1

January 27, 2010

Jonna Engel
California Coastal Commission
89 S. California Street, Suite 200
Ventura, CA 93001-2801

Subject: Wetland Delineation Materials for the Los Osos Wastewater Project

Dear Ms. Engel:

Pursuant to a request by Dan Carl of your Santa Cruz office, enclosed are the wetland delineation materials prepared for San Luis Obispo County's Los Osos Wastewater Project.

These materials consist of the following:

1. Overall Project Site Plan, Los Osos Wastewater Project 2010.

2. Treatment Plant Site Plan, Los Osos Wastewater Project 2010.

3. Delineation of Jurisdictional Waters and Wetlands for the Los Osos Wastewater Project, Attachment G of Appendix G of the Los Osos Wastewater Project Environmental Impact Report, Michal Brandman Associates November 14, 2008.

4. Los Osos Wastewater Disposal Project Lupine Street Pump Station Los Osos, California Wetland Delineation Report, Morro Group June 14, 2004.

5. Los Osos Wastewater Disposal Project Treatment Plant Area Los Osos, California Wetland Delineation Report, Morro Group September 8, 2004 (Includes Potential Wetlands Constraints mapping).

6. Los Osos Wastewater Disposal Project Treatment Plant Area Los Osos, California Wetland Delineation Report, Morro Group August 9, 2004.

7. Los Osos Wastewater Disposal Project 4th Street at Pismo Avenue Area Los Osos, California Wetland Delineation Report, Morro Group June 7, 2005.

8. 7th Through 13th Streets Pump Station Wetland Boundary Determination, Morro Group July 1, 2004.

Please note that these materials consist of wetland delineations prepared for the Los Osos Community Service's District's Wastewater Facilities Project in 2004/2005 along with

additional work prepared for the County's current Los Osos Wastewater Project. Work for the previous (2005) project was focused on areas within the urban reserve line of Los Osos. The County's current project efforts maintain the same collection system as the previous project, but evaluate out of town treatment plant sites.

Therefore, in order to produce the new EIR, the consultant's reviewed the 2004/2005 wetland work for current applicability, and performed new work for the new alternative sites. Our review of the 2004/2005 work found that conditions relative to wetland boundaries changed slightly at two locations: near the Lupine pump station at Donna/Lupine Streets, and near the East Paso pump station at Paso Robles/18th Street. While the project still meets the required setbacks (75 feet in the urban area per the LCP) we crafted condition 3 of the County issued CDP to ensure that the final project is modified if conditions change further before construction:

> 3. All development shall be consistent with the conditions contained herein. Prior to final design / layout of the East Paso Robles Avenue pump station and the Doris Avenue / Lupine Street pump station, the applicant shall provide verification to the satisfaction of the Planning Director, that the required 75 foot wetland setback will be met with the redesign / layout of said pump stations.

You will find extensive field work for the "Tonini" site east of Los Osos. Please be aware that the EIR performed a co-equal analysis of four project alternatives. However, in the final analysis, the proposed project has no facilities located on the Tonini site, or on the section of Turri Road leading to that site.

Also note that while the consultant's 2008 work produced delineation maps specific to the Corps of Engineers, Department of Fish and Game, and Regional Water Quality Control Board, for reasons that remain unclear they did not produce a coastal wetlands map. Consequently, our subsequent wetland setback map for the local CDP (Treatment Plant Site Plan) relied upon the field data sheets to properly locate coastal wetlands on the treatment plant site.

Thank you for you time and attention to this project. Please contact me a week or so ahead of any field visits to the Giacomazzi (treatment plant) site so that we may arrange access with the property owner. If you have any questions or need additional information from us, please feel free to contact me at (805) 781-5458.

Sincerely,

MARK HUTCHINSON
Environmental Programs Manager

c: Dan Carl, CA Coastal Commission (w/attachments)
Jonathan Bishop, CA Coastal Commission

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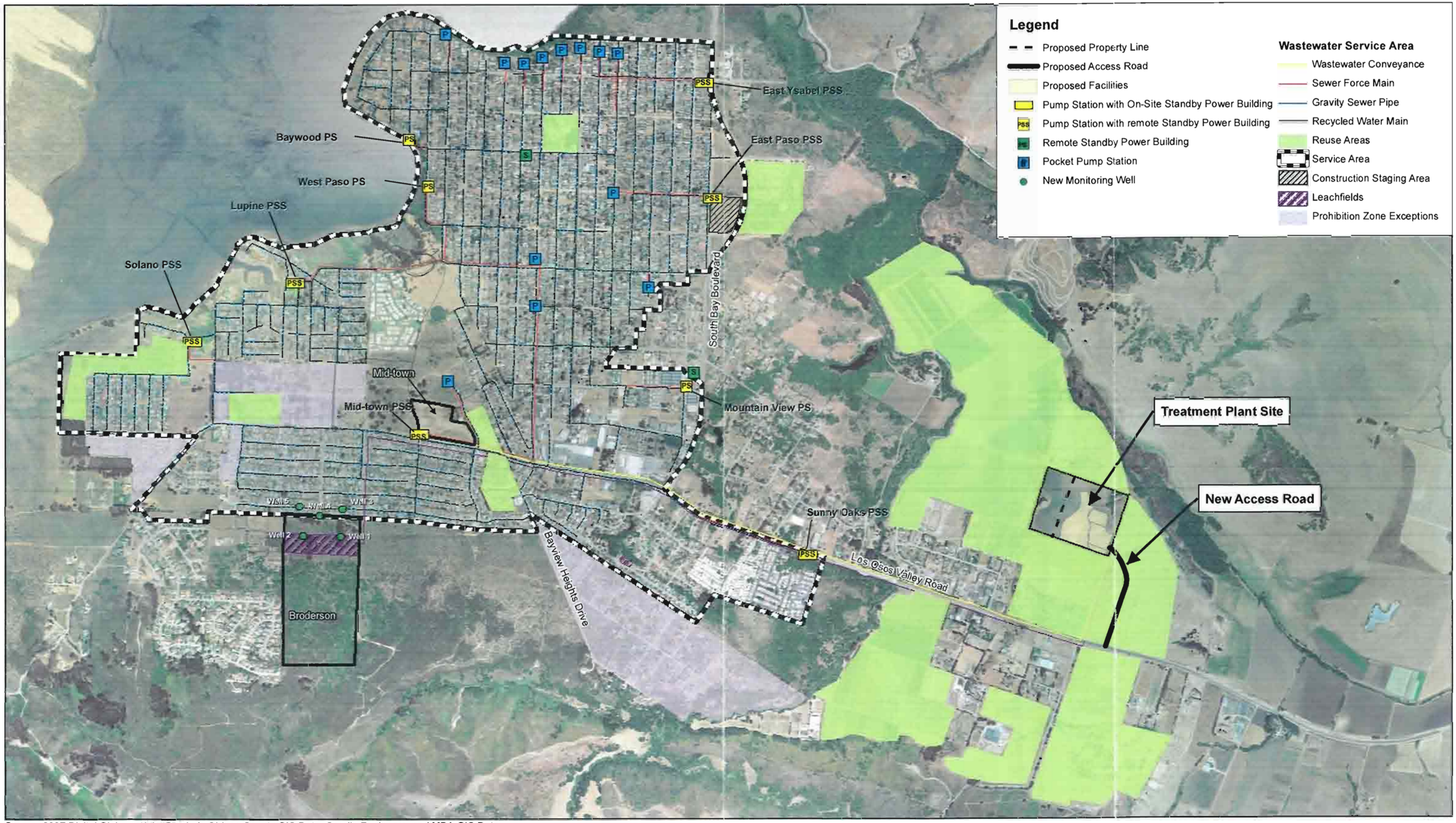

Source: 2007 Digital Globe aerials, San Luis Obispo County GIS Data, Carollo Engineers, and MBA GIS Data.

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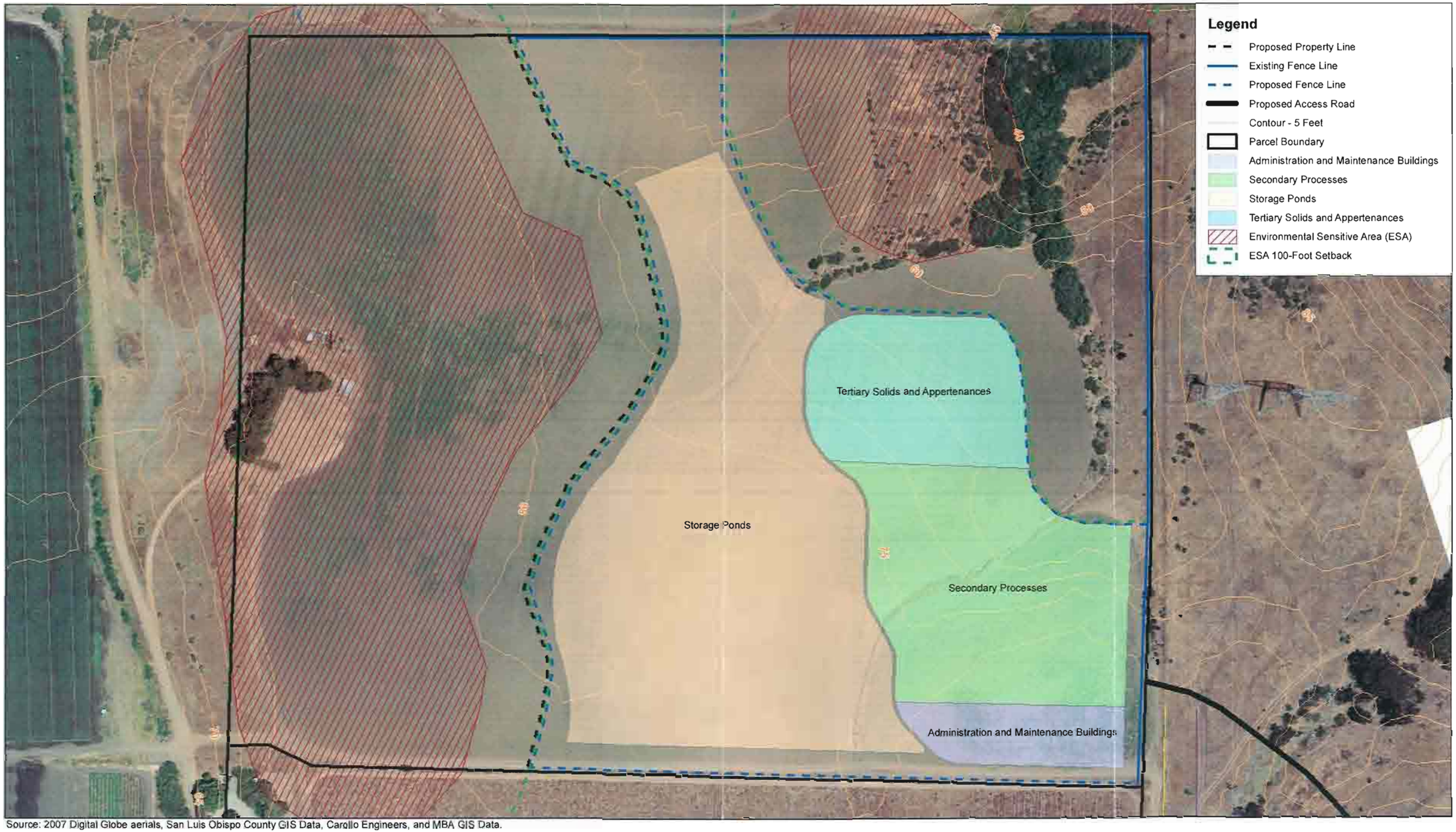
Feet

Exhibit 1-2
Overall Project Site Plan

LOS OSOS WASTEWATER PROJECT 2010

3



Source: 2007 Digital Globe aerials, San Luis Obispo County GIS Data, Carollo Engineers, and MBA GIS Data.

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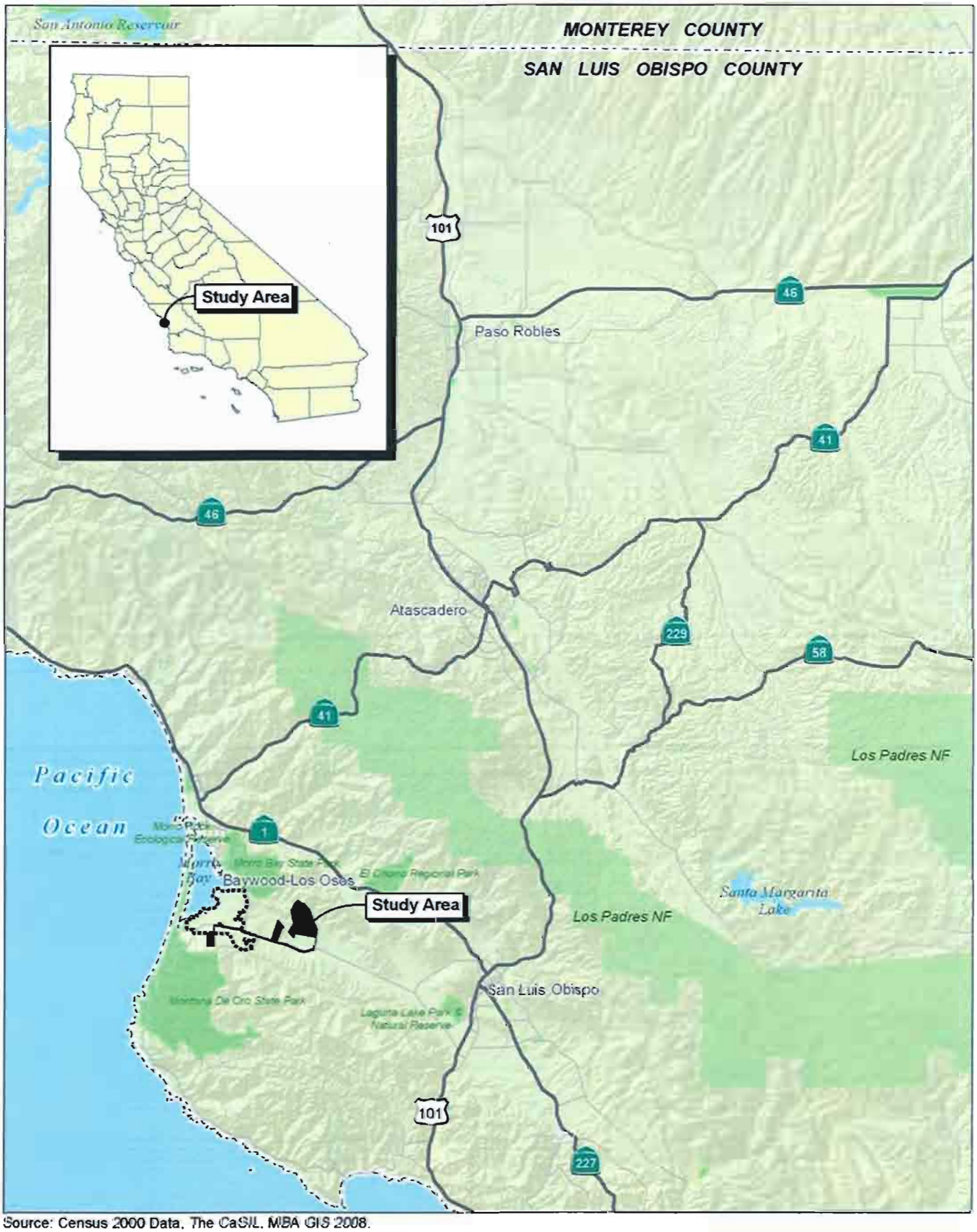
Feet

Exhibit 1-3
Treatment Plant Site Plan



Source: Census 2000 Data, The CaSIL, MBA GIS 2008.

