positive evidence of wetland hydrology.

## **4.2 Site Overview**

The facility is located at 1600 Aloha Place, between the Oceano Airport to the north and Arroyo Grande Creek to the south. Residential development is located to the north and northwest, and the Pacific Ocean and coastal dunes are located to the west. The site is relatively flat ranging between 10 and 15 feet above mean sea level, and is situated in the northwestern portion of the U.S.G.S. Oceano 7.5-minute topographic quadrangle. The fenced portion of the facility consists of developed areas including pavement, base rock, structures, and equipment storage areas associated with operation and maintenance of the facility. Small areas of landscape trees and shrubs, and two lawn areas are present around existing structures. The northern site boundary separating the site from the airport contains ornamental plantings of rosemary and arroyo willow for visual screening. Scattered occurrences of weedy annual plants are present along fence lines and stockpile areas. Landscape trees are also scattered throughout the site and along the margin of the facility. A roadside ditch along Aloha Place collects runoff from the surrounding neighborhood and airport, and directs it along the northern edge of the study area into the Oceano Lagoon and Meadow Creek system.

Areas outside the fence along the western and southern sides of the facility are dominated by native riparian habitat associated with the eastward extent of the confluence of Meadow Creek and Arroyo

Grande Creek. The construction of flood control structures including the levee and flood gate controlling the confluence of Meadow Creek and Arroyo Grande Creek has affected the historic flow regime in the area, creating the Oceano Lagoon and areas of ponded surface water to the northwest of the plant. Given shallow groundwater in the vicinity, arroyo willow riparian scrub is able to persist along the outside of the levee confining Arroyo Grande Creek as well as in topographic low areas surrounding the site. As shown on Figures 2 and 4, Arroyo Grande Creek is separated from the facility by a constructed levee and maintenance road.

The region is characterized as a Mediterranean climate with mild, wet winters and warm, dry summers. Due to the site's proximity to the Pacific Ocean, daily temperatures do not fluctuate as much as the County's interior north or east of the Santa Lucia Mountains. Average annual temperature is approximately 58 degrees Fahrenheit, and annual precipitation in the Oceano area is approximately 17 inches depending on location (Western Regional Climate Center and National Oceanic and Atmospheric Administration, 2016). Most of the rainfall occurs between November and March with a small amount attributed to coastal fog during the summer months.

