

Waters and Wetlands Delineation Report

Aero Drive Hotel Project 950 and 990 Aero Drive, San Luis Obispo, California



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DISCLAIMER

Terra Verde Environmental Consulting, LLC (hereafter, Terra Verde) has prepared this waters and wetlands delineation report for use by Sanjay Ganpule (owner). The results and conclusions of this report are conditional upon final approval by the United States Army Corps of Engineers. Results and conclusions presented in this report are based upon information available in the public domain (e.g., United States Geological Survey 7.5-minute topographic quadrangle maps, the Natural Resources Conservation Service Soil Surveys, aerial photographs from various sources, etc.), as well as Terra Verde's on-site reconnaissance, data collection, and analyses, which were completed using standard methods. Results and conclusions presented herein represent the best professional judgment of Terra Verde technical staff. In this context, surveying/boundary locations developed by Terra Verde are assumed to be true and correct.

- N/else

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EXECUTIVE SUMMARY

Terra Verde Environmental Consulting, LLC (Terra Verde) was retained by Sanjay Ganpule (owner) to complete a formal delineation of waters and wetlands under the jurisdiction of federal and state resource agencies in support of the proposed Aero Drive Hotel Project (project). The project site is located 950 and 990 Aero Drive in the City of San Luis Obispo, San Luis Obispo County, California. Field surveys included a delineation of all waters and wetlands, as defined by the U.S. Army Corps of Engineers (Corps) and California Department of Fish and Wildlife (CDFW). The survey area encompassed the entire proposed project site and the immediately surrounding wetland and riparian habitats.

This report has been developed by Terra Verde using current Corps guidance concerning waters and wetlands delineations, CDFW guidance on delineating state-defined waters and wetlands, and 2019 field-based observations of site conditions within the project area. Information offered in this report is arranged to describe the delineation objectives, discuss pertinent regulatory contexts, explain the approach and methodology used by Terra Verde in this delineation, and provide a summary of technical results. This report is intended to provide details regarding aquatic resources on site and may be used to support permit application(s) to the Corps, CDFW, the Regional Water Quality and Control Board (RWQCB), and the City of San Luis Obispo for the proposed project

Terra Verde delineated approximately 206 linear feet of federal-defined non-wetland waters and 0.13 acre of federal-defined wetlands. Further, Terra Verde delineated approximately 0.63 acre and 650 linear feet of CDFW-defined waters/wetlands. As necessary, this information may be used to support regulatory permits and/or project approvals from the Corps, CDFW, RWQCB, the City of San Luis Obispo and other resource agencies. The results of the delineation, as described in this report, are conditional upon a review and final jurisdictional determination by the Corps Los Angeles District and regional office of CDFW.



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1.0 INTRODUCTION & BACKGROUND

This waters and wetlands delineation report was prepared by Terra Verde Environmental Consulting, LLC (Terra Verde) in support of the proposed Aero Drive Hotel Project (project) located at 950 and 990 Aero Drive, San Luis Obispo, California (APN 053-412-010 and 053-412-011) (see Appendix A – Figure 1: Project Vicinity and Topographic Map). This report summarizes the regulatory context, methods, and results of field surveys, which focused on the delineation of federal and state wetlands and waters, including those defined by Section 404 of the Clean Water Act (i.e., waters of the U.S.) and those that fall under the jurisdiction of the state of California, as defined by the California Fish and Game Code and the Porter Cologne Water Quality Control Act. The survey area included the entire proposed project area, as well as immediately adjacent wetland and riparian habitats (see Appendix A – Figure 2: Project Site and Survey Area Map).

Preliminary site plans include the development of two new hotels and associated infrastructure on two undeveloped parcels totaling approximately 5 acres. The survey area encompassed the entirety of both parcels, focusing on one ephemeral drainage bordering the southwestern edge of the lot.

This report has been developed following guidance from the Los Angeles District of the U.S. Army Corps of Engineers (Corps) and the U.S. Environmental Protection Agency (EPA) (EPA and Corps 2008) pertaining to wetland delineations, as well as California Department of Fish and Wildlife (CDFW) guidance on delineating state wetlands (Cowardin et al. 1979). The results of the delineation are based on field observations made on October 03, 2019 and are subject to final review and approval by the Corps and CDFW. As needed, this report may be used in acquiring regulatory permits and/or project approvals from the Corps, CDFW, the Regional Water Quality Control Board (RWQCB), and the City of San Luis Obispo (City).

1.1 Overview of Site Characteristics

1.1.1 Current and Historical Land Uses

The proposed project site is located northeast of the San Luis Obispo County Regional Airport (Airport) at the southern limits of the City of San Luis Obispo. The site is also located within the Airport Overlay Zone (City 2019) which is zoned for business park development. It is surrounded by commercial developments, and public roadways. As such, the topography, soils, and vegetation of the proposed project site and surrounding areas have been altered considerably through past land conversion, construction of the adjacent commercial developments, expansion of the Airport, and realignment of Aero Drive. A review of historical aerial imagery indicates the



property has been regularly maintained (e.g., mowed) since the early 2000's (Google Earth 1994-2018). One unnamed drainage flows generally northwest across the southwestern edge of the survey area. Most of this drainage is located on the adjacent parcel.

1.1.2 Geomorphology and Landscape Context

The project site is located within the San Luis Obispo Creek watershed, approximately two miles east of the East Fork of San Luis Obispo Creek. The San Luis Obispo Creek watershed is a coastal basin that originates in the southern Santa Lucia Range, approximately 2,500 feet above sea level (City/County 2003). Topography within the survey area is mostly flat to gently sloping, except at the southwest edge where it slopes steeply up to a developed lot. Elevations on site range from approximately 164 to 180 feet (50 to 55 meters). The geology of the project site consists of alluvial deposits, comprised primarily of clay and silty clay loam (U.S. Dept. of Ag. 2019).

The project site is immediately bordered by Aero Drive to the south, a gravel parking lot to the west, existing commercial developments to the north and State Route 227 to the east. Highway 101 is located approximately 2.25 miles northwest of the project site.

1.1.3 Regional Climate

The regional climate is Mediterranean, with mild, rainy winters and hot, dry summers. Heavy marine fog is often present in the late spring and early summer. Historical temperature and precipitation data were acquired from the Western Regional Climate Center (WRCC) for San Luis Obispo (Station No. 047851). According to available data, average annual precipitation for a 123-year (1893 to 2016) period for the project region is 22.40 inches (WRCC 2019). The average minimum and maximum temperatures calculated for the same time period are 41.3°F in January and 77°F in September (WRCC 2019).

2.0 REGULATORY CONTEXTS

2.1 Rationale for the Determination of the Geographic Extent of Waters of the U.S.

Delineation of the geographic extent of waters of the U.S., including wetlands, within the survey area was consistent with definitions provided in 33 CFR 328.3 (a) (1-8), 328.3 (b, c, and e), as well as routine procedures detailed in the U.S. Army Corps of Engineers Wetlands Delineation Manual (1987 Manual) (Corps 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0 (2008 Arid West Regional Supplement) (Corps 2008). As defined in Section 404 of the CWA, the limits of Corps jurisdiction in non-tidal waters extends to the ordinary high water mark (OHWM) and includes all adjacent wetlands. The



following definitions are used by the Corps and EPA for the identification of wetlands and, as such, were used for the identification and delineation of wetlands at the project site.

Waters of the U.S. are defined in Section 404 of the CWA as:

"All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; including all interstate waters including interstate wetlands, all other waters such as intrastate lakes, rivers, streams, mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce."

Further, wetlands are considered waters of the U.S., and are identified as:

"Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

The Corps uses a three-parameter approach for identifying and delineating jurisdictional wetlands, where a wetland is defined as a feature associated with waters of the U.S., which is characterized by a dominance of hydrophytic vegetation, hydric soils, and wetland hydrology.

2.2 Rationale for the Determination of the Geographic Extent of Waters of the State

CDFW follows the definition used by the U.S. Fish and Wildlife Service (USFWS) for the identification of single-criterion wetlands (Cowardin et al. 1979), which requires that only one of the three wetland criteria used by the Corps (i.e., hydrology, hydric soils, and hydrophytic vegetation) be present in order to define a wetland. In addition, CDFW has jurisdiction over waters of the state, as defined under Section 1600 of the California Fish and Game Code.

Specifically, CDFW uses the following definition for the identification of wetlands:

"Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For the purposes of this classification, wetlands must have one or more of the following attributes: 1) at least periodically, the land supports predominantly



hydrophytes; 2) the substrate is predominantly undrained hydric soil; and 3) the substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season each year."

Based upon the above definitions, all wetlands determined to be under federal jurisdiction on site are also considered CDFW wetlands.

2.3 Consistency with SWANCC & Rapanos Guidance

U.S. Supreme Court rulings in two prominent court cases addressing the extent of federal jurisdiction (i.e., Solid Waste Agency of Northern Cook County [SWANCC] v. Corps et al. [531 U.S. 159, 2001]; and Rapanos et ux., et al. v. United States [547 U.S. 715, 2006]) led to the development of federal guidance that requires careful examination and documentation of the physical location(s) of and hydrologic connections among waters and wetlands. To determine federal jurisdiction, emphasis is given to surface hydrologic connections between a wetland and "navigable waters" or "adjacency" of a wetland to traditionally navigable waters, and, thus, a "significant nexus" to interstate commerce. In addition, waters and wetland features can be determined to be under federal jurisdiction by the Corps or EPA if a significant nexus can be shown between the wetland feature in question and its contribution to the maintenance or restoration of the physical, chemical, or biological integrity of downstream waters that are traditionally navigable. Federal guidance for field delineation procedures that address the Rapanos decision has been offered by the EPA and the Corps in a joint memorandum issued on June 5, 2007 (EPA and Corps 2008).

3.0 FIELD DELINEATION METHODS

3.1 Overview of Methodology

Prior to conducting field surveys, a desktop review was completed, which included a review of current and historical aerial imagery (Google Earth 1994 - 2018), an online Soil Survey for the County of San Luis Obispo (U.S. Dept. of Ag. 2019), USGS topographic maps (USGS 2019), regional weather data (WRCC 2019), the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) (USFWS 2019), and preliminary site development plans.

Terra Verde botanist Kristen Nelson and biologist Sara Snyder completed a formal wetland delineation on October 03, 2019 to identify and map the extent of jurisdictional waters and wetlands on site. Delineation methods followed routine procedures detailed in the *1987 Manual* (Corps 1987) and the *2008 Arid West Regional Supplement* (Corps 2008). In addition, wetlands



were classified based on hydrogeomorphic classes (e.g., riverine, slope, etc.) described by Brinson (1993) and Brinson et al. (1995).

Field delineation of wetlands included an assessment of the hydrology, soil characteristics, and vegetation at eight sampling points (i.e., SP-01 through SP-08). Data was recorded using the Wetland Determination Data Form provided in the *2008 Arid West Regional Supplement* (Corps 2008). At each sampling point, a soil test pit was excavated to a depth of at least 15 inches where possible, vegetation was characterized within a 5-foot radius of the excavated soil test pit, and indicators of wetland hydrology were documented (see Appendix B – Wetland Determination Data Forms). In order to delineate the edge of federal wetlands, sampling was conducted in areas that displayed apparent indicators of wetland hydrology and vegetation, as well as adjacent areas where no apparent wetland indicators were present, and transitional areas in between. As stated above, all wetlands determined to be under federal jurisdiction also fall under state jurisdiction. Further, any areas that were determined to meet at least one of the three wetland criteria (i.e., hydric soils, hydrophytic vegetation, wetland hydrology) were determined to be CDFW wetlands.

The delineation of non-wetland waters included identifying the presence of field indicators for OHWM within the drainage. This assessment followed guidelines provided in *A Field Guide to the Identification of the Ordinary High Water Mark in the Arid West Region of the Western United States (OHWM Manual)* (Lichvar and McColley 2008). In addition, all waters and wetlands were assessed for hydrologic connectivity and/or adjacency to traditionally navigable waters and their tributaries. Connectivity was confirmed by determining that the drainage is hydrologically connected to the traditionally navigable waters of the Pacific Ocean via the East Fork of San Luis Obispo Creek, and the main stem of San Luis Obispo Creek (see Appendix A – Figure 3). The limits of federal jurisdiction and the northern limits of state jurisdiction were mapped in the field. The southern limits of state jurisdiction were not field mapped. Rather, they were approximated from aerial imagery, as the current project design will not impact the southern limits of the drainage feature.

3.1.1 Delineation of Wetlands

Evidence of Wetland Hydrology

Consistent with the 1987 Manual (Corps 1987), the 2008 Arid West Regional Supplement (Corps 2008), and current regulatory guidance (Corps 1992), wetland hydrology can be identified by evaluating a variety of direct and indirect indicators, including stream gauge or well data, flood predictions (i.e., FEMA maps), historic records pertaining to the study area, and visual observation of field indicators for the identification of jurisdictional waters and wetlands. Field indicators may include inundation and/or saturation, sediment deposition, drainage patterns,



hydric soil characteristics, watermarks, drift lines, presence of oxidized pores associated with living roots and rhizomes (i.e., rhizospheres), and water-stained leaves (Corps 1987).

Wetland hydrology is present at a location if field observations indicate the area has a high probability of being periodically inundated or saturated to the soil surface for a sufficient duration during the growing season to develop anaerobic conditions in the surface soil environment (i.e., root zone) (Corps 1987). According to guidance provided in the *2008 Arid West Regional Supplement*, if at least one primary indicator or at least two secondary indicators of hydrology are present at a sample point, the wetland hydrology criterion is met (Corps 2008). Observations of wetland hydrology were recorded at each sample point to document evidence of inundation or soil saturation.