NORTH

5 2.5 0 5

Miles

Michael Brandman Associates

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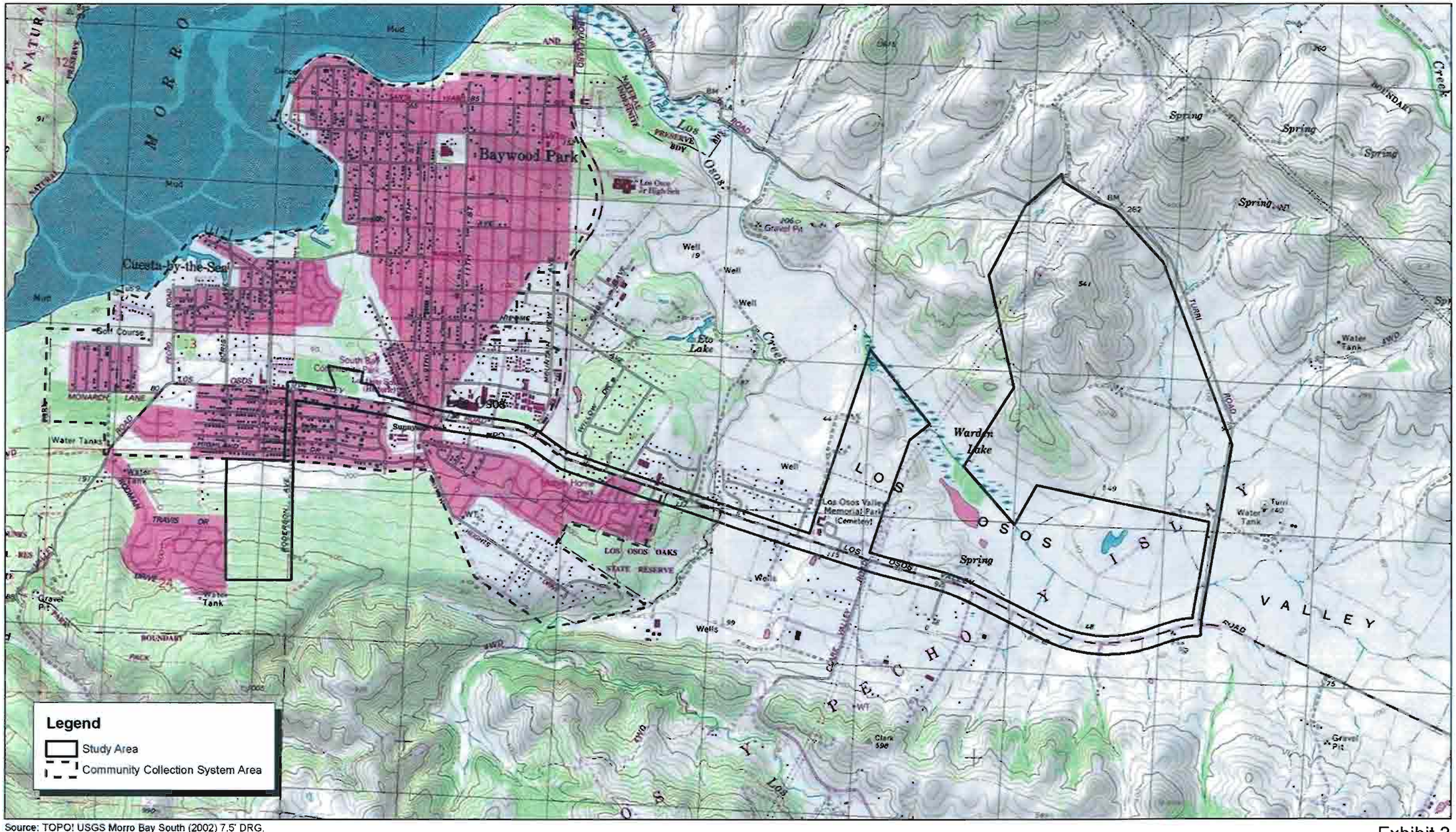
Exhibit 1
Regional Location Map

COUNTY OF SAN LUIS OBISPO • LOS OSOS WASTEWATER PROJECT
DELINEATION OF JURISDICTIONAL WATERS AND WETLANDS



Source: TOPO! USGS Morro Bay South (2002) 7.5' DRG.

Michael Brandman Associates

NORTH

2,000 1,000 0 2,000 Feet

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Exhibit 2
Local Vicinity Map
Topographic Base

COUNTY OF SAN LUIS OBISPO • LOS OSOS WASTEWATER PROJECT
DELINEATION OF JURISDICTIONAL WATERS AND WETLANDS

Mid-town

Broderson

Torrini

Branin

Giacomazzi

Cemetery

Los Osos Valley Rd

Legend

- Study Area
- Community Collection System Area

Source: AirPhoto USA and San Luis Obispo County GIS.

NORTH

2,000 1,000 0 2,000 Feet

Michael Brandman Associates

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Exhibit 3
Local Vicinity Map
Aerial Base

Attachment G: Delineation of Jurisdictional Waters and Wetlands for the Los Osos Wastewater Project

Delineation of Jurisdictional Waters and Wetlands
Los Osos Wastewater Project
Los Osos, San Luis Obispo County, California

Morro Bay South and San Luis Obispo, California,
USGS 7.5-minute Topographic Quadrangle Maps
Township 30 South, Range 11 East, Unsectioned

Prepared for:

San Luis Obispo County
Public Works Department
1050 Monterey Street
San Luis Obispo, CA 93408

Contact: Mark Hutchison, Project Manager

Prepared by:

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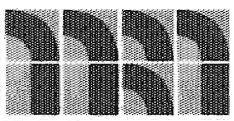

Survey Dates: April, May, 2008
Report Date: June 30, 2008

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SECTION 1: SUMMARY

Applicant Name:
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1.1 - Introduction

At the request of the County of San Luis Obispo Public Works Department, MBA conducted a jurisdictional delineation for a 1,004-acre series of sites (hereafter referred to as the "study area" or the "site") located in the community of Los Osos, San Luis Obispo County, California, on April 23, April 24, and May 20, 2008.

1.2 - Subject Features

The study area contains 13 drainages and two separate wetlands that are also associated with some of these drainages. Two of the drainages have names (Los Osos Creek and Warden Creek), as does one of the associated wetlands (Warden Creek wetland); the remaining 11 drainages are unnamed tributaries or sub-tributaries to Warden Creek. The unnamed associated wetland has been designated as the Los Osos Valley Road Seasonal Wetland. Nine of these drainages are relatively permanent waters (RPWs) which have an Ordinary High Water Mark (OHWM) and a defined bed and bank. These include the two principal drainages within the study area, Los Osos Creek and Warden Creek. These RPWs have hydrologic connectivity to downstream navigable waters (Morro Bay and the Pacific Ocean, both of which are Traditional Navigable Waters [TNWs]). The remaining four drainages are ephemeral, non-RPWs. All drainages and associated wetlands may be subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE), the Central Coast Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Game (CDFG).

USACE jurisdiction includes 0.72 acre (6,030 linear feet) of non-wetland waters of the U.S. and 15.73 acres (12,567 linear feet) of wetland waters within the project site.

RWQCB jurisdiction includes 16.45 acre (18,597 linear feet) of waters of the State within the project site.

CDFG jurisdiction includes 23.48 acres of jurisdictional streambed and associated riparian vegetation within the project site.

SECTION 2: JURISDICTIONAL METHODOLOGY

2.1 - Methodology Statement

This jurisdictional delineation was conducted in accordance with regulations set forth in 33 CFR part 328 and the USACE guidance documents referenced below:

- USACE Wetlands Research Program Technical Report Y-87-1 (on-line edition), Wetlands Delineation Manual, Environmental Laboratory, 1987 (Wetland Manual).
- USACE Guidelines for Jurisdictional Determinations for Waters of the United States in the Arid Southwest, 2001 (Arid Southwest Guidelines).
- USACE Minimum Standards for Acceptance of Preliminary Wetlands Delineations, November 30, 2001 (Minimum Standards).
- USACE Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, December 2006 (Arid West Supplement).
- USACE Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region. April 2008.
- USACE Jurisdictional Determination Form Instructional Guidebook, May 30, 2007 (JD Form Guidebook).

2.2 - Pre-Survey Investigation

Prior to the field visit, a 200-scale (1 inch = 200 feet) aerial photograph of the site was procured and compared with the Morro Bay South, California, and the San Luis Obispo, California, United States Geological Survey (USGS) 7.5-minute topographic quadrangle maps to identify drainage features within the survey area as indicated from topographic changes or visible drainage patterns. The National Wetland Inventory was also reviewed to determine whether any wetland areas had been documented within the vicinity of the site. The United States Department of Agriculture (USDA) Soil Survey Map was reviewed to identify the soil series that occur on the site.

2.3 - Field Investigation

Field investigations were performed by MBA Regulatory Specialist Tom Mullen and MBA Biologist Karl Osmundson on April 23, April 24, and May 20, 2008. Data was collected using a Magellan Explorist 600 Global Positioning System (GPS) unit with an accuracy of ±7 feet, and the drainage features were mapped onto recent aerial photographs. Other materials utilized in the field included a 30-meter tape measure, shovel, digital camera, and a Munsell color chart to identify soil types.

The survey was conducted on foot. Potential jurisdictional features were systematically inspected to record existing conditions and to determine their jurisdictional limits. The site was carefully assessed to identify surface flow indicators (such as the presence of hydrophytic vegetation, staining, cracked soil, ponding, etc.). Flow regimes and corresponding hydrogeomorphic features were subsequently identified. The lateral extent of USACE jurisdiction was measured at the OHWM. Where appropriate, multiple measurements were recorded at various representative locations along the length of each feature.

CDFG jurisdiction was based on the presence of a bed and bank, and the presence of riparian vegetation and/or wildlife resources. The lateral extent of CDFG jurisdiction was measured from bank to bank at the top of the channel, or to the drip-line of the associated riparian vegetation where it extends beyond the bank of the channel.

Width and length measurements were entered into Geographical Information System (GIS) ArcView software to plot the location and dimensions of jurisdictional areas. The ArcView application was then used to compute federal and state jurisdictional areas in acres. Acreage computations were verified using a 200-scale aerial photograph and field data.

SECTION 3: ENVIRONMENTAL SETTING

3.1 - Location of the Property

The study area includes portions of the community of Los Osos, the Los Osos Valley Road, and properties located east of the community of Los Osos within unincorporated San Luis Obispo County. The site consists of a series of components which together provide a complete proposed wastewater treatment facility with a pipeline collection system for sewage, a treatment plant, an effluent disposal pipeline system, and effluent disposal sites.

The Broderson site is located in the western portion of the community of Los Osos, and includes Broderson Avenue; the Mid-town site is located within the community; the adjacent Giacomazzi, Branin, and Cemetery properties are located east of the community of Los Osos and just north of Los Osos Valley Road; the Tonini property is located east of the community of Los Osos and west of Turri Road. The site also includes Los Osos Valley Road (between Broderson Avenue to the west and Turri Road to the east), and Turri Road (between Los Osos Valley Road to the south and the entrance to the Tonini property to the north) (Exhibit 1).

The site is depicted in unsectioned portions of Township 30 South, Range 11 East on the Morro Bay South, California, and the San Luis Obispo, California, USGS 7.5-minute topographic quadrangle maps (Exhibit 2 and Exhibit 3). The centers of the principal locations on the site are approximately identified by the following coordinates:

Cemetery, Giacomazzi, Branin ..... 35° 18' 34" N; 120° 48' 06" W
Tonini ..... 35° 18' 44" N; 120° 46' 44" W
Mid-Town Collection Point..... 35° 18' 47" N; 120° 50' 19" W
Broderson ..... 35° 18' 23" N; 120° 50' 44" W

3.1.1 - Directions to the Property

The different regions that comprise the entire site are generally located along, and adjacent to, Los Osos Valley Road, both within the developed region of the community of Los Osos as well as within the outskirts of the community. To drive to the Tonini site, take the Turri Road exit to the north of Los Osos Valley Road, and drive for 0.45 mile to the entrance to the Tonini property on the west side of the road. The Cemetery, Giacomazzi, and Branin properties are located north of Los Osos Valley Road and adjacent to and west of the Clark Valley Road (which is located 1.4 miles west of the intersection of Turri Road and Los Osos Valley Road). The Mid-town site is located north of Los Osos Valley Road between Palisades Avenue (to the east) and Ravenna Avenue (to the west). The Broderson leach field site is located south of Los Osos Valley Road and west of Broderson Avenue. From the intersection of the two roads, drive south along Broderson Avenue for 0.35 mile to arrive at the eastern site boundary.

3.2 - Land Uses

The Broderson site is a sloping, undeveloped site that includes native shrubs and groves of eucalyptus trees.

The proposed Mid-town collection site is undeveloped and contains grasses and shrubs. The land immediately to the north and west is undeveloped. Residential developments are located east and south of the site.

The Cemetery, Giacomazzi, and Branin sites include mixed uses. The Cemetery site includes open space with ruderal weeds, as well as the Los Osos Valley Memorial Park cemetery to the south. The Giacomazzi site includes a disked field that is fallow, and the Branin site includes a portion of the Warden Creek wetland, as well as what appear to be small agricultural plots. Agricultural fields are located west of the Giacomazzi and Branin properties, while open space and the Warden Creek wetland are located to their east. There are agricultural fields and low-density residences west of the Cemetery property, and a disked field with electrical transmission towers to the east of the site.

The Tonini site is predominantly used for agriculture. Crops include those used to produce a hay mix (barley, oat, and wheat) as well as peas on the southern portion of the site. The northwest portion is used for cattle grazing.

The corridor parallel to Los Osos Valley Road includes grassy swales, season wetlands within the existing County Road right-of-way, adjacent agricultural fields and residential developments that are bisected by jurisdictional drainages.

3.2.1 - Activities Relating to Interstate or Foreign Commerce

Surface waters within the study area are generally tributary to Los Osos Creek, which flows northwest into Morro Bay. Although Morro Bay harbor includes one of California's largest commercial fishing fleets, and sales of locally caught fish relates to interstate commerce, neither Los Osos Creek nor its tributaries are associated with the sale of fish or shellfish related to interstate or foreign commerce. However, the project site does include agricultural activities that may relate to interstate or foreign commerce. Therefore, a nexus to commerce may be evident within the project site.

3.3 - Topography

The highest elevations of the site are located within the northwest portion of the Tonini property (approximately 541-feet above mean sea level (AMSL), according to the USGS 7.5-minute quadrangle). The second highest elevation is located at the Broderson site (approximately 300-feet AMSL at the westernmost portion of the study area). Los Osos Valley Road slopes gradually uphill from east to west (with minor undulations) until it is adjacent to the Mid-town site (approximately 120 feet AMSL), at which point it begins to slope downhill toward the coastline.

The site is located just north of the Irish Hills and both southwest of, as well as within, the Santa Lucia Mountains. Two general topographical drainage patterns are associated with the site. Although regional flows emanate from the Santa Lucia Mountains (specifically, Park Ridge) and generally move northeast to southwest to Warden Creek, flows from these mountains within the project site move northwest to southeast within and adjacent to the Tonini property. The other major drainage pattern associated with the study area is from south to north from the Irish Hills. Both sets of flows join Warden Creek (or its tributaries), or Los Osos Creek.

3.3.1 - Pertinent Hydrogeomorphic Features

Field work performed for this study identified nine RPWs and four non-RPWs. The RPWs include Los Osos Creek, Warden Creek, and several tributary and sub-tributary drainages to Warden Creek (listed in Table 1). These features are classified as RPWs because they flow for more than three months of the year. Both Los Osos Creek and Warden Creek are de facto RPWs because they are listed on the Clean Water Act (CWA) Section 303(d) list of Water Quality Limited Segments as well as within the Central Coast RWQCB Water Quality Control Plan (Basin Plan).

The non-RPW features include four drainages. Drainage W-1 and Drainage W-2 flow within the Branin property and are tributary to Warden Creek. Drainage T-1.a and Drainage T-1.b are minor tributaries to Drainage T-1 (the principal drainage feature on the Tonini property). These features are classified as non-RPWs because they are ephemeral and do not maintain continuous flow for extended periods of time (three months or more). During the survey periods, Drainage W-1 was dry, Drainage W-2 included pockets of water, Drainage T-1.a was dry, and Drainage T-1.b included pockets of standing water.

Table 1: Jurisdictional Drainages Within the Project Site

Drainage	Project Location	Average Width (Feet) USACE / CDFG	RPW / Non-RPW	Downstream Reference Point	Distance to TNW - Morro Bay (River Miles	Distance to TNW - Morro Bay (Linear Miles)
Los Osos Creek	Los Osos Valley Road	26 / 100	RPW	Northern end of bridge crossing along Los Osos Valley Road	3.6	2.4
Warden Creek	Branin; Turri Road	400 / 400: 25 / 40	RPW	Intersection with Turri Road	4.6	3.8
Drainage W-1	Giacomazzi	2.5 / 17.5	Non-RPW	Confluence with Warden Creek wetland	3.1	2.6
Drainage W-2	Giacomazzi	2 / 14	Non-RPW	Confluence with Drainage W-1	3.2	2.6

Table 1 (Cont.): Jurisdictional Drainages Within the Project Site

Drainage	Project Location	Average Width (Feet) USACE / CDFG	RPW / Non-RPW	Downstream Reference Point	Distance to TNW - Morro Bay (River Miles	Distance to TNW - Morro Bay (Linear Miles)
Drainage W-3	Los Osos Valley Road	9 / 30	RPW	Confluence with Warden Creek	3.9	3.3
Drainage W-4	Los Osos Valley Road	22 / 22	RPW	Confluence with Warden Creek	4.1	3.5
Drainage W-5	Los Osos Valley Road	6 / 6	RPW	Confluence with Warden Creek	4.3	3.6
Drainage W-5.a	Los Osos Valley Road	6 / 15	RPW	North side of Los Osos Valley Road	4.5	3.7
Drainage W-5.b	Los Osos Valley Road	6 / 6	RPW	North side of Los Osos Valley Road	4.5	3.8
Drainage T-1	Tonini; Turri Road	15 / 20; 15 / 30	RPW	Confluence with Drainage T-2	4.9	3.5
Drainage T-1.a	Tonini	1.5 / 3	Non-RPW	Confluence with T-1	5.5	3.2
Drainage T-1.b	Tonini	3 / 3	Non-RPW	Confluence with T-1	5.3	3.4
Drainage T-2	Tonini	12 / 25	RPW	Confluence with Drainage T-1	4.9	3.5

Source: Michael Brandman Associates, 2008.

3.3.2 - Watershed Description

The study area is located within the 11,400-square-mile Central California Coastal Watershed USGS accounting unit 18060006). Within this watershed, Los Osos Creek is located within the Estero Bay Sub-Hydrologic Unit number 310.23, which encompasses 17,937 acres (28.03 square miles).