#### **4.3 Vegetation**

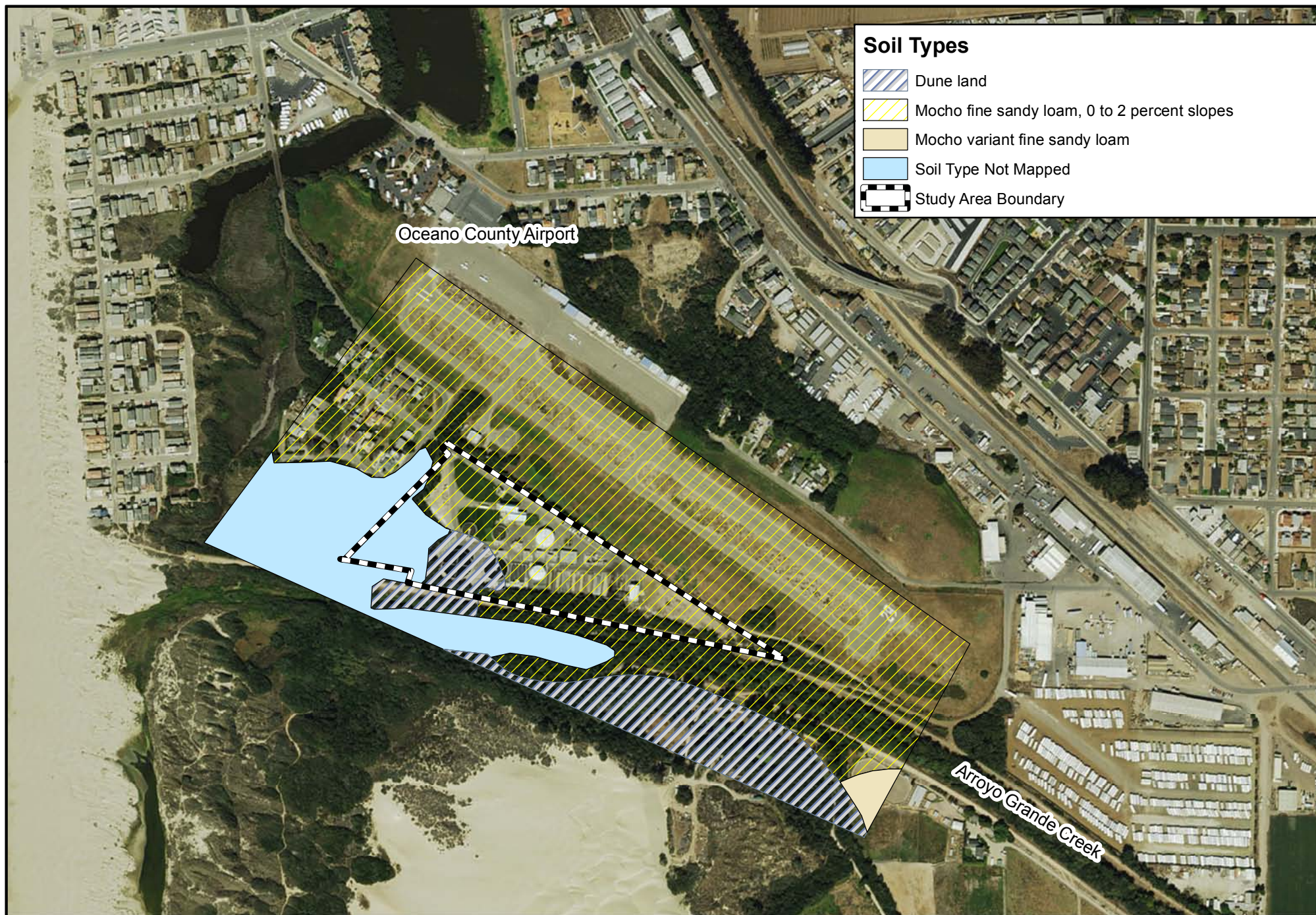
The developed portion of the facility does not contain any naturally occurring native vegetation and consists of pavement, concrete, structures, and treatment facilities including machinery used during daily operations. The riparian habitat located outside the fences along the southern and western sides are dominated by arroyo willow (*Salix lasiolepis*- FACW), California blackberry (*Rubus ursinus*- FAC), and virgin's bower or creek clematis (*Clematis ligusticifolia*- FAC), creating a dense cover over the ground surface. A row of planted western sycamore (*Platanus racemosa* - FAC) and coast live oak (*Quercus agrifolia* - UPL) trees are present along the western fenceline near the entrance. The investigation found an area of shallow ponded water containing California bulrush (*Schoenoplectus californicus*- OBL) along the western site boundary along Aloha Place (see Data Point 3). This area appears to be a remnant channel or topographic low area associated with the greater Arroyo Grande Creek and Meadow Creek confluence.

The northern fence line separating the site from the adjacent Oceano Airport contains a mix of planted rosemary (*Rosmarinus officinalis* - UPL), coast live oak, and arroyo willows, all planted as landscape trees and shrubs along the property boundary to aid in screening the plant from surrounding areas. The adjacent areas on airport property are dominated by annual non-native upland plants including slender wild oat (*Avena barbata* - UPL), perennial mustard (*Hirschfeldia incana* - UPL), and Italian thistle (*Carduus pycnocephalus* - UPL). Patches of arroyo willow are also present in the general area in topographic low points persisting due to shallow groundwater.

#### **4.4 Soils**

The NRCS identified two soil map units as occurring on the study area, which included Mocho fine sandy loam, 0-2 percent slopes, and Dune land. The two soil map units are not listed as hydric soils by the NRCS California Hydric Soils List for San Luis Obispo County, although both can have hydric inclusions. The Mocho fine sandy loam is a well drained nearly level soil on alluvial fans and plains. Dune land consists of hilly areas along the coast that are composed of sand-sized particles that shift with the wind.







The upper 12-16 inches of the soil profile were examined at five sample points to determine presence or absence of positive indicators for hydric soils, and to determine if the soil map units mapped and described by the NRCS were consistent with observed soil characteristics. Below are brief characterizations of the two soil map units identified within the study area.