Several types of evidence were examined to determine whether wetland hydrology previously existed or currently exists. In addition, the type and frequency of site manipulation and anthropogenic disturbances were considered for their potential to impact or alter current and historical site hydrology.

Identification of Hydric Soils

The presence of hydric soils was assessed based on the criteria outlined in the *1987 Manual* (Corps 1987) and the *2008 Arid West Regional Supplement* (Corps 2008). Hydric soils are defined as soils "*that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part*" (U.S. Dept. of Ag. 1994). Determination of whether or not a soil is hydric is based on the fulfillment of at least one of four technical criteria (U.S. Dept. of Ag. 2002), which can be satisfied using a combination of published soils information and field indicators. Field indicators for determining whether a soil satisfies the hydric soil definition and the technical criteria for hydric soils are listed in *Field Indicators of Hydric Soils in the United States* (U.S. Dept. of Ag. 2006).

Following the guidance provided in the above-referenced documents, the presence of hydric soils within the survey area was determined using a combination of direct field observations and a review of available online resources, including the Soil Survey of San Luis Obispo County, Web Soil Survey (U.S. Dept. of Ag. 2019) and the USFWS NWI (USFWS 2019). In the field, soil test pits were excavated at each of eight sampling points to examine the upper 15 inches of the soil profile for hydric soil indicators. Specifically, a Munsell Soil Color Book (2000) was used to classify the colors of matrix soils and redoximorphic (redox) concentrations within the matrix. The *2017 Pocket Guide to Hydric Soil Indicators* (Wetland Training Institute [WTI] 2017) was used to determine the texture of soils, and to assess the location, type, and extent of matrix soil colors and redox concentrations, to determine whether they qualified as hydric soils.



Dominance of Hydrophytic Vegetation

On June 1, 2012, the 2012 National Wetland Plant List (NWPL) (Lichvar et al. 2012) replaced the USFWS 1988 National List of plant species that occur in wetlands for use under the CWA, Swamp Buster, and National Wetland Inventory programs. The NWPL and regional supplements have since been revised with updated plant listings. The Arid West 2016 Regional Wetland Plant List (2016 Regional List) (Lichvar et al. 2016) is the most current version available for use in the Arid West region, including coastal areas of California. The updated 2016 Regional List indicates the relative frequency that a species occurs in wetland habitats and is used to determine whether the hydrophytic vegetation parameter is met when conducting wetland delineations under the CWA.

Species included on the 2016 Regional List are assigned one of the following wetland indicator statuses (Lichvar et al. 2012):

- **Obligate (OBL)**: plants that almost always occur in wetlands.
- Facultative Wetland (FACW): plants that usually occur in wetlands but may occur in non-wetlands.
- Facultative (FAC): plants that are equally likely to occur in wetlands and non-wetlands.
- Facultative Upland (FACU): plants that usually occur in non-wetlands but may occur in wetlands.
- **Upland (UPL)**: plants that almost never occur in wetlands; plants not included on the list are considered UPL.

Dominance of hydrophytic vegetation is determined by identifying all plant species within a 5foot radius surrounding each soil excavation pit for herbaceous and shrub cover, and a 30-foot radius for tree and woody vine cover; documenting the absolute percent cover of each species within each stratum (i.e., herb, shrub, tree, and woody vine) for the sampling plot; and noting the indicator status for each (i.e., UPL, FACU, FAC, FACW, or OBL). Dominant species are then determined using the 50/20 rule, as recommended in the *2008 Arid West Regional Supplement* (Corps 2008). Based on this method, dominant species are those species that individually or collectively constitute more than 50 percent of the total vegetative cover (i.e., relative cover) within each stratum, in addition to those species that individually constitute 20 percent or more of the relative cover within each vegetation stratum. Species identifications and taxonomic nomenclature followed the second edition of *The Jepson Manual: Vascular Plants of California* (Baldwin et al. 2012), as well as taxonomic updates provided in the Jepson eFlora (Jepson Flora Project 2019).

According to both the Corps' 1987 Manual (Corps 1987) and 2008 Arid West Regional Supplement (Corps 2008), the hydrophytic vegetation parameter for wetlands is met when, under normal



circumstances, *more than* 50 percent of the dominant species across all strata have an indicator status of OBL, FACW, or FAC.

Connectivity/Adjacency

As noted above, particular emphasis is given to surface hydrologic connectivity of wetlands to traditionally navigable waters, including adjacency of wetlands to jurisdictional waters. Connectivity of wetlands was established via field investigations, a review of aerial imagery, and an assessment of site-specific topography.

3.1.2 Delineation of Non-wetland Waters

The OHWM Manual (Lichvar and McColley 2008) provides guidance on identifying field indicators of OHWM, including protocols for characterizing the overall system to determine the presence of waters of the U.S. Where apparent indicators of OHWM were observed, data was recorded using the Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (OHWM Data Sheet) (Curtis and Lichvar 2010). Completed data sheets are provided in Appendix C (Arid West Intermittent and Ephemeral Streams OHWM Datasheets). In addition, the lateral limits of waters of the State typically include the bed and bank and may extend to the limits of riparian vegetation if present.

Cross-sectional Analysis

Cross sectional analyses were conducted at three locations along the drainage where there was a clear change in the limits of either the OHWM or the top of bank. The physical and biological characteristics present at each cross section were documented on OHWM Data Sheets, including a sketch of the site topography at each cross section. Specifically, the floodplain units were described for each cross section through the vegetation cover, sediment texture, and hydrology indicators at that location. The limits of OHWM were determined based on the presence of hydrology indicators such as debris wracking, shelving, scour, and change in sediment texture/substrate.

Connectivity/Adjacency

Connectivity to traditionally navigable waters was assessed via field investigations, site topography, and a review of aerial imagery (Google Earth 1994 – 2018).

4.0 RESULTS

4.1 Wetlands Determination

Terra Verde completed a wetland delineation on October 03, 2019 and determined that federal wetlands are present within the drainage, which occur in disjunct patches connected by sections



of non-wetland waters of the U.S. (see Appendix A – Figure 5: Waters and Wetlands Delineation Map). Further, all areas meeting at least one of the federal wetland criteria were also identified as state wetlands. The results of the federal wetland delineation and sampling point data was documented on Wetland Determination Data Forms (Appendix B) and is detailed below.

4.1.1 Hydrology

Within the drainage, field observations of wetland hydrology included primary and secondary indicators. Primary indicators observed included surface soil cracks (B6) and oxidized rhizospheres along living roots (C3). Secondary indicators observed included riverine water marks (B1), riverine sediment deposits (B2), riverine drift deposits (B3), drainage patterns (B10), saturation visible on aerial imagery (C9), and FAC-neutral test (D5). Wetland hydrology was determined to be present at SP-01 through SP-07, but not at SP-08 which was located on an adjacent flood plain outside the channel bottom (see Appendix A – Figure 5).

4.1.2 Soils

According to the NRCS online soil survey of San Luis Obispo County, two soil units occur within the survey area (U.S. Dept. of Ag. 2019). These include: Unit 128 (Cropley clay, 2 to 9 percent slopes), and Unit 197 (Salinas silty clay loam, 0 to 2 percent slopes) (see Appendix A – Figure 4: Soil Units Map). Unit 128 is listed as partially hydric (U.S. Dept. of Ag. 2019). A summary of the dominant characteristics of these soil types is provided below.

Soil Unit 128: Cropley clay, 2 to 9 percent slopes

The parent material of this soil type is alluvium derived from calcareous shale. The drainage class of this unit is moderately well drained, and it is composed mostly of clay over sandy clay loam. This soil type tends to occur on alluvial fans and terraces below 2,340 feet.

Soil Unit 197: Salinas silty clay loam, 0 to 2 percent slopes

The parent material of this soil type is alluvium derived from sedimentary rock. The drainage class of this unit is well drained, and it is composed mostly of silty clay loam and very fine sandy loam. This soil type tends to occur on alluvial fans and flats, and flood plains.

Soil test pits were excavated at each sampling point to classify the color and texture of the soil horizons down to at least 12 inches (except SP-01). Soil textures consisted of clay loam and clay at SP-03, silty loam and sand at SP-01, and clay at the remaining six sampling points (SP-02 and SP-04 through SP-08). Hydric soils were identified at SP-02, SP-03 and SP-05, all of which had a soil matrix of 10YR 2/1 with 2 to 5 percent reddish redox concentrations of 10YR 5/8 (SP-02), 10YR 3/6 (SP-03) and 10YR 4/6 (SP-05) in the matrix and along pore linings (see Appendix D – Photos 4 through 6). SP-07 had a soil matrix of 10YR 2/1 in the upper 9 inches with 1 percent reddish redox concentrations and a mottled soil matrix of 80 percent 10YR 4/2 and 18 percent



10YR 3/2 below 9 inches with 2 percent reddish redox concentrations (see Appendix D – Photo 7). SP-01 was taken directly downstream of the culvert under Aero Drive and the upper 10 inches consisted of a mix of deposited sand/decomposed granite, landscaping soil, and woodchips that had been deposited from the upstream developed areas (see Appendix D – Photos 8). Below 10 inches was a layer of large rocks/riprap from armoring of the culvert outlet. A soil matrix color of 10YR 2/1 with no redox concentrations was documented at the remaining sampling points, SP-04, SP-06 and SP-08 (see Appendix D – Photos 9 and 10).

4.1.3 Vegetation

Greater than 50 percent relative cover of hydrophytic, herbaceous vegetation was documented at all eight sampling points. None of the sampling points supported tree, shrub, or woody vine cover. Dominant species included tall flatsedge (*Cyperus eragrostis*; FACW), common spikerush (*Eleocharis marcrostachya*; OBL), brown headed rush (*Juncus phaeocephalus*; FACW) and bristly ox-tongue (*Helminthotheca echioides*; FAC) at SP-01 through SP-07. Vegetation within the flood terrace surrounding SP-08 was dominated by salt grass (*Distichlis spicata*) and seaside barley (*Hordeum marinum*).

4.2 Non-Wetland Waters Determination

The drainage is ephemeral, conveying water from the adjacent parking lot south of Aero Drive and across the western portion of the survey area before entering a 36-inch culvert in the northwest corner of the survey area. Within the survey area, the drainage displayed intermittent evidence of OHWM and a clearly defined bed and bank. Portions of the drainage are likely considered non-wetland waters of the U.S. based on the presence of a clearly defined OHWM identified by a distinct transition in vegetative cover, debris wracking, scour, and connectivity to traditionally navigable waters. Areas displaying evidence of OHWM are limited to two sections of the channel: 1) immediately downstream of the culvert under Aero Drive, and 2) in the section downstream of SP-04 until the central wetland. These areas are connected by areas of federaldefined wetlands and also some transitional areas where seasonal flows become less concentrated, fanning out into a wide floodplains and in-channel wetlands. These transitional areas did not display evidence of OHWM (see Figure 5).

5.0 SUMMARY OF JURISDICTIONAL FINDINGS

The jurisdictional waters identified within the survey area fall under the regulatory jurisdiction of the Corps, CDFW, and RWQCB. A summary of the type and extent of jurisdictional waters and wetlands is presented in Table 1 below.



Feature Type	Jurisdiction	Acres	Length (feet)
Waters of the U.S.	Corps	0.009	206
Waters/wetlands of the State	CDFW, RWQCB	0.63	650
Federal Wetlands	Corps	0.13	N/A

Table 1. Extent and Location of Jurisdictional Waters and Wetlands

Table 2 (Summary of Sampling Point Data for Wetland Delineation), provides a summary of the data collected at each of the eight sampling points during the wetland delineation.

Sample Point	Wetland Vegetation	Hydric Soils	Wetland Hydrology	Connectivity/ Adjacency	Federal Wetland	State Wetland ¹
SP-01	Yes	No	Yes	Yes	No	Yes
SP-02	Yes	Yes	Yes	Yes	Yes	Yes
SP-03	Yes	Yes	Yes	Yes	Yes	Yes
SP-04	Yes	No	Yes	Yes	No	Yes
SP-05	Yes	Yes	Yes	Yes	Yes	Yes
SP-06	Yes	No	Yes	Yes	No	Yes
SP-07	Yes	No	Yes	Yes	No	Yes
SP-08	Yes	No	No	Yes	No	Yes

 Table 2. Summary of Sampling Point Data for Wetland Delineation

¹State wetlands are synonymous in area and linear feet as state waters based on the single-criterion parameter. As such, no additional mapping or quantification of state wetlands has been completed as a part of delineation efforts.

The geographic extent of waters of the U.S. (all area below the OHWM), totals approximately 206 linear feet and 0.009 acre within the survey area. A total of 0.13 acre of federal wetlands were mapped. The total area of proposed impact within jurisdictional waters and wetlands will be determined based on final site plans. Section 404 of the CWA requires authorization from the Corps for the discharge of dredged or fill material into all waters of the U.S., including wetlands. The findings of this federal waters and wetlands delineation is subject to review and final concurrence by the Corps.

The geographic extent of waters of the state (all area below top of bank or edge of riparian vegetation), including CDFW-defined wetlands, totals approximately 650 linear feet and 0.63 acres within the survey area. These areas may be regulated under the California Environmental Quality Act (CEQA), by CDFW under Sections 1600-1607 of the Fish and Game Code, and the RWQCB under Section 401 of the Clean Water Act and Section 13260(a) of the California Water Code.