Creeks within the region of the community of Los Osos generally flow either southwest from the Santa Lucia Mountains (including the hills that comprise Park Ridge, such as Hollister Peak), or northward from the Irish Hills. These flows enter Los Osos Creek directly, or through the Warden Creek tributary that is located east of Los Osos Creek within the Los Osos Valley. Warden Creek includes both Warden Lake and Warden Creek wetland (Warden Lake is located within Warden Creek wetland). Warden Creek runs from southeast to northwest until converging with Los Osos Creek at a point approximately 1.5 miles northwest of the northern border of the Branin property.

Both Los Osos Creek and Warden Creek are subject to flooding during, and following,100-year storm events.

3.3.3 - Connectivity to Downstream Resources

All creeks within the project site (including RPWs and non-RPWs) eventually flow into Los Osos Creek, which flows into Morro Bay (TNW), which is part of the Pacific Ocean (TNW). The distances from each tributary to Morro Bay is expressed in both linear and river miles in Table 1, above.

3.3.4 - Water Quality Issues

Waterbodies within, and downstream of, the project site are susceptible to impacts from specific pollutants. Both Los Osos Creek and Warden Creek are listed on the Clean Water Act Section 303(d) list of Water Quality Limited Segments. Impairments to both of these drainages are listed in Table 2.

Properties surrounding the relevant reaches of drainages within the project site have mixed uses that predominantly include agriculture, livestock grazing, open space, and residential use. The application (including potential past uses) of pesticides and fertilizers/nutrients in the agricultural regions adjacent to the drainages on the Tonini site, and adjacent to Warden Creek on the Giacomazzi and Branin properties, may result in impacts to the water quality of the drainage systems (although no data presently exists to specify such impacts).

Although the source of fecal coliform is listed as unknown, substantial livestock grazing takes place along the northwest portion of the Tonini site and contributes significant pathogens directly into Drainage T-1, which is tributary to the 303(d) listed Warden Creek.

Table 2: CWA Section 303(d) Water Quality Limited Segments Within Project Site

Water Body	Calwater Watershed Number	Pollutant / Stressor	Potential Sources
Los Osos Creek	31023012	Fecal Coliform	Source Unknown
		Low Dissolved Oxygen	Agriculture Natural Sources Pasture Grazing - Riparian and/or Upland Urban Runoff/Storm Sewers
		Nitrate	Source Unknown
		Nutrients	Agricultural Return Flows Agriculture Agriculture - storm runoff Irrigated Crop Production
		Sedimentation/Siltation	Agriculture Agricultural storm runoff

Table 2 (Cont.): CWA Section 303(d) Water Quality Limited Segments Within Project Site

Water Body	Calwater Watershed Number	Pollutant / Stressor	Potential Sources
		cont.	Channel Erosion Channelization Dredging Erosion/Siltation Habitat Modification Hydromodification Irrigated Crop Production Natural Sources Nonpoint Sources Range Grazing - Riparian and/or Upland Removal of Riparian Vegetation Streambank Modification/Destabilization
Warden Creek	31023010	Fecal Coliform	Source Unknown
		Low Dissolved Oxygen	Source Unknown

Source: California State Water Resources Control Board.

3.4 - Field Conditions

3.4.1 - Seasonal Climate Variation

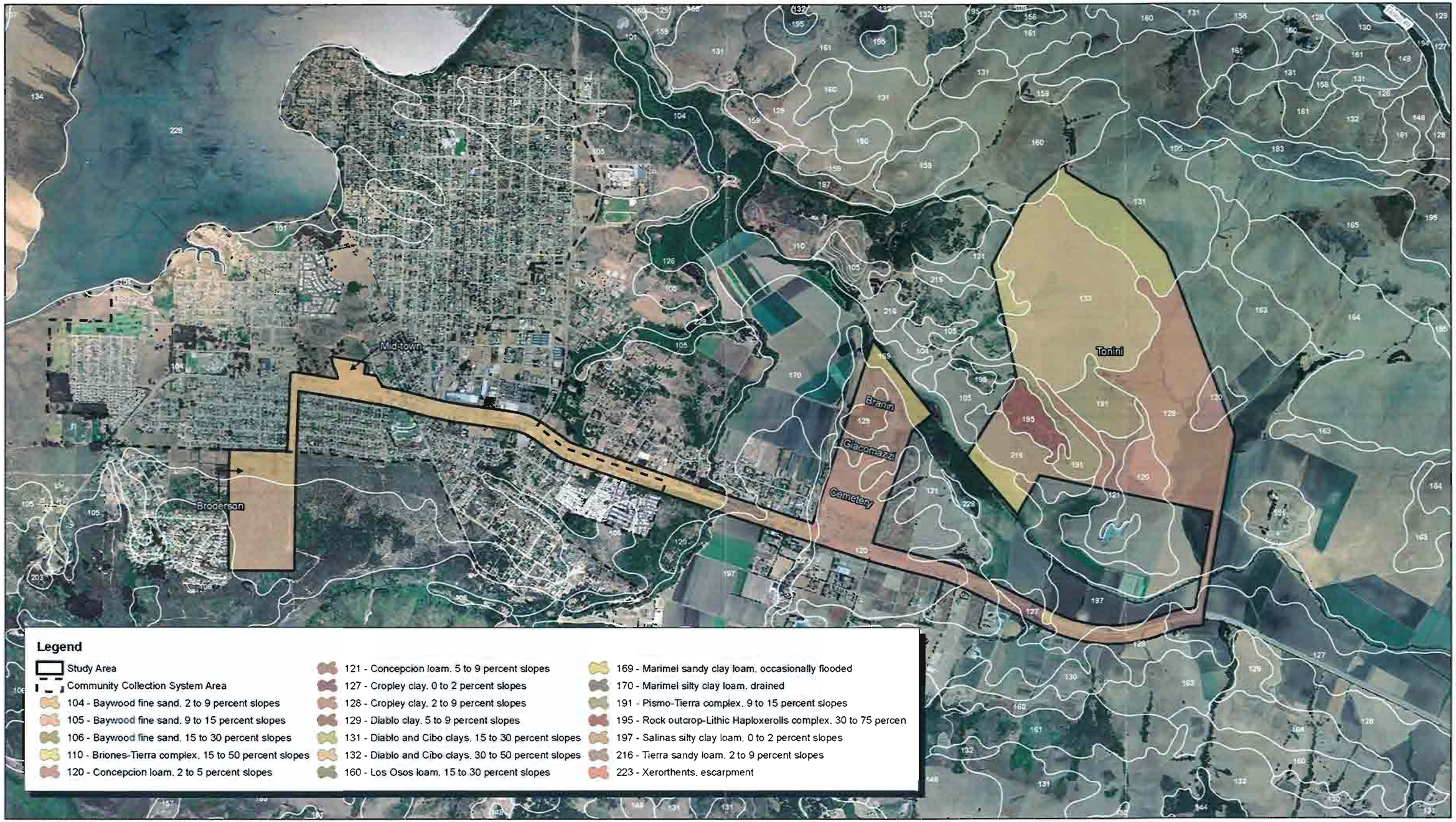
The region surrounding the community of Los Osos is subject to both seasonal and annual variations in temperature and precipitation. Annual average precipitation in the region (Morro Bay Fire Department, 1971-2000; source Natural Resources Conservation Service [NRCS]) is 17.62 inches, with highest average rainfall in February (3.69 inches), and lowest rainfall in July (0.03 inches). Rainfall increases further inland (the average annual precipitation at San Luis Obispo Polytech gauge, located approximately 7 miles to the southeast, is 23.3 inches).

3.4.2 - Conditions at time of Field Investigation

The delineation of jurisdictional waters and wetlands took place on April 23, April 24, and May 20, 2008. During the April survey, the temperature was 61 degrees Fahrenheit (F), winds were 0 to 2 miles per hour (mph) and the conditions were partly cloudy with minor, intermittent precipitation. During the May survey, the temperature was in the mid-70 degrees F range, winds were moderate (5 to 15 mph), and the conditions were clear and sunny.

3.5 - Soils

Exhibit 4 shows the different soil series within the study area. Percentage cover of soils and drainage characteristics are highlighted in Table 3, below.



Source: AirPhoto USA and San Luis Obispo County GIS.

NORTH

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Michael Brandman Associates

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Exhibit 4
USDA Soils Map

COUNTY OF SAN LUIS OBISPO • LOS OSOS WASTEWATER PROJECT
DELINEATION OF JURISDICTIONAL WATERS AND WETLANDS

A soil series is a group of soils with similar profiles. These profiles include major horizons with similar thickness, arrangement, and other important characteristics. These soil series were checked against the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) National Hydric Soils List.

Table 3: Summary of USDA / NRCS Soil Descriptions

Map Unit Symbol	Soil Series	Percentage Cover	NRCS Hydric	Drainage
104	Baywood fine sand, 2 to 9 percent slopes	14.9	No	Somewhat excessively drained
105	Baywood fine sand, 9 to 15 percent slopes	0.4	No	Somewhat excessively drained
110	Briones-Tierra Complex	0.4	No	Somewhat excessively drained
120	Concepcion loam, 2 to 5 percent slopes	10.9	No	Moderately well drained
121	Concepcion loam, 5 to 9 percent slopes	6.9	No	Moderately well drained
127	Cropley clay, 0 to 2 percent slopes	2.2	Yes	Moderately well drained
128	Cropley clay, 2 to 9 percent slopes	19.2	No	Moderately well drained
129	Diablo clay, 5 to 9 percent slopes	1.2	No	Well drained
131	Diablo and cibo clays, 15 to 30 percent slopes	7.4	No	Well drained
132	Diablo and cibo clays, 30 to 50 percent slopes	19.5	No	Well drained
160	Los Osos loam, 15 to 30 percent slopes	0.4	No	Well drained
169	Marimel sandy clay loam, occasionally flooded	3.0	Yes	Somewhat poorly drained
170	Marimel silty clay, loam, drained	0.6	Yes	Well drained
191	Pismo Tierra complex, 9 to 15 percent slopes	4.8	No	Somewhat excessively drained
195	Rock outcrop - Lithic Haploxerolls complex, 30 to 75 percent slopes	2.5	No	Excessively drained
197	Salinas silty clay loam, 0 to 2 percent slope	2.5	Yes	Well drained
216	Tierra sandy loam, 2 to 9 percent slopes	3.1	No	Moderately well drained
223	Xerothents, escarpment	0.1	No	

Source: Natural Resources Conservation Service.

3.6 - Vegetation

Descriptions of plant communities are provided with each drainage description in Section 4.2 of this report. A more detailed description is provided in the Biological Resources Assessment technical report (MBA July 2008), published as an appendix to the County of San Luis Obispo Los Osos Wastewater Draft Environmental Impact Report (Draft EIR).

3.7 - Coastal Zone Evaluation

The study area is located within the coastal zone, as defined by the California Coastal Act. Therefore, a Coastal Zone Management Act consistency determination is required. Such a consistency determination with the Coastal Zone Land Use Ordinance (which forms part of the Elements of the San Luis Obispo County Plan) is included in the EIR for the County of San Luis Obispo Los Osos Wastewater Project that is being prepared by MBA.

3.8 - Critical Habitat

The study area is located within portions of United States Fish and Wildlife Service (USFWS) designated critical habitat for two species. The Broderson property is located entirely within critical habitat for the Morro shoulderband snail (*Helminthoglypta walkeriana*). All of Los Osos Creek within the Los Osos Hydrologic Subarea (#331023) is within critical habitat for South-Central California Coast steelhead (*Oncorhynchus mykiss irideus*).

3.9 - Biological Resources

3.9.1 - Biological Resources Surveys and Reports

Biological resources associated with the study area are described in the technical attachments of the Biological Resources Assessment (MBA July 2008), which is included in the County of San Luis Obispo Los Osos Wastewater Draft EIR.

The Biological Resources Assessment's technical attachments include:

- Attachment A Floral and Faunal Compendia
- Attachment B: Special Status Species Tables
- Attachment C: Site Photographs
- Attachment D: California Natural Diversity Database Search Results
- Attachment E: Regulatory Framework
- Attachment F: California Red-legged Frog Protocol Survey Report
- Attachment G: Delineation of Jurisdictional Waters and Wetlands

3.10 - Environmental Documentation

Proposed development within the study area is being analyzed as required by the California Environmental Quality Act (CEQA). MBA is preparing an EIR for the County of San Luis Obispo Los Osos Wastewater Project.

SECTION 4: JURISDICTIONAL DELINEATION RESULTS

The following section provides a detailed discussion of jurisdictional areas within the project site including findings related to vegetative communities, topography, soils, hydrology, and wetlands for each of the listed hydrogeomorphic features (Exhibit 5 and Exhibit 6).

4.1 - Summary of Jurisdictional Areas

4.1.1 - USACE Jurisdiction

The study area includes nine RPWs and four non-RPWs and two separate wetlands that are associated with RPWs that were determined to be jurisdictional waters of the United States (Table 4).

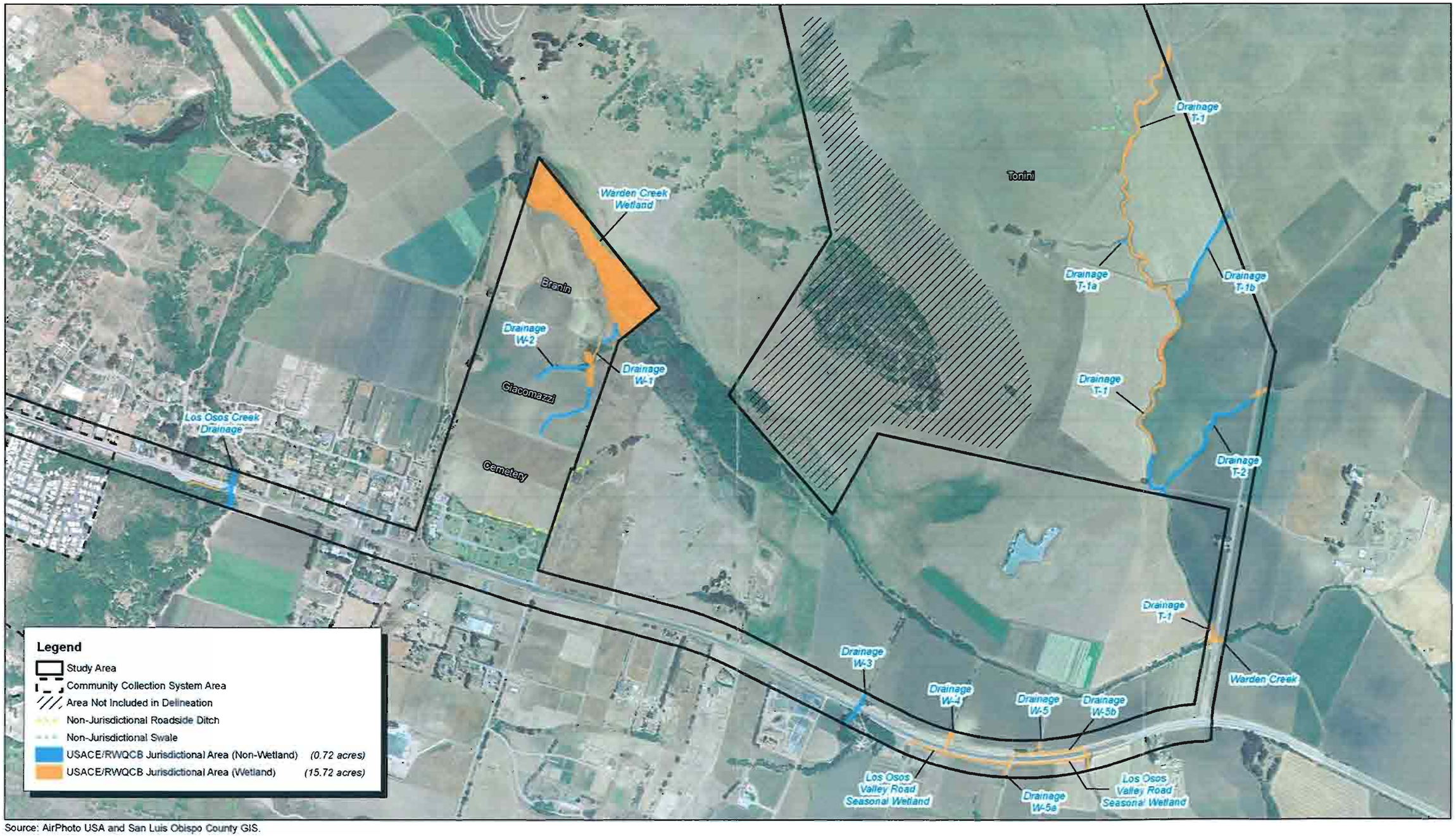
Table 4: USACE Jurisdictional Evaluation

Hydrogeomorphic Feature	USACE JURISDICTION	
	Non-wetland Waters Acres (LF)	Wetland Waters Acres (LF)
Los Osos Creek	0.27 (931)	0.00 (0)
Warden Creek	0.00 (0)	0.12 (214)
Drainage W-1	0.09 (1,148)	0.42 (499)
Warden Creek Wetland	0.00 (0)	13.34 (1,965)
Drainage W-2	0.03 (612)	0.00 (0)
Drainage W-3	0.09 (410)	0.00 (0)
Drainage W-4	0.00 (0)	0.11 (256)
Drainage W-5	0.00 (0)	0.02 (137)
Drainage W-5.a	0.00 (0)	0.07 (524)
Drainage W-5.b	0.00 (0)	0.10 (748)
Los Osos Valley Road Seasonal Wetland	0.00 (0)	0.23 (1,893)
Drainage T-1	0.08 (566)	1.22 (5,733)
Drainage T-1.a	0.003 (80)	0.00 (0)
Drainage T-1.b	0.06 (1,198)	0.00 (0)
Drainage T-2	0.10 (1,480)	0.08 (212)
Total	**0.723 (6,425)**	**15.71 (12,181)**

Source: Michael Brandman Associates, 2008.