Mocho fine sandy loam, 0-2 percent slopes, is a very deep, excessively drained, nearly level soil found on alluvial fans and plains, formed in alluvium weathered from sedimentary rocks. The surface layer is typically brown (10YR 4/3 to 5/3 moist) fine sandy loam approximately 18 inches thick. Underlying material is pale brown (10YR 6/3 moist) silty clay loam to a depth of approximately 45 inches. The profile is moderately alkaline and calcareous. Permeability of Mocho fine sandy loam is moderately slow, and available water capacity is moderate. Surface runoff is slow, with slight to moderate water erosion hazard and moderate hazard of soil blowing.

Dune Land soils are found on beach dunes and hilly areas along the coast, and consist of sand-sized particles that shift in the wind. Most areas are unvegetated, but stabilized areas may contain sagebrush or beachgrass. This gently rolling soil is considered excessively drained due to rapid permeability and low water capacity. Surface runoff is slow, and the hazard of soil blowing is high.

#### **4.5 Hydrology**

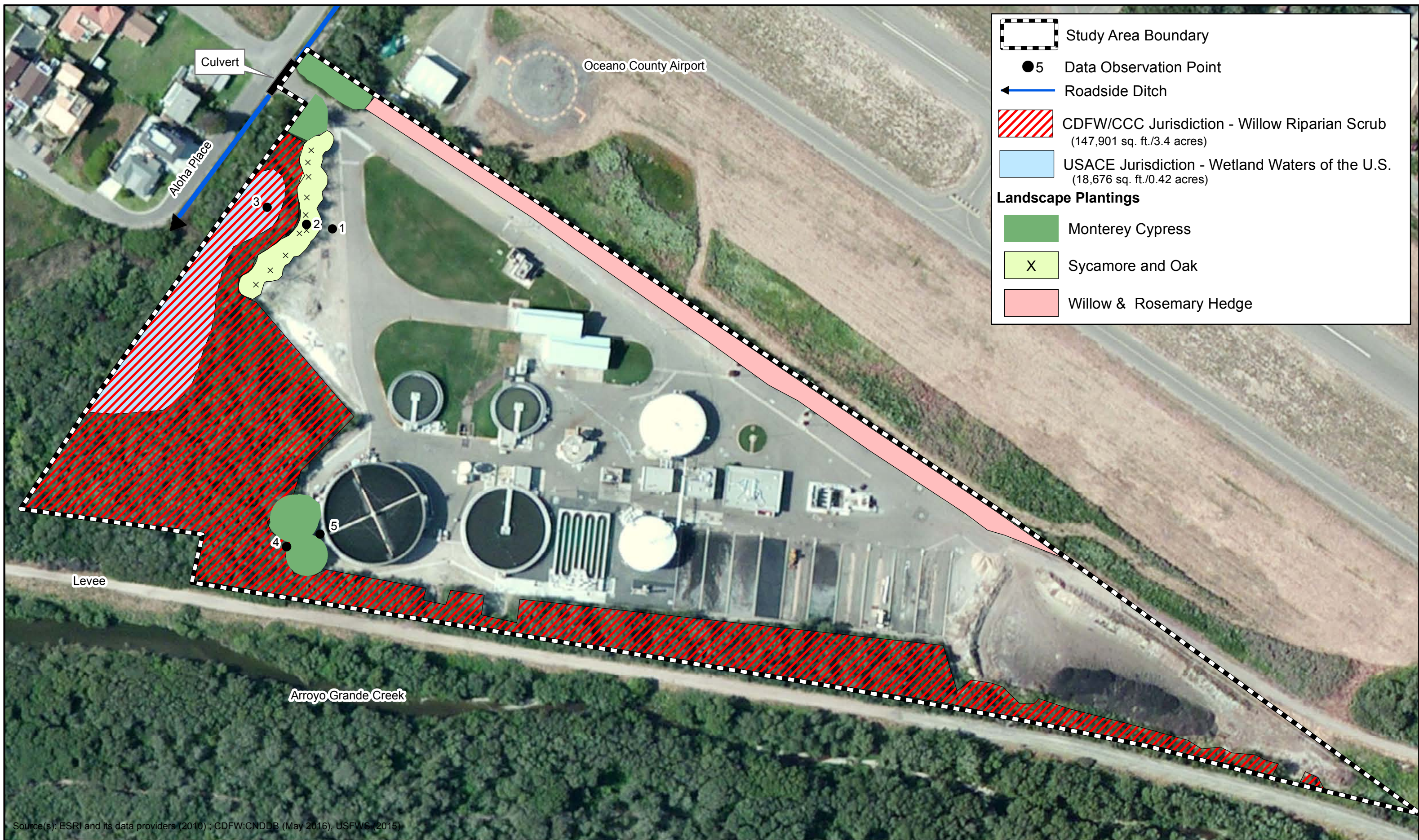
The entire project site is within the mapped Flood Hazard designation for Arroyo Grande Creek; however, the wastewater treatment facility is constructed on fill material estimated at six to ten feet thick. No wetland or riparian habitats were found within the fenced portion of the facility. The eastern extent of Meadow Creek and the Oceano Lagoon are located west-northwest of the site. A small roadside ditch along Aloha Place collects runoff from portions of the Oceano Airport and neighborhoods/streets along the northern edge of the site. Arroyo Grande Creek is located over 100 feet south of the southern property boundary, and the active creek channel is separated from the facility by a chain link fence, and a constructed levee and maintenance road.

