STORRER ENVIRONMENTAL SERVICES

2565 Puesta Del Sol Road #3
Santa Barbara, CA 93105
(805) 682-2065
www.storrerenvironmental.com

WETLAND DELINEATION AND JURISDICTIONAL DETERMINATION REPORT FOR 862 AEROVISTA PLACE (APN 053-412-015) SAN LUIS OBISPO, CALIFORNIA

Prepared for:

Terra Verde Environmental Consulting, LLC
3765 South Higuera Street, Suite 102
San Luis Obispo, CA 93401

Prepared By:

Storrer Environmental Services, LLC
2565 Puesta Del Sol Road, Suite 203
Santa Barbara, California 93105

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1.0 INTRODUCTION

On behalf of Terra Verde Environmental Consulting, LLC (Terra Verde), Storrer Environmental Services, LLC (SES) identified and delineated the current geographic extent of waters of the U.S., including wetlands, for a 2.41-acre site that is zoned for commercial development (Project Site).

The following Wetland Delineation and Jurisdictional Determination Report (Report) provides an assessment and delineation of U.S. Army Corps of Engineers (USACE) jurisdictional waters, including wetlands, California Department of Fish and Wildlife (CDFW) jurisdictional streambed and bank, and CDFW-defined wetlands. This Report has been developed using (a) current Los Angeles District of the USACE and U.S. Environmental Protection Agency (EPA) guidance pertaining to jurisdictional delineations, and (b) a combination of 2019 field-based observations of site conditions and review of previous site assessments prepared for the Project Site (Althouse and Meade 2013) and information available in the public domain (e.g., U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle maps, the Natural Resources Conservation Service (NRCS) Soil Surveys, and aerial photographs). The results and recommendations offered in this Report are subject to final review and approval by the USACE.

1.1 PROJECT LOCATION AND DESCRIPTION

The Project Site is located at 862 Aerovista Place in the City and County of San Luis Obispo (City/County), California (APN 053-412-015) (Figure 1 – Vicinity Map). The proposed Project includes a commercial building and associated parking lot and infrastructure on a 2.41-acre undeveloped parcel (Figure 2 – Site Plan). Preliminary site plans have been submitted to the City by Quaglino Properties (Applicant) for review and approval.

The Survey Area is bordered by Aerovista Place to the south, existing commercial development to the north and east, and undeveloped land to the west. For the purposes of this Report, the Survey Area includes the 2.41-acre undeveloped parcel and a portion of the adjacent undeveloped parcel to the west (Figure 3 – Survey Area Map).

2.0 EXISTING CONDITIONS

The Survey Area is located within the San Luis Obispo Creek watershed in southern San Luis Obispo County. The San Luis Obispo Creek watershed is a coastal basin that originates in the Santa Lucia Range, approximately 2,500 feet above sea level (City/County 2003).

The Survey Area is located adjacent to (east of) the San Luis Obispo County Regional Airport and is within the Airport Overlay Zone (AOZ) (City 2019). The parcel is zoned for a business park development (BP-SP). Based on aerial imagery review, the property has been regularly maintained (e.g., mowed) since the early 1990s. The terrain within the Survey Area is relatively flat, with the elevation ranging from 157 to 162 feet above sea level.

A portion of an unnamed tributary to Acacia Creek extends along the western property boundary (Figure 3 – Survey Area Map). The tributary is a narrow ephemeral (i.e., flows during and/or immediately following a rain event) drainage that conveys runoff from storms and the adjacent commercial developments, as well as undeveloped parcels to the south. A 36-inch culvert directs flow north under Aerovista Place and outlets to the drainage in the southwest corner of the Project Site. The drainage continues to the northwest for approximately 200 feet before it extends into the

adjacent undeveloped parcel to the west. The unnamed tributary remains on the adjacent parcel for approximately 185 feet to the northern boundary, where it makes a 90 degree turn to the east and reenters the Project Site (Figure 2 – Site Plan). The drainage continues approximately 165 feet to the east where it outlets to a 48-inch concrete box culvert that extends northward under Fiero Lane to Acacia Creek. Acacia Creek joins the East Fork of San Luis Obispo Creek approximately 0.4-mile downstream (west). The East Fork of San Luis Obispo Creek eventually discharges into the main channel of San Luis Obispo Creek and ultimately, into the Pacific Ocean (Figure 4 – Connectivity Map).

The unnamed tributary also receives runoff from the adjacent commercial property to the east. A 12-inch culvert outlets at the northeast corner of the Project Site to a shallow swale, which conveys runoff to the 48-inch concrete box culvert.

3.0 REGULATORY FRAMEWORK

Wetlands and other waters in the Survey Area are potentially subject to a variety of federal, state, and local regulations, including the federal Clean Water Act (CWA), California Fish and Game Code, and the San Luis Obispo Municipal Code. The federal, state, and local regulations applicable to the Survey Area are described below.

3.1 FEDERAL REGULATIONS

3.1.1 Clean Water Act – Section 404

Section 404 of the CWA regulates the discharge of dredged and/or fill material into waters of the U.S., including wetlands. Section 404 of the CWA is jointly administered and enforced by the USACE and the U.S. Environmental Protection Agency (EPA). Activities in waters of the U.S. regulated under Section 404 include dredge or fill for development, water resources projects (i.e., dams and levees), infrastructure development (i.e., highways and airports), and mining projects. With the exception of certain farming and forestry activities that are exempt from Section 404 regulation, a Section 404 permit is required before any dredged or fill material may be discharged into waters of the U.S.

The Section 404 program prohibits discharge of dredged or fill material if waters of the U.S. would be significantly degraded or a practical alternative exists that is less damaging to the aquatic environment. For the Project region, a Section 404 permit would be obtained from the Los Angeles District of the USACE.

3.1.1.1 Waters of the U.S.

The limit of USACE's jurisdiction in non-tidal waters extends to the ordinary high water mark (OHWM) and includes all adjacent wetlands.

Waters of the U.S. are defined 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."*

U.S. Supreme Court decisions (i.e., Solid Waste Agency of Northern Cook County [SWANCC] v. USACE [531 U.S. 159, 2001] January 9, 2001 and Rapanos *et ux., et al.* v. United States, June 19, 2006) have led to the development of federal guidance that requires a careful examination and documentation of the physical location(s) and hydrologic connections among waters and wetlands. To determine federal jurisdiction, particular focus is given to (1) surface hydrologic connections between a wetland and "navigable waters in fact," (2) "adjacency" of a wetland to traditionally navigable waters, and thus (3) a "significant nexus" to interstate commerce. In addition, waters and wetlands features can be determined to be under federal jurisdiction by the USACE 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.

3.1.1.2 USACE Jurisdictional Wetlands

Wetlands subject to Section 404 of the CWA are defined as:

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

The *Corps of Engineers Wetland Delineation Manual* (1987 Manual) (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (Arid West Supplement) (Environmental Laboratory 2008) provide technical guidance for identifying and delineating wetlands that may be subject to regulatory jurisdiction. The Arid West Supplement provides wetland indicators and additional guidance for delineation specific to the southwestern U.S. The delineation methods outlined in the 1987 Manual and the Arid West Supplement are based on a three-factor approach involving indicators of hydrophytic vegetation, hydric soil, and wetland hydrology. The USACE requires that a positive wetland indicator be present for all three parameters.

3.2 STATE REGULATIONS

3.2.1 Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act, also known as the California Water Code, Section 7 (CA Water Code §§ 13000-13999.10), governs water quality regulation in California. This Act establishes the State Water Resources Control Board (SWRCB) as the principal State agency for controlling water quality in California. The SWRCB provides regulations that mandate a "non-degradation policy" for State waters, especially those of high quality.

3.2.2 Clean Water Act – Section 401

The CWA Section 401 Water Quality Certification (Section 401 Certification) provides states and authorized tribes an opportunity to address the aquatic resource impacts of federally issued permits and licenses, to help protect water quality. Under Section 401 of the CWA, any applicant for a federal license or permit to conduct any activity that may result in any discharge into waters of the U.S. must obtain a Section 401 Certification from the SWRCB that the proposed activity will comply with state water quality standards. In California, Section 401 Certifications are issued by Regional Water Quality Control Boards (RWQCB) located throughout the state. The Central Coast RWQCB issues Section 401 Certifications for projects in the County. The federal CWA Section 404 permit is dependent on and subject to the terms of the Section 401 Certification. Therefore, under Section 401, a federal agency cannot issue a permit or license for an activity that may result in discharge into waters of the U.S. until the RWQCB has granted or waived the Section 401 Certification. Section 401 Certification is limited to federally jurisdictional waters and wetlands.