4.1.2 - RWQCB Jurisdiction

The study area includes nine RPWs and four non-RPWs and two separate wetlands that are associated with RPWs that were determined to be jurisdictional waters of the United States. They are therefore also considered to be jurisdictional waters of the State (Table 5).



Source: AirPhoto USA and San Luis Obispo County GIS.

Michael Brandman Associates

NORTH

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Exhibit 5
USACE/RWQCB Jurisdictional Areas

COUNTY OF SAN LUIS OBISPO • LOS OSOS WASTEWATER PROJECT
DELINEATION OF JURISDICTIONAL WATERS AND WETLANDS

Source: AirPhoto USA and San Luis Obispo County GIS.

NORTH

1,000 500 0 1,000 Feet

Michael Brandman Associates

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Exhibit 6
CDFG Jurisdictional Areas

COUNTY OF SAN LUIS OBISPO • LOS OSOS WASTEWATER PROJECT
DELINEATION OF JURISDICTIONAL WATERS AND WETLANDS

Table 5: RWQCB Jurisdictional Evaluation

Hydrogeomorphic Feature	RWQCB Jurisdiction	
	Non-wetland Waters Acres (LF)	Wetland Waters Acres (LF)
Los Osos Creek	0.27 (931)	0.00 (0)
Warden Creek	0.00 (0)	0.12 (214)
Warden Creek Wetland	0.00 (0)	13.34 (1,965)
Drainage W-1	0.09 (1,148)	0.42 (499)
Drainage W-2	0.03 (612)	0.00 (0)
Drainage W-3	0.09 (410)	0.00 (0)
Drainage W-4	0.00 (0)	0.11 (256)
Drainage W-5	0.00 (0)	0.02 (137)
Drainage W-5.a	0.00 (0)	0.07 (524)
Drainage W-5.b	0.00 (0)	0.10 (748)
Los Osos Valley Road Seasonal Wetland	0.00 (0)	0.23 (1,893)
Drainage T-1	0.08 (566)	1.22 (5,733)
Drainage T-1.a	0.003 (80)	0.00 (0)
Drainage T-1.b	0.06 (1,198)	0.00 (0)
Drainage T-2	0.10 (1,480)	0.08 (212)
Total	**0.723 (6,425)**	**15.71 (12,181)**

Source: Michael Brandman Associates, 2008.

4.1.3 - CDFG Jurisdiction

The CDFG asserts jurisdiction over streambeds and associated riparian communities/systems. Thirteen drainages and two separate but associated wetlands within the study area were determined to be subject to CDFG jurisdiction (Table 6).

Table 6: CDFG Jurisdictional Evaluation

Hydrogeomorphic Feature	CDFG Jurisdiction acres (Including Riparian Areas)
Los Osos Creek	1.55
Warden Creek	0.21
Warden Creek Wetland	13.34
Drainage W-1	1.44
Drainage W-2	0.42
Drainage W-3	0.79
Drainage W-4	0.11

Table 6 (Cont.): CDFG Jurisdictional Evaluation

Hydrogeomorphic Feature	CDFG Jurisdiction acres (Including Riparian Areas)
Drainage W-5	0.05
Drainage W-5.a	0.20
Drainage W-5.b	0.21
Los Osos Valley Road Seasonal Wetland	0.23
Drainage T-1	3.31
Drainage T-1.a	0.05
Drainage T-1.b	0.48
Drainage T-2	1.12
Total	**23.51**

Source: Michael Brandman Associates, 2008.

4.2 - Rationale for Jurisdictional Determination

A detailed discussion of the rationale for supporting the jurisdictional determination for each type of hydrogeomorphic feature found on the site follows. This is based on the field evaluation that included an assessment of hydrological conditions, an analysis of vegetation types, and the excavation of soil pits to assess wetland characteristics (Exhibit 7 and Exhibit 8).

4.2.1 - Los Osos Creek

Los Osos Creek originates in the Clark Valley within the Irish Hills. It flows northwest out of the hills, then meanders northeast until it crosses Los Osos Valley Road. The creek then flows generally north before entering Morro Bay (TNW). Los Osos Creek is the principal drainage within the project site and is joined by the tributary Warden Creek, into which all other on-site drainages flow. After exiting below the southern edge of Los Osos Valley road, it flows 2.7 river miles to the confluence with Warden Creek. It then flows an additional 0.9 river miles west to enter Morro Bay. Within the relevant reach of the project, Los Osos Creek is a third order stream. Los Osos Creek is an intermittent RPW and maintains an average width (OHWM) of 22 feet in the reach between Los Osos Valley Road and the confluence with Warden Creek. The drainage is incised 25 feet deep in locations north of Los Osos Valley Road. The drainage base is comprised of varying percentages of sand, soil, and rock throughout the site. At the location where the creek passes below Los Osos Road, the channel has an OHWM that varies from 24 to 28 feet in width (26 feet average width). Note that the project boundaries adjacent to Los Osos Valley Road have been arbitrarily defined as being 200 feet on either side of the road centerline. The drainage has downstream connectivity to Morro Bay (TNW) and the Pacific Ocean (TNW).

Source: AirPhoto USA and San Luis Obispo County GIS.

Michael Brandman Associates

NORTH

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Exhibit 7
Data Point Locations

COUNTY OF SAN LUIS OBISPO • LOS OSOS WASTEWATER PROJECT
DELINEATION OF JURISDICTIONAL WATERS AND WETLANDS

Source: AirPhoto USA and San Luis Obispo County GIS.

NORTH

1000 500 0 1000

SCALE IN FEET

Michael Brandman Associates

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Exhibit 8
Photo Location Map

COUNTY OF SAN LUIS OBISPO • LOS OSOS WASTERWATER PROJECT
DELINEATION OF JURISDICTIONAL WATERS AND WETLANDS

A wetland pit excavated within the drainage (designated as LOC, Pit 2; see Attachment D, Photograph 3) indicates that hydrophytic vegetation, wetland hydrology (indicated by the presence of a high water table, saturation, riverine water marks, sediment and drift deposits, and drainage patterns), and hydric soils (10YR4/1 loam redox) are present. According to the USACE three-parameter assessment, wetlands are therefore associated with this drainage.

The drainage includes Central Coast Live Oak Riparian Forest habitat. The stand that exists on the project site continues further upstream and to the south along Los Osos Creek, and integrates with Coast Live Oak Forest habitat occupying upland areas to the immediate southwest and west, and Central Coast Arroyo Willow Riparian Forest and Arroyo Willow - Black Cottonwood series riparian habitat further downstream. The habitat onsite contains a dense closed-canopy that is co-dominated by coast live oak trees (upland species, or UPL) and arroyo willow trees (*Salix lasiolepis*, facultative wet species, or FACW). Little understory growth exists within onsite areas that are characterized by this community, and especially within the bare active channel and adjacent channel margins of Los Osos Creek itself. Dominate understory species observed within limited areas include poison oak (*Toxico dendron* FACW), mugwort (*Artemisia douglasiana* FACW), Himalaya blackberry (*Rubious discolor* FACW), and horsetail (*Equisetum hyemale*, FACW).

USACE Jurisdiction

The onsite portion of Los Osos Creek includes 0.27 acre (931 linear feet) of non-wetland waters of the United States.

RWQCB Jurisdiction

RWQCB jurisdiction totals 0.27 acre (931 linear feet) of waters of the State.

CDFG Jurisdiction

Los Osos Creek includes a discernible bed and bank, and is therefore considered jurisdictional according to the CDFG. Total CDFG jurisdiction equals 1.55 acre.

4.2.2 - Warden Creek

Warden Creek originates from several drainages that flow from the Irish Hills to the south and from the Santa Lucia Mountains located within and north of the project site. The drainage flows northwest through the Los Osos Valley until it joins Los Osos Creek, of which it is a tributary. With the exception of Los Osos Creek, all other on-site drainages flow either directly or indirectly into Warden Creek. Water was present within the creek during both the April and May site surveys and it is likely the creek maintains flows for at least three continuous months (see Section 3.4.1 regarding peak rainfall). This creek is therefore an RPW that intersects with the project site at two locations. The eastern location is along Turri Road (4.6 river miles and 3.8 linear miles southeast of Morro Bay). The western location is at the northern end of the Branin property (3.1 river miles and 2.6 linear miles southeast of Morro Bay). Warden Creek is contained within Warden Creek wetland at this western location. Within the relevant reach of the site, Warden Creek is a fourth order stream.

At the point where Warden Creek passes below Turri Road, the drainage has an OHWM of approximately 25 feet. At the location where Warden Creek wetland passes through Branin property, the wetland extends to the north outside of the project site.

A wetland pit excavated within Warden Creek wetland (designated WCW Pit 1) indicates that hydrophytic vegetation, wetland hydrology (indicated by the presence of surface water, saturation, drainage patterns, and saturation visible on aerial imagery), and hydric soils (10YR3/6 loam with redox) are present. According to the USACE three-parameter assessment, wetlands are therefore associated with this drainage.

The drainage includes Central Coast Arroyo Willow Riparian Forest habitat. This is located within the Warden Creek wetlands and at the Turri Road crossing. The dominant species observed onsite includes arroyo willow (*Salix lasiolepis*, FACW) within the tree stratum, mulefat (*Baccharis salicifolia*, FACW) and coyote bush (a facultative species, or FAC) within the shrub stratum, and poison hemlock (FACW), curly dock (FACW), and fennel (a facultative uplans species, or FACU) within the herbaceous stratum.

USACE Jurisdiction

The onsite portion of Warden Creek includes 0.12 acre (214 linear feet) of wetland waters of the United States.

RWQCB Jurisdiction

RWQCB jurisdiction totals 0.12 acre (214 linear feet) of waters of the State.

CDFG Jurisdiction

Warden Creek includes a discernible bed and bank, and is therefore considered jurisdictional according to the CDFG. Total CDFG jurisdiction equals 0.21 acre.

4.2.3 - Warden Creek Wetland

The Warden Creek wetland forms part of Warden Creek, but is discussed separately from the drainage in this document because of its size. The wetland extends for more than 5,000 linear feet along its southeast to northwest trending axis, and is up to 700 feet in width. This wetlands is a part of Warden Creek (RPW) and is located along the northern periphery of the Branin property (3.1 river miles and 2.6 linear miles southeast of Morro Bay). Within the site, the wetland is approximately 13.34 acres in area, and approximately 1.956 feet in length.

A wetland pit excavated within this wetland is described under Section 4.2.2, above.

The wetland can be classified as a freshwater marsh, and is intermixed with elements of riparian forest within the northern portions of the Branin property. Dominate species present include broad-leaved cattail (*Typha latifolia*, (an obligate species, or OBL) and arroyo willow (FACW). Habitat

quality within the Freshwater Marsh onsite is considered high for a number of common and sensitive terrestrial and aquatic species.

USACE Jurisdiction

The onsite portion of Warden Creek wetland includes 13.34 acre (1,965 linear feet) of wetland waters of the United States.

RWQCB Jurisdiction

RWQCB jurisdiction totals 13.34 acre (1,965 linear feet) of waters of the State.

CDFG Jurisdiction

Warden Creek wetland is considered jurisdictional according to the CDFG. Total CDFG jurisdiction equals 13.34 acre.

4.2.4 - Drainage W-1

Drainage W-1 is an ephemeral non-RPW that originates on the Cemetery property and flows northward through the Giacomazzi and Branin properties into Warden Creek wetland, at a location approximately 3.1 river miles (2.6 linear miles) to the east of Morro Bay (TNW). Within the relevant reach of the project, Drainage W-1 is a first and second order stream. The channel has an average OHWM of approximately 2.5 feet, while the bank-to-bank channel varies from 10 to 25 feet in width (17.5 feet average width).

Several wetland pits were excavated within and adjacent to this drainage. One pit (designated as W-1, Pit 4;see Attachment D, Photograph 7) includes hydrophytic vegetation, wetland hydrology (indicated by the presence of water marks, sediment and drift deposits, and water stained leaves), and hydric soils (10YR2/2 sandy loam). According to the USACE three-parameter assessment, wetlands are therefore associated with this drainage. The results found at a second pit (designated as W-1, Pit 6; see Attachment D, Photograph 9) confirmed this assessment.

This drainage contains Disturbed Habitat, which typically occurs within portions that are currently fallow or used as dirt access roads. Many of these areas exist at the margins of existing developed areas and areas historically and/or routinely disturbed as a result of agricultural activities. Common plant species observed within the Disturbed Habitat include non-native annual grasses such as ripgut brome (*Bromus diandrus*, UPL), soft chess (*Bromus hordeaceous*, UPL), and wild oats (*Avena fatua*, UPL), and annual forbs such as filaree (*Erodium cicutarium*, UPL), pineapple weed (*Chamomilla suaveolens*, FACU), wild radish (*Raphanus sativus*, UPL), field mustard (*Brassica rapa*, UPL), bristly ox-tongue (*Picris echoides*, FAC), poison hemlock (*Conium maculatum*, FACW), and fennel (*Foeniculum vulgare*, FACU).

The drainage also includes Central Coast Arroyo Willow Riparian Forest habitat. The dominant species observed onsite include arroyo willow (*Salix lasiolepis*, FACW) within the tree stratum,

mulefat (*Baccharis salicifolia*, FACW) and coyote bush (FAC) within the shrub stratum, and poison hemlock (FACW), curly dock (FACW), and fennel (FACU) within the herbaceous stratum.

Because the drainage is a non-RPW, a significant nexus evaluation is included below to determine whether this feature should be considered jurisdictional by the USACE.

Significant Nexus Evaluation

Hydrological Factors

Los Osos/Baywood Park is located within the Central California Coastal Watershed (identified as United States Geological Survey (USGS) Region 18, Accounting Unit 180600, which has an area of approximately 11,400 square miles). Drainage W-1 is a tributary to Warden Creek (RPW), which is tributary to Morro Bay (TNW). The drainage conveys stormwater as precipitation and agricultural runoff.

The tributary area to the drainage is approximately 15-acres. The land is partially disced for agriculture, and contains other fields that are either remnants of past agricultural activities or were fallow at the time of the survey. The land is largely permeable. An rainfall map of the region shows that most of the project site is subject to an annual rainfall of approximately 19.0 inches. The Rational Method (Q = CIA, where Q is peak flow, C is coefficient of runoff, I is rainfall intensity, and A is area) is used to calculate approximate peak flow for the 50-year, 6-hour storm event (see Attachment H). The peak flow is approximately 5.15 cubic feet per second (cfs). The relative magnitude of this flow, combined with the presence of a discernible OHWM throughout a portion of the study area, and the proximity of the drainage to an RPW (Warden Creek), makes it reasonable to assume that flow from the study area will be conveyed downstream 3.1 river miles via Warden Creek to Morro Bay (TNW).

Ecological Factors

Drainage W-1 serves as an ephemeral conduit through which minerals and organic nutrients from fields and open lands within the Cemetery and Branin properties are flushed downstream toward Morro Bay (TNW) via Warden Creek (RPW). The drainage may also convey pollutants from surrounding land uses within the relevant reach (these land uses include agriculture). These potential pollutants may include nitrogen/nitrates/ammonia, total dissolved solids, pesticides, and fertilizers. Warden Creek (into which this tributary discharges) is a CWA Section 303(d) listed 'water quality limited segment' that is impaired for fecal coliform, and low dissolved oxygen. The contribution of any such pollutants by Drainage W-1 would have an immediate impact on Warden Creek. The fact that the creek is already impaired by these substances would reduce its capability to attenuate the addition of such pollutants before their discharge into Morro Bay, and increase the likelihood and degree of their impact on the quality of bay waters. The discharge of such pollutants into the bay would ultimately influence the ecology of that water body.

A summary of the hydrological and ecological characteristics that may result in discharge from the drainage having a more than speculative or insubstantial effect on the nearest downstream TNW (Morro Bay) are highlighted in Table 7.

Table 7: Significant Nexus Determination - Drainage W-1

Factors	More than Speculative or Insubstantial Effect
Hydrological Factors	
Volume, duration, and frequency of flow. This includes consideration of certain tributary characteristics, historic records of flow, flood predictions, gauge data, and personal observations (OHWM, shelving, water staining, sediment sorting, and scouring).	Yes
Proximity to the TNW. If a tributary is far from a TNW, the impact on the TNW is more likely to be speculative.	Yes
Contextual hydrological factors. These include (1) size of the watershed, (2) average annual rainfall, and (3) average annual snow pack.	No
Presence of tributary or wetland within the flood plain. A significant nexus determination cannot be based solely on the presence of a water body within or outside the flood plain.	Yes
Ecological Factors	
Ability of the tributary and its adjacent wetlands (if any) to carry pollutants and flood waters to a TNW.	Yes
Ability of the tributary and its adjacent wetlands (if any) to provide aquatic habitat that supports biota of a TNW.	Yes
Ability of adjacent wetlands to trap and filter pollutants or store flood water.	Yes
Ability to maintain water quality.	No
Source: Michael Brandman Associates, 2008.	