Arroyo Grande Creek, Meadow Creek and the Oceano Lagoon, and the roadside ditch have connectivity to the Pacific Ocean; and therefore fall within the jurisdiction of the Corps pursuant to Section 404 of the Clean Water Act, the RWQCB under Section 401 of the Clean Water Act, and the CDFW under California Fish and Game Code Section 1600 et seq.

#### **4.6 Discussion**

The investigation found wetland and riparian habitat associated with the Aloha Place roadside drainage ditch, Meadow Creek and Oceano Lagoon on the northwestern portion of the study area. Riparian habitat (arroyo willow riparian scrub) was also observed growing on the Arroyo Grande Creek levee along the southern edge of the facility. Based on the presence of defined bed and bank and/or ordinary high water mark features, hydrologic connectivity with Meadow Creek and the Oceano Lagoon and Arroyo Grande Creek and the Pacific Ocean, in concert with a predominance of hydrophytic vegetation and hydric soils conditions, it is expected that the wetland waters of the U.S. shown on Figure 4 would fall under the jurisdiction of the Corps pursuant to Section 404 of the Clean Water Act. The RWQCB and CDFW would be expected to take jurisdiction over all wetland and riparian areas shown on Figure 4. Similarly, all wetland and riparian habitats shown on Figure 4 would qualify as ESHA pursuant to the California Coastal Act.







It is important to note that the no wetland or riparian areas were identified within the active operations area of the plant including the area proposed for the Redundancy project. All of the jurisdictional features identified during this investigation and listed in Table 1 below are located outside the fenced and developed portion of the site.

**Table 1. Jurisdictional Areas and ESHA Pursuant to California Coastal Act.**

Jurisdictional Feature	Responsible Agency	Area (square feet / acre)
<b>Wetland Waters of the U.S. (Wetland ESHA)</b>	USACE RWQCB CDFW CCC	18,676 / 0.4
<b>Willow Riparian Scrub (Riparian ESHA)</b>	RWQCB CDFW CCC	147,901 / 3.4

The entire arroyo willow-dominated area shown on Figure 4 is associated with the Meadow Creek and Arroyo Grande Creek confluence, and was mapped by the National Wetlands Inventory (NWI) as Freshwater Forested/Shrub Wetland (please refer to Figure 2). Per the USFWS *Classification of Wetlands and Deep Water Habitats of the United States* (Cowardin et al., 1979), the riparian area would be classified as palustrine shrub wetland, and the entire willow dominated area would meet the California Coastal Act's definition of riparian ESHA. Although the willow habitat growing on the levee berm along the south side of the facility is not mapped as wetland habitat by the NWI, the vegetation appears tied to the hydrology of Arroyo Grande Creek and the shallow groundwater in the region. Therefore, this area would also constitute riparian ESHA in addition to being subject to RWQCB and CDFW permitting requirements.

## 5.0 CONCLUSION

This report identifies potential federal and state jurisdictional boundaries within the study area shown on Figure 4, as determined by KMA during field investigations conducted in May 2016. Waters of the U.S. and State of California identified within this report are subject to verification by federal and state agencies. As shown on Figure 4, no areas considered to be potentially jurisdictional Waters of the U.S. under the Clean Water Act, or that fall under the jurisdiction of the RWQCB and CDFW as waters of the state, or that constitute wetland or riparian ESHA under the Coastal Act, are present within the existing facility, but are rooted outside the fenceline with occasional overhanging branches extending over the fence.