3.2.3 California Fish and Game Code

Under Sections 1600-1616 of the California Fish and Game Code, the CDFW regulates all activity that may substantially divert or obstruct the natural flow of any river, stream, or lake; change or use any material from the bed, channel or bank of any river, stream, or lake; or, deposit debris, waste or other materials that could pass into any river, stream or lake. Notification of Lake or Streambed Alteration must be submitted to CDFW for such activities. CDFW defines a stream as:

> "…*a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.*"

CDFW jurisdiction typically includes all portions of the bed, banks, and channel of a stream, including intermittent and ephemeral streams, and extends outward to the upland edge of the riparian vegetation.

3.3 LOCAL REGULATIONS

3.3.1 San Luis Obispo Municipal Code

Creeks and riparian areas are regulated by the *San Luis Obispo Municipal Code* (Municipal Code) (City 2019). The following City policies apply to the Project Site.

3.3.1.1 Regulated Areas (Section 12.23.020)

A. Creeks including San Luis Obispo Creek and its tributaries and any other "Water of the United States," as defined in 40 CFR 122.2, including all surface watercourses and waterbodies, natural waterways and definite channels and depressions in the earth, or such sections or connections of such waters that have been lined with concrete, covered or channelized in the past, that may carry water, even though such waterways may only carry water during rains and storms and may not carry surface water at and during all times and seasons.

B. Riparian areas, which include the area between a stream or other body of water and the adjacent upland identified by soil characteristics and distinctive vegetation and wetlands and those portions of floodplains and valley bottoms that support riparian vegetation (herbaceous plants, shrubs, and trees which are naturally associated with stream side environments, and with roots and branches extending in or over a creek channel).

3.3.1.2 Creek Setbacks (Section 17.70.030)

C. *Measurement of Creek Setbacks.* Creek setbacks shall be measured from the existing top of bank (or the future top of bank resulting from a creek alteration reflected in a plan approved by the City), or from the edge of the predominant pattern of riparian vegetation, whichever is farther from the creek flow line. Top of bank determination shall be consistent with California Department of Fish and Wildlife where state or federal jurisdictional areas apply.

E(2). *Creeks in Areas Annexed After 1996.* Along any creek in an area annexed to the City after July 1, 1996, the following setbacks shall be provided, unless a specific plan or development plan approved by the council provides a larger or smaller setback, consistent with the purpose of these zoning regulations and with general plan policies:

a. *Fifty-Foot Setbacks.* The setback along the following shall be fifty feet: San Luis Obispo Creek (all of main branch); San Luis Obispo Creek East Fork, from San Luis Obispo Creek (main branch) to the confluence with Acacia Creek; and Stenner Creek.

b. *Thirty-Five-Foot Setbacks.* The setback along the following shall be thirty-five feet: Prefumo Creek; Froom Creek; Brizziolari Creek; San Luis Obispo Creek East Fork tributary, from the confluence with Acacia Creek to Broad Street (Highway 227); Acacia Creek and its tributaries west of Broad Street (Highway 227); and the segment of the tributary of Acacia Creek which flows generally parallel to and on the easterly side of Broad Street (Highway 227), from Broad Street to Fuller Road.

c. *Twenty-Foot Setbacks.* The setback along all creeks except those listed in subsections (E)(2)(a) and (E)(2)(b) of this section shall be twenty feet.

4.0 METHODS

The geographic extent of waters of the U.S., including wetlands, and CDFW-jurisdictional streambed and banks within the Survey Area were delineated using a combination of background literature review, applied field methods, and ArcGIS analysis. Wetland delineation field methods were consistent with the federal, state, and local policies and definitions described in Section 2.0 above.

The wetland delineation was conducted on July 18, 2019, by SES botanist, Jessica Peak and Terra Verde botanist, Kristen Nelson. Prior to the field delineation, SES reviewed the previous jurisdictional determination prepared by Althouse and Meade (2013) for the Project Site and available public domain information including the NRCS Web Soil Survey of San Luis Obispo County, California, Coastal Part (NRCS 2019), USGS San Luis Obispo, CA 7.5-minute quadrangle map, the National Hydrography Dataset (NHD) (USGS 2019), National Wetlands Inventory (USFWS 2019), and weather data.

4.1 DELINEATION OF WATERS OF THE U.S., INCLUDING WETLANDS

4.1.1 Waters of the U.S.

Pursuant to Section 401 of the CWA, the limit of USACE jurisdiction in non-tidal waters extends to the OHWM and includes all adjacent wetlands. The OHWM is an element used to identify the lateral limits of non-wetland waters based on stream geomorphology and vegetation response to the dominant stream discharge (Lichvar and McColley 2008). The OHWM was established along unnamed tributary in the Survey Area using topographic changes in the terrain and presence of one or more of the following as a boundary: dominant hydrophytic vegetation, debris racking, and/or drainage patterns. The width of the channel at the OHWM was mapped using an iPad tablet with ArcCollector and a high accuracy Arrow 100 Global Navigation Satellite System (GNSS) receiver. Jurisdictional acreages were calculated in ArcGIS.

Arid West Ephemeral and Intermittent Streams OHWM Datasheets (OHWM Datasheets) (Curtis and Lichvar 2010) were completed in the ephemeral drainage to characterize the low-flow channel and active floodplain (when present). OHWM data sheets are provided in Appendix B.

4.1.2 Federal Wetlands

Delineation of the USACE-jurisdictional wetlands within the Survey Area was consistent with "Routine" procedures detailed in the 1987 Manual (Environmental Laboratory 1987) and the Arid West Supplement (Environmental Laboratory 2008).

Soil test pits were excavated throughout the drainage to confirm the presence/absence of hydric soils (see Appendix C – Wetland Determination Data Forms). The soil test pits (sampling points) were mapped using an iPad tablet with ArcCollector and a high accuracy Arrow 100 GNSS receiver. The dimensions of sample plots were determined by the extent of the low-flow channel and active floodplain around the soil pit excavated at each sampling point. USACE-jurisdictional wetlands were determined to be present if evidence of all three federal criteria were observed (hydrophytic vegetation, hydric soils, and wetland hydrology).

4.1.2.1 Vegetation

Presence of hydrophytic vegetation was determined by identifying all plant species within the sample plots and assigning the indicator status, as listed in *The National Wetland Plant List*: *2016 Wetland Ratings* (Lichvar et al. 2016) and the *National Wetland Plant List (NWPL) Website* (USACE 2019). The indicator status refers the relative frequency with which a plant species occurs in jurisdictional wetlands versus non-wetlands and are described as follows:

- **OBL** = Hydrophyte; obligate wetland plants that almost always occur in wetlands.
- **FACW** = Hydrophyte; facultative wetland plants that usually occur in wetlands, but may occur in non-wetlands.
- **FAC** = Hydrophyte; facultative plants that occur in wetlands and non-wetlands.
- **FACU** = Non-hydrophyte; facultative upland plants that usually occur in non-wetlands, but may occur in wetlands.
- **UPL** = Non-hydrophyte; obligate upland plants that almost never occur in wetlands.

Plant species not listed on the NWPL are considered UPL for wetland delineation purposes (Lichvar et al. 2016). The percent cover of all species in each of four strata (tree, sapling/shrub, herb, and woody vine) was determined within each sampling plot. Species identifications and taxonomic nomenclature follow *The Jepson Manual, Second Edition* (Baldwin et al. 2012). Dominant species were determined using the dominance test and/or prevalence index, when necessary, as recommended in the Arid West Supplement (Environmental Laboratory 2008).

4.1.2.2 Soils

The NRCS Web Soil Survey tool (NRCS 2019) was used to review soil types within the Survey Area. The presence of hydric soil indicators was determined in the field based on the criteria outlined in the 1987 Manual (Environmental Laboratory 1987) and information provided in the Arid West Supplement (Environmental Laboratory 2008) and the *Field Indicators of Hydric Soils in the United States: A Guide for Identifying and Delineating Hydric Soils* (USDA-NRCS 2010). Soil tests pits were excavated within the unnamed tributary to determine the presence or absence of hydric soils and wetland hydrology. Soil pits were dug to a minimum 12 inches, or until a restrictive layer prevented further excavation. A Munsell® Soil Color Chart (Munsell 2000) was used to identify the color of the soil matrix and redox features, if present.

4.1.2.3 Hydrology

Observations of wetland hydrology were conducted along the length of the unnamed tributary. Consistent with the 1987 Manual (Environmental Laboratory 1987) protocols in the Arid West Supplement (Environmental Laboratory 2008), each sampling point was evaluated for primary and secondary indicators of wetland hydrology. The presence or absence of indicators such as drift deposits, sediment deposits, and drainage patterns were used to determine wetland hydrology.