Based on the factors discussed above, it is reasonable to assume the flows within Drainage W-1 may be capable of at least partially flushing sediment, organic compounds, and / or nutrients downstream to Morro Bay (TNW). Though diluted and reduced in quantity from the project site where they originate, such substances could have a more than insubstantial or speculative effect on the chemical, physical, and biological integrity of a TNW. Therefore, a significant nexus can be established between Drainage W-1 and the nearest TNW, and therefore Drainage W-1 should be considered jurisdictional by the USACE.

The USACE and US Environmental Protection Agency (EPA), however, will make a final significant nexus determination.

USACE Jurisdiction

The onsite portion of Drainage W-1 includes 0.09 acre (1,148 linear feet) of non-wetland and 0.42-acre (449) of wetland waters of the United States.

RWQCB Jurisdiction

RWQCB jurisdiction totals 0.42 acre (499 linear feet) of waters of the State.

CDFG Jurisdiction

Drainage W-1 is ephemeral and includes a discernible bed and bank, and is therefore considered jurisdictional according to the CDFG. Total CDFG jurisdiction equals 1.44 acre.

4.2.5 - Drainage W-2

Drainage W-2 is an ephemeral non-RPW that originates on the Giacomazzi property and that is tributary to Drainage W-1 within that same property. The confluence of this drainage with Drainage W-1 is at a location 3.2 river miles (2.6 linear miles) southeast of Morro Bay (TNW). Within the relevant reach of the project, Drainage W-2 is a first order stream. The channel has an average OHWM of approximately 2 feet, while the bank to bank channel varies from 3 to 25 feet in width (14 feet average width).

A wetland pit (designated as W-2, Pit 1; see Attachment D, Photograph 11) was excavated within the drainage. The pit showed no indicators of hydrophytic vegetation, wetland hydrology, or hydric soils (the dominant soil was a 10YR3/1 loam). Therefore, according to the USACE three parameter assessment, wetlands are not associated with the drainage.

This drainage contains Disturbed Habitat, which typically occurs within portions that are currently fallow or used as dirt access roads. Many of these areas exist at the margins of existing developed areas and areas historically and/or routinely disturbed as a result of agricultural activities. Common plant species observed within the Disturbed Habitat include non-native annual grasses such as ripgut brome (*Bromus diandrus*, UPL), soft chess (*Bromus hordeaceous*, UPL), and wild oats (*Avena fatua*, UPL), and annual forbs such as filaree (*Erodium cicutarium*, UPL), pineapple weed (*Chamomilla suaveolens*, FACU), wild radish (*Raphanus sativus*, UPL), field mustard (*Brassica rapa*, UPL), bristly ox-tongue (*Picris echoides*, FAC), poison hemlock (*Conium maculatum*, FACW), and fennel (*Foeniculum vulgare*, FACU).

Because the drainage is a non-RPW, a significant nexus evaluation is included below to determine whether this feature should be considered jurisdictional by the USACE.

Significant Nexus Evaluation

Hydrological Factors

Los Osos/Baywood Park is located within the Central California Coastal Watershed (identified as USGS Region 18, Accounting Unit 180600, which has an area of approximately 11,400 square

miles). Drainage W-2 is a tributary to Warden Creek (RPW), which is tributary to Morro Bay (TNW). The drainage conveys stormwater that originates as precipitation and agricultural runoff.

The tributary area to the drainage is approximately 15 acres (approximately equal to the tributary area for Drainage W-1). The land is mostly disked for agriculture and is largely permeable. An isopluvial map of the region shows that most of the project site is subject to an annual rainfall of approximately 19.0 inches. The Rational Method (Q = CIA, where Q is peak flow, C is coefficient of runoff, I is rainfall intensity, and A is area) is used to calculate approximate peak flow for the 50-year, 6-hour storm event (see Attachment H). The peak flow is approximately 4.48 cubic feet per second (cfs). The relative magnitude of this flow, combined with the presence of an OHWM that is discernible throughout a portion of the drainage, and the proximity of the drainage to an RPW (Warden Creek is less than 0.14 river miles from the confluence of Drainage W-2 and Drainage W-1), makes it reasonable to assume that flow from the study area will be conveyed 3.5 river miles downstream via Warden Creek to Morro Bay (TNW).

Ecological Factors

Drainage W-2serves as an ephemeral conduit through which minerals and organic nutrients from agricultural fields within the Branin property are flushed downstream toward Morro Bay (TNW) via Drainage W-1 and Warden Creek (RPW). The drainage may also convey pollutants from surrounding land uses within the relevant reach (the land use is predominantly agricultural). These potential pollutants may include nitrogen/nitrates/ammonia, total dissolved solids, pesticides, and fertilizers. Warden Creek is a CWA Section 303(d) listed 'limited water quality segment' that is impaired for fecal coliform, and low dissolved oxygen. The contribution of any such pollutants by Drainage W-2 would have an immediate impact on Warden Creek. The fact that the creek is already impaired by these substances would reduce its capability to attenuate such pollutants before their discharge into Morro Bay, and increase the likelihood and degree of their impact on the quality of bay waters. The discharge of such pollutants into the bay would ultimately influence the ecology of that water body.

A summary of the hydrological and ecological characteristics that may result in discharge from the drainage having a more than speculative or insubstantial effect on the nearest downstream TNW (Morro Bay) are highlighted in Table 8.

Table 8: Significant Nexus Determination - Drainage W-2

Factors	More than Speculative or Insubstantial Effect
Hydrological Factors	
Volume, duration, and frequency of flow. This includes consideration of certain tributary characteristics, historic records of flow, flood predictions, gauge data, and personal observations (OHWM, shelving, water staining, sediment sorting, and scouring).	Yes
Proximity to the TNW. If a tributary is far from a TNW, the impact on the TNW is more likely to be speculative.	Yes
Contextual hydrological factors. These include (1) size of the watershed, (2) average annual rainfall, and (3) average annual snow pack.	No
Presence of tributary or wetland within the flood plain. A significant nexus determination cannot be based solely on the presence of a water body within or outside the flood plain.	Yes
Ecological Factors:	
Ability of the tributary and its adjacent wetlands (if any) to carry pollutants and flood waters to a TNW.	Yes
Ability of the tributary and its adjacent wetlands (if any) to provide aquatic habitat that supports biota of a TNW	Yes
Ability of adjacent wetlands to trap and filter pollutants or store flood water.	Yes
Ability to maintain water quality.	No
Source: Michael Brandman Associates, 2008.	

Based on the factors discussed above, it is reasonable to assume the flows within Drainage W-2 may be capable of at least partially flushing sediment, organic compounds, and / or nutrients downstream to Morro Bay (TNW). Though diluted and reduced in quantity from the project site where they originate, such substances could have a more than insubstantial or speculative effect on the chemical, physical, and biological integrity of a TNW. Therefore, a significant nexus can be established between Drainage W-2 and the nearest TNW, and therefore Drainage W-2 should be considered jurisdictional by the USACE.

The USACE and EPA, however, will make a final significant nexus determination.

USACE Jurisdiction

The onsite portion of Drainage W-2 includes 0.03 acre (612 linear feet) of non-wetland waters of the United States.

RWQCB Jurisdiction

RWQCB jurisdiction totals 0.03 acre (612 linear feet) of waters of the State.

CDFG Jurisdiction

Drainage W-2 is ephemeral and includes a discernible bed and bank, and is therefore considered jurisdictional according to the CDFG. Total CDFG jurisdiction equals 0.42 acre.

4.2.6 - Drainage W-3

Drainage W-3 is an RPW that originates in the Irish Hills and flows north beneath Los Osos Valley Road to connect with Warden Creek (RPW) at a location slightly east of Jacaranda Lane located approximately 3.9 river miles (3.3 linear miles) east of Morro Bay (TNW). Within the relevant reach of the project, Drainage W-3 is a second order stream. The channel has an average OHWM of approximately 9 feet, while the bank to bank channel is approximately 30 feet in width.

A wetland pit (designated as W-3, Pit 1; see Attachment D, Photograph 13) was excavated within the drainage. Although the pit indicates that hydrophytic vegetation and wetland hydrology (indicated by the presence of non-riverine water marks, sediment deposits and drainage patters) are present, the drainage lacks hydric soils (the dominant soil is a 10YR3/2 coarse sandy alluvium). Therefore, according to the USACE three parameter assessment, wetlands are not associated with the drainage.

The drainage includes Central Coast Arroyo Willow Riparian Forest habitat. The dominant species observed onsite includes arroyo willow (*Salix lasiolepis*, FACW) within the tree stratum, mulefat (*Baccharis salicifolia*, FACW) and coyote bush (FAC) within the shrub stratum, and poison hemlock (FACW), curly dock (FACW), and fennel (FACU) within the herbaceous stratum.

USACE Jurisdiction

The onsite portion of Drainage W-3 includes 0.09 acre (410 linear feet) of non-wetland waters of the United States.

RWQCB Jurisdiction

RWQCB jurisdiction totals 0.09 acre (410 linear feet) of waters of the State.

CDFG Jurisdiction

Drainage W-2 is ephemeral and includes a discernible bed and bank, and is therefore considered jurisdictional according to the CDFG. Total CDFG jurisdiction equals 0.79 acre.

4.2.7 - Drainage W-4

Drainage W-4 is an RPW that originates in the Irish Hills and flows north beneath Los Osos Valley Road to connect with Warden Creek (RPW) at a location that is approximately 4.1 river miles (3.5 linear miles) east of Morro Bay (TNW). Within the relevant reach of the project, Drainage W-4 is a first order stream. The channel has an average OHWM of approximately 22 feet, while the bank to bank channel is also approximately 22 feet in width.

The dominant plant species observed within the majority of the Vernal Marsh habitat that occurs on-site is the perennial rhizomatous herb, spikerush (*Eleocharis macrostachya*, OBL). Other plant species observed within this habitat onsite include species typical of wetland habitats such as perennial ryegrass (*Lolium multiflorum*, FAC), curly dock (*Rumex crispus*, FACW), yellow sweet clover (*Melilotus officinalis*, FAC), and blue-eyed grass (*Sisyrinchium bellum*, FAC), and species typical of upland habitats such as ripgut brome (*Bromus diandrus*, UPL), soft chess (*Bromus hordeaceous*, UPL), wild oats (*Avena fatua*, UPL), and bristly ox-tongue (*Picris echoides*, FAC).

This drainage includes Disturbed Habitat, which typically occurs within portions that are currently fallow or used as dirt access roads. Many of these areas exist at the margins of existing developed areas and areas historically and/or routinely disturbed as a result of agricultural activities. Common plant species observed within the Disturbed Habitat include non-native annual grasses such as ripgut brome (*Bromus diandrus*, UPL), soft chess (*Bromus hordeaceous*, UPL), and wild oats (*Avena fatua*, UPL), and annual forbs such as filaree (*Erodium cicutarium*, UPL), pineapple weed (*Chamomilla suaveolens*, FACU), wild radish (*Raphanus sativus*, UPL), field mustard (*Brassica rapa*, UPL), bristly ox-tongue (*Picris echoides*, FAC), poison hemlock (*Conium maculatum*, FACW), and fennel (*Foeniculum vulgare*, FACU).

The drainage also includes Central Coast Arroyo Willow Riparian Forest habitat. The dominant species observed onsite includes arroyo willow (*Salix lasiolepis*, FACW) within the tree stratum, mulefat (*Baccharis salicifolia*, FACW) and coyote bush (FAC) within the shrub stratum, and poison hemlock (FACW), curly dock (FACW), and fennel (FACU) within the herbaceous stratum.

USACE Jurisdiction

The onsite portion of Drainage W-4 includes 0.11 acre (256 linear feet) wetland waters of the United States.

RWQCB Jurisdiction

RWQCB jurisdiction totals 0.11 acre (256 linear feet) of waters of the State.

CDFG Jurisdiction

Drainage W-2 is ephemeral and includes a discernible bed and bank, and is therefore considered jurisdictional according to the CDFG. Total CDFG jurisdiction equals 0.11 acre.

4.2.8 - Drainage W-5

Drainage W-5 is an RPW that originates north of Los Osos Valley Road at the confluence of two tributaries (W-5.a and W-5.b) and flows north to connect with Warden Creek (RPW) at a location that is approximately 4.3 river miles (3.6 linear miles) east of Morro Bay (TNW). Within the relevant reach of the project, Drainage W-5 is a second order stream. The channel has an average OHWM of approximately 6 feet, while the bank to bank channel is approximately 6 feet in width.

The dominant plant species observed within the majority of the Vernal Marsh habitat that occurs on-site is the perennial rhizomatous herb, spikerush (*Eleocharis macrostachya*, OBL). Other plant species observed within this habitat onsite include species typical of wetland habitats such as perennial ryegrass (*Lolium multiflorum*, FAC), curly dock (*Rumex crispus*, FACW), yellow sweet clover (*Melilotus officinalis*, FAC), and blue-eyed grass (*Sisyrinchium bellum*, FAC), and species typical of upland habitats such as ripgut brome (*Bromus diandrus*, UPL), soft chess (*Bromus hordeaceous*, UPL), wild oats (*Avena fatua*, UPL), and bristly ox-tongue (*Picris echoides*, FAC).

This drainage includes Disturbed Habitat, which typically occurs within portions that are currently fallow or used as dirt access roads. Many of these areas exist at the margins of existing developed areas and areas historically and/or routinely disturbed as a result of agricultural activities. Common plant species observed within the Disturbed Habitat include non-native annual grasses such as ripgut brome (*Bromus diandrus*, UPL), soft chess (*Bromus hordeaceous*, UPL), and wild oats (*Avena fatua*, UPL), and annual forbs such as filaree (*Erodium cicutarium*, UPL), pineapple weed (*Chamomilla suaveolens*, FACU), wild radish (*Raphanus sativus*, UPL), field mustard (*Brassica rapa*, UPL), bristly ox-tongue (*Picris echoides*, FAC), poison hemlock (*Conium maculatum*, FACW), and fennel (*Foeniculum vulgare*, FACU).

The drainage also includes Central Coast Arroyo Willow Riparian Forest habitat adjacent to Los Osos Valley Road. The dominant species observed onsite includes arroyo willow (*Salix lasiolepis*, FACW) within the tree stratum, mulefat (*Baccharis salicifolia*, FACW) and coyote bush (FAC) within the shrub stratum, and poison hemlock (FACW), curly dock (FACW), and fennel (FACU) within the herbaceous stratum.

USACE Jurisdiction

The onsite portion of Drainage W-2 includes 0.02 acre (137 linear feet) of wetland waters of the United States.

RWQCB Jurisdiction

RWQCB jurisdiction totals 0.02 acre (137 linear feet) of waters of the State.

CDFG Jurisdiction

Drainage W-2 is ephemeral and includes a discernible bed and bank, and is therefore considered jurisdictional according to the CDFG. Total CDFG jurisdiction equals 0.05 acre.

4.2.9 - Drainage W-5.a

Drainage W-5.a is an RPW that originates in the Irish Hills and flows north beneath Los Osos Valley Road to connect with Warden Creek (RPW) at a location that is approximately 4.5 river miles (3.7 linear miles) east of Morro Bay (TNW). Within the relevant reach of the project, Drainage W-5.a is a second order stream. The channel has an average OHWM of approximately 6 feet. The drainage is

one of two short tributaries (the other tributary being Drainage W-5.b) that join to form Drainage W-5.

The dominant plant species observed within the majority of the Vernal Marsh habitat that occurs on-site is the perennial rhizomatous herb, spikerush (*Eleocharis macrostachya*, OBL). Other plant species observed within this habitat onsite include species typical of wetland habitats such as perennial ryegrass (*Lolium multiflorum*, FAC), curly dock (*Rumex crispus*, FACW), yellow sweet clover (*Melilotus officinalis*, FAC), and blue-eyed grass (*Sisyrinchium bellum*, FAC), and species typical of upland habitats such as ripgut brome (*Bromus diandrus*, UPL), soft chess (*Bromus hordeaceous*, UPL), wild oats (*Avena fatua*, UPL), and bristly ox-tongue (*Picris echoides*, FAC).

This drainage includes Disturbed Habitat, which typically occurs within portions that are currently fallow or used as dirt access roads. Many of these areas exist at the margins of existing developed areas and areas historically and/or routinely disturbed as a result of agricultural activities. Common plant species observed within the Disturbed Habitat include non-native annual grasses such as ripgut brome (*Bromus diandrus*, UPL), soft chess (*Bromus hordeaceous*, UPL), and wild oats (*Avena fatua*, UPL), and annual forbs such as filaree (*Erodium cicutarium*, UPL), pineapple weed (*Chamomilla suaveolens*, FACU), wild radish (*Raphanus sativus*, UPL), field mustard (*Brassica rapa,* UPL), bristly ox-tongue (*Picris echoides*, FAC), poison hemlock (*Conium maculatum*, FACW), and fennel (*Foeniculum vulgare*, FACU).

A wetland pit excavated within the drainage (designated as W-5.a, Pit 1; see Attachment D, Photograph 17 and 18 of the drainage) indicates that hydrophytic vegetation, wetland hydrology (indicated by the presence of water marks, sediment and drift deposits and water stained leaves), and hydric soils (10YR3/1 loam) are present. Therefore, according to the USACE three-parameter assessment, wetlands are associated with this drainage.