The delineation established clear boundaries for federal and state jurisdictional areas along the southern and western edges of the study area, and show that current operations as well as the proposed Redundancy Project would not directly impact jurisdictional areas. As such, project activities occurring within the existing facility footprint would not require permit authorization under Sections 404 and 401 of the Clean Water Act, or under Section 1600 et seq. of the California Fish and Game Code.

As stated above, the wetland and riparian habitats delineated on Figure 4 qualify as ESHA pursuant to the California Coastal Act. Sections 30240 (a) and (b) of the Coastal Act state: "Environmentally



*sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas. (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas."*

In addition, the San Luis Obispo County Local Coastal Program Policy Document includes the following Coastal Plan Policy on Page 6-5, under Policies For Environmentally Sensitive Habitats: Policy 2: Permit Requirement - *As a condition of permit approval, the applicant is required to demonstrate that there will be no significant impact on sensitive habitats and that proposed development or activities will be consistent with the biological continuance of the habitat. This shall include an evaluation of the site prepared by a qualified professional which provides: a) the maximum feasible mitigation measures (where appropriate), and b) a program for monitoring and evaluating the effectiveness of mitigation measures where appropriate.*

As proposed, the project would be constructed on existing fill within the actively managed facility, which is devoid of ESHA. The project would maintain a setback from areas identified as ESHA that is consistent with current and ongoing facility activities. In addition, the project would not disrupt or degrade ESHA within or adjacent to the site. The separation of the site and ESHA established by the fenceline and actively maintained vegetation management zone between the fence and edge of riparian canopy constitutes an appropriate buffer based on the ongoing activities, and on existing setbacks from adjacent residential and airport uses. An increased setback requirement for the proposed project from identified ESHA within the existing facility would not provide any significant benefit to these resources, and would be inconsistent with current and ongoing uses on the site and in the surrounding area.

The jurisdictional results presented in this report are subject to review by federal and state agencies and the County of San Luis Obispo during the project review process. The involved regulatory agencies may request a site visit to verify the conditions and jurisdictional areas identified in this report, and will either approve or request amendments to the report based on their findings. KMA advises all interested parties to treat the information contained herein as preliminary pending written verification of jurisdictional boundaries by the reviewing agencies.

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## **APPENDIX A**

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### **Wetland Determination Data Forms**



# WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Wastewater Facility Redundancy Project City/County: San Luis Obispo Sampling Date: 5/18/16  
 Applicant/Owner: South San Luis Obispo County Sanitation District State: CA Sampling Point: 1  
 Investigator(s): Merk, Sloan Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): graded Local relief (concave, convex, none): none Slope (%): 2  
 Subregion (LRR): C Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Mocho fine sandy loam 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 ☒, Soil ☒, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No ☒  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: Data Point located at edge of fence in fill soils under landscape tree canopy. Point documents conditions at edge of developed portion of the facility.	

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>20 ft circle</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>Platanus racemosa - planted</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Salix lasiolepis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>30</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
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. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: <u>20 ft circle</u> )				
1. <u>Rubus ursinus</u>	<u>2</u>	<u>Y</u>	<u>FAC</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
2. <u>Clematis ligustifolia</u>	<u>2</u>	<u>Y</u>	<u>FAC</u>	
<u>4</u> = Total Cover				
% Bare Ground in Herb Stratum <u>66</u> % Cover of Biotic Crust _____				

Remarks:  
Dominant vegetation consists of a planted row of sycamore along the facility fence. Naturally occurring willows and vines extend from and are rooted in the riparian area behind the planted trees. None of the species listed are rooted inside the fence. The fenceline area is maintained regularly to remove encroaching vegetation.

## SOIL

Sampling Point: 1

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

[illegible]

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

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

### Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Histosol (A1)                           | <input type="checkbox"/> Sandy Redox (S5)           | <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )  |
| <input type="checkbox"/> Histic Epipedon (A2)                    | <input type="checkbox"/> Stripped Matrix (S6)       | <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</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) ( <b>LRR C</b> ) | <input type="checkbox"/> Depleted Matrix (F3)       | <input type="checkbox"/> Other (Explain in Remarks)       |
| <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )         | <input type="checkbox"/> Redox Dark Surface (F6)    |   |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)       | <input type="checkbox"/> Depleted Dark Surface (F7) |   |
| <input type="checkbox"/> Thick Dark Surface (A12)                | <input type="checkbox"/> Redox Depressions (F8)     |   |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                | <input type="checkbox"/> Vernal Pools (F9)          |   |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                |   |   |
- <sup>3</sup>Indicators of hydrophytic vegetation wetland hydrology must be present unless disturbed or problematic

<sup>3</sup>Indicators 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:

Construction fill soil containing gravels and some cobble, and small lighter colored sand pockets. No hydric indicators noted.