6.0 **REFERENCES**

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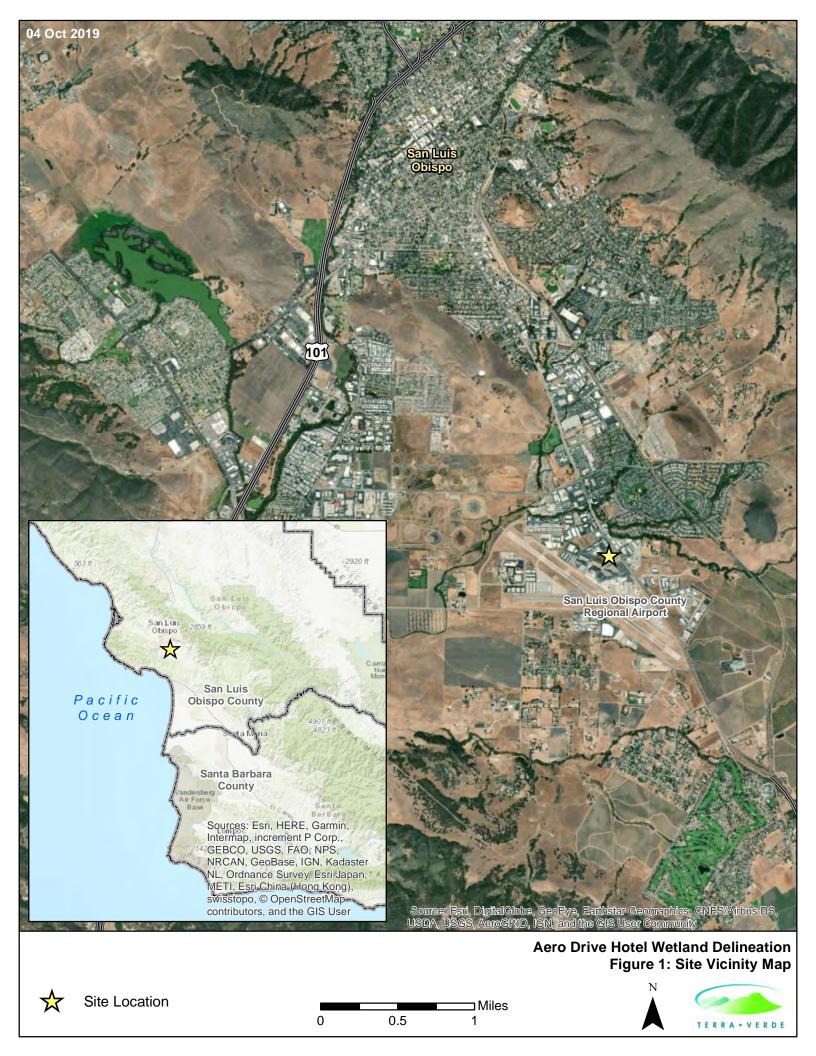


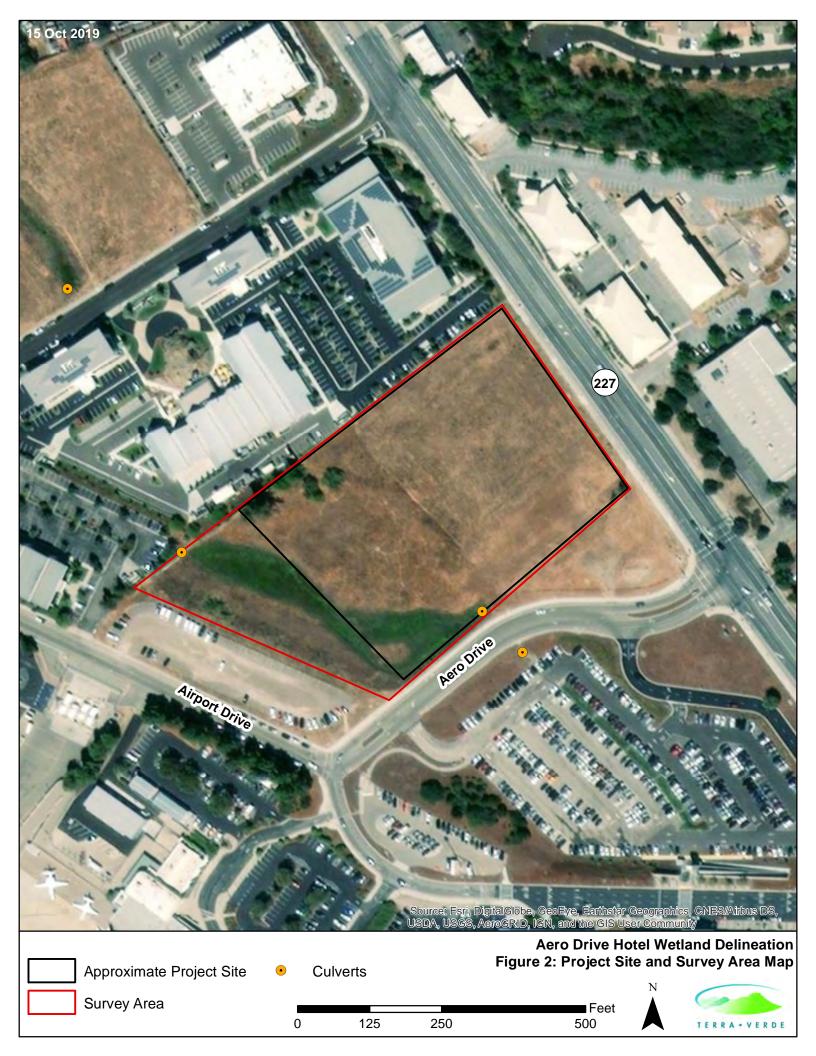


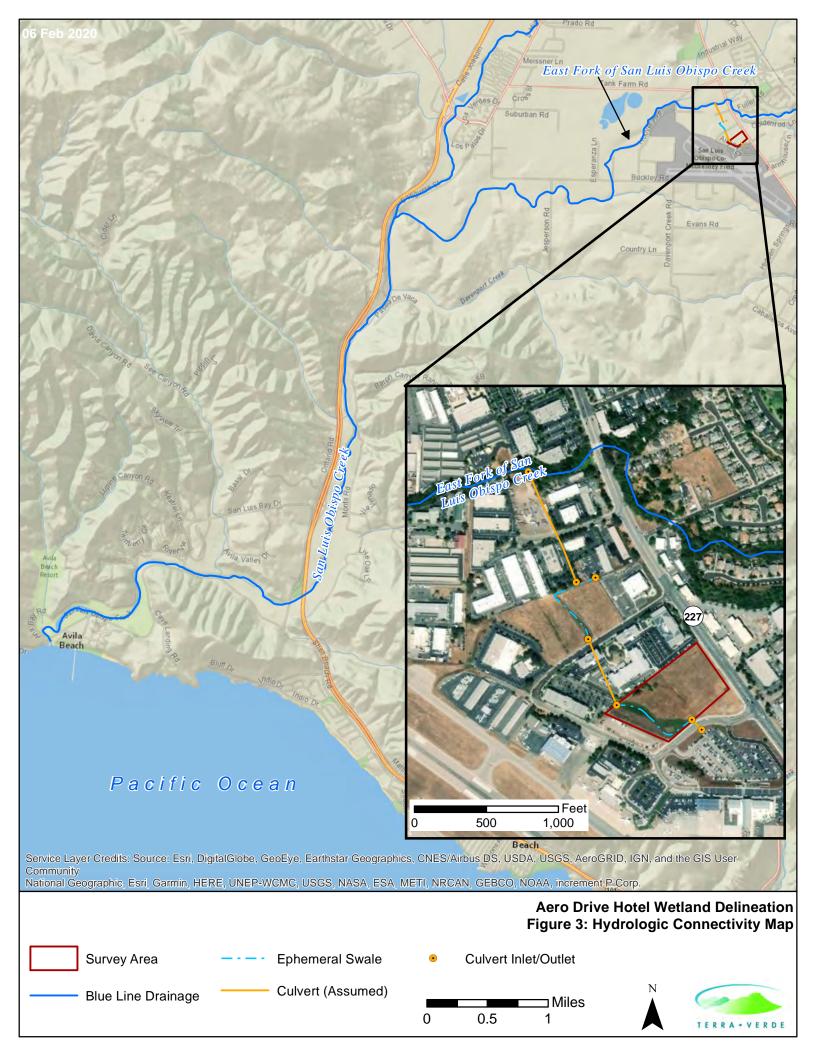
APPENDIX A: Report Figures

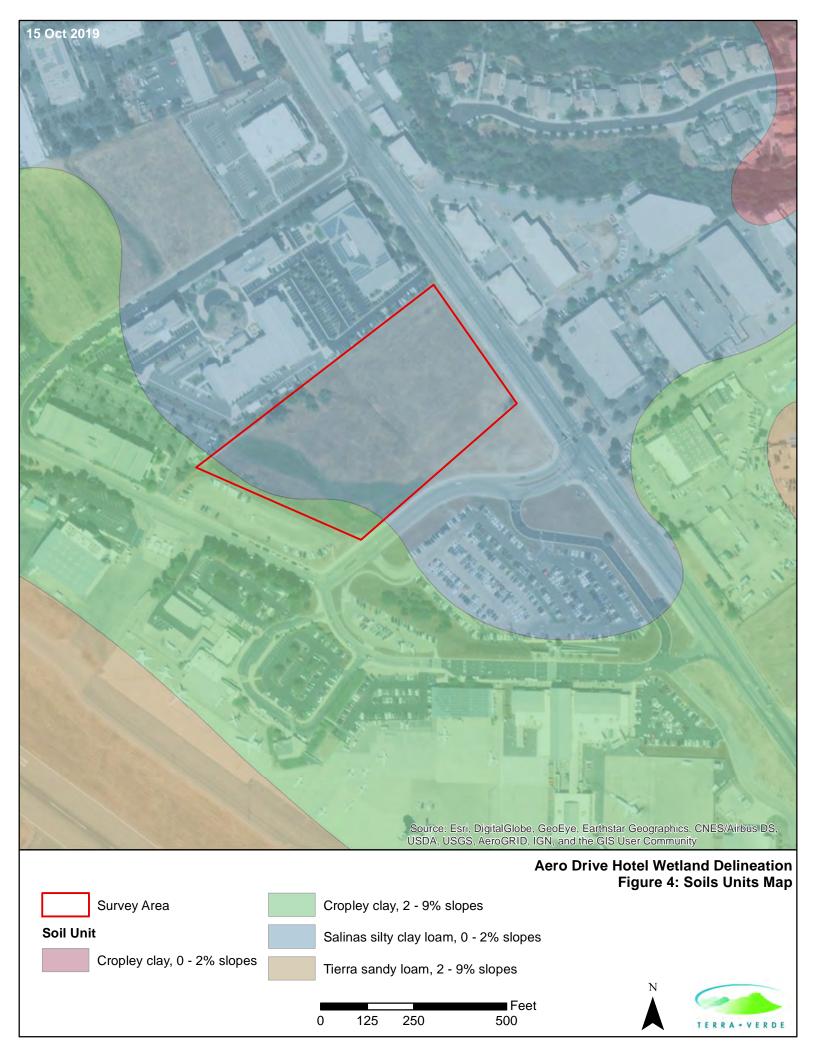
Figure 1: Site Vicinity Map
Figure 2: Project Site and Survey Area Map
Figure 3: Hydrologic Connectivity Map
Figure 4: Soil Units Map
Figure 5: Waters and Wetlands Delineation Map













	Approx.	Centerline	of Waters	of the State**	
--	---------	------------	-----------	----------------	--

- Northern Limits of Waters/Wetlands of the State*
- 100 50

⊐ Feet

 $\overline{}$

0







APPENDIX B: Wetland Determination Data Forms



WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: APRO Drive Hotel	City/County: San	LUIS ODISPO Sampling Date: 10/03/19
Applicant/Owner: Ganpule		State: Sampling Point: O1
Investigator(s): KNelson S.Snyderc	Section, Township, F	
Landform (hillslope, terrace, etc.): SWale		e, convex, none): <u>CONCAVE</u> Slope (%): <u>O-2</u>
100 5		Long: <u>-170.639454</u> Datum: NAD63
Soil Map Unit Name: Salinas silty de	y loan	NWI classification: NONE
Are climatic / hydrologic conditions on the site typical for		
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are	e "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology		needed, explain any answers in Remarks.)
	Electrony to service the first	locations, transects, important features, etc.
	No	, and a second
Hydric Soil Present? Yes	No Is the Sample	
Wetland Hydrology Present? Yes	No within a Wetla	and? Yes No
Remarks:	la contra de la	
Ephemeral swale bordered undeveloped, weedy lgrassy	field.	acvelopement and
VEGETATION – Use scientific names of pl		
Trop Stratum (Plot size:	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	<u>% Cover</u> Species? Status	Number of Dominant Species
2.		That Are OBL, FACW, or FAC: (A)
3.		Total Number of Dominant
4		. Species Across All Strata: (B)
Sapling/Shrub Stratum (Plot size:)	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:
<u>Sapinig/Siliub Stratum</u> (Plot size:)		(***/
2.		Prevalence Index worksheet: Total % Cover of: Multiply by:
3.		Initial % Cover of: Multiply by: OBL species
4		FACW species $91 \times 2 = 162$
5		FAC species $4 \times 3 = 12$
E'raduu	= Total Cover	FACU species (x 4 = 0
Herb Stratum (Plot size: 5 Faal 9)	50 V FACW	UPL species x5 = 5
1. CLAPERIAS EVOLUTIONS	- 90 V FACW	Column Totals: <u>87</u> (A) <u>180</u> (B)
3 He White Hotherd echarges	2 FAC	
4 POLLOGOM MANSHELEMSTE	$-\frac{2}{1}$ $-\frac{FAC}{FACW}$	Prevalence Index = B/A = 2.0
5. Cythrem hyssapitolia	OBL	Hydrophytic Vegetation Indicators:
6. EUNONDIA DENTUS	<1 UPL	Prevalence Index is <3.01
7		Morphological Adaptations ¹ (Provide supporting
8.		data in Remarks or on a separate sheet)
	87 = Total Cover	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)		
1		¹ Indicators of hydric soil and wetland hydrology must
2/		be present, unless disturbed or problematic.
~ ~ ~	= Total Cover	Hydrophytic Vegetation
% Bare Ground in Herb Stratum 20 % Cov	er of Biotic Crust	Present? Yes No
Remarks:	10	6
scoured poor immediately	j aluunsivean ,	a culvert outlet; conveying
surrace flows from adje	icent parking 1	of a kindscaping area.
		The cert