USACE Jurisdiction

The onsite portion of Drainage W-5.a includes 0.07 acre (524 linear feet) of wetland waters of the United States.

RWQCB Jurisdiction

RWQCB jurisdiction totals 0.07 acre (524 linear feet) of waters of the State.

CDFG Jurisdiction

Drainage W-5.a is ephemeral and includes a discernible bed and bank, and is therefore considered jurisdictional according to the CDFG. Total CDFG jurisdiction equals 0.20 acre.

4.2.10 - Drainage W-5.b

Drainage W-5.b is an RPW that originates in the Irish Hills and flows north beneath Los Osos Valley Road to connect with Warden Creek (RPW) at a location that is approximately 4.5 river miles (3.8 linear miles) east of Morro Bay (TNW). Within the relevant reach of the project, Drainage W-5.b is a first order stream. The channel has an average OHWM of approximately 6 feet, while the bank to bank channel is also approximately 6 feet in width on average. The drainage is one of two short tributaries (the other tributary being Drainage W-5.a) that join to form Drainage W-5.

The dominant plant species observed within the majority of the Vernal Marsh habitat that occurs on-site is the perennial rhizomatous herb, spikerush (*Eleocharis macrostachya*, OBL). Other plant species observed within this habitat onsite include species typical of wetland habitats such as perennial ryegrass (*Lolium multiflorum*, FAC), curly dock (*Rumex crispus*, FACW), yellow sweet clover (*Melilotus officinalis*, FAC), and blue-eyed grass (*Sisyrinchium bellum*, FAC), and species typical of upland habitats such as ripgut brome (*Bromus diandrus*, UPL), soft chess (*Bromus hordeaceous*, UPL), wild oats (*Avena fatua*, UPL), and bristly ox-tongue (*Picris echoides*, FAC).

This drainage includes Disturbed Habitat, which typically occurs within portions that are currently fallow or used as dirt access roads. Many of these areas exist at the margins of existing developed areas and areas historically and/or routinely disturbed as a result of agricultural activities. Common plant species observed within the Disturbed Habitat include non-native annual grasses such as ripgut brome (*Bromus diandrus*, UPL), soft chess (*Bromus hordeaceous*, UPL), and wild oats (*Avena fatua*, UPL), and annual forbs such as filaree (*Erodium cicutarium*, UPL), pineapple weed (*Chamomilla suaveolens*, FACU), wild radish (*Raphanus sativus*, UPL), field mustard (*Brassica rapa*, UPL), bristly ox-tongue (*Picris echoides*, FAC), poison hemlock (*Conium maculatum*, FACW), and fennel (*Foeniculum vulgare*, FACU).

Although a wetland pit was not excavated within Drainage W-5.b, a field inspection, combined with results from excavating a pit within tributary Drainage W-5.a. (see discussion above), indicates that this drainage also includes wetland waters.

USACE Jurisdiction

The onsite portion of Drainage W-5.b includes 0.10 acre (748 linear feet) of wetland waters of the United States.

RWQCB Jurisdiction

RWQCB jurisdiction totals 0.10 acre (748 linear feet) of waters of the State.

CDFG Jurisdiction

Drainage W-5.b is ephemeral and includes a discernible bed and bank, and is therefore considered jurisdictional according to the CDFG. Total CDFG jurisdiction equals 0.21 acre.

4.2.11 - Los Osos Valley Road Seasonal Wetland

This series of wetlands is located south of, and parallel to, Los Osos Valley Road from a point approximately 400 feet west of Drainage W-4 to the intersection with Drainage W-5.b in the east. This wetlands has an average width of approximately 6 feet, while the bank to bank channel is also approximately 6 feet in width on average.

A wetland pit excavated within this drainage (designated as LOVRSW Pit 2) indicates that hydrophytic vegetation, wetland hydrology (as indicated by the presence of water marks, sediment deposits, drainage patterns, surface water, presence of a water table and saturation), and hydric soils (including a 5YR4/6 redox loam) are present. Therefore, the USACE three parameter assessment confirms the presence of these wetlands.

The dominant plant species observed within the majority of the Vernal Marsh habitat that occurs within these wetlands is the perennial rhizomatous herb, spikerush (*Eleocharis macrostachya*, OBL). Other plant species observed within this habitat onsite include species typical of wetland habitats such as perennial ryegrass (*Lolium multiflorum*, FAC), curly dock (*Rumex crispus*, FACW), yellow sweet clover (*Melilotus officinalis*, FAC), and blue-eyed grass (*Sisyrinchium bellum*, FAC), and species typical of upland habitats such as ripgut brome (*Bromus diandrus*, UPL), soft chess (*Bromus hordeaceous*, UPL), wild oats (*Avena fatua*, UPL), and bristly ox-tongue (*Picris echoides*, FAC).

USACE Jurisdiction

The onsite portion of Los Osos Valley Road Seasonal Wetland includes 0.23 acre (1,893 linear feet) of wetland waters of the United States.

RWQCB Jurisdiction

RWQCB jurisdiction totals 0.23 acre (1,893 linear feet) of waters of the State.

CDFG Jurisdiction

The Los Osos Valley Road Seasonal Wetland is considered jurisdictional according to the CDFG. Total CDFG jurisdiction equals 0.23 acre.

4.2.12 - Drainage T-1

Drainage T-1 originates from precipitation that falls on peaks within the Santa Lucia Range and forms various minor ephemeral drainages, all of which travel generally south to converge within the Tonini property. The drainage is an RPW that flows off the Tonini property to the south to join Warden Creek (RPW) as a tributary approximately 4.9 river miles (3.5 linear miles) southeast of Morro Bay (TNW). Within the relevant reach of the project, Drainage T-1 is a second order stream. Cattle walk within, and graze adjacent to, this drainage in the northwestern portion of the Tonini property in a region separated from the rest of the property by a north-south running fence. The drainage has been highly disturbed by cattle grazing activities. The drainage encompasses wetlands throughout its length, with the exception of a few hundred feet located along its lower (southern) portion where it

exits the Tonini property. These wetlands are up to 25 feet in width. The drainage also includes several pools that are up to 70 feet in length and 30 feet in width. The channel has an average OHWM of approximately 15 feet. During the survey in April, many of these pools were filled with standing water. The groundwater table is generally high in this region.

The dominant plant species observed within the majority of the Vernal Marsh habitat that occurs on-site is the perennial rhizomatous herb, spikerush (*Eleocharis macrostachya*, OBL). Other plant species observed within this habitat onsite include species typical of wetland habitats such as perennial ryegrass (*Lolium multiflorum*, FAC), curly dock (*Rumex crispus*, FACW), yellow sweet clover (*Melilotus officinalis*, FAC), and blue-eyed grass (*Sisyrinchium bellum*, FAC), and species typical of upland habitats such as ripgut brome (*Bromus diandrus*, UPL), soft chess (*Bromus hordeaceous*, UPL), wild oats (*Avena fatua*, UPL), and bristly ox-tongue (*Picris echoides*, FAC).

Several wetland pits were excavated within, and near, the drainage. One pit (designated as T-1, Pit 1; see Attachment D, Photograph 27) indicates that hydrophytic vegetation, wetland hydrology (indicated by the presence of a high water table and saturation), and hydric soils (10YR4/6 redox) are present. Therefore, according to the USACE three parameter assessment, wetlands are associated with this drainage. Two other pits (designated as T-1, Pit 3 and T-1, Pit 4; see Attachment D, Photograph 29 and 30) confirm this assessment.

USACE Jurisdiction

The onsite portion of Drainage T-1 includes 0.08 acre (566 linear feet) of non-wetland waters of the United States and 1.22 acre (5,733 linear feet) of wetland waters of the United States.

RWQCB Jurisdiction

RWQCB jurisdiction totals 0.08 acre (566 linear feet) of non-wetland waters of the State and 1.22 acre (5,733 linear feet) of wetland waters of the United States.

CDFG Jurisdiction

Drainage T-1 includes a discernible bed and bank, and is therefore considered jurisdictional according to the CDFG. Total CDFG jurisdiction equals 3.31 acre.

4.2.13 - Drainage T-1.a

Drainage T-1.a is a non-RPW that originates near the existing farmhouse on the Tonini property and flows eastward for approximately 0.16 mile before joining Drainage T-1 (RPW). Flows originate from precipitation, nuisance flow from buildings at the Tonini farmhouse, and agricultural runoff. The drainage is incised with vertical banks one to four feet high. The drainage joins Drainage T-1 at a location approximately 5.5 river miles (3.2 vertical miles) from Morro Bay (TNW). Within the relevant reach of the project, Drainage T-1.a is a first order stream. The channel has an average OHWM of approximately 1.5 feet, while the bank to bank channel is approximately 3 feet in width on average.

A wetland pit excavated within the drainage (designated as T-1.a, Pit 1; see Attachment D, Photograph 32) indicates that hydrophytic vegetation, wetland hydrology, and hydric soils (the dominant soil being a 10YR2/2 loam with no redox) are not present. Therefore, according to the USACE three parameter assessment, no wetlands are associated with the drainage.

This drainage includes Disturbed Habitat, which typically occurs within portions that are currently fallow or used as dirt access roads. Many of these areas exist at the margins of existing developed areas and areas historically and/or routinely disturbed as a result of agricultural activities. Common plant species observed within the Disturbed Habitat include non-native annual grasses such as ripgut brome (*Bromus diandrus*, UPL), soft chess (*Bromus hordeaceous*, UPL), and wild oats (*Avena fatua*, UPL), and annual forbs such as filaree (*Erodium cicutarium*, UPL), pineapple weed (*Chamomilla suaveolens*, FACU), wild radish (*Raphanus sativus*, UPL), field mustard (*Brassica rapa*, UPL), bristly ox-tongue (*Picris echoides*, FAC), poison hemlock (*Conium maculatum*, FACW), and fennel (*Foeniculum vulgare*, FACU).

Because the drainage is a non-RPW, a significant nexus evaluation is included below to determine whether this feature should be considered jurisdictional by the USACE.

Significant Nexus Evaluation

Hydrological Factors

Los Osos/Baywood Park is located within the Central California Coastal Watershed (identified as United States Geological Survey (USGS) Region 18, Accounting Unit 180600, which has an area of approximately 11,400 square miles). Drainage T-1.a is tributary, via Drainage T-1, to Warden Creek (RPW), which is tributary to Morro Bay (TNW). The drainage conveys stormwater that originates as precipitation and agricultural runoff.

The tributary area to the drainage is approximately 42 acres. The hilly land is used for agriculture or as open space and is largely permeable. An isopluvial map of the region shows that most of the project site is subject to an annual rainfall of approximately 19.0 inches. The Rational Method (Q = CIA, where Q is peak flow, C is coefficient of runoff, I is rainfall intensity, and A is area) is used to calculate approximate peak flow for the 50-year, 6-hour storm event (see Attachment H). The peak flow is approximately 16.60 cubic feet per second (cfs). The relative magnitude of this flow, combined with the presence of an OHWM that is discernible throughout a portion of the drainage, and the proximity of the drainage to an RPW (Warden Creek is less than 1.1 river miles from the confluence of Drainage T-1.a and Drainage T-1), makes it reasonable to assume that flows from the study area will be conveyed 4.8 river miles downstream via Warden Creek to Morro Bay (TNW).

Ecological Factors

Drainage T-1.a serves as an ephemeral conduit through which minerals and organic nutrients from agricultural fields and from farmhouses and barns within the Tonini properties are flushed downstream toward Morro Bay (TNW) via Drainage T-1 and Warden Creek (RPW). The drainage

may also convey pollutants from surrounding land uses within the relevant reach (the land use is predominantly agricultural). These potential pollutants may include pathogens, nitrogen/nitrates/ammonia, total dissolved solids, pesticides, and fertilizers. Warden Creek, into which the tributary discharges via Drainage T-1, is a CWA Section 303(d) listed 'limited water quality segment' that is impaired for fecal coliform and low dissolved oxygen. The contribution of any such pollutants by Drainage T-1.a would have a relatively rapid impact on Warden Creek. The fact that the creek is already impaired by these substances would reduce its capability to attenuate such pollutants before their discharge into Morro Bay, and increase the likelihood and degree of their impact on the quality of bay waters. The discharge of such pollutants into the bay would ultimately influence the ecology of that water body.

A summary of the hydrological and ecological characteristics that may result in discharge from the drainage having a more than speculative or insubstantial effect on the nearest downstream TNW (Morro Bay) are highlighted in Table 9.

Significant Nexus Determination

The factors for determining significant nexus for Drainage T-1.a are provided in the table below.

Table 9: Significant Nexus Determination - Drainage T-1.a

Factors	More than Speculative or Insubstantial Effect
Hydrological Factors	
Volume, duration, and frequency of flow. This includes consideration of certain tributary characteristics, historic records of flow, flood predictions, gauge data, and personal observations (OHWM, shelving, water staining, sediment sorting, and scouring).	Yes
Proximity to the TNW. If a tributary is far from a TNW, the impact on the TNW is more likely to be speculative.	Yes
Contextual hydrological factors. These include (1) size of the watershed, (2) average annual rainfall, and (3) average annual snow pack.	Yes
Presence of tributary or wetland within the flood plain. Note that a significant nexus determination cannot be based solely on the presence of a water body within or outside the flood plain.	Yes
Ecological Factors	
Ability of the tributary and its adjacent wetlands (if any) to carry pollutants and flood waters to a TNW.	Yes

Table 9 (Cont.): Significant Nexus Determination - Drainage T-1.a

Factors	More than Speculative or Insubstantial Effect
Ability of the tributary and its adjacent wetlands (if any) to provide aquatic habitat that supports biota of a TNW.	Yes
Ability of adjacent wetlands to trap and filter pollutants or store flood water.	Yes
Ability to maintain water quality.	No
Source: Michael Brandman Associates, 2008.	

Based on the factors discussed above, it is reasonable to assume the flows within Drainage T-1.a may be capable of at least partially flushing sediment, organic compounds, and / or nutrients downstream to Morro Bay (TNW). Though diluted and reduced in quantity from the project site where they originate, such substances could have a more than insubstantial or speculative effect on the chemical, physical, and biological integrity of a TNW. Therefore, a significant nexus can be established between Drainage T-1.a and the nearest TNW, and therefore Drainage T-1.a should be considered jurisdictional by the USACE.

The USACE and EPA, however, will make a final significant nexus determination.

USACE Jurisdiction

The onsite portion of Drainage T-1.a includes 0.003 acre (80 linear feet) of non-wetland and no wetland waters of the United States.

RWQCB Jurisdiction

RWQCB jurisdiction totals 0.003 acre (80 linear feet) of waters of the State.

CDFG Jurisdiction

Drainage T-1.a includes a discernible bed and bank, and is therefore considered jurisdictional according to the CDFG. Total CDFG jurisdiction equals 0.05 acre.

4.2.14 - Drainage T-1.b

Drainage T-1.b is a non-RPW that originates in fields northeast of Turri Road and which, after crossing below Turri Road through a 5 foot diameter culvert, flows for approximately 0.22 miles to the southwest before joining Drainage T-1 (RPW). The drainage joins Drainage T-1 at a location approximately 5.3 river miles (3.4 vertical miles) from Morro Bay (TNW). Within the relevant reach of the project, drainage T-1.b is a first order stream. Flows originate from precipitation and agricultural runoff. The channel has an average OHWM of approximately 3 feet, while the bank to bank channel is also approximately 3 feet in width on average. No wetland waters are associated with this drainage. The drainage is indented with hoof marks and is polluted with pathogens from grazing cattle. The drainage has a rocky bottom and is incised 6 feet deep at locations.

This drainage includes Disturbed Habitat, which typically occurs within portions that are currently fallow or used as dirt access roads. Many of these areas exist at the margins of existing developed areas and areas historically and/or routinely disturbed as a result of agricultural activities. Common plant species observed within the Disturbed Habitat include non-native annual grasses such as ripgut brome (*Bromus diandrus*, UPL), soft chess (*Bromus hordeaceous*, UPL), and wild oats (*Avena fatua*, UPL), and annual forbs such as filaree (*Erodium cicutarium*, UPL), pineapple weed (*Chamomilla suaveolens*, FACU), wild radish (*Raphanus sativus*, UPL), field mustard (*Brassica rapa,* UPL), bristly ox-tongue (*Picris echoides*, FAC), poison hemlock (*Conium maculatum*, FACW), and fennel (*Foeniculum vulgare*, FACU).

Because the drainage is a non-RPW, a significant nexus evaluation is included below to determine whether this feature should be considered jurisdictional by the USACE.

Significant Nexus Evaluation

Hydrological Factors

Los Osos/Baywood Park is located within the Central California Coastal Watershed (identified as United States Geological Survey (USGS) Region 18, Accounting Unit 180600, which has an area of approximately 11,400 square miles). Drainage T-1.b.a is tributary, via Drainage T-1, to Warden Creek (RPW), which is tributary to Morro Bay (TNW). The drainage conveys stormwater that originates as precipitation and agricultural runoff.

The tributary area to the drainage is approximately 37 acres. The hilly land is used for agriculture or is open space and is largely permeable. An isopluvial map of the region shows that most of the project site is subject to an annual rainfall of approximately 19.0 inches. The Rational Method ($Q = CIA$, where Q is peak flow, C is coefficient of runoff, I is rainfall intensity, and A is area) is used to calculate approximate peak flow for the 50-year, 6-hour storm event (see Attachment H). The peak flow is approximately 13.80 cubic feet per second (cfs). The relative magnitude of this flow, combined with the presence of an OHWM that is discernible throughout a portion of the drainage, and the proximity of the drainage to an RPW (Warden Creek is less than 0.9 river mile from the confluence of Drainage T-1.b and Drainage T-1), makes it reasonable to assume that flow from the study area will be conveyed 5.1 river miles downstream via Warden Creek to Morro Bay (TNW).