## 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) ( <b>Riverine</b> )       |
| <input type="checkbox"/> High Water Table (A2)                         | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) |
| <input type="checkbox"/> Saturation (A3)                               | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )    |
| <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )       | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Drainage Patterns (B10)                    |
| <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2)                |
| <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )    | <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):

Wetland Hydrology Present?    Yes                      No    ✓

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

Remarks:

Facility border above roadside ditch could flood under extremely high flow conditions, but does not normally pond water or conduct flows. No evidence of hydrology observed.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Wastewater Facility Redundancy Project City/County: San Luis Obispo Sampling Date: 5/18/16  
 Applicant/Owner: South San Luis Obispo County Sanitation District State: CA Sampling Point: 2  
 Investigator(s): Merk, Sloan Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): bank top above channel Local relief (concave, convex, none): none Slope (%): 1  
 Subregion (LRR): C Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Mocho fine sandy loam 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 ☒, Soil ☒, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No ☒  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: Data Point located on top of bank along roadside channel. Point documents conditions at top of bank of small roadside channel that connects to the extreme eastern end of the Oceano Lagoon.	

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>20 ft circle</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</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>100</u> (A/B)
1. <u>Platanus racemosa - planted</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Salix lasiolepis</u>	<u>45</u>	<u>Y</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>70</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				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. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: <u>20 ft circle</u> )				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Rubus ursinus</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Clematis ligustifolia</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>	
<u>45</u> = Total Cover				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____

Remarks:  
 Dominant vegetation consists of naturally occurring willows and vines rooted in the riparian area behind the planted Sycamore trees. Dense leaf litter from both natural fall and maintenance pruning along fence zone covers ground surface.

# SOIL

Sampling Point: 2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2							OM	leaf litter
2-8	10YR3/3	100					sand	dry, single grain, many roots
8-16	10YR3/3	100					sand	dry, single grain, few roots

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: 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 Soils<sup>3</sup>:**

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

<sup>3</sup>Indicators 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:

Dry sand on berm above small channel. No hydric indicators noted.

# HYDROLOGY

**Wetland Hydrology Indicators:**

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)

- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

**Secondary Indicators (2 or more required)**

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

Remarks:

Top of berm above channel could flood under extremely high flow conditions, but does not normally pond water or conduct flows. No evidence of hydrology observed.



# WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Wastewater Facility Redundancy Project City/County: San Luis Obispo Sampling Date: 5/18/16  
 Applicant/Owner: South San Luis Obispo County Sanitation District State: CA Sampling Point: 3  
 Investigator(s): Merk, Sloan Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): channel bottom Local relief (concave, convex, none): concave Slope (%): 1  
 Subregion (LRR): C Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Mocho fine sandy loam 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 \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Hydric Soil Present? Yes _____ No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:  Data Point located at bottom edge of channel. Point documents conditions in the channel, including shallow ponding.	

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>20 ft circle</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)  Total Number of Dominant Species Across All Strata: <u>5</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>Platanus racemosa - planted</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
2. <u>Salix lasiolepis</u>	<u>65</u>	<u>Y</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>70</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
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. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Schoenoplectus californicus</u>	<u>5</u>	<u>Y</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% _____ Prevalence Index is ≤3.0 <sup>1</sup> _____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>5</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>20 ft circle</u> )				
1. <u>Rubus ursinus</u>	<u>45</u>	<u>Y</u>	<u>FAC</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
2. <u>Clematis ligustifolia</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>	
<u>95</u> = Total Cover				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				

Remarks:

Dominant vegetation consists of naturally occurring willows and vines rooted in the riparian area behind the planted sycamore trees. Bulrush is rooted in lowest portion of channel in saturated soils. Dense leaf litter from natural fall covers ground surface.