		Sec. 16 19.	
Samp	lina	Point	
Sallin	ning	1 Unin	

OIL								Sampling Point:	6
Profile Descriptio	n: (Describe	to the dept	h needed to docur	nent the	indicator	or confirm	m the absence	e of indicators.)	
Depth	Matrix			x Feature %	es Type ¹	Loc ²	Texture	Remarks	
(inches) C	olor (moist)	100	Color (moist)				SiLo	TOPOIL RUNOFA	-
0-6 10	IN ILA				_		0.1	To have position	
3-6 10	4144/4	100				-	Pula		
6-9 10	123/2	100	1				2100		
								. <u></u>	
Type: C=Concen	tration, D=Dep	bletion, RM=	Reduced Matrix, C	S=Covere	ed or Coate	ed Sand G		cation: PL=Pore Lining, M=N s for Problematic Hydric So	
Histosol (A1)	ttors. (Applic		Sandy Red					Muck (A9) (LRR C)	
Histic Epipedo	on (A2)		Stripped M)			Muck (A10) (LRR B)	
Black Histic (A			Loamy Muc					ced Vertic (F18)	
Hydrogen Sult			Loamy Gle					Parent Material (TF2) (Explain in Remarks)	
Stratified Laye		C)	Depleted N Redox Dar				_ Other	(Explain in Remarks)	
1 cm Muck (A Depleted Belo		e (A11)	Depleted D						
Thick Dark Su			Redox Dep					s of hydrophytic vegetation ar	ıd
Sandy Mucky			Vernal Poo	ls (F9)				hydrology must be present,	
Sandy Gleyed				_	_		unless	disturbed or problematic.	
Restrictive Layer	(if present):								7
Туре:							Undela Ca	il Present? Yes	No V
Depth (inches):		-							
deve lope	ed area	ther it	"10" de	phis pth,	$\frac{1}{a}$	yer e	of large	landscaping so from adjacen vacks is depos asmoving.	ited
Wetland Hydrolo	gy Indicators	: .							
	2		t; check all that app	ly)			Seco	ondary Indicators (2 or more r	equired)
Surface Wate			Salt Crus					Water Marks (B1) (Riverine)	
High Water T			Biotic Cru	ist (B12)				Sediment Deposits (B2) (Rive	
Saturation (A					ites (B13)			Drift Deposits (B3) (Riverine))
Water Marks					Odor (C1)			Drainage Patterns (B10)	N
Sediment Dep					neres along		10 11 9 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Dry-Season Water Table (C2 Crayfish Burrows (C8)	,
Drift Deposits		erine)			ced Iron (C			Saturation Visible on Aerial Ir	nagery (C9
Surface Soil (Imagony (B						Shallow Aquitard (D3)	
Inundation Vi Water-Staine			Other (E>					FAC-Neutral Test (D5)	
Field Observatio		-		ipidin in i		1			
Surface Water Pre		Yes	No 🔣 Depth (ii	nches):					
Water Table Pres			No <u>V</u> Depth (ii					/	
Saturation Preser	nt? (fringe)	Yes	No <u> </u>	nches): _		We		gy Present? Yes 🗹	No
Describe Recorde	ed Data (strea	m gauge, mo	onitoring well, aeria	l photos,	previous in	spections	s), if available:		
Remarks:		1		-			1 1	1 1 1	
Vegetated	diain	age/s	wale bon	deviv	ng ai	n W	ndevelo	ped lot allow	gth
eage a	a pr	16/10	lia cent	ecer	ves	scasa	(vunoff	ped lot allow phomeral flo).	NUI
TRONT	culvert	ų v	april 1	nive	wprice	1110		1.	

Arid West - Version 2.0

WETLAND DETERMINATION DATA FORM – Arid West Region LID Project/Site: MAIC A DISPO Sampling Date: an City/County: Applicant/Owner: mille Gan State: Sampling Point: Ve Investigator(s): Section, Township, Range: 3 Landform (hillslope, terrace, etc.): SWA Concave Local relief (concave, convex, none): Slope (%) Subregion (LRR): LRRC Lat: 35.240606 Long: \cap Datum: Soil Map Unit Name: Salinas 5:14 NWI classification: Are climatic / hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.) No Are Vegetation _____, Soil _____, or Hydrology __ significantly disturbed? Are "Normal Circumstances" present? Yes 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 Is the Sampled Area Hydric Soil Present? Yes No within a Wetland? No Wetland Hydrology Present? Yes No Remarks: by "public road a development on are side. Ephemera weedy field an d. other. VEGETATION – Use scientific names of plants. Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size:) % Cover Species? Status Number of Dominant Species

··		That Are OBL, FACW, or FAC: (A)
2		THE REPORT
3.		Total Number of Dominant
4		Species Across All Strata: (B)
		Percent of Dominant Species
	= Total Cover	That Are OBL, FACW, or FAC: 100 (A/B)
Sapling/Shrub Stratum (Plot size:)		
1		Prevalence Index worksheet:
2		Total % Cover of: Multiply by:
3		A
4		FACW species $30 \times 2 = 260$
5		FAC species 2 x 3 =
	= Total Cover	FACU species x 4 =
Herb, Stratum (Plot size: 5)		
1. CUPENUS evaluations	75 V FAUN	UPL species x 5 =
2. JUNCUS phalebacephalus	25 V PAIN	Column Totals: 32 (A) 266 (B)
F	- Do Frida	1
3. KUMEX CRISPIS	2 FAC	Prevalence Index = B/A =
4		Hydrophytic Vegetation Indicators:
5		Dominance Test is >50%
6		Prevalence Index is ≤3.0'
7		Morphological Adaptations ¹ (Provide supporting
8		data in Remarks or on a separate sheet)
	32 = Total Cover	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)	= Total Cover	· · · · · · · · · · · · · · · · · · ·
		here and second and a second second second
1		¹ Indicators of hydric soil and wetland hydrology must
2		be present, unless disturbed or problematic.
	= Total Cover	Hydrophytic
A CONTRACTOR OF		Vegetation
% Bare Ground in Herb Stratum % Cove	r of Biotic Crust	Present? Yes No
Remarks:		
In-channel wetland associated	ed with a side	low was not contract
INT-CAMPILIE MELLOUND STOPPOLITY	a will a wae,	sicu-moving reasonally
flooded section of the drai	nage Shale	•
Time ical dealing of the	Justic	

SOIL		Sampling Point: 02
Profile Description: (Describe to the depth	needed to document the indicator or confi	rm the absence of indicators.)
Depth <u>Matrix</u>	Redox Features	- Contraction of the second
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Remarks
24 10483/1. 98	101R518 2 C 1L	Clay 20-30 % OM
4-3 1040311 95	IDYDSB 5 C PLIN	1 clay
<u>4 111 10110211 000</u>	INVESTOR 2 C M	clay heavy blacky clay
0-14 104F-11 10 -	10 1K-10 2 0 1	- CIMM - Illered Street Street
		<u></u>
		2
¹ Type: C=Concentration, D=Depletion, RM=F	educed Matrix, CS=Covered or Coated Sand	Grains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: (Applicable to all L		
Histosol (A1)	Sandy Redox (S5)	1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B)
Histic Epipedon (A2)	Stripped Matrix (S6)	Reduced Vertic (F18)
Black Histic (A3)	Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2)	Red Parent Material (TF2)
Hydrogen Sulfide (A4)	Depleted Matrix (F3)	Other (Explain in Remarks)
Stratified Layers (A5) (LRR C) 1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)	
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	
Depleted Below Dark Gallage (711) Thick Dark Surface (A12)	Redox Depressions (F8)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Vernal Pools (F9)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)		unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:		1
Depth (inches):		Hydric Soil Present? Yes No
Remarks:		
Vand heaved blocker day	is clau associated w	ith wide scabnally florde
very navy, bickyion	it could dross in the ov	it with a second the second
portion of a drainer	rk clay associated w	4
ALL		
IYDROLOGY		
Wetland Hydrology Indicators:	shock all that apply?	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required;		Water Marks (B1) (Riverine)
Surface Water (A1)	Salt Crust (B11)	Sediment Deposits (B2) (Riverine)
High Water Table (A2)	Biotic Crust (B12)	
Saturation (A3)	Aquatic Invertebrates (B13)	Drift Deposits (B3) (Riverine)
Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	✓ Drainage Patterns (B10)
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizospheres along Living	
Drift Deposits (B3) (Nonriverine)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
✓ Surface Soil Cracks (B6)	Recent Iron Reduction in Tilled Soils	
Inundation Visible on Aerial Imagery (B7		Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Other (Explain in Remarks)	FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes N	lo Depth (inches):	
Water Table Present? Yes N	lo Depth (inches):	/

US Army Corps of Engineers

Saturation Present?

Remarks:

Yes

No

Depth (inches):

Remarks: Vegetated drainage Iswale receives ephemeral (seasonal flows finan Cultert + adjacent developments (runoff).

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

No

Wetland Hydrology Present? Yes 1

			– Arid West Region
Project/Site: Aero Drive Hotel	City/Co	inty: San	Luis Obispo Sampling Date: 10/03/19
Applicant/Owner: ban pule	•		State: <u>CA</u> Sampling Point: 03
Investigator(s): K. Welson, S. Snuder	Section	Township, R	ange: 512 ± 315 R12E
Landform (hillslope, terrace, etc.):			, convex, none): <u>CONCAVI</u> Slope (%): <u>0</u> - 2
		2565	_ Long: <u>-120,63965</u> Datum: NAD63
Soil Map Unit Name: Salines site cl	law loan		NWI classification: Norle
Are climatic / hydrologic conditions on the site typical for	this time of year? Yes	V No	(If no, explain in Remarks)
Are Vegetation, Soil, or Hydrology	_ significantly disturbe		"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology			eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site ma	p showing samp		locations, transects, important features, etc.
Hydric Soil Present? Yes Wetland Hydrology Present? Yes	No	the Sampled	
Remarks: Ephemeral swale bordered & Undeveloped grassy live	by public edy field	road i	& development on one side,
VEGETATION – Use scientific names of pla	nts.		
Tree Stratum (Plot size:)		ant Indicator	Dominance Test worksheet:
1. (FIOUSIZE)	% Cover Species	s? <u>Status</u>	Number of Dominant Species
2			That Are OBL, FACW, or FAC: (A)
3			Total Number of Dominant Becies Across All Strata:
4			Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)	= Total (Cover	That Are OBL, FACW, or FAC: (A/B)
1			Prevalence Index worksheet:
2			Total % Cover of:Multiply by:
3	· · · · · · · · · · · · · · · · · · ·		OBL species x 1 =
4			FACW species $100 \times 2 = 200$
5	- Total C		FAC species $x_3 = 3$
Herb Stratum (Plot size: 5)		Jover	FACU species x 4 = UPL species x 5 =
1. <u>Cyperus eragrostis</u>	100 V	FACW	Column Totals: 101 (A) 203 (B)
2. Kuimex crispus		FAL	
3			Prevalence Index = B/A = 2100
5.			Hydrophytic Vegetation Indicators:
6			Prevalence Index is ≤3.0 ¹
7			Morphological Adaptations ¹ (Provide supporting
8			data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size:)	10 = Total C	over	Problematic Hydrophytic Vegetation ¹ (Explain)
1. (r lot size)			Indicators of hydric soil and wetland hydrology must
2			be present, unless disturbed or problematic.
% Bare Ground in Herb Stratum % Cover	= Total C	over	Hydrophytic Vegetation Present? Yes No
Remarks:			
transitional zerve along t trooded area and a se	he draine	ruce be	channelized flows.