4.2 CDFW JURISDICTIONAL STREAMBEDS AND STATE WETLANDS

Pursuant to Section 1600 *et seq*. of the California Fish and Game code, the extent of CDFW jurisdiction along the unnamed tributary was determined based on presence of a defined physical bed, bank, and channel. The extent of CDFW-defined one parameter wetlands (i.e., presence of hydrophytic vegetation or hydric soil, or wetland hydrology) corresponds to the area of waters of the U.S. as described above. The approximate length, width, and jurisdictional acreages were calculated using ArcGIS.

5.0 RESULTS

The following sections provide a summary of environmental conditions in the Survey Area including climate, vegetation, soils, hydrology, and jurisdictional areas documented during the wetland delineation. Representative photographs of environmental conditions and jurisdictional waters and wetlands present in the Survey Area are provided in Appendix A.

5.1 CLIMATE

The San Luis Obispo region experiences a Mediterranean climate, with mild, moist winters and warm, dry summers. A heavy marine layer or fog is often present in late spring and early summer mornings. Temperatures at the Survey Area are relatively mild, with an average maximum temperature of 77 degrees Fahrenheit (F) in August and September and an average minimum temperature of 41 degrees

(F) in January (San Luis Obispo Polytech Station No. 047851) (WRCC 2019). Average annual precipitation is 22.4 inches, with the majority of that falling between November and April. The San Luis Obispo Polytech Station received 29.48 inches of rain in the 2018 water year (water year starts July and ends in June and is designated by the calendar year in which it begins), which is 132% of the "Normal" rainfall for the area (ITRC 2019).

5.2 VEGETATION

The majority of the Survey Area, including the upland area and the shallow swale at the northeast corner, consists of ruderal/disturbed habitat comprised of a variety of non-native, often invasive, species that are adapted to regular disturbance. The vegetation in the ruderal/disturbed habitat is dominated by bristly-ox tongue (*Helminthotheca echioides*) and wild oats (*Avena barbata, A. fatua*), with frequent occurrences of summer mustard (*Hirschfeldia incana*), bindweed (*Convolvulus arvensis*), alkali mallow (*Mavella leprosa*) (Appendix A – Site Photographs). At the time of the field survey, the upland habitat had been recently mowed (i.e., within two months) to near the edge of the unnamed tributary.

At the outlet of the 36-inch culvert at Aerovista Place (SP-02), the unnamed tributary to supports a stand of broad-leaf cattail (*Typha latifolia*; OBL) and arroyo willow (*Salix lasiolepis*; FACW) (Appendix A – Site Photographs). The remainder of the channel contains dense herbaceous vegetation dominated by tall flatsedge (*Cyperus eragrostis*; FACW), harding grass (*Phalaris aquatica*; FACU), common spikerush (*Eleocharis macrostachya*; FACW), brown-headed rush (*Juncus phaeocephalus*; FACW), and curly dock (*Rumex crispus*; FAC) (SP-01 and SP-03).

Hydrophytic vegetation (i.e., OBL, FACW, and FAC) was dominant at all three sample points (Appendix C – Wetland Determination Data Forms).

5.3 SOILS

One mapped soil unit has been identified in the Survey Area (NRCS 2019):

- Salinas silty clay loam, 0 to 2 percent slopes, MLRA 14

Salinas silty clay loam is a well-drained alluvium derived from sedimentary rock (NRCS 2019). Salinas silty clay loam typically occurs on the footslope or toeslope of alluvial fans, alluvial flats, and flood plains. Runoff is negligible.

Soils pits were excavated and data were collected at three sampling points (SP-01 – SP-03) within the unnamed tributary in Survey Area (Appendix C – Wetland Determination Data Forms) (Figure 5 – Jurisdictional Waters and Wetlands Map).

The presence of hydric soils was determined using a combination of direct field observations and review of the Web Soil Survey of San Luis Obispo County, California, Coastal Part (NRCS 2019). Soil matrix color (Munsell [2000] Colors) was very dark brown (10YR 2/1) in the upper soil profile at all three sampling points. At SP-02, the lower soil profile (2 to 12 inches) consisted of coarse sand and what appeared to be decomposed granite deposited from the culvert at Aerovista Place. Few and faint redox concentrations were observed at SP-01 and SP-03; however, they comprised less than 2% of the soil profile at both locations.

No hydric soil indicators were observed at any of the wetland Sample Points in the Survey Area (Appendix C – Wetland Determination Data Forms).

5.4 HYDROLOGY

The Survey Area is within the San Luis Obispo Creek watershed (Hydrologic Unit Name Estero Bay HU 10). No water was present in the unnamed tributary on July 18, 2019 when wetland sampling occurred (Appendix C – Wetland Determination Data Forms).

5.4.1 Wetland Hydrology Indicators

Secondary indicators of wetland hydrology (e.g., sediment deposits, drift deposits, and drainage patterns) were observed at all three sampling locations (Appendix C – Wetland Determination Data Forms). Faint oxidized rhizospheres, a primary indicator, were also observed in the soil profile at SP-01.

5.4.2 Connectivity to Downstream Waters

SES adhered to existing federal guidance for determination of federal jurisdiction in waters and wetlands in the Survey Area. To start, we recognize that the unnamed tributary is ephemeral and only holds water during and following rain events. Consequently, the drainage is infrequently connected to San Luis Obispo Creek (via Acacia Creek and East Fork San Luis Obispo Creek) downstream of the Survey Area, which discharges into the "traditionally navigable waters" of the Pacific Ocean.

The unnamed tributary in Survey Area contains water periodically due to a combination of winter stormwater and runoff from adjacent properties to the south and east. As described above, the drainage receives flow from the south through an existing 36-inch culvert under Aerovista Place and outlets to Acacia Creek via a 48-inch concrete box culvert that extends under adjacent developments and Fiero Lane. A shallow swale conveys runoff from the adjacent commercial development to the east to the 48-inch box culvert (Figure 4 – Connectivity Map).

5.4.3 Channel and Floodplain Characterization

Four cross-sections of the unnamed tributary were evaluated at each of the sampling points and within the shallow swale in the northeast corner of the Survey Area (XS-01 – XS-04) (Appendix B – OHWM Datasheets).

Near the culvert outlet at Aerovista Place (XS-02), the low-flow channel is widest (10-15 feet wide and 10 to 12 inches deep). This area supports the stand of cattail and arroyo willow and likely ponds/temporarily floods following precipitation (Appendix B – OHWM Datasheets). The low-flow channel narrows as it proceeds northward and a low terrace/active floodplain develops (XS-01) (Figure 5 – Jurisdictional Waters and Wetlands Map). Peak storm flows during a normal rain event likely overtop the low-flow channel at XS-01 and inundate the low terrace/active floodplain. The low-flow channel is narrowest (3 feet wide and 4 to 6 inches deep) along the northern boundary of the Survey Area (XS-03). No active floodplain is present (Appendix B – OHWM Datasheets).

The shallow swale at the northeast corner of the Survey Area is densely vegetated and has a small bank on the south side, but no bank along the north side at the property fence line (XS-04). As a

result, the swale conveys some runoff to the 48-inch box culvert, but also sheet flows on to the adjacent developed parcel to the north.

5.5 JURISDICTIONAL WATERS AND WETLANDS

5.5.1 Waters of the U.S.

The unnamed tributary within the Survey Area has a defined bed and banks and is periodically connected to downstream waters (i.e., Acacia Creek, San Luis Obispo Creek), and is therefore likely to be considered waters of the U.S. under current federal guidance. Wetland hydrology indicators (e.g., sediment deposits, drift deposits, drainage patterns) were observed in the low-flow channel at all sampling locations during the July 18, 2019 delineation effort.

The area of USACE-jurisdictional waters of the U.S. extends to the OHWM on the banks of the unnamed tributary (0.15-acre) (Figure 5 – Jurisdictional Waters and Wetlands Map).

5.5.2 Federal Wetlands

None of the sampling points met all three wetland criteria. Therefore, no federal-defined wetlands are present within the Survey Area.

5.5.3 CDFW Jurisdictional Streambed and Wetlands

The width unnamed tributary at the top of the bank (TOB) ranges from approximately 15 to 50 feet wide. Riparian and wetland vegetation is wholly contained within the banks of the drainage, with the exception of the canopy of the arroyo willow stand. Therefore, the upland limit of CDFW jurisdiction along the unnamed tributary was determined based on the TOB, except at the willow stand where it extends to the outer edge of the willow canopy (Figure 5 – Jurisdictional Waters and Wetlands Map).

CDFW-defined one-parameter wetland habitat corresponds to the area of waters of the U.S., within the mapped OHWM, as described above. Approximately 0.41-acre of CDFW-jurisdictional streambed and wetlands are present in the Survey Area.