Ecological Factors

Drainage T-1.b serves as an ephemeral conduit through which minerals and organic nutrients from agricultural fields and from farmhouses and barns within the Tonini properties are flushed downstream toward Morro Bay (TNW) via Drainage T-1 and Warden Creek (RPW). The drainage may also convey pollutants/nutrients from surrounding land uses within the relevant reach (the land use is predominantly agricultural, but includes the use of tractors and vehicles that park at the farmhouse). These potential pollutants may include pathogens, nitrogen/nitrates/ammonia, total dissolved solids, pesticides, and fertilizers. Warden Creek, into which the tributary discharges via Drainage T-1, is a CWA Section 303(d) listed 'limited water quality segment' that is impaired for

fecal coliform and low dissolved oxygen. The contribution of any such pollutants by Drainage T-1.b would have an immediate impact on Warden Creek. The fact that the creek is already impaired by these substances would reduce its capability to attenuate such pollutants before their discharge into Morro Bay, and increase the likelihood and degree of their impact on the quality of bay waters. The discharge of such pollutants into the bay would ultimately influence the ecology of that water body.

A summary of the hydrological and ecological characteristics that may result in discharge from the drainage having a more than speculative or insubstantial effect on the nearest downstream TNW (Morro Bay) are highlighted in Table 10.

Table 10: Significant Nexus Determination - Drainage T-1.b

Factors	More than Speculative or Insubstantial Effect
Hydrological Factors	
Volume, duration, and frequency of flow. This includes consideration of certain tributary characteristics, historic records of flow, flood predictions, gauge data, and personal observations (OHWM, shelving, water staining, sediment sorting, and scouring).	Yes
Proximity to the TNW. If a tributary is far from a TNW, the impact on the TNW is more likely to be speculative.	No
Contextual hydrological factors. These include (1) size of the watershed, (2) average annual rainfall, and (3) average annual snow pack.	Yes
Presence of tributary or wetland within the flood plain. A significant nexus determination cannot be based solely on the presence of a water body within or outside the flood plain.	Yes
Ecological Factors	
Ability of the tributary and its adjacent wetlands (if any) to carry pollutants and flood waters to a TNW.	Yes
Ability of the tributary and its adjacent wetlands (if any) to provide aquatic habitat that supports biota of a TNW.	Yes
Ability of adjacent wetlands to trap and filter pollutants or store flood water.	Yes
Ability to maintain water quality.	No
Source: Michael Brandman Associates, 2008.	

Based on the factors discussed above, it is reasonable to assume the flows within Drainage T-1.b may be capable of at least partially flushing sediment, organic compounds, and / or nutrients downstream to Morro Bay (TNW). Though diluted and reduced in quantity from the project site where they originate, such substances could have a more than insubstantial or speculative effect on the chemical, physical, and biological integrity of a TNW. Therefore, a significant nexus can be established

between Drainage T-1.b and the nearest TNW, and therefore Drainage T-1.a should be considered jurisdictional by the USACE.

The USACE and EPA, however, will make a final significant nexus determination.

USACE Jurisdiction

The onsite portion of Drainage T-1.b includes 0.06 acre (1,198 linear feet) of non-wetland and no-wetland waters of the United States.

RWQCB Jurisdiction

RWQCB jurisdiction totals 0.06 acre (1,198 linear feet) of waters of the State.

CDFG Jurisdiction

Drainage T-1.b includes a discernible bed and bank, and is therefore considered jurisdictional according to the CDFG. Total CDFG jurisdiction equals 0.48 acre.

4.2.15 - Drainage T-2

Drainage T-2 is a tributary drainage to Drainage T-1 within the Tonini property that includes one wetland (located at the upstream crossing with Turri Road). The drainage is an RPW that flows south of the Tonini property to join Warden Creek (RPW) as a tributary at a location approximately 4.9 river miles (3.5 linear miles) from Morro Bay (TNW). Within the relevant reach of the project, Drainage T-2 is a second order stream. The drainage flows through a gully approximately 25 feet deep in locations. The base is primarily lined with rocks and gravel. The channel has an average OHWM of approximately 12.5 feet,

The dominant plant species observed within the majority of the Vernal Marsh habitat that occurs on-site is the perennial rhizomatous herb, spikerush (*Eleocharis macrostachya*, OBL). Other plant species observed within this habitat onsite include species typical of wetland habitats such as perennial ryegrass (*Lolium multiflorum*, FAC), curly dock (*Rumex crispus*, FACW), yellow sweet clover (*Melilotus officinalis*, FAC), and blue-eyed grass (*Sisyrinchium bellum*, FAC), and species typical of upland habitats such as ripgut brome (*Bromus diandrus*, UPL), soft chess (*Bromus hordeaceous*, UPL), wild oats (*Avena fatua*, UPL), and bristly ox-tongue (*Picris echoides*, FAC).

This drainage also includes Disturbed Habitat, which typically occurs within portions that are currently fallow or used as dirt access roads. Many of these areas exist at the margins of existing developed areas and areas historically and/or routinely disturbed as a result of agricultural activities. Common plant species observed within the Disturbed Habitat include non-native annual grasses such as ripgut brome (*Bromus diandrus*, UPL), soft chess (*Bromus hordeaceous*, UPL), and wild oats (*Avena fatua*, UPL), and annual forbs such as filaree (*Erodium cicutarium*, UPL), pineapple weed (*Chamomilla suaveolens*, FACU), wild radish (*Raphanus sativus*, UPL), field mustard (*Brassica*

rapa, UPL), bristly ox-tongue (*Picris echoides*, FAC), poison hemlock (*Conium maculatum*, FACW), and fennel (*Foeniculum vulgare*, FACU).

The drainage also includes Central Coast Arroyo Willow Riparian Forest habitat at isolated stands located near the Turri Road culvert. The dominant species observed onsite includes arroyo willow (*Salix lasiolepis*, FACW) within the tree stratum, mulefat (*Baccharis salicifolia*, FACW) and coyote bush (FAC) within the shrub stratum, and poison hemlock (FACW), curly dock (FACW), and fennel (FACU) within the herbaceous stratum.

A wetland pit excavated within this drainage (designated as T-2, Pit 1; see Attachment D, Photograph 33) indicates that hydrophytic vegetation, wetland hydrology (indicated by the presence of a high water table, saturation, drift deposits, and drainage patters), and hydric soils (10YR4/6 loam redox) are present at the northernmost extent of the drainage within the property site (adjacent to Turri Road). Therefore, according to the USACE three parameter assessment, wetlands are associated with this drainage.

USACE Jurisdiction

The onsite portion of Drainage T-2 includes 0.10 acre (1,480 linear feet) of non-wetland waters of the United States and 0.08 acre (212 linear feet) of wetland waters of the United States.

RWQCB Jurisdiction

RWQCB jurisdiction totals 0.10 acre (1,480 linear feet) of non-wetland waters of the State and 0.08 acre (212 linear feet) of wetland waters of the State.

CDFG Jurisdiction

Drainage W-2 includes a discernible bed and bank, and is therefore considered jurisdictional according to the CDFG. Total CDFG jurisdiction equals 1.12 acre.

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Attachment A: Regulatory Compliance

REGULATORY COMPLIANCE

Regulatory permitting for dredge and fill activities involves a compliance framework requiring interaction with federal, state and local agencies, often involving a diverse number of statutes and regulations.

Federal Statutes and Regulations - USACE

Clean Water Act Section 404

Pursuant to Section 404 of the Clean Water Act, the USACE regulates the discharge of dredged or fill material into waters of the U.S. Regulated activities include but are not limited to, grading, placing of riprap for erosion control, pouring concrete, laying sod, and stockpiling excavated material. In general, any activity, which proposes to carry out an activity, which will temporarily or permanently affect areas delineated as waters of the US, including wetlands, typically requires prior authorization from the USACE, pursuant to Section 404 of the Clean Water Act (CWA). Successful applications will put forth projects with a valid purpose, which generally comply with the avoidance, minimization and mitigation ("no net loss") goals of the USACE.

Nationwide Permits v. Individual Permits

Nationwide permits (NWPs) are a type of general permit issued by the Chief of Engineers and are designed to expedite the regulatory process for those types of projects/activities expected to have minimal impacts on jurisdictional areas.

The nationwide permitting program is reauthorized every five years. The current NWP program became effective on March 19, 2007 and includes 49 different nationwide permit categories including "*Linear Transportation Projects*" (NWP 14), "*Residential Developments*" (NWP 29), "*Commercial and Institutional Developments*" (NWP 39) and "*Stormwater Management Facilities*" (NWP 43) among others. Each NWP establishes thresholds, which trigger the need for submitting a pre-construction notification (PCN) to the Corps and which set upper limits to accepted impacts based on the total acreage and/or linear feet of impacts, which result from project. Exceeding these limits will require processing an Individual Permit (IP), which may involve a significantly longer processing time.

Federal Jurisdiction over Waters and Wetlands

The USACE will assert jurisdiction over waters that are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. The definition of "Waters of the U.S.," are set forth in the Code of Federal Regulations (CFR) 328.3. The term "waters of the United States" means:

(1) 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;

(2) All interstate waters including interstate wetlands;

(3) All other waters such as intrastate lakes, rivers, streams (including intermittent 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 including any such waters:

(i) Which are or could be used by interstate or foreign travelers for recreational or other purposes;

(ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; and

(iii) Which are used or could be used for industrial purpose by industries in interstate commerce.

(4) All impoundments of waters otherwise defined as waters of the United States under the definition;

(5) Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;

(6) The territorial seas;

(7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section. (Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States), and

(8) Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.

Subsequent to the U.S. Supreme Court decision in *Rapanos, et al v. United States* (2006) the Environmental Protection Agency (EPA) and the USACE (the agencies) issued a joint memorandum (*Clean Water Act Jurisdiction Following Rapanos v. United States*, (June 5, 2007)), which integrates the *Rapanos* standards with the process presented in 33 CFR 328.3(a).

Pursuant to the memorandum, federal jurisdiction will be asserted over the following categories of water bodies:

- (TNWs): TNW, including territorial seas;
- Wetlands adjacent to TNWs;
- (RPWS): Non- navigable tributaries of TNWs with relatively permanent water flow that are flow directly or indirectly to TNWs. "Relatively permanent" means water flowing for at least three months of the year. (Usually, perennial streams and some intermittent streams); and
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs.

In addition, the agencies will assert jurisdiction over the following categories of water bodies only if, based on fact-specific analysis, the water body is determined to have a significant nexus with a TNW:

- (Non-RPWs): Non-navigable tributaries that do not have relatively permanent water flow that flow directly or indirectly into TNWs (Usually ephemeral and some intermittent streams);
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs; and
- Wetlands adjacent to, but not directly abutting RPWs that flow directly or indirectly into TNWs.

"A significant nexus exists if the tributary, in combination with all of its adjacent wetlands has more than a speculative or an insubstantial effect on the chemical, physical, and/or biological integrity of a TNW."

The agencies will not assert jurisdiction over the following geomorphic features:

- "Swales or erosional features (e.g., gullies small washes characterized by low volume, infrequent or short duration flows)," and
- "Ditches (including roadsides ditches) excavated wholly in and draining only uplands that do not carry relatively permanent water flows."

The agencies now require that all determinations for non-navigable waters, isolated-waters and/or wetlands be evaluated by the USACE and EPA before making a final jurisdictional determination.

In the absence of wetlands the lateral extent of federal jurisdiction over non-tidal waters of the U.S. is defined by the ordinary high water mark (OHWM). The OHWM is defined in 33 CFR 328.3, as "*that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.*"

In June 2001, the USACE South *Pacific* Division issued *Guidelines for Jurisdictional Delineations for Waters of the United States in the Arid Southwest*. The purpose of this document was to aid delineators in assessing the physical characteristics of dry land drainage systems in the Arid West. With respect to jurisdictional determinations, the factors for determining waters of the U.S include *evaluating* the flow regime geomorphic feature, and general indicators of flow. These methods are consistent with the criteria set forth in 328.3(a) and 328.3(e), but are also subject to guidance set forth in the *Rapanos* guidance, including "significant nexus determinations," as appropriate.

Subject to *Rapanos* limitations, Federal Jurisdiction will extend to "adjacent" wetlands. "Adjacent" means "bordering *contiguous* or neighboring." According to the USACE Wetlands Delineation Manual, Technical Report, (1987) three criteria must be satisfied to classify an area as a jurisdictional wetland:

1. A predominance of plant life that is adapted to life in wet conditions (hydrophytic vegetation);
2. Soils that saturate, flood, or pond long enough during the growing season to develop anaerobic conditions in the upper part (hydric soils); and
3. Permanent or periodic inundation or soils saturation, at least seasonally (wetland hydrology).

The USACE has established regional guidance to address specific regional variations in wetlands determinations. These regional guidance documents supplement the 1987 manual. The Interim Regional *Supplement* for the Arid West was published in December 2006. Similarly Draft guidance for Western Mountains, Valleys and Coast Regions" was published in April, 2007. In performing its delineations, MBA applies these supplemental guidance as appropriate.

Resulting from the 2001 US Supreme Court in *Solid Waste Agency of North Cook County v. USACE* (SWANCC) case, federal jurisdiction will not reach wholly intra-state wetlands, which are not "adjacent" to a *jurisdictional* stream course. Similarly, as previously established, the *Rapanos* decision may further limit jurisdiction, on a case-specific basis, where a significant nexus determination is required.

Primary General Conditions (GC) of 404 Permits

GC # 4: Compliance with the Migratory Bird Treaty Act

The MBTA protects all common wild birds found in the US except the house sparrow, starling, feral pigeon, and resident game birds such as pheasant, grouse, quail, and wild turkey. Resident game birds are managed separately by each state. The MBTA makes it unlawful for anyone to kill, capture, collect, possess, buy, sell, trade, ship, import, or export any migratory bird including feathers, parts, nests, or eggs.

The primary responsibility for complying with the Migratory Bird Treaty Act (MBTA) is that of the project proponent (permittee) and is independent of Department of the Army permitting processes (404). It should be noted, however, that the nationwide permitting program (General Condition 4) does require that breeding areas for migratory birds in waters of the United States must be avoided to the maximum extent practicable.

GC # 17: Compliance with Federal Endangered Species Act

In administering the Section 404 permitting program, the USACE is required to abide by Section 7(a) (2) of the Federal Endangered Species Act (ESA), which requires federal agencies to consult with the United States Fish and Wildlife Service (USFWS) "to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat." As a result, the presence of federally listed species must be determined prior to submittal of the Section 404 application. In the nationwide permitting program compliance with the ESA is set forth in general condition (GC 17)

The USFWS administers the Federal Endangered Species Act. The ESA provides a process for listing species as either threatened or endangered, and methods of protecting listed species. The ESA defines as "endangered" any plant or animal species that is in danger of extinction throughout all or a significant portion of its known geographic range. A "threatened" species is a species that is likely to become endangered. A "proposed" species is one that has been officially proposed by the USFWS for addition to the federal threatened and endangered species list.

Section 9 of the ESA prohibits "take" of threatened or endangered species. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. Take can include disturbance to habitats used by a threatened or endangered species during any portion of its life history. The presence of any federally threatened or endangered species in a project area generally imposes severe constraints on development, particularly if development would result in take of the species or its habitat. Under the regulations of the ESA, the USFWS may authorize take when it is incidental to, but not the purpose of, an otherwise lawful act.

GC # 18: Compliance with National Historic Preservation Act

In processing a Section 404 permit, the USACE is required to comply with section 106 of the National Historic Preservation Act (NHPA). Section 106 consultation is triggered when historic or archaeological sites are potentially affected by the proposed project. In the nationwide permitting program compliance with the NHPA is set forth in general condition (GC 18). The USACE will initiate section 106 consultation with the appropriate state agency (SHPO in California) with federal oversite (ACHP). The process usually requires one month from the date the USACE triggers consultation with the state agency.

GC # 21: Compliance with Section 401 of the Clean Water Act

In connection with notification to the USACE under Section 404 of the Clean Water Act (CWA), pursuant to 33 CFR Part 330, a written request for Section 401 water quality certification must be submitted to the RWQCB to ensure that no degradation of water quality will result from the proposed project. Subject to CWA section 401(a)(1), the Army Corps of Engineers cannot issue a section 404 dredge/fill permit until such time as a CWA section 401 Water Quality Certification (WQC) has been approved by the applicable RWQCB. In the nationwide permitting program compliance with the Section 401 is set forth in general condition (GC 21).

In order to meet the requirements of the RWQCB for issuance of a 401-water quality certification, the project proponent must provide assurances that the project will not adversely affect the water quality of receiving water bodies. A written request for 401 water quality certification must be prepared and submitted to the RWQCB for review. The request will include a detailed project description, a description of *proposed* impacts, identification and discussion of beneficial uses of affected receiving waters (as described within the appropriate Basin Plan), a water quality plan identifying project-specific Best Management practices (BMPs), discussion of other approvals and certifications being obtained, a conceptual restoration plan, and a completed notification form.