rofile Description: (Describe to the depth	Redox Features		Durada
nches) <u>Color (moist)</u> %		Loc ² Texture	Remarks
1.2. IDVR2/2 97	1048316 3 C	M CILO	20-30% OM
2-13 104/22/1 98	101R3/16 2 C-	M Clay	heavy blocky clay
ype: C=Concentration, D=Depletion, RM=F	Reduced Matrix, CS=Covered or Coated	Sand Grains. ² L	ocation: PL=Pore Lining, M=Matrix.
ydric Soil Indicators: (Applicable to all L	RRs, unless otherwise noted.)	Indicator	s for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)		Muck (A9) (LRR C)
Histic Epipedon (A2)	Stripped Matrix (S6)		Muck (A10) (LRR B) uced Vertic (F18)
Black Histic (A3)	Loamy Mucky Mineral (F1)		Parent Material (TF2)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		r (Explain in Remarks)
Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)	Out	V - V
1 cm Muck (A9) (LRR D)	Depleted Dark Surface (F7)		
Depleted Below Dark Surface (A11)	Redox Depressions (F8)		rs of hydrophytic vegetation and
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Vernal Pools (F9)	wetlan	d hydrology must be present,
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)		unless	disturbed or problematic.
Restrictive Layer (if present):			
14 Prove 10			,
			. /
Depth (inches): Remarks: Transmond area	a between wide, se	asonally -	Flocked pertism of
Depth (inches): Remarks: Transitional are drainage & narro	a between wide, se w, channelized f	asonally -	
Depth (inches): Remarks: Transitional are drainage & narrow YDROLOGY	a between wide, se w, channelized f	asonally -	
Depth (inches): Remarks: Transitional are drainage & narro IYDROLOGY Wetland Hydrology Indicators:	w, channelized f	asonally-1 laws	flocked pertion of
Remarks: Transitional are drainage & Narro IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required	w, channelized f	asmally-1 laws	condary Indicators (2 or more required)
Depth (inches): Remarks: Transitional are drainage & name IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1)	d; check all that apply) 	asmally-1 laws	condary Indicators (2 or more required) Water Marks (B1) (Riverine)
Depth (inches): Remarks: Transitional are drainage & name IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required 	d; check all that apply) Salt Crust (B11) Biotic Crust (B12)	asmally-1 laws	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
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Depth (inches): Remarks: Transitional are drainage & name YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine)	d; check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	asonally-1 laws	Condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
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Depth (inches): Remarks:	d; check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) VOxidized Rhizospheres along I Presence of Reduced Iron (C4	a Sonally -1	condary 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)
Depth (inches): Remarks: Transitional and drainage & Marko IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Mark's (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6)	b; check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along I Presence of Reduced Iron (C4 Recent Iron Reduction in Tilled	a Sonally -1	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Séason Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9
Depth (inches): Remarks: Transitional and drainage & Marko IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Mark's (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B	 d; check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along I Presence of Reduced Iron (C4 Recent Iron Reduction in Tillec Thin Muck Surface (C7) 	a Sonally -1	condary 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)
Depth (inches): Remarks:	b; check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along I Presence of Reduced Iron (C4 Recent Iron Reduction in Tilled	a Sonally -1	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Séason Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9
Depth (inches): Remarks:	 <i>b</i>; check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along I Presence of Reduced Iron (C4 Recent Iron Reduction in Tillec Thin Muck Surface (C7) Other (Explain in Remarks) 	a Sonally -1	condary 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)
Depth (inches): Remarks:	 d; check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along II Presence of Reduced Iron (C4 Recent Iron Reduction in Tillec 7) Thin Muck Surface (C7) Other (Explain in Remarks) 	a Sanally - 1 (aus 	condary 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)
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Depth (inches): Remarks: Transtrond and JAINAGE 4 MAMO YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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 (B Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes	W, Chamber and f d; check all that apply)	a Sanally - 1 (aus 	Condary 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)
Depth (inches): Remarks: Transtrond and JAINAGE 4 MAMO YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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 (B Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes	W, Chamber and f d; check all that apply)	a Sanally - 1 (aus 	Condary 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)
Depth (inches):	W, Chamber and f d; check all that apply)	a Sanally - 1 (aus 	Condary 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)
Depth (inches): Remarks: Transtrand and JAINAGE 4 MARAD YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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 (B Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Water Table Present? Yes Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Describe Recorded Data (stream gauge, m	W, Chamber and f d; check all that apply)	a Sanally - 1 (aus 	condary 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)
Depth (inches): Remarks: Transtrand and JAINAGE 4 MARAD YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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 (B Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Water Table Present? Yes Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Describe Recorded Data (stream gauge, m	W, Chamber and f d; check all that apply)	a Sanally - 1 (aus 	condary 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)
Depth (inches):	W, Chamber and f d; check all that apply)	a Sanally - 1 (aus 	condary 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)

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WETLAND DETERMINATION DATA FOR	M – Arid West Region
Applicant/Owner: Ganpule Investigator(s): K.NUSCH, S.SNUKER Section, Township, Landform (hillslope, terrace, etc.): SWALE Local relief (concave) Subregion (LRR): LRP Lat: 25.246431 Soil Map Unit Name: Croppley Cary Are climatic / hydrologic conditions on the site typical for this time of year? Yes No Are Vegetation , Soil , or Hydrology significantly disturbed? A	ve, convex, none): <u>CONCOUP</u> Slope (%): <u>0-2</u> Long: <u>-120, 639998</u> Datum: <u>NADE3</u> NWI classification: <u>NDM</u> o (If no, explain in Remarks.) re "Normal Circumstances" present? Yes <u>V</u> No f needed, explain any answers in Remarks.)
+ ordeveloped grassy (weedy field on	
VEGETATION – Use scientific names of plants.	
Tree Stratum (Plot size:) Absolute % Cover Dominant Indicato Species? 1.	Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)Total Number of Dominant Species Across All Strata:(B)Percent of Dominant Species That Are OBL, FACW, or FAC:(DO)(A/B)Prevalence Index worksheet:Total % Cover of:Multiply by:OBL species O FACW species 33 x 1 = O FACW species 33 x 2 = $60b$ FAC species 29 x 3 = 37 FACU species $x 4 = 0$ UPL species $x 5 = 5$ Column Totals: 63 (A) 156 (B)
3. Polypagen manspeliensis 3 FAU 4. Harle in mavinum 2 FAC 5. Rumex crispus 2 FAC 6. Brach y padium distachyon 1 UPL 7.	Prevalence Index = B/A =
Vegetated drainage obennel with a pland of flood ferrace	mix of species from adjacant

COIL

Sampling Point:

04

Depth <u>Matrix</u> nches) <u>Color (moist) %</u>	Redox Features Color (moist) % Type ¹	Loc ² Texture	Remarks
-12 104R2/1 100		clay	heavy blocky clay
ype: C=Concentration, D=Depletion, RM rdric Soil Indicators: (Applicable to all	=Reduced Matrix, CS=Covered or Coated LRRs, unless otherwise noted.)		cation: PL=Pore Lining, M=Matrix. s for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)		Muck (A9) (LRR C)
Histic Epipedon (A2)	Stripped Matrix (S6)		Muck (A10) (LRR B)
Black Histic (A3)	Loamy Mucky Mineral (F1)		ced Vertic (F18)
_ Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		Parent Material (TF2) · (Explain in Remarks)
_ Stratified Layers (A5) (LRR C)	Depleted Matrix (F3) Redox Dark Surface (F6)	Other	(Explain in Remarks)
1 cm Muck (A9) (LRR D) Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)		
Thick Dark Surface (A12)	Redox Depressions (F8)	³ Indicators	s of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Vernal Pools (F9)		hydrology must be present,
Sandy Gleyed Matrix (S4)		unless	disturbed or problematic.
estrictive Layer (if present):			
These			/
Type:			/
Type: Depth (inches): temarks: feavy clay who red flows whele wated	ox features, area flood terrace that		to move channel not invindented
Depth (inches):	ox features, area flood terrace that to form hydric		
Depth (inches): emarks: teavy clay who red flows whele wated bong enough (DROLOGY	ox features, area flood terrace that to form hydric		
Depth (inches): emarks: feavy clay who red flows whele yated bright (DROLOGY Vetland Hydrology Indicators:	1 10 torm nyacic	transitions is likely soils	
Depth (inches): emarks: flows whele yated flows whele yated (DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one require	1 10 torm nyacic	transitions is likely soils seco	to move channel not inundated
Depth (inches): emarks: {CAVY CAY Who red flows whele yated by belevated (DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one require Surface Water (A1)	ed; check all that apply)	transitions is likely soils	not invindented
Depth (inches): emarks: feavy clay who red flows where you are flows where you are provided by the second flows where you are an are provided by the second	ed; check all that apply) Salt Crust (B11)	transitions is likely soils	not in underted
Depth (inches): emarks: CAYY CAY Who red flows whele yated physical and the second (DROLOGY) Vetland Hydrology Indicators: rimary Indicators (minimum of one require Surface Water (A1)	ad; check all that apply) Salt Crust (B11) Biotic Crust (B12)	transitions is likely soils	to more channel Not invidented ondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Depth (inches): emarks: feavy clay who red flows wheleyated physical and the physical and the physica		is likely soils	to more channel not invndetted ondary 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)
Depth (inches): emarks: flows where you have flows where you have flows where you have provided by the second of the second provided by the second of	ed; check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)) Oxidized Rhizospheres along L Presence of Reduced Iron (C4)	is likely soils	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Séason Water Table (C2) Crayfish Burrows (C8)
Depth (inches): emarks: COVY CAY Who red flows whele yound on the second second second second flows whele yound of the second second second second second provide the second seco	ed; check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled	is likely <u>soils</u> Second	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Séason Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Depth (inches): emarks: COVY CAY Who red flows where equired (DROLOGY) // // // // // // // // // // // // //	ad; check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled 37)Thin Muck Surface (C7)	is likely Soils (C6)	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Séason Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
Depth (inches): emarks: EQUY Clay Who red COVS Clay Who red COVS Clay Who red COVS Clay Who red Covs Welcycated Digger (DROLOGY // // // // // // // // // /	ad; check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled	is likely Soils (C6)	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Séason Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Depth (inches): emarks: COVY CAY Who red COVY COVY CAY WHO RED COVY CAY WHO RED COVY CAY WHO RED		is likely Soils (C6)	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Séason Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
Depth (inches):		is likely <u>Soils</u> Soils (C6)	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Séason Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
Depth (inches):	ad; check all that apply)	is likely Second	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Séason Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (inches):		is likely Second	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Séason Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
Depth (inches):	ad; check all that apply)	is likely Soils (C3)	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Séason Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (inches):	ad; check all that apply)	is likely Soils (C3)	andary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Séason Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (inches):	ad; check all that apply)	iving Roots (C3) Soils (C6)	the move channel not invndated (not invndated) (not in
Depth (inches):	ad; check all that apply)	iving Roots (C3) Soils (C6)	the move channel not invndated (not invndated) (not in

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: ACRO DRIVE Hotel City/County: San	LUIS Obispo Sampling Date: 10 103/19
	State: Sampling Point:
Investigator(s): K. Nellon, S. Snyder Section, Township, R	ange: SIZ TBIS RIZE
Landform (hillslope, terrace, etc.): Local relief (concave	
	_ Long: -17.0.646422 Datum: NAD 83
Soil Map Unit Name: Salinas silty clay loan	NWU classification: 10005
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No	
Are Vegetation, Soil, or Hydrology significantly disturbed? Are Are Vegetation, Soil, or Hydrology naturally problematic? (If n	
SUMMARY OF FINDINGS – Attach site map showing sampling point	eeded, explain any answers in Remarks.) locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes V No Is the Sample within a Wetland Hydric Soil Present? Yes No No within a Wetland Wetland Hydrology Present? Yes No No within a Wetland Remarks: Yes Yes No Yes Yes	d Area ind? Yes <u>V</u> No
Ephemeral swale bordend by public roa side an undeveloped weedy grassy fil	id development on one
VEGETATION – Use scientific names of plants.	
Absolute Dominant Indicator Tree Stratum (Plot size:) % Cover Species? Status	Dominance Test worksheet:
1	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2	
-3	Total Number of Dominant Species Across All Strata: (B)
4	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)= Total Cover	That Are OBL, FACW, or FAC:(A/B)
1/	Prevalence Index worksheet:
2	Total % Cover of:Multiply by:
3	OBL species _100 x1=_100
4	FACW species x 2 =2
5	FAC species x 3 =
Herb Stratum (Plot size: 5)	FACU species x 4 =4
1. Eleochavis macrostachya 100 V OBL	UPL species x 5 =
2. Helminthothera echierder 5 FAC	Column Totals:(A)27(B)
3. Rumex crispus 1 FAC	Prevalence Index = B/A = 1,17+
4. BROMUS hordeaceus FACY	Hydrophytic Vegetation Indicators:
5. Festuca perennis I FAC	Dominance Test is >50%
6. JUNCUR patens 1 FACW	Prevalence Index is ≤3.0 ¹
7	Morphological Adaptations ¹ (Provide supporting
8	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)	
1.	¹ Indicators of hydric soil and wetland hydrology must
2	be present, unless disturbed or problematic.
= Total Cover	Hydrophytic
% Bare Ground in Herb Stratum % Cover of Biotic Crust	Vegetation Present? Yes No
Remarks:	
What is a soluting thousand particle of a d	Lainage (swale. This
Wide scasonally flooded particle of a d area likely flooded following starms, elu	e to back up @ downstream
CUIVER .	