5.5.4 Waters of the State

The limit of waters of the State, under RWQCB jurisdiction, corresponds to the area of CDFW streambed and bank described above. Waters of the State extend to the TOB and/or the edge of the riparian habitat, whichever is further. Approximately 0.41-acre of waters of the State are present in the Survey Area.

6.0 SUMMARY OF REGULATORY AGENCY JURISDICTION

The unnamed tributary in the Survey Area contains USACE non-wetland waters of the U.S., waters of the State, and CDFW-defined (one parameter) wetlands. No USACE-defined wetlands are present in the Survey Area. The total acreages of waters/wetlands on-site that are subject to the permitting authority of the USACE, CDFW, and RWQCB are summarized in Table 1 below.

Table 1 – Jurisdictional Acreages within the Survey Area

Location	USACE Jurisdiction		CDFW/RWQCB Jurisdiction	
	Non-wetland Waters of the U.S. (Acres)	USACE-defined Wetlands (Acres)	Waters of the State (Acres)[1]	CDFW-defined Wetlands (Acres)
Unnamed Tributary to Acacia Creek	0.15	0	0.41	0.15

[1] Acreage for waters of the State includes CDFW-defined wetlands.

6.1 U.S. ARMY CORPS OF ENGINEERS

As reported above, there are no USACE-jurisdictional wetlands within the Survey Area. Approximately 0.15-acre of waters of the U.S. was identified and mapped within the Survey Area. USACE jurisdiction extends to the OHWM on the banks of the drainage.

This delineation is conditional upon review and final jurisdictional determination by the USACE. USACE-defined waters are also subject to the permitting authority of the City.

6.2 CDFW JURISDICTIONAL STREAMBED AND WETLANDS

Approximately 0.41-acre of CDFW jurisdictional streambed and bank were identified and mapped within the Survey Area. The limits of CDFW jurisdiction extends to the TOB or the outer edge of the riparian vegetation, whichever is greater. CDFW-defined wetlands are confined within the mapped TOB.

The CDFW administers Streambed Alteration Agreements under Sections 1600-1607 of the Fish & Game Code. Sections 1600-1607 address any project that will "(1) divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake designated by the department [California Fish and Wildlife] in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit, (2) use materials from the streambeds designated by the department, or (3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass in to any river, stream, or lake designated by the department" (Section 1601). A Streambed Alteration Agreement is required for any work occurring within a water or wetland with defined bed and bank features.

6.3 CENTRAL COAST REGIONAL WATER QUALITY CONTROL BOARD

The unnamed tributary periodically discharges stormwater runoff into downstream waters (i.e., Acacia Creek, San Luis Obispo Creek, and Pacific Ocean). The Central Coast RWQCB regulates work involving discharge of pollutants into waters/wetlands under Section 402 of the CWA and the National Pollutant Discharge Elimination System permit (NPDES) program. Under the NPDES program, projects involving discharge of pollutants into waters/wetlands must have a Stormwater Pollution Prevention Plan (SWPPP), which is reviewed and approved by the Central Coast RWQCB and the City.

6.4 CITY OF SAN LUIS OBISPO

Waters of the U.S., waters of the State, and CDFW-defined wetlands areas are also subject to the permitting authority of the City.

Project-related impacts to waters of the U.S and CDFW-defined wetlands or streams/riparian areas must be mitigated or avoided, consistent with City land use policies protecting streams and wetlands. Per the City Municipal Code (City 2019), the prescribed setback for creeks and any other waters of the U.S. is 20, 35, or 50 feet, depending on the location. Intrusion within the setbacks for creeks, wetlands, and riparian habitats may be considered significant.

7.0 LITERATURE CITED

Althouse and Meade, Inc. (Althouse and Meade). 2013. Volny Enterprises' Aerovista Commercial at Aerovista Place. September 5.

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. The Jepson Manual: Vascular Plants of California, Second Edition, Revised. University of California Press, Berkeley and Los Angeles.

City of San Luis Obispo (City). 2019. San Luis Obispo Municipal Code. A Codification of the General Ordinances of the City of San Luis Obispo, California. Accessed online: https://sanluisobispo.municipal.codes/

City/County of San Luis Obispo (City/County). 2003. Waterway Management Plan, Volume 1, San Luis Obispo Creek Watershed. San Luis Obispo, CA. Revised February 13, 2003.

Cowardin, L. M., V. Garter, F. Golet, and E. T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. Office of Biological Services, U.S. Fish & Wildlife Service. FWS/OBS-79/31.

Curtis, Katherine E. and Robert W. Lichvar. 2010. Updated Datasheet for the Identification of the Ordinary Hight Water Mark (OHWM) in the Arid West Region of the Western United States. U.S. Army Army Corps of Engineers Wetland Regulatory Assistance Program.

Environmental Laboratory. 1987. U.S. Army Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS.

Environmental Laboratory. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). U.S. Army Corps of Engineers Wetlands Regulatory Assistance Program, Washington, DC.

Federal Register. 1986. Regulatory Programs of the Corps of Engineers; Final Rule. Volume 51, No. 219; 33 CFR Parts 320 through 330.

Federal Register. July 13, 1994. Changes in Hydric Soils of the United States. Washington, D.C. (Hydric soil definition).

Cal Poly Irrigation Training and Research Center (ITRC). 2019. ITRC Weather Station Annual Historical Precipitation Report, Cal Poly/NOAA Station. Accessed online: http://www.itrc.org/databases/precip/AnnualTotals.pdf

Lichvar, Robert W. and Shawn M. McColley. 2008. A field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. A delineation Manual. Cold Regions Research and Engineering Laboratory. U.S. Army Corps of Engineers.

Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 Wetland Ratings. Phytoneuron 2016-303: 1-17. Published 28 April 2016.

Munsell Color. 2000. Munsell Soil Color Charts. Munsell Color, Macbeth Division of Kollmorgen Instruments Corp., New Windsor, NY.

Natural Resources Conservation Service (NRCS). 2006. Field Indicators of Hydric Soils in the United States, Version 6.0. G.W. Hurt, L.M. Vasilas, editors. United States Department of Agriculture (USDA), NRCS, in cooperation with the National Technical Committee for Hydric Soils, Fort Worth, TX.

Natural Resources Conservation Service (NRCS). 2019. Web Soil Survey – San Luis Obispo County, Coastal Part. Available online at http://websoilsurvey.nrcs.usda.gov/.

United States Army Corps of Engineers (USACE). 2007. Regulatory Guidance Letter. Exemptions for Construction or Maintenance of Irrigation Ditches and Maintenance of Drainage Ditched Under Section 404 of Clean Water Act. July 4, 2007.

United States Army Corps of Engineers (USACE). 2019. National Wetland Plant List Version 3.2. Available online at http://wetland_plants.usace.army.mil/.

United States Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS). 2010. Field Indicators of Hydric Soils in the United States, Version 7.0. L.M. Vasilas, G.W. Hurt, and C.V. Noble (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.

United States Environmental Protection Agency and U.S. Army Corps of Engineers. June 5, 2007. Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States. Joint memorandum issued June 5, 2007. Washington, D.C.

United States Fish and Wildlife Service (USFWS). 2019. National Wetlands Inventory. Available online at http://www.fws.gov/wetlands/Data/Mapper.html.

Western Regional Climate Center (WRCC), San Luis Obispo Polytech, California. 2019. Period of Record Monthly Climate Summary. Period of Record: 02/01/1893 to 06/10/2016. https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca7851. Accessed July 2019.

FIGURES

Quaglino Wetland Delineation
Figure 1: Site Vicinity Map

Site Location

0 0.5 1 Miles

N

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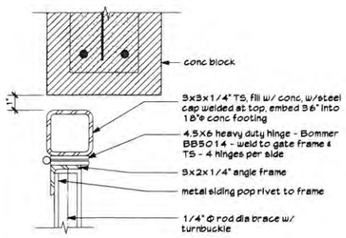
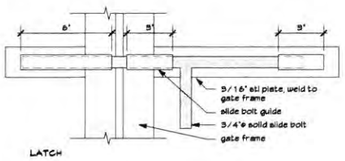


61 GATE JAMB

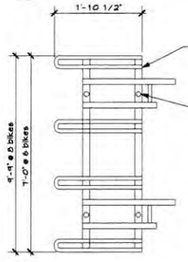
3"



TRASH ENCLOSURE NOTES:
1. Provide exterior rated signs per plan;
   Sign D - RECYLE MATERIALS ONLY
   Sign E - FOR GARBAGE ONLY
2. Provide 3/4"ø steel cane bolt at pair of gates per city standards. w/ welded stop pin, backing plate, stop pin rest, and 1 1/4" ID steel pipe x 6" deep cane slot