# 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 <sup>1</sup>	Loc <sup>2</sup>		
0-3							OM	leaf litter
3-7	10YR3/2	100					sandyloam	moist, few large roots
7-14	10YR3/3	95	10YR4/4	5	rm	m	sclom	moist, faint mottles

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: 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 Soils<sup>3</sup>:

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

<sup>3</sup>Indicators 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:

Lower horizon shows clay accumulation, faint redox, moist but not saturated soils. Due to location and vegetation, soil should be considered hydric.

# HYDROLOGY

## Wetland Hydrology Indicators:

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

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (Nonriverine)
- ☐ Sediment Deposits (B2) (Nonriverine)
- ☐ Drift Deposits (B3) (Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)

- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

### Secondary Indicators (2 or more required)

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

### Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 2

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

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes ☒ No ☐

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

### Remarks:

Standing water present at edge of plot in lowest portion of channel, but no saturation noted at pit location. No evidence of flow or ponding at soil pit location due to dense cover of leaf litter, but area is expected to contain flows and ponding during normal rainfall events.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Wastewater Facility Redundancy Project City/County: San Luis Obispo Sampling Date: 5/18/16  
 Applicant/Owner: South San Luis Obispo County Sanitation District State: CA Sampling Point: 4  
 Investigator(s): Merk, Sloan Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): outside toe of levee Local relief (concave, convex, none): none Slope (%): 1  
 Subregion (LRR): C Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Dune 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 ☒, Soil ☒, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No ☒  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: Data Point located between levee and Facility fence. Point documents conditions in willow forest area along the southern side of the Facility. Areas not containing ornamental trees may exhibit stronger hydric vegetation attributes.	

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>20 ft circle</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>5</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60</u> (A/B)
1. <u>Monterey cypress - planted</u>	<u>25</u>	<u>Y</u>	<u>UPL</u>	
2. <u>Salix lasiolepis</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>55</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species <u>35</u> x 2 = <u>70</u> FAC species <u>10</u> x 3 = <u>30</u> FACU species _____ x 4 = _____ UPL species <u>40</u> x 5 = <u>200</u> Column Totals: <u>85</u> (A) <u>300</u> (B)  Prevalence Index = B/A = <u>3.53</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>20 ft circle</u> )				
1. <u>Malva nicaensis</u>	<u>15</u>	<u>Y</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators: ____ Dominance Test is >50% ____ Prevalence Index is ≤3.0 <sup>1</sup> ____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Conium maculatum</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>20</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>20 ft circle</u> )				
1. <u>Clematis ligustifolia</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
2. _____	_____	_____	_____	
<u>10</u> = Total Cover				
% Bare Ground in Herb Stratum <u>40</u> % Cover of Biotic Crust <u>0</u>				

Remarks:

Dominant vegetation consists of ornamental and naturally occurring trees and vines, with an understory of non-native annual species. Sparse to dense leaf litter present on ground surface. Although the Dominance Test is met, the Prevalence Index indicates that true dominance by hydric species is lacking at this location.

# 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 <sup>1</sup>	Loc <sup>2</sup>		
0-1							OM	leaf litter
2-6	10YR3/3	100					sand	dry, gravels, many roots
6-15	10YR3/3	100					sandy clay	dry, gravels, few roots

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: 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 Soils<sup>3</sup>:**

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

<sup>3</sup>Indicators 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:

Dry soils at outside toe of levee berm. Area historically disturbed by levee construction and possibly by airport and treatment facility construction. No hydric indicators noted.

## HYDROLOGY

**Wetland Hydrology Indicators:**

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (Nonriverine)
- ☐ Sediment Deposits (B2) (Nonriverine)
- ☐ Drift Deposits (B3) (Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)

- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

**Secondary Indicators (2 or more required)**

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

Remarks:

Area could flood under extremely high water conditions in the Oceano Lagoon, but does not normally pond water or conduct flows. Area does not receive any surface flows from the adjacent Arroyo Grande Creek, but high groundwater levels in the area likely help support the willow habitat. No evidence of surface hydrology observed.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Wastewater Facility Redundancy Project City/County: San Luis Obispo Sampling Date: 5/18/16  
 Applicant/Owner: South San Luis Obispo County Sanitation District State: CA Sampling Point: 5  
 Investigator(s): Merk, Sloan Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): graded Local relief (concave, convex, none): none Slope (%): 1  
 Subregion (LRR): C Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Mocho fine sandy loam 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 ☒, Soil ☒, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No ☒  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: Data Point located near edge of fence in fill soils within the facility. Point documents conditions at edge of developed portion of the facility opposite the levee.	