1

SOIL

Sampling Point: ______5

Profile Des	cription: (Describe	to the dept	th needed to docu	ment the i	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix			x Feature		12	Tautura	Remarks
(inches)	Color (moist)		Color (moist)	%	Type'	Loc	Clay	heavy blocky 1 kg
0-12	10/122/1	95	10114 110	2	~	M	und	- ind knowled Child
		-				<u> </u>		
	+							
	14 			• • • • • • • •				
				-			- 21	
¹ Type: C=C	oncentration, D=Dep	oletion, RM=	Reduced Matrix, C	S=Covered	d or Coate	ed Sand Gr	ains. Loc	cation: PL=Pore Lining, M=Matrix.
	Indicators: (Applic	cable to all			eu.)			Muck (A9) (LRR C)
Histoso			Sandy Red Stripped M					Muck (A10) (LRR B)
	pipedon (A2) Istic (A3)		Loamy Mu		(F1)			ced Vertic (F18)
	en Sulfide (A4)		Loamy Gle					arent Material (TF2)
	d Layers (A5) (LRR	C)	Depleted N					(Explain in Remarks)
	uck (A9) (LRR D)	1	V Redox Dar	k Surface				
Deplete	d Below Dark Surfac	ce (A11)	Depleted D	ark Surfac	ce (F7)			
the second se	ark Surface (A12)		Redox Dep	pressions (F8)			of hydrophytic vegetation and
	Mucky Mineral (S1)		Vernal Poc	ols (F9)				hydrology must be present,
	Gleyed Matrix (S4)				_		uniess c	listurbed or problematic.
Restrictive	Layer (if present):							
Type:							Under Call	Present? Yes 🔨 No
Depth (ir	nches):						Hydric Soli	Present? Yes No
HYDROLO	OGY	1						
	/drology Indicators	:						
	icators (minimum of		d: check all that app	olv)			Seco	ndary Indicators (2 or more required)
	e Water (A1)	ono roquiro.	Salt Crus					Water Marks (B1) (Riverine)
	ater Table (A2)		Biotic Cru					Sediment Deposits (B2) (Riverine)
	ion (A3)			nvertebrate	es (B13)			Drift Deposits (B3) (Riverine)
	Marks (B1) (Nonrive	rine)		n Sulfide C				Drainage Patterns (B10)
	ent Deposits (B2) (No					Living Ro	ots (C3)	Dry-Season Water Table (C2)
	eposits (B3) (Nonrive			of Reduc				Crayfish Burrows (C8)
	e Soil Cracks (B6)					ed Soils (C	6) 🗹 s	Saturation Visible on Aerial Imagery (C9)
	tion Visible on Aerial	Imagery (B		k Surface				Shallow Aquitard (D3)
	Stained Leaves (B9)			plain in R	emarks)		V F	FAC-Neutral Test (D5)
Field Obse	and the second second second second			<u> </u>				
		Yes	No Depth (i	nches):				
Water Tabl		Yes		nches):				
Saturation		Yes				Wet	land Hydrolog	gy Present? Yes No
(includes c	anillary fringe)							
Describe R	ecorded Data (stream	m gauge, m	onitoring well, aeria	l photos, p	revious in	spections)	, if available:	
Remarks:	and duri	ante	lourda	word	an a	n a	la i lud	involved but alar
Vegete	ated circu	Mage	Iswalle	way.	CF1X	ja	ri lavo	leveloped lot alone anal lephemeral clopments (11109
the	edge of	1 1)	MUDIC 1	oad,	150	CIVE	Secise	anal representation
t with	louis ful	un	culvert	4	adi	alen	+ dev	elo pments (1000)
- +	14443 - 143				1			1 -

Arid West - Version 2.0

WETLAND DET	ERMINATI	ON DATA FORM	- Arid West Region
Project/Site: Aero Drive Hotel		City/County: San	LUIS Oblepo Sampling Date: 10/03/19
Applicant/Owner: Gan pull		only/obdanty.	State: CA Sampling Point: OQ
	V	Soction Township D	ange: $S12$ T31S $P12E$
			convex, none): <u>CONCAVE</u> Slope (%): <u>0-2</u>
			_ Long: -170.640421 Datum: 101083
Soil Map Unit Name: <u>Salinas</u> silty c			NWI classification: 10009
Are climatic / hydrologic conditions on the site typical for t			(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology			"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology	naturally pro	blematic? (If ne	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing	sampling point I	ocations, transects, important features, etc.
Hydric Soil Present? Yes	No No No	Is the Sampled within a Wetlan	
Remarks:	NU		
Side q undeveloped we	rdy 1	gublic roc grassy fil	eld on the other
VEGETATION – Use scientific names of pla	nts.		
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet:
1. (i lot 5/20)	<u>78 COver</u>	_species?_Status_	Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2.			the same same and a set of the same shall be
3			Total Number of Dominant Species Across All Strata: (B)
4			
Sapling/Shrub Stratum (Plot size:)		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:(00(A/B)
1,			Prevalence Index worksheet:
2			Total % Cover of: Multiply by:
3			OBL species $0 \times 1 = 0$
4			FACW species \underline{O} $x^2 = \underline{O}$
5			FAC species $\underline{39}$ x 3 = $\underline{207}$
Herb Stratum (Plot size: 5)	<u> </u>	= Total Cover	FACU species x 4 =
1. LIPIMINHhothera echicides	40	FAC	UPL species $0 \times 5 = 0$ Column Totals: $89 \times (A) \times 267$ (B)
2. Hordeum wannum	42	V FAC	
3. Festura perennis	5	- tAC	Prevalence Index = $B/A = 3.6$
4 KINNEX CHISPUS	2	TAC	Hydrophytic Vegetation Indicators:
5			Dominance Test is >50%
6			Prevalence Index is ≤3.0 ¹
7			Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
8	Ba		Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine\Stratum (Plot size:)	24-	= Total Cover	
1/		the second secon	¹ Indicators of hydric soil and wetland hydrology must
2			be present, unless disturbed or problematic.
	1	= Total Cover	Hydrophytic
% Bare Ground in Herb Stratum 12 % Cove	r of Biotic Cru	ust	Vegetation Present? Yes No
Remarks:			
Transitional area adjacen Seasonally flooded area	t to	Eleochavis	-mats in wide,
surrivered tweeter street	i con	ANN GIGIN	and is not the

SOIL

 \tilde{z}_{ij}

Sampling Point: 06

Profile Description: (Describe to the depth needed to do		ne absence of indicators.)
	edox Features % Type ¹ Loc ²	Texture Remarks
(inches) Color (moist) % Color (moist)		
0-14 1046 211 100		
	- (
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix	, CS=Covered or Coated Sand Grain	ns. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LRRs, unless of	therwise noted.)	Indicators for Problematic Hydric Soils*:
Histosol (A1) Sandy F	Redox (S5)	1 cm Muck (A9) (LRR C)
	Matrix (S6)	2 cm Muck (A10) (LRR B)
	Mucky Mineral (F1)	Reduced Vertic (F18)
	Gleyed Matrix (F2)	Red Parent Material (TF2) Other (Explain in Remarks)
	d Matrix (F3) Dark Surface (F6)	
	d Dark Surface (F7)	
	Depressions (F8)	³ Indicators of hydrophytic vegetation and
	Pools (F9)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)		unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:		/
Depth (inches):		Hydric Soil Present? Yes No V
Remarks:		
Transitional area; Neary, b	INNY Clark with	1 MA VOADX PEATINES
Individual of the for	ion con on	No Netoxe Leveloarea
HYDROLOGY		
Wetland Hydrology Indicators:		and the second se
Primary Indicators (minimum of one required; check all that a		Secondary Indicators (2 or more required)
		Water Marks (B1) (Riverine)
	⁻ ust (B11) Crust (B12)	Sediment Deposits (B2) (Riverine)
	c Invertebrates (B13)	Drift Deposits (B3) (Riverine)
	gen Sulfide Odor (C1)	⊥ Drainage Patterns (B10)
		(C3) Dry-Season Water Table (C2)
	nce of Reduced Iron (C4)	Crayfish Burrows (C8)
	t Iron Reduction in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9)
	luck Surface (C7)	Shallow Aquitard (D3)
	(Explain in Remarks)	FAC-Neutral Test (D5)
Field Observations:		
	(inches):	
		1
	(inches).	nd Hydrology Present? Yes No
Saturation Present? Yes No Depth	(incres): Wetian	la Hydrology Present? Tes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, ae	rial photos, previous inspections), if	available:
2		
2	and area along	100 flood tours
2	mal area along	low flood terrace
2	mal area along	low flood terrace
	mal area along	low flood terrace

WETLAND DET	ERMINATION DATA FOR	M – Arid West Region
Project/Site: <u>Aero Drive Hotel</u> Applicant/Owner: <u>Ganpuk</u> Investigator(s): <u>KINCLSON, S.Snipter</u> Landform (hillslope, terrace, etc.): <u>Subale</u> Subregion (LRR): <u>Subale</u> Soil Map Unit Name: <u>Salines sitty</u> Are climatic / hydrologic conditions on the site typical for the Are Vegetation, Soil, or Hydrology	City/County: <u>Salv</u> Section, Township, Local relief (concav Lat: <u>35.240927</u> <u>Clay (cam</u> his time of year? Yes <u>No</u> significantly disturbed? Ar naturally problematic? (If	1 LUIS Obispo Sampling Date: 10/03/19 State: CA Sampling Point: 07
Hydric Soil Present? Yes	No Is the Sample No Is the Sample within a Wet	
VEGETATION – Use scientific names of plan	ate	re origin wy an weicher free
Tree Stratum (Plot size:) 1.	Absolute Dominant Indicator <u>% Cover</u> <u>Species?</u> <u>Status</u> 	
3. Polyporion monspettensis 4. Helminthis thera echicides 5. Cypevis eracitostis 6. Rumox chispois 7	30 3 2 2 1 1 5 5 6 6 7 6 7 6 7 6 7 6 7 7 7 6 7 7 7 7 7 7 7 7 7 7 7 7 7	Prevalence Index = B/A =
8 Bare Ground in Herb Stratum & Cover of Remarks: Transitional area betwee Cypercy	= Total Cover of Biotic Crust n dense pate	Hydrophytic Vegetation Present? Yes <u>No</u> hes of Eleochavis +

ofile Description: (Describe to the depth needed to document the indicator o		anna of indicators)
Dodoy Leaturas	or confirm the ab	sence of mulcators.
eptil Matha (calas (moist) % Type	Loc ² Text	ure Remarks
<u>hches)</u> <u>Color (molsc)</u> <u>x</u>		(y
	M Ma	11 il in daily
- 14 10 4R 4/3 80 104R416 2 C	1- Cler	
GIOYR21 18		
4		
· · · · · · ·_		
Diverse of Coater	d Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indi	cators for Problematic Hydric Soils ³ :
O to Deday (CE)		1 cm Muck (A9) (LRR C)
_ Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6)	1.52	2 cm Muck (A10) (LRR B)
Black Histic (A3) Loamy Mucky Mineral (F1)		Reduced Vertic (F18)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)		Red Parent Material (TF2)
Stratified Lavers (A5) (LRR C) Depleted Matrix (F3)		Other (Explain in Remarks)
1 cm Muck (A9) (LRR D) Redox Dark Surface (F6)		
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8)	³ Ind	icators of hydrophytic vegetation and
		vetland hydrology must be present,
_ Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4)	u	nless disturbed or problematic.
estrictive Layer (if present):		
Туре:		./
Depth (inches):	Hyd	ric Soil Present? Yes No
transitional area		
YDROLOGY Vetland Hydrology Indicators:		
Vetland Hydrolouv Indicators.		at the
		Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)		
Primary Indicators (minimum of one required; check all that apply) Sulface Water (A1) Salt Crust (B11) Division Crust (B12)		Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required) Water Marks (B1) (Riverine)
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1)	Living Roots (C3	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)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)		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)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4)	4)	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 (C3)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Recent Iron Reduction in Tille	4)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Séason Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C3) Shallow Aquitard (D3)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Recent Iron Reduction in Tille Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7)	4)	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 (C3)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Recent Iron Reduction in Tille Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Water-Stained Leaves (B9) Other (Explain in Remarks)	4) ed Soils (C6)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Séason Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C3) Shallow Aquitard (D3)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Recent Iron Reduction in Tille Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Water-Stained Leaves (B9) Other (Explain in Remarks)	4) ed Soils (C6)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Séason Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C3) Shallow Aquitard (D3)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	4) ed Soils (C6)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Séason Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C4 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	4) kd Soils (C6)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Séason Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C3) Shallow Aquitard (D3)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	4) Ind Soils (C6)	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	4) Ind Soils (C6)	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	4) d Soils (C6) Wetland H spections), if avai	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Séason Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C3 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	4) d Soils (C6) Wetland H spections), if avai	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Séason Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C3 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Recent Iron Reduction in Tille Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Water Table Present? Yes No Depth (inches): Saturation Present? Yes Nater Table Present? Yes No Depth (inches): Saturation Present?	4) d Soils (C6) Wetland H spections), if avai	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Séason Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C3 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	4) d Soils (C6) Wetland H spections), if avai	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Séason Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C3 Shallow Aquitard (D3) FAC-Neutral Test (D5)

AT

WETLAND DETERMINATION DATA FORM – Arid West Region
Project/Site: Aero Drive Hotel City/County: San Luis Obispo Sampling Date: 10/03/19
Applicant/Owner: 6anpule State: 6 Sampling Point: 08
Investigator(s): K. NCISON, S. Shyder Section, Township, Range: SIZ TBIS RIZE
Landform (hillslope, terrace, etc.): <u>flood fervale</u> Local relief (concave, convex, none): <u>CONVEX</u> Slope (%): <u>1-3</u>
Subregion (LRR): LPC Lat: 35, 246727 Long: -120, 646253 Datum: NADES
Soil Map Unit Name: Salinas Silty Chay LOam NWI classification: NONR
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 V 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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	~	NO	Is the Sampled Area within a Wetland?	Yes	No
Remarks: Low bank @ undevely	edge of ped fie	Mein Id.	channel	and.	adjacut

VEGETATION - Use scientific names of plants.