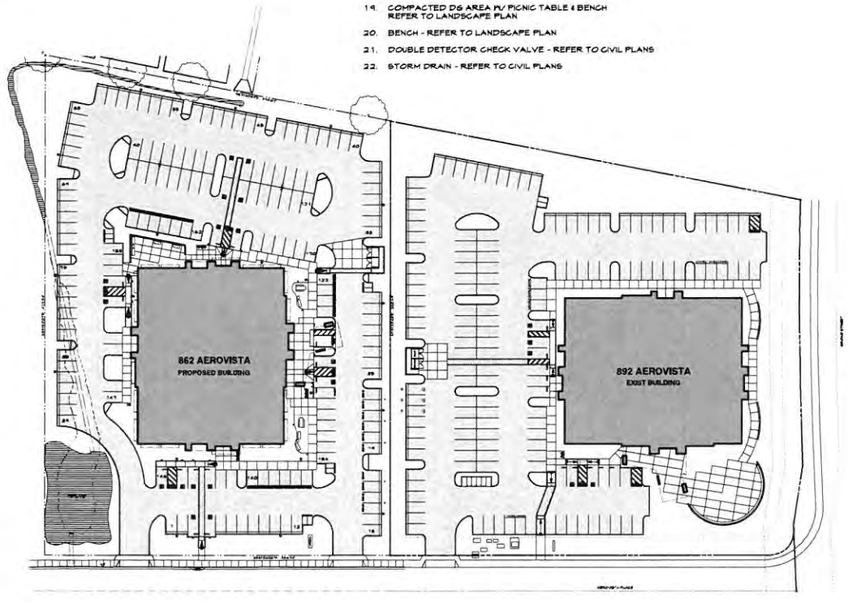
62 GATE LATCH

3"



63 BIKE RACKS

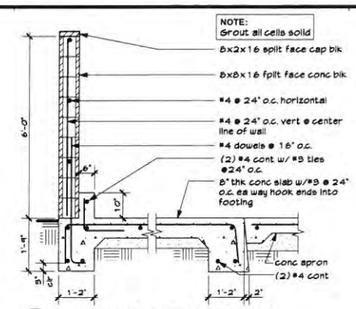
3/4"



KEY SITE PLAN

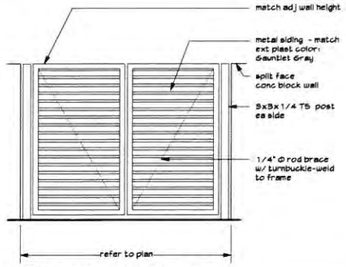
1" = 50' - 0"

NOTE:
Grout all cells solid



51 TRASH ENCLOSURE

1/2"

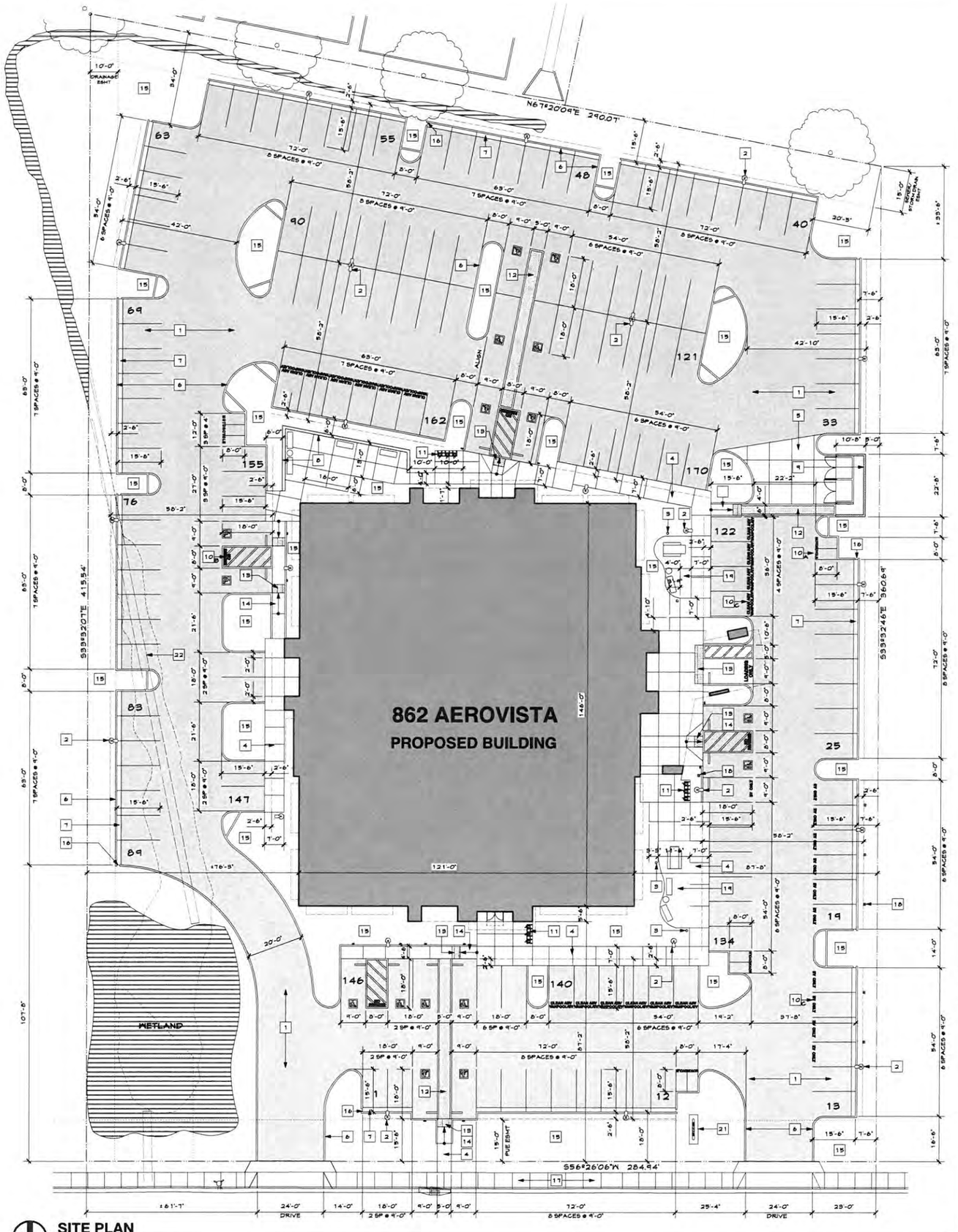


52 TRASH GATE

NO SCALE

SITE PLAN REFERENCE NOTES

1. PAVED DRIVE & PARKING AREAS - SHOWN SHADED
2. PARKING LOT POLE LIGHT FIXTURE - REFER TO SHTS E-1 & E-2
3. BOLLARD LIGHT FIXTURE - REFER TO SHTS E-1 & E-2
4. CONCRETE WALKS
5. CONCRETE SLAB AT DRIVE AREAS, 6" CONC WITH # 4 AT 18" O.C. EA WAY OVER "1" CL E BASE, W/ EXP JOINTS AS SHOWN
6. CONC CURB - 6" HIGH TYP AT ALL PARKING AREAS
7. CONCRETE CURB/GUTTER
8. CONCRETE BLOCK PATIO WALL W/ EXTERIOR PLASTER
9. SPLIT FACE CONC BLOCK TRASH ENCLOSURE
10. TRAFFIC PAINT
    A. "MOTORCYCLE" - 5" HIGH LETTERS
    B. "NO PARKING" - 12" HIGH LETTERS & STRIPES @ 36" O.C. MAX
    C. DESIGNATED PARKING, PER PLAN
11. BIKE RACK - 6 BIKES - TYP @ 3 LOCATIONS
12. PRECAST CONC PAVERS
13. TRUNCATED DOMES
14. CONC CURB RAMP 1:12 MAX SLOPE - REFER TO CIVIL PLANS
15. PLANTING AREA - REFER TO PLANTING PLAN
16. CURB OPENING, REFER TO CIVIL PLANS
17. EXISTING SIDEWALK, CURB & GUTTER
18. VEHICLE CHARGING STATION
19. COMPACTED DG AREA W/ PICNIC TABLE & BENCH REFER TO LANDSCAPE PLAN
20. BENCH - REFER TO LANDSCAPE PLAN
21. DOUBLE DETECTOR CHECK VALVE - REFER TO CIVIL PLANS
22. STORM DRAIN - REFER TO CIVIL PLANS



SITE PLAN

1/16" = 1' - 0"

PULTS
Pults & Associates, LLP

Architecture, Planning & Graphics
3592 Sacramento Dr, Suite 140
San Luis Obispo, California 93401
805/541-5604 voice

Project:

862 AEROVISTA PLACE

SAN LUIS OBISPO
CA 93401

Client:

QUAGLINO PROPERTIES

815 FIERO LANE
SAN LUIS OBISPO
CA 93401

(805) 543-0560

Consultant:

Sheet Contents:

SITE PLAN

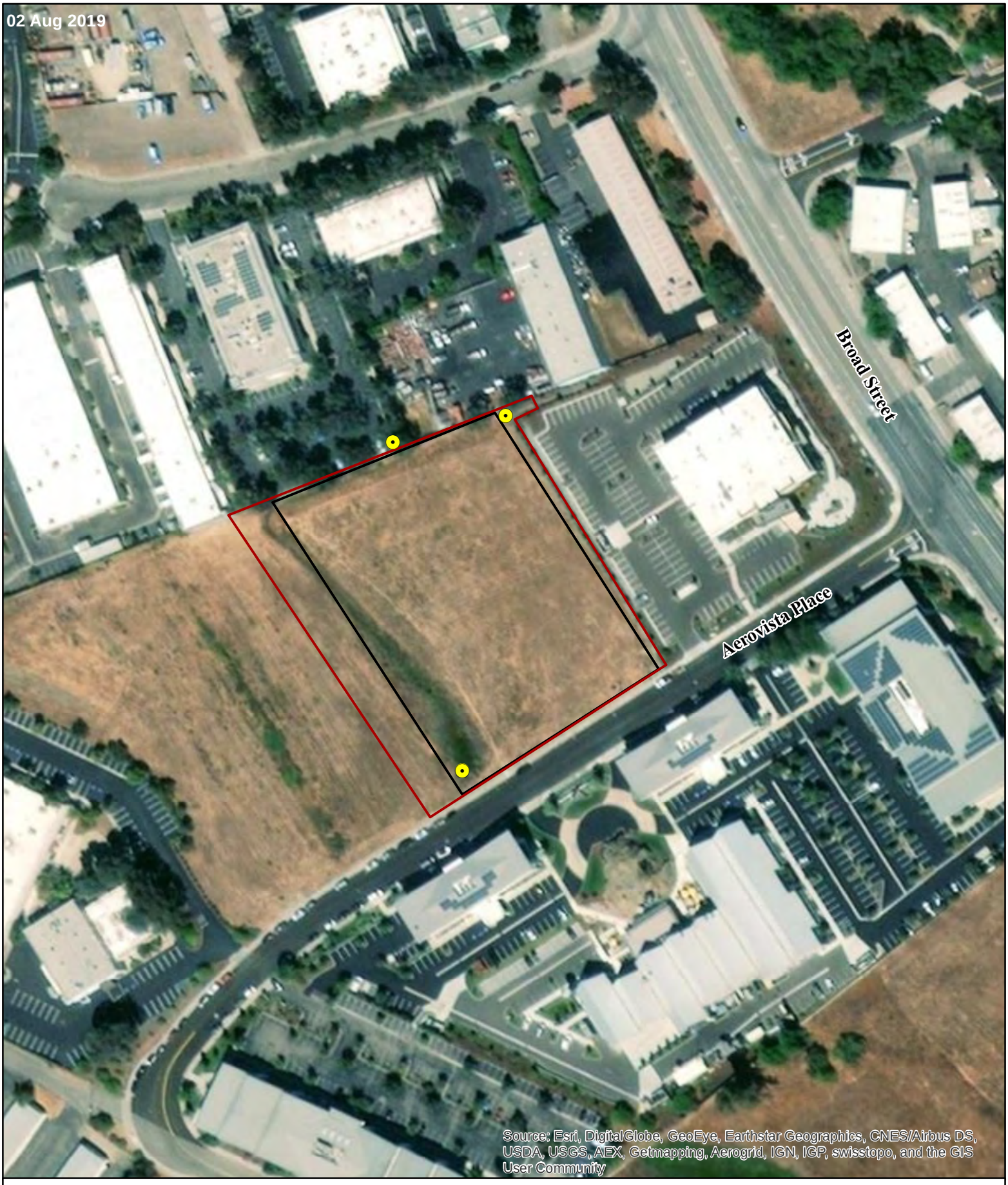
LICENSED ARCHITECT
FRANCES FAN QING
No. C-26942
REN. 10-31-19
STATE OF CALIFORNIA

Date: 25 JUN 19

Revised:

Job No: 1923

Sheet: **AC-1**



Quaglino Wetland Delineation
Figure 3: Survey Area Map

Project Site
Survey Area
Culvert

0 50 100 200 300 Feet

N

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05 Aug 2019

Quaglino Wetland Delineation
Figure 4: Connectivity Map

Survey Area
Blue Line Drainage
Ephemeral Swale
Culvert (Assumed)
Culvert Inlet/Outlet

Miles
0
0.5
1

N

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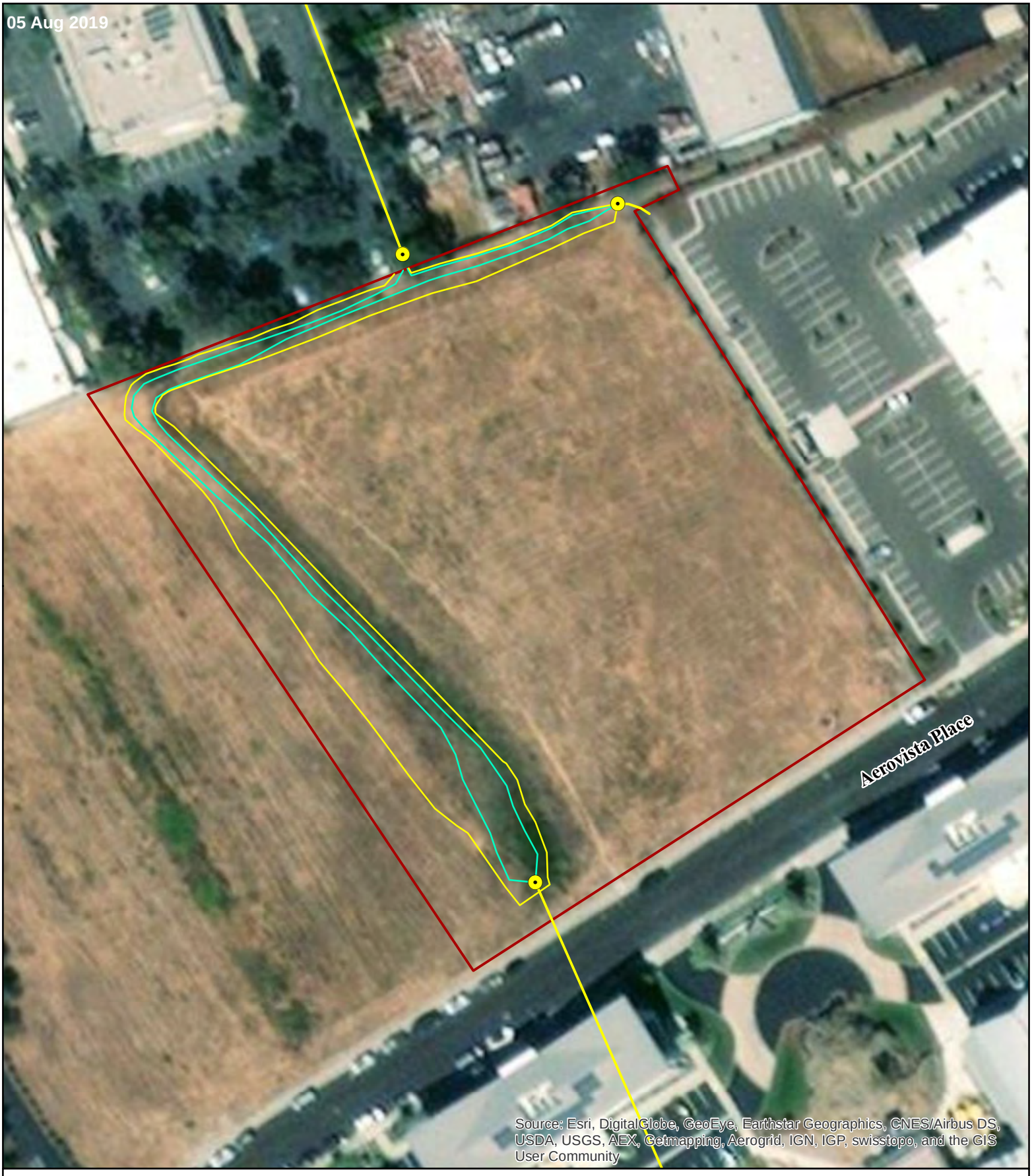

Quaglino Wetland Delineation
Figure 5: Jurisdictional Waters and Wetlands Map

Survey Area
Limits of Waters of the U.S.
Limits of Waters of the State
Culvert (Assumed)
Culvert Inlet/Outlet

0 50 100 200 Feet

N

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APPENDIX A

SITE PHOTOGRAPHS

(All Photographs Taken July 18, 2019)

Photo 1. Cattail and arroyo willow stand at the outlet of the 36-inch culvert at Aerovista Place (Aspect: Northwest). Red arrow indicates culvert location.