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>20 ft circle</u> )	Absolute % Cover	Dominant Species?	Indicator Status	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)
1. <u>Cupressus macrocarpus - planted</u>	<u>20</u>	<u>Y</u>	<u>UPL</u>	
2. <u>Salix lasiolepis</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>25</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species <u>5</u> x 2 = <u>10</u> FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species <u>20</u> x 5 = <u>100</u> Column Totals: <u>25</u> (A) <u>110</u> (B)  Prevalence Index = B/A = <u>4.4</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 <sup>1</sup> ___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>100</u> % Cover of Biotic Crust _____				

Remarks:

No vegetation present within fenceline. Cypress and willows extend from and are rooted in the forested area along the levee. None of the species listed are rooted inside the fence. The fenceline area is maintained regularly to remove encroaching vegetation. Prevalence Index results indicate that dominance by hydric species is lacking at this location.

## SOIL

Sampling Point: 5

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

[illegible]

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

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

### Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Histosol (A1)                           | <input type="checkbox"/> Sandy Redox (S5)           | <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )  |
| <input type="checkbox"/> Histic Epipedon (A2)                    | <input type="checkbox"/> Stripped Matrix (S6)       | <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</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) ( <b>LRR C</b> ) | <input type="checkbox"/> Depleted Matrix (F3)       | <input type="checkbox"/> Other (Explain in Remarks)       |
| <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )         | <input type="checkbox"/> Redox Dark Surface (F6)    |   |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)       | <input type="checkbox"/> Depleted Dark Surface (F7) |   |
| <input type="checkbox"/> Thick Dark Surface (A12)                | <input type="checkbox"/> Redox Depressions (F8)     |   |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                | <input type="checkbox"/> Vernal Pools (F9)          |   |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                |   |   |
- <sup>3</sup>Indicators of hydrophytic vegetation wetland hydrology must be present unless disturbed or problematic

<sup>3</sup>Indicators 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:

Construction fill soil containing gravels and some cobbles. No hydric indicators noted.

## 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) ( <b>Riverine</b> )       |
| <input type="checkbox"/> High Water Table (A2)                         | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) |
| <input type="checkbox"/> Saturation (A3)                               | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )    |
| <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )       | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Drainage Patterns (B10)                    |
| <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2)                |
| <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )    | <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:

Remarks:

Facility border along outside of levee could flood temporarily under extremely high flow conditions, but sample point area does not normally pond water or conduct flows. Area does not receive any surface flows from the adjacent Arroyo Grande Creek. No evidence of hydrology observed.

## **APPENDIX B**

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### **PHOTO PLATE**





## Appendix B - Photo Plate



**Photo 1.** View southeast from facility entrance gate. Note buildings, lawn, and other developed features.



**Photo 2.** View north along western fenceline toward entrance gate. Note fenceline demarcating plant boundary with willows and planted sycamore and oak trees along fence outside the developed portions of the facility.





**Photo 3.** View southwest along western fence line showing general location of Data Point #5. Note cypress and willows outside fence with existing development within the facility.



**Photo 4.** View of southern fenceline opposite the Arroyo Grande Creek levee, looking east. Note maintained fenceline with occasional willows extending over the fence.





**Photo 5.** View of Data Point #1 inside the western fenceline looking west toward Aloha Place. Note approximate 10-wide vegetation maintenance zone along outside of fence.



**Photo 6.** View of Data Point #2, looking west toward Aloha Place. Soil pit located on berm above small channel, at edge of maintained zone along the fenceline.





**Photo 7.** View of Data Point #3, in the lower portion of the channel, looking west. Note dense riparian vegetation in this area. Surface water was present just beyond data point demarcated by shovel.



**Photo 8.** View through southern fenceline to Data Point #4 location, looking southwest toward the levee berm. Note cypress and willow trees, and sparse understory vegetation dominated by annual upland species. Data Point #5 was positioned inside fenceline on maintained base rock near the concrete ditch.





**Photo 9.** Westerly view of roadside ditch near facility entrance.



**Photo 10.** Northeasterly view of willow and rosemary hedge planted along parking lot. The fence in the background separates the site from the Oceano County Airport.