<u>Tree Stratum</u> (Plot size:) 1)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A)
23			Total Number of Dominant Species Across All Strata:(B)
4	_/	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
1			Prevalence Index worksheet: Total % Cover of:Multiply by:
3			OBL species O x 1 =O
4			FACW species x 2 = 0
5		= Total Cover	FAC species $115 \times 3 = 345$ FACU species $2 \times 4 = 0$
Herb Stratum (Plot size:)		- Total Cover	$\begin{array}{c c} \hline & & & \\ \hline & & \\ \hline & & \\ \hline \\ \hline$
1. Distichtis spicata 2. Hordeum marinum	20	V FAC	Column Totals: 11 (4) (A) 350 (B)
3. Avena barbata		- HC	Prevalence Index = $B/A = 3.02$
4		- OFE	Hydrophytic Vegetation Indicators:
5			✓ Dominance Test is >50%
6			Prevalence Index is ≤3.0 ¹
7	-		Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
8	1110	= Total Cover	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)	<u>-µv</u> .	- Total Cover	
1	_		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		= Total Cover	Hydrophytic
% Bare Ground in Herb Stratum % Cover	of Biotic Cru	ist	Vegetation Present? Yes No No
Remarks:			
Area adjacent to ma	In 1	channel	dominated by
Distichur			e al

SOIL

Sampling Point: 08

Profile Description: (Describe to the depth needed to document the inc	active of commentation of managements
Depth Matrix Redox Features (inches) Color (moist) % Color (moist) %	Type ¹ Loc ² Texture Remarks
p - L = 10 L = 2 1 = 160	- Clay
1-14 10 16 11 100	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered of	or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix.
ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted	1.) Indicators for Problematic Hydrid dons :
Histosol (A1) Sandy Redox (S5)	1 cm Muck (A9) (LRR C)
Histic Epipedon (A2) Stripped Matrix (S6)	2 cm Muck (A10) (LRR B)
Black Histic (A3) Loamy Mucky Mineral (
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F	F2) Red Parent Material (TF2)
Stratified Layers (A5) (LRR C) Depleted Matrix (F3)	Other (Explain in Remarks)
1 cm Muck (A9) (LRR D) Redox Dark Surface (F	
Depleted Below Dark Surface (A11) Depleted Dark Surface	
Thick Dark Surface (A12) Redox Depressions (F8	 ³Indicators of hydrophytic vegetation and wetland hydrology must be present,
Sandy Mucky Mineral (S1) Vernal Pools (F9)	unless disturbed or problematic.
Sandy Gleyed Matrix (S4)	
Restrictive Layer (if present):	
Туре:	
Depth (inches):	Hydric Soil Present? Yes No V
Remarks: Loose, crumbly day; no re	
Remarks: Loose, crumbly day; no rea	
Remarks: LOOSE, CRUMBLY day; no rea	
Remarks: LOOSE, CMMBLY day; no rea MYDROLOGY Wetland Hydrology Indicators:	
Remarks: LOOSE, CHMBY day; NO VE YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	dor features Secondary Indicators (2 or more required)
Remarks: LOOSE, CMMBY YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
Remarks: LOOSE, CMMBY day; no YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Remarks: LOOSE, CMMBY day; no YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	B13) (B13) (B12) (B13) (B12) (B13) (B13) (B13) (B13) (B13) (B14) (
Remarks: LOOSE, CMMBY day; NO NYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	(B13) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine)
Remarks: LOOSE, CMMBY day; NO YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	B13) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B10) as along Living Roots (C3) Dry-Season Water Table (C2)
Remarks: LOOSE, CMMBY day; NO YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	B13) Drainage Patterns (B10) B13) Drainage Patterns (B10) as along Living Roots (C3) Dry-Season Water Table (C2) i Iron (C4) Crayfish Burrows (C8)
Remarks: LOOSE, CMMBY day; NO YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Secondary Indicators (2 or more required)
Remarks: LOOSE, CMMBY day; NO YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odd Sediment Deposits (B2) (Nonriverine) Oxidized Rhizosphere Drift Deposits (B3) (Nonriverine) Presence of Reduced Surface Soil Cracks (B6) Recent Iron Reduction	Secondary Indicators (2 or more required)
Remarks: VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Secondary Indicators (2 or more required)
Remarks: VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odd Sediment Deposits (B2) (Nonriverine) Oxidized Rhizosphere Drift Deposits (B3) (Nonriverine) Presence of Reduced Surface Soil Cracks (B6) Recent Iron Reductio Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C Water-Stained Leaves (B9) Other (Explain in Rem	Secondary Indicators (2 or more required)
Remarks: VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates Water Marks (B1) (Nonriverine) Oxidized Rhizosphere Drift Deposits (B3) (Nonriverine) Oxidized Rhizosphere Surface Soil Cracks (B6) Recent Iron Reduction Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C Water-Stained Leaves (B9) Other (Explain in Ren	Secondary Indicators (2 or more required)
Remarks: VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odd Sediment Deposits (B2) (Nonriverine) Oxidized Rhizosphere Drift Deposits (B3) (Nonriverine) Presence of Reduced Surface Soil Cracks (B6) Recent Iron Reductio Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C Water-Stained Leaves (B9) Other (Explain in Ren Field Observations: Yes No Depth (inches):	Secondary Indicators (2 or more required)
Remarks: LOOSE, CMMBY days no realized in the second se	Secondary Indicators (2 or more required)
Remarks: VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Secondary Indicators (2 or more required)
Remarks: UOOSE, CMMBY day; NO ready YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates Water Marks (B1) (Nonriverine) Oxidized Rhizosphere Drift Deposits (B3) (Nonriverine) Presence of Reduced Surface Soil Cracks (B6) Recent Iron Reductio Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C Water-Stained Leaves (B9) Other (Explain in Ren Field Observations: Surface Water Present? Yes Surface Water Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):	Secondary Indicators (2 or more required)
Remarks: VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Secondary Indicators (2 or more required)
Remarks: UODSE, CUMBY Quy no real Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Secondary Indicators (2 or more required)
Remarks: UODSE, CUMBY Quy no real Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Secondary Indicators (2 or more required)
Remarks: UODSE, CUMBY Quy no real Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Secondary Indicators (2 or more required)
Remarks: UODSE, CUMBY Quy no real Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Secondary Indicators (2 or more required)
Remarks: VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Secondary Indicators (2 or more required)

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APPENDIX C: Arid West Intermittent and Ephemeral Streams OHWM Datasheets



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Arid West Ephemeral and Intermit	ttent Streams OH WIVI Datasheet
Project: AERO DRUVE HOTEL PROVERT Project Number: N/A Stream: Unnamed Angulary to Academic neck Investigator(s): K Nelfon, S. Source	Date: 10/03/19 Time: 1100 - 14(00 Town: San Littlow State: CA Photo begin file#: — Photo end file#: —
$Y \square N \square$ Do normal circumstances exist on the site?	Location Details: 950 A 990 Aaro Drive. Sin Lans Classe, in 1340
$Y \square / N $ Is the site significantly disturbed?	Projection: Datum: Coordinates:
Potential anthropogenic influences on the channel syste Drainage is curvented of policean a down it receives runoff from petream landsa public roads a commercial development	streem edges of subject property, aped area, site is summinded by
Brief site description: Indeveloped in fill lot Su native Verbaceous vegetedion of Pew a NW across SW edge of Undeveloped iot. Pr Seasonally causing temporary floating	eporting mostly non-frequently mon
Checklist of resources (if available):	a transit despised beacher all
Aerial photography	data
Dates: 994 - 2018 Gage numb	
Topographic maps Period of re	
	of recent effective discharges
	of flood frequency analysis
	cent shift-adjusted rating
	eights for 2-, 5-, 10-, and 25-year events and the cent event exceeding a 5-year event
Hydrogeomorphic Flo	podplain Units
Active Floodplain	Low Terrace
Active Floodplain	OHWM Paleo Channel
Active Floodplain Active Floodplain Low-Flow Channels Procedure for identifying and characterizing the floodpl . Walk the channel and floodplain within the study area to	OHWM Paleo Channel lain units to assist in identifying the OHWM:
Active Floodplain Active Floodplain Low-Flow Channels rocedure for identifying and characterizing the floodpl Walk the channel and floodplain within the study area to vegetation present at the site.	OHWM Paleo Channel DHWM Paleo Channel lain units to assist in identifying the OHWM: get an impression of the geomorphology and
Active Floodplain Active Floodplain Low-Flow Channels rocedure for identifying and characterizing the floodpl Walk the channel and floodplain within the study area to vegetation present at the site. Select a representative cross section across the channel. Dr Determine a point on the cross section that is characterist a) Record the floodplain unit and GPS position.	DHWM Paleo Channel DHWM Paleo Channel lain units to assist in identifying the OHWM: get an impression of the geomorphology and raw the cross section and label the floodplain units. ic of one of the hydrogeomorphic floodplain units.
Active Floodplain Active Floodplain Low-Flow Channels rocedure for identifying and characterizing the floodpl Walk the channel and floodplain within the study area to vegetation present at the site. Select a representative cross section across the channel. Dr Determine a point on the cross section that is characterist a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth clu floodplain unit.	DHWM Paleo Channel DHWM Paleo Channel lain units to assist in identifying the OHWM: get an impression of the geomorphology and raw the cross section and label the floodplain units. ic of one of the hydrogeomorphic floodplain units.
Active Floodplain Low-Flow Channels rocedure for identifying and characterizing the floodpl Walk the channel and floodplain within the study area to vegetation present at the site. Select a representative cross section across the channel. Dr Determine a point on the cross section that is characterist a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth cl. floodplain unit. c) Identify any indicators present at the location.	DHWM Paleo Channel OHWM Paleo Channel Anin units to assist in identifying the OHWM: get an impression of the geomorphology and raw the cross section and label the floodplain units. ic of one of the hydrogeomorphic floodplain units. ass size) and the vegetation characteristics of the
Active Floodplain Active Floodplain Low-Flow Channels Procedure for identifying and characterizing the floodpl Walk the channel and floodplain within the study area to vegetation present at the site. Select a representative cross section across the channel. Dr Determine a point on the cross section that is characterist a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth cli- floodplain unit. c) Identify any indicators present at the location. Repeat for other points in different hydrogeomorphic flood	DHWM Paleo Channel OHWM Paleo Channel lain units to assist in identifying the OHWM: get an impression of the geomorphology and raw the cross section and label the floodplain units. ic of one of the hydrogeomorphic floodplain units. ass size) and the vegetation characteristics of the
Active Floodplain Active Floodplain Low-Flow Channels Frocedure for identifying and characterizing the floodplain Walk the channel and floodplain within the study area to vegetation present at the site. Select a representative cross section across the channel. Dr Determine a point on the cross section that is characterist a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth clu floodplain unit. c) Identify any indicators present at the location. Repeat for other points in different hydrogeomorphic flood Identify the OHWM and record the indicators. Record the	DHWM Paleo Channel OHWM Paleo Channel Alain units to assist in identifying the OHWM: get an impression of the geomorphology and raw the cross section and label the floodplain units. ic of one of the hydrogeomorphic floodplain units. ass size) and the vegetation characteristics of the odplain units across the cross section. e OHWM position via:
Active Floodplain Active Floodplain Low-Flow Channels rocedure for identifying and characterizing the floodpl Walk the channel and floodplain within the study area to vegetation present at the site. Select a representative cross section across the channel. Do Determine a point on the cross section that is characterist a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth cli- floodplain unit. c) Identify any indicators present at the location. Repeat for other points in different hydrogeomorphic flood Identify the OHWM and record the indicators. Record the Mapping on aerial photograph	OHWM Paleo Channel OHWM Paleo Channel lain units to assist in identifying the OHWM: get an impression of the geomorphology and raw the cross section and label the floodplain units. ic of one of the hydrogeomorphic floodplain units. ass size) and the vegetation characteristics of the

Cross section drawing: Mowe D HERBACEDUS VEG	PARTIALLY VEGETATED CHANNED BOTTOM WIN SCOURED POOL CULVERT.
OHWM	
GPS point: AD-DI:	
Indicators: Change in average sediment texture Change in vegetation species Change in vegetation cover	ure Break in bank slope Other: Other:
Comments: A small scour pod has form on site substrate in this a moff (commercial potting s	med Q the outlet of the upstream called and consists of Mixed Landscaping of Wean Foil, mulich, D.G., etc.). This pool is intermiti then water from upstream source
innunolated by -excess irriga	tion water from upstream source
Floodplain unit: 🗹 Low-Flow Chan	
Floodplain unit: I Low-Flow Chan GPS point: <u>AD</u> -OL Characteristics of the floodplain unit:	nel 🗌 Active Floodplain 🗌 Low Terrace
Floodplain unit: Image: Construction GPS point: AD -OI Characteristics of the floodplain unit: Average sediment texture: Gravel - Sa Average sediment texture: Gravel - Sa 7 Total veg cover: BO % Tree: 0 %	nel 🗌 Active Floodplain 🗌 Low Terrace
Floodplain unit: I Low-Flow Chan GPS point: <u>AD</u> -OL Characteristics of the floodplain unit:	nel 🗌 Active Floodplain 🗌 Low Terrace
Floodplain unit: I Low-Flow Channel GPS point: AD -OI Characteristics of the floodplain unit: Average sediment texture: Gravel - Sa Total veg cover: D % Image: Image: Image: </td <td>nel Active Floodplain Low Terrace</td>	nel Active Floodplain Low Terrace
Floodplain unit: Image: Comparison of the floodplain unit: GPS point: AD -OI Characteristics of the floodplain unit: Average sediment texture: Average sediment texture: GYAYEI - SA Total veg cover: D % Tree: D % Community successional stage: MA Early (herbaceous & seedlings) Indicators: Mudcracks Ripples Drift and/or debris Presence of bed and bank Benches	nel Active Floodplain Dow Terrace