Photo 2. Upland habitat with cattail/willow stand and unnamed tributary in the background (Aspect: West). Upland area was recently mowed to the edges of the drainage.

Photo 3. South end of the unnamed tributary looking toward Aerovista Place (Aspect: South).

Photo 4. North end of unnamed tributary on adjacent parcel (Aspect: South). Channel is narrow and dominated by dense hydrophytic vegetation (tall flat sedge).

Photo 5. Unnamed tributary at the northern property boundary prior to entering the 48-inch box culvert (Aspect: East).

Photo 6. 48-inch box culvert that extends under Fiero Lane and outlets to Acacia Creek, (Aspect: North).

Photo 7. 12-inch culvert on the adjacent parcel at the northeast corner of the Survey Area (Aspect: West).

Photo 8. Densely vegetated swale that conveys flow from 12-inch culvert at the northeast corner of the Survey Area (Aspect: East).

Photo 9. Sampling point (SP-01) downstream of cattail/willow stand (Aspect: South).

Photo 10. Soil profile at SP-01. No hydric soil indicators observed.

Photo 11. Sampling point (SP-02) within cattail/willow stand at the outlet of the 36-inch culvert at Aerovista Place (Aspect: West).

Photo 12. Coarse sand soil in SP-02 soil profile. No hydric soil indicators observed.

Photo 13. Sampling point (SP-03) within narrow channel at northern boundary of Survey Area (Aspect: East)

.

APPENDIX B

ARID WEST EPHEMERAL AND INTERMITTENT STREAMS OHWM DATASHEETS

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: QUAGLIND-862 AEROVISTA PLACE **Date:** 07/18/19 **Time:** 0800-1200
Project Number: — **Town:** San Luis Obispo **State:** CA
Stream: Unnamed tributary to Acacia Crk **Photo begin file#:** — **Photo end file#:** —
Investigator(s): KRISTEN NELSON, JESSICA PEIK

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:
862 AEROVISTA PL, SLO, CA

Projection: **Datum:**
Coordinates:

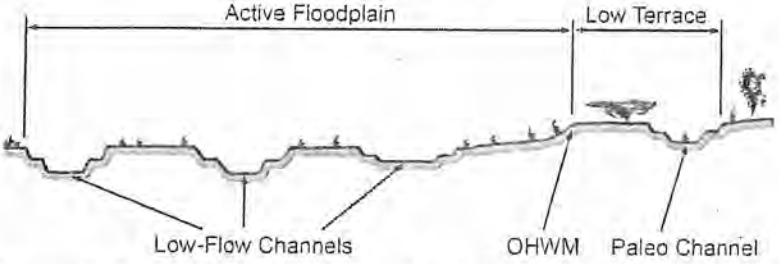
Potential anthropogenic influences on the channel system:
Site is an infill lot, surrounded on the N/E/S by developed parcels; parcel to the W. is a weedy/grassy leach field that is regularly mowed. The drainage is highly modified from natural state & culverted upstream & downstream of site.

Brief site description:
Site is a weedy/grassy undeveloped lot, regularly mowed. Unnamed drainage borders western edge of site and appears to convey only intermittent storm flows & surface runoff.

Checklist of resources (if available):

- ☑ Aerial photography
  Dates: 1994-2019
- ☑ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☑ Soils maps
- ☐ Rainfall/precipitation maps
- ☑ Existing delineation(s) for site
- ☑ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

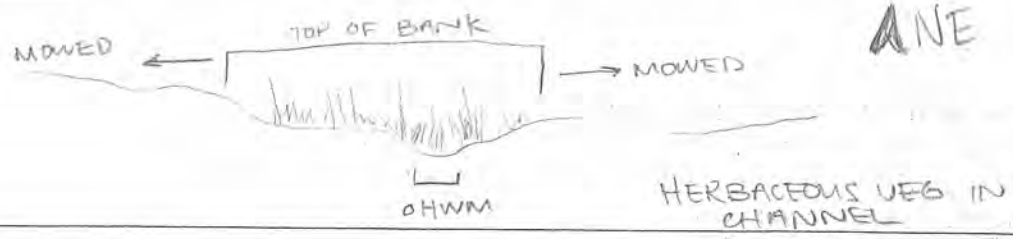


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☑ GPS
   - ☐ Digitized on computer
   - ☐ Other:

Project ID: Quaglino Cross section ID: 01 Date: 07/18/19 Time: 11:30

Cross section drawing:



OHWM

GPS point: 01.35.242346/-120.641957

Indicators:

- ☐ Change in average sediment texture
- ☑ Change in vegetation species
- ☑ Change in vegetation cover
- ☑ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Narrow channel conveys ephemeral storm flows; peak flows overtop onto low terrace/flood plain.

Floodplain unit: ☑ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: 01.35.242346/-120.641957

Characteristics of the floodplain unit:

Average sediment texture: Clay loam

Total veg cover: 100 % Tree: 5 % Shrub: 0 % Herb: 95 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☑ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☑ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Narrow channel supports dense cover of herbaceous species.

Project ID: Quaglino Cross section ID: 01 Date: 07/18/19 Time: 11:30

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: 01.35 242346 / -120.64957

Characteristics of the floodplain unit:

Average sediment texture: Clay loam

Total veg cover: 100 % Tree: 5 % Shrub: 0 % Herb: 95 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☑ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☑ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Low terrace/active floodplain adjacent to main, low flow channel, likely inundated during peak flows of normal storm event.

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

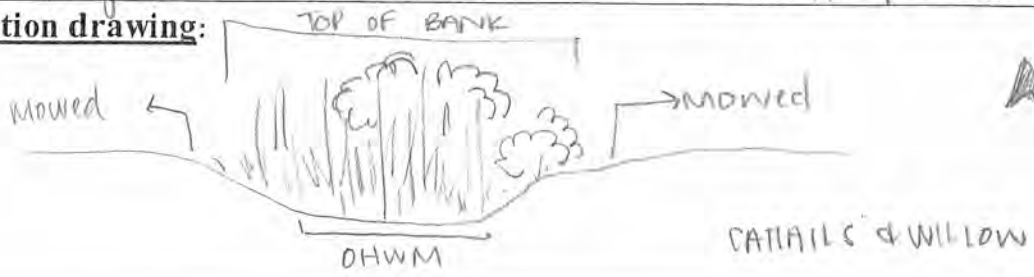
Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: Quaglino **Cross section ID:** 02 **Date:** 07/18/19 **Time:** 11:45

Cross section drawing:



OHWM

GPS point: 02 35.252260 / -120.641882

Indicators:

- ☐ Change in average sediment texture
- ☑ Change in vegetation species
- ☑ Change in vegetation cover
- ☑ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Wide channel @ outlet of 36" culvert; area likely ponds/temporarily floods following precipitation. Channel is filled in with dense vegetation & sediment.

Floodplain unit:

☑ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: 02 35 252260 / -120.641882

Characteristics of the floodplain unit:

Average sediment texture: sand

Total veg cover: 99 % Tree: 5 % Shrub: 0 % Herb: 94 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☑ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☑ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Wide, ephemerally inundated channel, densely vegetated with cattails & willow.

Project ID: Quaglino **Cross section ID:** 02 **Date:** 07/18/19 **Time:** 11:45

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

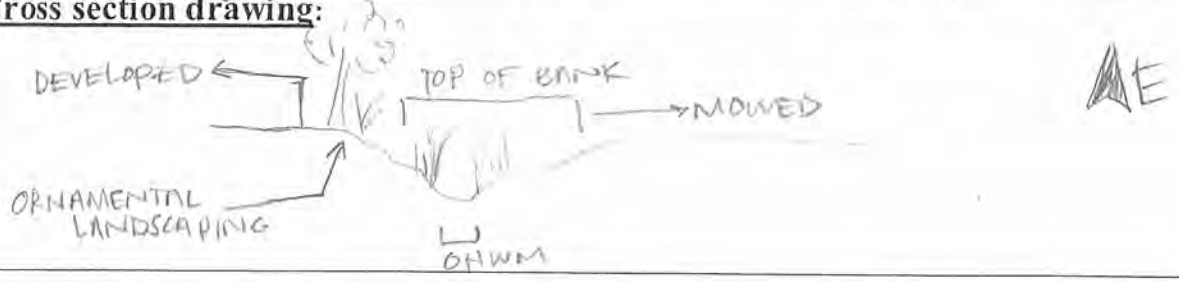
Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: Quagliano **Cross section ID:** 03 **Date:** 07/18/19 **Time:** 1200

Cross section drawing:



OHWM

GPS point: 03:35.243108/-120 642504

Indicators:

- [ ] Change in average sediment texture
- [x] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Narrow channel, conveys ephemeral storm flows & surface runoff from adjacent development

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: 03 35243108/-120.642504

Characteristics of the floodplain unit:

Average sediment texture: Clay loam w/ alluvial deposits

Total veg cover: 30 % Tree: 0 % Shrub: 0 % Herb: 30 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Channel bottom mostly unvegetated

Project ID: **Cross section ID:** **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

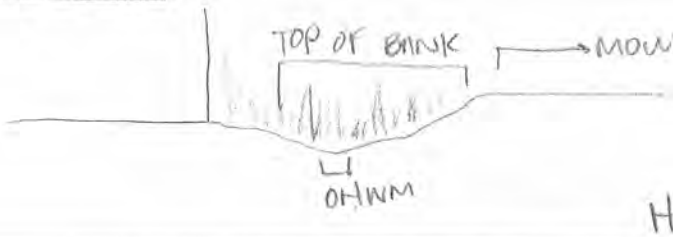
Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: Quagline Cross section ID: 04 Date: 07/18/19 Time: 1215

Cross section drawing:



OHWM

GPS point: 04.35.243267/-120.642068

Indicators:

- ☐ Change in average sediment texture
- ☑ Change in vegetation species
- ☐ Change in vegetation cover
- ☐ Break in bank slope
- ☑ Other: EVIDENCE OF FLOW
- ☑ Other: DRIFT / DEBRIS

Comments:

SHALLOW, narrow swale that conveys ephemeral storm flows & surface runoff from adjacent development.

Floodplain unit: ☑ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: 04.35.243267/-120.642068

Characteristics of the floodplain unit:

Average sediment texture: clay loam

Total veg cover: 100 % Tree: 0 % Shrub: 0 % Herb: 100 %

Community successional stage:

- ☐ NA
- ☑ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☑ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Runoff from adjacent development, flows directly into unnamed jurisdictional drainage that is tributary to Acacia Creek

Project ID: Cross section ID: Date: Time:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

APPENDIX C

WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Quaglino Properties- 802 Aerovista Place City/County: San Luis Obispo / San Luis Obispo Sampling Date: 7/18/19

Applicant/Owner: Matt Quaglino State: CA Sampling Point: SP01

Investigator(s): Kristen Nelson, Jessica Peak Section, Township, Range:

Landform (hillslope, terrace, etc.): drainage Local relief (concave, convex, none): concave Slope (%): 0-2%

Subregion (LRR): LRR C Lat: 35.241396 Long: -120.641957 Datum: NAD 83

Soil Map Unit Name: Salinas Silty Clay loam NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes X	No ____	

Remarks: Hydrophytic vegetation dominant, drainage patterns / drift deposits present, but no hydric soil indicators.

VEGETATION

Tree Stratum (Use scientific names.) 15ft plot	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	5	Y	FACW
2.			
3.			
4.			
Total Cover:	5		
Sapling/Shrub Stratum 15ft plot			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum 15ft plot			
1. Phalaris aquatica	25	Y	FACU
2. Cyperus eragrostis	10	Y	FACW
3. Rumex crispus	5	N	FAC
4. Epilobium brachycarpum	3	N	NL
5. Eleocharis macrostachya	40	Y	FACW
6. Polypogon monspeliensis	3	N	FACW
7. Juncus phaeocephalus	15	Y	FACW
8. Helminthotheca echioides	2	N	FAC
Total Cover:	103		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 68	x 2 = 136
FAC species 7	x 3 = 21
FACU species 25	x 4 = 100
UPL species 0	x 5 = 0
Column Totals: 100 (A)	257 (B)

Prevalence Index = B/A = 2.57

Hydrophytic Vegetation Indicators:

- X Dominance Test is >50%
- X Prevalence Index is ≤3.0[1]
- ____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: Juncus phaeocephalus mat @ south end of plot is dying back, likely due to backup @ culvert on Aerovista Pl. — willows choking out flow in drainage. Large stand of Typha latifolia & Salix lasiolepis @ culvert conveying flow from Aerovista Pl.

SOIL

Sampling Point: SP01

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 2/1	99	10YR 3/6	1	C	RC	silty clay loam	
11+								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: Redox concentrations present but faint/few; no hydric soil indicators observed (less than 2%)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

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

Remarks: faint oxidized rhizospheres; drainage patterns & drift deposits present in plot from flow conveyed through 36" culvert @ Aerovista Place. Area likely ponds temporarily following storm events.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Quaglino Prop. - 862 Aerovista Place City/County: San Luis Obispo / San Luis Obispo Sampling Date: 7/18/19

Applicant/Owner: Matt Quaglino State: CA Sampling Point: SP02

Investigator(s): K. Nelson, J Peak Section, Township, Range:

Landform (hillslope, terrace, etc.): drainage Local relief (concave, convex, none): concave Slope (%): 0-2%

Subregion (LRR): LRRC Lat: 35.242260 Long: -120.641882 Datum: NAD83

Soil Map Unit Name: Salinas silty clay loam NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____ No X	
Wetland Hydrology Present?	Yes X No ____	

Remarks:
hydrophytic vegetation dominant & drainage evident from culvert @ Aerovista Pl., but no hydric soil indicators present

VEGETATION

Tree Stratum (Use scientific names.) 10ft	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	40	Y	FACW
2.			
3.			
4.			
Total Cover:	40		
Sapling/Shrub Stratum 10ft			
1. Baccharis pilularis	5	N	UPL
2.			
3.			
4.			
5.			
Total Cover:	5		
Herb Stratum 10ft			
1. Typha latifolia	60	Y	OBL
2. Epilobium ciliatum	1	N	FACW
3. Helminthotheca echioides	2	N	FAC
4. Foeniculum vulgare	1	N	UPL
5. Phalaris aquatica	1	N	FACU
6.			
7.			
8.			
Total Cover:	65		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 2 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	60	x 1 =	60
FACW species	41	x 2 =	82
FAC species	2	x 3 =	6
FACU species	1	x 4 =	4
UPL species	6	x 5 =	30
Column Totals:	110 (A)		182 (B)

Prevalence Index = B/A = 1.65

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Dense thicket of arroyo willow & cattail @ the outlet of the 36" culvert @ Aerovista Place.

SOIL

Sampling Point: SP02

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-2	10YR 2/1	100					Sandy CL	minimal org. matter @ surface
2-12	10YR 4/2	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
significant sand/sediment deposit from 36" culvert on Aeporista Pl; no redox features observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ **Water Marks (B1) (Nonriverine)**
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

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

Remarks:
Drainage patterns/drift deposits evident in and around cattails/willows the outlet of the culvert. Area likely floods/ponds temporarily following storm events.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Quaglino Prop - 862 Alrovista Pl. City/County: San Luis Obispo / San Luis Obispo Sampling Date: 7/18/19

Applicant/Owner: Matt Quaglino State: CA Sampling Point: SP03

Investigator(s): K. Nelson, J. Peak Section, Township, Range:

Landform (hillslope, terrace, etc.): drainage Local relief (concave, convex, none): concave Slope (%): 0-2%

Subregion (LRR): LRRC Lat: 35.243108 Long: -120.642504 Datum: NAD 83

Soil Map Unit Name: Salinas silty clay loam NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____

Hydric Soil Present? Yes ____ No X

Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks:
Narrow channel (3 ft wide); no hydric soil indicators present; hydrophytic veg. dominant & drainage patterns evident

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
3 x 15 ft plot Total Cover:			
Herb Stratum			
1. Cyperus eragrostis	70	Y	FACW
2. Rumex crispus	20	Y	FAC
3. Festuca perennis	5	N	FAC
4. Helminthotheca echioides	3	N	FAC
5.			
6.			
7.			
8.			
Total Cover: 98			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 2 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 70	x 2 = 140
FAC species 28	x 3 = 84
FACU species 0	x 4 = 0
UPL species 0	x 5 = 0
Column Totals: 98 (A)	224 (B)

Prevalence Index = B/A = 2.29

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Significant leaf litter from nearby Eucalyptus trees

SOIL

Sampling Point: SP03

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 2/1	100					CL	25% Rock
3-10	10YR 3/2	99	10YR 5/6	1	C	M	CL w/ Rock	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
High alluvial content & landscaping rocks from adjacent property (pebbles to cobbles) few/faint redox concentrations but <2%; no hydric soil indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

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

Remarks:
Drainage patterns evident in narrow channel (3ft wide), conveys storm flows to 48" culvert downstream.