Project ID: AERO DR Cross section ID	D: AU-02 Date: 03 A Time: 200
Cross section drawing: MOWED HERBACEOUS VEGET MILLON	FLOODPLAIN TONING
OHWM	
GPS point: AD-02.	
Indicators: Change in average sediment texture Change in vegetation species Change in vegetation cover	 Break in bank slope Other: Other:
Comments: Wide section of drainage, wh active floodplain adjacen	the seasonal inundation floods the to the low flow channel
Floodplain unit: Low-Flow Channel	Active Floodplain Low Terrace
haracteristics of the floodplain unit:	
Average sediment texture: CLAY	Shrub:% Herb:%
	Late (herbaceous, shrubs, mature trees)
Mudcracks Mudcracks Ripples Drift and/or debris Presence of bed and bank Benches	Soil development Surface relief Other: <u>A IN VIG. COVE R</u> Other: <u>Other:</u>
Low flow channel is non	row, characterized by sparse

Floodplain unit: Low-Flow Channel	Active Floodplain Low Terrace
GPS point: AD-02	
Characteristics of the floodplain unit: Average sediment texture: <u>Clay</u> Total veg cover: <u>TS</u> % Tree: <u>O</u> % S Community successional stage:	hrub: <u>0</u> % Herb: <u>15</u> %
Early (herbaceous & seedlings)	Late (herbaceous, shrubs, mature trees)
Indicators: Mudcracks Ripples Drift and/or debris Presence of bed and bank Benches	 Soil development Surface relief Other: <u>A 10 veq Specie</u> Other: Other:
Flood plain seasonally inur imaging. Mapped lared goog	ndected - apparent on aerial raphy + vegetation.
	Active Floodplain Low Terrace
	Active Floodplain Low Terrace
GPS point: Characteristics of the floodplain unit:	
GPS point:	Shrub:% Herb:%
GPS point: Characteristics of the floodplain unit: Average sediment texture:% Total veg cover:% Tree:% S	
Characteristics of the floodplain unit: Average sediment texture: Total veg cover:% Tree:% S Community successional stage: NA Early (herbaceous & seedlings) Indicators: Mudcracks	Shrub:% Herb:%
GPS point: Characteristics of the floodplain unit: Average sediment texture:% Tree:% S Community successional stage: NA Early (herbaceous & seedlings) Indicators:	Shrub:% Herb:% Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees) Soil development
GPS point: Characteristics of the floodplain unit: Average sediment texture: Total veg cover:% Tree:% S Community successional stage: NA Early (herbaceous & seedlings) Indicators: Mudcracks Mudcracks Ripples Drift and/or debriss Presence of bed and bank	Shrub:% Herb:% Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees) Soil development Surface relief Other: Other:
GPS point: Characteristics of the floodplain unit: Average sediment texture: Total veg cover:% Tree:% S Community successional stage: NA Early (herbaceous & seedlings) Indicators: Mudcracks Ripples Drift and/or debriss Presence of bed and bank Benches	Shrub:% Herb:% Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees) Soil development Surface relief Other: Other:

Cross section drawing:	OP OF BANK AN
MOVED +	*/////
VEDENTIA	
L'INE.	AND
	MINING AND
	OHWAN WEILAND,
	Driving
OHWM	
AD 02:	
GPS point: <u>AD -03</u> ;	
Indicators:	
Change in average sediment textu	re Break in bank slope
Change in vegetation species	Other:
Change in vegetation cover	Other:
Comments:	
Namon, vegetated low flo	w channel, surrounded by in chann
wetlands.	in contraction of the construction
inclusions.	
Floodplain unit: IT Low-Flow Chann	
Floodplain unit: I Low-Flow Chann	nel 🗌 Active Floodplain 🗌 Low Terrace
	nel 🗌 Active Floodplain 🗌 Low Terrace
	nel 🗌 Active Floodplain 🗌 Low Terrace
GPS point: <u>AD - 0 ろ</u> Characteristics of the floodplain unit:	nel 🗌 Active Floodplain 🗌 Low Terrace
GPS point: <u>AD-03</u> Characteristics of the floodplain unit: Average sediment texture: Clay	_
GPS point: <u>AD-03</u> Characteristics of the floodplain unit: Average sediment texture: <u>Clay</u> Total veg cover: <u>100</u> % Tree: <u>0</u> %	_
GPS point: <u>AD-03</u> Characteristics of the floodplain unit: Average sediment texture: <u>Clay</u> Total veg cover: <u>DO</u> % Tree: <u>0</u> % Community successional stage:	
GPS point: <u>AD-O3</u> Characteristics of the floodplain unit: Average sediment texture: <u>Clay</u> Total veg cover: <u>DO</u> % Tree: <u>0</u> % Community successional stage: <u>NA</u>	 Shrub:% Herb: DO % Mid (herbaceous, shrubs, saplings)
GPS point: <u>AD-03</u> Characteristics of the floodplain unit: Average sediment texture: <u>Clay</u> Total veg cover: <u>DO</u> % Tree: <u>0</u> % Community successional stage:	
GPS point: <u>AD-O3</u> Characteristics of the floodplain unit: Average sediment texture: <u>Clay</u> Total veg cover: <u>DO</u> % Tree: <u>0</u> % Community successional stage: <u>M</u> NA <u>Early (herbaceous & seedlings)</u>	 Shrub:% Herb: DO % Mid (herbaceous, shrubs, saplings)
GPS point: <u>AD-O3</u> Characteristics of the floodplain unit: Average sediment texture: <u>Clay</u> Total veg cover: <u>DO</u> % Tree: <u>0</u> % Community successional stage: <u>M</u> NA <u>Early (herbaceous & seedlings)</u>	 Shrub:% Herb: DO % Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees)
GPS point: <u>AD-O3</u> Characteristics of the floodplain unit: Average sediment texture: <u>Clay</u> Total veg cover: <u>IO</u> % Tree: <u>O</u> % Community successional stage: <u>NA</u> Early (herbaceous & seedlings) Indicators:	 Shrub:% Herb:
GPS point: <u>AD-O3</u> Characteristics of the floodplain unit: Average sediment texture: <u>Clay</u> Total veg cover: <u>DO</u> % Tree: <u>O</u> % Community successional stage: <u>MA</u> Early (herbaceous & seedlings) indicators: <u>Mudcracks</u> <u>Ripples</u> <u>Drift and/or debris</u>	 Shrub:% Herb: 00% Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees) Soil development Surface relief Other:
GPS point: <u>AD-O3</u> Characteristics of the floodplain unit: Average sediment texture: <u>Clay</u> Total veg cover: <u>DO</u> % Tree: <u>O</u> % Community successional stage: <u>MA</u> Early (herbaceous & seedlings) ndicators: <u>Mudcracks</u> <u>Ripples</u> <u>Drift and/or debris</u> <u>Presence of bed and bank</u>	 Shrub:% Herb: 00% Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees) Soil development Surface relief Other:
GPS point: <u>AD-O3</u> Characteristics of the floodplain unit: Average sediment texture: <u>Clay</u> Total veg cover: <u>DO</u> % Tree: <u>O</u> % Community successional stage: <u>MA</u> Early (herbaceous & seedlings) indicators: <u>Mudcracks</u> <u>Ripples</u> <u>Drift and/or debris</u>	 Shrub:% Herb: DO% Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees) Soil development Surface relief
GPS point: <u>AD-O3</u> Characteristics of the floodplain unit: Average sediment texture: <u>Clay</u> Total veg cover: <u>DO</u> % Tree: <u>O</u> % Community successional stage: <u>NA</u> Early (herbaceous & seedlings) Indicators: <u>Mudcracks</u> Ripples Drift and/or debris Presence of bed and bank Benches Comments:	 Shrub:% Herb: DO% Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees) Soil development Surface relief Other: Other: Other:
GPS point: <u>AD-O3</u> Characteristics of the floodplain unit: Average sediment texture: <u>Clay</u> Total veg cover: <u>DO</u> % Tree: <u>O</u> % Community successional stage: <u>NA</u> Early (herbaceous & seedlings) Indicators: <u>Mudcracks</u> Ripples Drift and/or debris Presence of bed and bank Benches Comments:	 Shrub:% Herb: DO% Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees) Soil development Surface relief Other: Other: Other:
GPS point: <u>AD-O3</u> Characteristics of the floodplain unit: Average sediment texture: <u>Clay</u> Total veg cover: <u>DO</u> % Tree: <u>O</u> % Community successional stage: NA Early (herbaceous & seedlings) Indicators: Mudcracks Ripples Drift and/or debris Presence of bed and bank Benches Comments:	 Shrub:% Herb: DO% Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees) Soil development Surface relief Other: Other: Other:
GPS point: AD-OB Characteristics of the floodplain unit: Average sediment texture: Clay Total veg cover: bO % Tree: 0 % Community successional stage: NA Early (herbaceous & seedlings) Indicators: Mudcracks Ripples Drift and/or debris Presence of bed and bank Benches Comments:	 Shrub:% Herb: DO% Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees) Soil development Surface relief Other: Other:
GPS point: <u>AD-O3</u> Characteristics of the floodplain unit: Average sediment texture: <u>Clay</u> Total veg cover: <u>DO</u> % Tree: <u>O</u> % Community successional stage: NA Early (herbaceous & seedlings) Indicators: Mudcracks Ripples Drift and/or debris Presence of bed and bank Benches Comments:	 Shrub:% Herb: DO% Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees) Soil development Surface relief Other: Other: Other:

Project ID: ACLO DR Cross section ID: Floodplain unit: D Low-Flow Channel	Active Floodplain Low Terrace
GPS point: AD -03	
Characteristics of the floodplain unit: Average sediment texture: <u>Chay</u> Total veg cover: <u>100</u> % Tree: <u>0</u> % 5 Community successional stage:	Shrub: <u>Ø</u> % Herb: <u>100</u> %
NA Early (herbaceous & seedlings)	 Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees)
Indicators:	Soil development
Mudcracks Ripples	Surface relief
Drift and/or debris	Other: A in veg species
Presence of bed and bank	Other:
Benches	
Wide active flocapidin like backup of downstream c	ly resulting from seasonal
Floodplain unit: □ Low-Flow Channel	Active Floodplain Dow Terrace
Floodplain unit:	
Floodplain unit: Low-Flow Channel GPS point: Characteristics of the floodplain unit:	
Floodplain unit: Low-Flow Channel GPS point: Characteristics of the floodplain unit: Average sediment texture: Total veg cover: % Tree: % State 	
Floodplain unit: Low-Flow Channel GPS point: Characteristics of the floodplain unit: Average sediment texture: Total veg cover: % Tree: % Stree: % Stree: % Stree:<td>Active Floodplain Low Terrace</td>	Active Floodplain Low Terrace
Floodplain unit: Low-Flow Channel GPS point: Characteristics of the floodplain unit: Average sediment texture: Total veg cover: % Tree: % State 	Active Floodplain Low Terrace
Floodplain unit: Low-Flow Channel GPS point:	Active Floodplain Low Terrace Shrub:% Herb:% Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees)
Floodplain unit: Low-Flow Channel GPS point:	Active Floodplain Low Terrace Shrub:% Herb:% Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees) Soil development
Floodplain unit: Low-Flow Channel GPS point:	Active Floodplain Low Terrace Shrub:% Herb:% Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees) Soil development Surface relief
Floodplain unit: Low-Flow Channel GPS point:	Active Floodplain Low Terrace Active Floodplain Low Terrace Shrub:% Herb:% Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees) Soil development Surface relief Other: Other:
Floodplain unit: Low-Flow Channel GPS point:	Active Floodplain Low Terrace Shrub:% Herb:% Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees) Soil development Surface relief
Floodplain unit: Low-Flow Channel GPS point:	Active Floodplain Low Terrace Active Floodplain Low Terrace Shrub:% Herb:% Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees) Soil development Surface relief Other:
Floodplain unit: Low-Flow Channel GPS point:	Active Floodplain Low Terrace Active Floodplain Low Terrace Shrub:% Herb:% Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees) Soil development Surface relief Other:



APPENDIX D: Representative Site Photographs



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Photo 1. View east of drainage where it enters the survey area through a culvert (red arrow) under Aero Drive (10-03-19).



Photo 2. View north of downstream end of drainage where it flows northwest through the survey area and exits via a culvert (red arrow) (10-03-19).





Photo 3. View of culvert under Aero Drive (red arrow) where drainage enters the survey area, aspect northeast (10-03-19).



Photo 4. Soil ped from SP-02, showing redox features as concentrations in the matrix and oxidized pore linings along root channels (05-15-18).





Photo 5. Soil ped from SP-03, showing redox features as oxidized pore linings along root channels (05-15-18).



Photo 6. Soil plug from SP-05, showing redox features as oxidized pore linings along root channels (05-15-18).





Photo 7. Soil plug from SP-07, lacking any redox features (10-03-19).



Photo 8. Soil plug from SP-01 showing deposited sand/decomposed granite, landscaping soil and woodchips that has runoff from adjacent developed areas (03-23-18).





Photo 9. Soil plug from SP-04, lacking any redox features (10-03-19).



Photo 10. Soil plug from SP-06, lacking any redox features (10-03-19).