CEQA Compliance: Pursuant to Title 23, Section 3856(f) of the California Code of Regulations (CCR), the *Regional* Water Quality Control Board (RWQCB) may not issue a Clean Water Act (Section 401) Water Quality Certification (WQC) for a project before being provided with (and having had ample time to review) a copy of the final CEQA documentation prepared for the project. Upon formal request for certification, water quality certification should be forthcoming within 90-120 days of completion of the CEQA process.

Fee Structure: Subject to California Code of Regulations (CCR), Title 23, §3833, a section 401 application must be accompanied by an initial deposit of not less than $500.00. If the initial deposit does not cover the agency's application review costs, the RWQCB may require an additional (one-time) amount using the calculus set forth in section 2200(e), Title 23, of the California Code of Regulations.

GC # 22: Compliance with the Coastal Zone Management Act

In administering the Section 404 permitting program, the USACE is required to abide by Section 307(c)(1) of the Coastal Zone Management Act (CZMA). This requirement is set forth in General Condition No. 22 of *the* NWP (2007) program and detailed in 33 CFR 330.4(d). This condition requires the USACE to provide a consistency determination and receive state agreement prior to the authorization of activities affecting land, water, or natural resources within the coastal zone.

The California "Coastal zone" means that land and water area within the State extending seaward to the state's outer limit of jurisdiction, including all offshore islands, and extending inland generally 1,000 yards from the mean high tide line of the sea. In significant coastal estuarine, habitat, and

recreational areas it *extends* inland to the first major ridgeline paralleling the sea or five miles from the mean high tide line of the sea, whichever is less, and in developed urban areas the zone generally extends inland less than 1,000 yards. The coastal zone does not include the area of jurisdiction of the San Francisco Bay Conservation and Development Commission, established pursuant to Title 7.2 (commencing with Section 66600) of the Government Code, nor any area contiguous thereto, *including* any river, stream, tributary, creek, or flood control or drainage channel flowing into such area.

State Statues and Regulations - RWQCB

The State of California has concurrent jurisdiction with the Federal government over §401 Water Quality Certification over jurisdictional waters and wetlands of the United States. Where isolated waters and wetlands (not subject to federal jurisdiction) are involved, the State will exert independent jurisdiction via the Porter Cologne Water Quality Act.

Porter-Cologne Water Quality Act

Section 13260(a) of the California Water Code ("Water Code," or "Porter Cologne") requires that any person discharging waste or proposing to discharge waste within any region, other than to a community sewer system, which could affect the quality of the waters of the State, file a report of waste discharge (ROWD). The discharge of dredged or fill material may constitute a discharge of waste that could affect the quality of waters of the State (Defined in Water Code §13050(e)).

Typically, the State of California relies upon its authority under section 401 of the Federal Clean Water Act (CWA (33 U.S.C. §1341) to regulate discharges of dredged or fill material to California waters that are also within the jurisdiction of the United States Army Corps of Engineers (USACE). Given the water quality certification (WQC) process employed under section 401, waste discharge requirements under Porter Cologne are typically waived for those projects requiring a water quality certification. In 2001 the U.S. Supreme decision in *Sold Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001) (*SWANCC*) invalidated the Army Corp's use of the "Migratory Bird Rule" to establish federal jurisdiction over isolated waters. Since 2001, the State of California has reasserted its authority under state law to assert jurisdiction over isolated waters for water quality purposes by requiring a ROWD.

Regulation of Isolated Waters

Dredging, filling, or excavation of "isolated" waters constitutes a discharge of waste to waters of the State, and prospective dischargers are required to submit a report of waste discharge to the RWQCB and comply with other requirements of the State Porter Cologne Water Quality Act (Water Code).

Scope of Regulation

With respect to isolated waters, discharges and/or dredging of wetlands, active channels or beds of waterbodies are regulated. Discharges to riparian or areas in proximity to a waterbody are regulated

when such activity will directly or indirectly result a change to water quality. Such changes may include discharge of stormwater pollutants and runoff; change in the nature of vegetation that could affect water quality (e.g., affecting pollutant removal, stream shading or bank stability); or change to the hydrological or geomorphic characteristics of the waterbody.

Application of Regulation

Whenever the USACE issues a jurisdictional disclaimer (concurs with a finding of no federal jurisdiction), the respective RWQCB is notified of the disclaimer. Typically, the RWQCB will issue a letter notifying the project proponent that a ROWD must be filed. A ROWD must be submitted in one of two forms, depending on the anticipated impacts.

(1) General Waste Discharge Requirement (GWDR): The GWDR program is substantively set forth in SWRCB Water Quality Order No. 2004-0004-DWQ. GWDRs are generally prescribed for a category of discharges (either temporary or permanent) involving earth, rock, or similar solid materials if the discharge will not be greater than 0.2 acres and 400 linear feet (for fill or excavation) or 50 cubic yards (for dredging). The type of projects that may be covered under these General WDRs include land development, detention basins, disposal of dredged material, bank stabilization, revetment, channelization, and other similar projects. GWDRs do not apply to discharges that adversely impact, either directly or through habitat modification, any plants or animals identified as candidate, sensitive, or special status species in local or regional plans, or by the CDFG (including NCCPs), or USFWS (including HCPs). Similarly, GWDRs do not apply to discharges impacting significant historical, archaeological or paleontological resources.

Requirements

The GWDR typically requires submittal of the following items: (1) A Notice of Intent (NOI), (2) Any CEQA documents that have been prepared for the project, (3) A fee pursuant to Title 23, section 2200 of the CCR, (4) A Mitigation Plan demonstrating that the discharger will sequentially avoid, minimize, and compensate for the adverse impacts to the affected water bodies, and beneficial uses (as set forth in the applicable Basin Plan), and (5) Any other relevant information requested by the SWRCB or RWQCB. A copy of the application must be submitted to both the applicable RWQCB and to the SWANC-ROWD, Water Quality Certification Unit in Sacramento.

Timing

Pursuant to the requirements of the California Permit Streamlining Act, RWQCB has 30 days to deem the application complete. Upon receipt of a complete submittal, the RWQCB has 45 days in which to issue a Notice of Applicability (NOA) (authorizing the activity) or a Notice of Exclusion (NOE) (denying authorization. The discharge activity is operationally authorized if no NOE is issued within the 45-day evaluation period, provided that the proposed activity is not a prohibited activity.

(2) Individual Waste Discharge Requirements (IWDR): Projects not qualifying for the GWDRs will need to satisfy individual waste discharge requirements, typically requiring submittal of 401 Water

Quality Certification forms and supporting documentation as set forth by the respective RWQCB. Such submittals are subject to fees as set forth in California Code of Regulations Title 23 Section 2200(a)(2). Pursuant to the Water Code the project proponent is required to file with the appropriate Regional Water Quality Control Board (RWQCB) a Report of Waste Discharge describing the proposed discharge at least 140 days before it occurs (Water Code §§13260, 13264).

State Statutes and Regulations - CDFG

Section 1600/1602 of the California Fish and Game Code

In the public interest of protection and conservation of fish and wildlife resources of the state (§1600), Fish and Game Code Section 1602 requires any person, state or local governmental agency, or public utility to notify the CDFG before beginning any activity that will do one or more of the following: (1) substantially obstruct or divert the natural flow of a river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake. CDFG's jurisdiction includes ephemeral, intermittent, and perennial watercourses, including dry washes, characterized by:

1 The presence of hydrophytic vegetation.
2. The location of definable bed and banks.
3. The presence of existing fish or wildlife resources.

Furthermore, CDFG jurisdiction is often extended to habitats adjacent to watercourses, such as oak woodlands in canyon bottoms or willow woodlands that function as part of the riparian system. Historic court cases have further extended CDFG jurisdiction to include watercourses that seemingly disappear, but re-emerge elsewhere. Under the CDFG definition, a watercourse need not exhibit evidence of an OHWM to be claimed as jurisdictional. However, CDFG does not regulate isolated wetlands; that is, those that are not associated with a river, stream, or lake.

CDFG Regulated Activities

The CDFG regulates activities that involve diversions, obstruction, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife resources. When a project requires such activities, a Section 1602 Streambed Alteration Notification will be prepared and submitted to the CDFG for review. The request will include a detailed project description, a description of proposed impacts, a conceptual mitigation plan, and completed notification forms. Typically, CDFG will be able to complete the agreement within 60-90 days of the completion of the CEQA process.

CEQA Compliance: It should be noted that CDFG must also comply with the California Environmental Quality Act (CEQA) (Pub. Resources Code, §21000, et seq.) before it may issue a final Lake or Streambed Alteration Agreement. Issuance of a final Lake or Streambed Alteration

Agreement occurs after the Department receives a draft Lake or Streambed Alteration Agreement from the applicant and the Department signs it. In many instances, the Department will receive a signed draft Lake or Streambed Alteration Agreement from an applicant before the lead agency has fully complied with CEQA. In those instances, the Department must wait for the lead agency to fully comply with CEQA before it may sign the draft Lake or Streambed Alteration Agreement, thereby making it final.

Fee Structure: Pursuant to California Code of Regulations (CCR), Title 14 §699.3, CDFG assesses a fee to cover the cost of reviewing §1602 applications. The fee calculus is based on the sum cost of the proposed activities within the streambed or riparian community.

Sensitive Plant and Wildlife Species

Sensitive species are native species that have been accorded special legal or management protection because of concern for their continued existence. There are several categories of protection at both federal and state levels, depending on the magnitude of threat to continued existence and existing knowledge of population levels.

California Endangered Species Act

The CDFG administers the California Endangered Species Act (CESA). The State of California considers an "endangered" species one whose prospects of survival and reproduction are in immediate jeopardy. A "threatened" species is one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management. A "rare" species is one present in such small numbers throughout its portion of its known geographic range that it may become endangered if its present environment worsens. The rare species designation applies to California native plants. State threatened and endangered species are fully protected against take, as defined above. The term "species of special concern" is an informal designation used by CDFG for some declining wildlife species that are not state candidates for listing. This designation does not provide legal protection under CESA, but signifies that these species are recognized as sensitive by CDFG.

California Native Plant Society

The CNPS is a California resource conservation organization that has developed and inventory of California's sensitive plant species (Tibor 2001). This inventory summarizes information on the distribution, rarity, and endangerment of California's vascular plants. The inventory is divided into four lists based on the rarity of the species. In addition, the CNPS provides an inventory of plant communities that are considered sensitive by the state and federal resource agencies, academic institutions, and various conservation groups. Determination of the level of sensitivity is based on the number and size of remaining occurrences as well as recognized threats.

Section 3503 and 3511 of the California Fish and Game Code

The CDFG administers the California Fish and Game Code. Code 3503 makes it illegal to destroy any birds' nest or any birds' eggs that are protected under the MBTA. Code 3503.5 further protects all birds in the orders *Falconiformes* and *Strigiformes* (birds of prey, such as hawks and owls) and their eggs and nests from any form of take. Section 3511 of the Code lists fully protected bird species, where the CDFG is unable to authorize the issuance of permits or licenses to take these species.

California Coastal Commission

The mission of the California Coastal Commission is to protect, conserve, restore, and enhance environmental and human-based resources of the California coast and ocean for environmentally sustainable and prudent use by current and future generations. The Commission, in partnership with coastal cities and counties, plans and regulates the use of land and water in the coastal zone. Development activities, broadly defined by the California Coastal Act of 1976 to include, among others, construction of buildings, divisions of land, and activities that change the intensity of use of land or public access to coastal waters, generally require a coastal permit from either the Coastal Commission or the local government.

The community of Los Osos utilizes the San Luis Obispo County Local Coastal Program (LCP) as a planning tool to guide development in the coastal zone, in partnership with the California Coastal Commission. The LCP contains the ground rules for future development and the protection of coastal resources. The elements of the General Plan include the LCP, which applies to those areas within the Coastal Zone. For the purposes of preparing the LCP, the County is divided into four segments. Los Osos is located within the region covered by the Estero Area Plan.

A section that is particularly relevant to the implementation of this project is Section 30603 of the Act, which stipulates that the Coastal Commission retains appeal authority after certification of the Local Coastal Plan for any development by the county within 100 feet of any stream.

Another section that is particularly relevant to this project is in Chapter 8 (Public Works), that states in Section 30412 (c) that "Any development within the coastal zone…that constitutes a treatment work shall be reviewed by the Commission…"

Attachment B: Jurisdictional Wetlands and Significant Nexus Determination

CRITERIA FOR WETLAND DETERMINATIONS

USACE

As defined in 33 CFR part 328.3(a)(7) and as established by current case law, the USACE will currently assert jurisdiction over wetlands adjacent to waters of the U.S., except for those wetlands adjacent to other wetlands.

The term "wetlands" means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence or vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (33 CFR part 328.3(b)).

Typically, the term "adjacent" means bordering, contiguous, or neighboring. Wetlands separated from other waters of the U.S. by man-made dikes or barriers, natural river berms, beach dunes, and the like are also adjacent (33 CFR part 328.3(c)). Similarly, the wetland must be adjacent to either a navigable in-fact water way or tributary thereof. Where "adjacency" cannot be established, the wetlands will be determined to be an "isolated" non-jurisdictional feature unless an independent nexus to interstate or foreign commerce can be established as per 33 CFR part 328.3(a)(3). (Also see SWANCC v. US, 2001).

Based on the standards established in *Rapanos v. U.S.*, the USACE will not assert jurisdiction over wetlands where: (1) the wetlands are adjacent to non-navigable tributaries that lack relatively permanent flows, or (2) wetlands are adjacent to but not abutting non-navigable tributaries with relatively permanent water, unless in both cases the relevant portion (reach) of the drainage, together with all of its wetlands, have a significant nexus to a TNW.

According to the USACE *Wetlands Delineation Manual, Technical Report* (1987), three criteria must be satisfied to classify an area as a jurisdictional wetland:

1. **Hydrophytic Vegetation:** A predominance of plant life that is adapted to life in wet conditions (hydrophytic vegetation);
2. **Hydric Soils:** Soils that saturate, flood, or pond long enough during the growing season to develop anaerobic conditions in the upper part (hydric soils), and
3. **Wetland Hydrology:** Permanent or periodic inundation or soils saturation, at least seasonally (wetland hydrology).

The USACE has established regional guidance to address specific regional variations in wetlands determinations. These regional guidance documents supplement the 1987 manual The Interim Regional Supplement for the Arid West, that was published in December 2006. Similarly, Draft

guidance for Western Mountains, Valleys and Coast Regions" was published in April 2007. In performing its delineations, MBA applies these supplemental guidance as appropriate.

As established in both the USACE 87 Manual and the "Arid West" regional guidance, the following criteria apply.

Hydrophytic Vegetation

Hydrophytic vegetation is defined as plant life growing in water, soil, or substrate that is at least periodically deficient in oxygen because of excessive water content. The USFWS has published the "National List of Vascular Plant Species That Occur in Wetlands," (1996 National Summary, hereafter NLVPS) and divided plants into 5 groups based on their "wetland indicator status:"

1. Obligate wetland plants (OBL) that occur almost always in wetlands under natural conditions;
2. Facultative wetland plants (FACW) that usually occur in wetlands but occasionally are found in upland areas;
3. Facultative plants (FAC) that are equally likely to occur in wetlands as well as upland;
4. Facultative upland plants (FACU) that usually occur in upland areas but occasionally are found in wetlands; and
5. Upland plants (UPL) that occur almost always in upland areas under natural conditions.

Plus (+) and minus (-) values, used in identifying indicator status in the NLVPS are not applied when evaluating plants in the arid west region. In the arid west, an area is deemed to have hydrophytic vegetation when either it: (1) passes the dominance test; (2) has a prevalence index ≤ 3; (3) morphological adaptations are present; or (4) the area is a "problem area." (See, "Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region," December 2006.)

Dominance Test

An area has hydrophytic vegetation when, under normal circumstances, more than 50 percent of the composition of dominant plant species (using the 50/20 rule) from all strata are obligate wetland (OBL), facultative wetland (FACW) and/or facultative species (FAC). If the plant community passes the dominance test, then the vegetation is hydrophytic and no further vegetation analysis is required. If the plant community fails the dominance test, and indicators of hydric soil and/or wetland are absent then hydrophytic vegetation is absent unless the site meets requirements for a problematic wetland situation.

Prevalence Test

In areas failing the dominance test yet having indicators of hydric soil and wetland hydrology, the vegetation must be re-evaluated using the "prevalence index" (PI). The prevalence index takes into account all plant species in the community, not just a few dominants. The index is a weighted-average wetland indicator status of all plant species in the sampling plot, where each indicator status category is a given a numeric code (OBL =1, FACW =2, FAC = 3, FACU = 4, and UPL = 5) and weighting is by abundance (percent cover). The sum of the weighted indicator values are then divided by the sum of the percent cover values for each indicator type. Where the PI value is ≤ 3, the area is considered positive for hydrophytic vegetation. Generally, the index is a more comprehensive analysis of the hydrophytic status of the community than one based on just a few dominant species. The index is particularly useful: (1) in communities only one or two dominants; (2) in highly diverse communities where many species may be present at roughly equal coverage; and (3) when strata differ greatly in total plant cover. The prevalence index is used on sites where indicators of hydric soil and wetland hydrology are present but the vegetation initially fails the dominance test.

Morphological Adaptations

In areas failing both the dominance test and prevalence test, yet having indicators of hydric soil and wetland hydrology, hydrophytic vegetation will still be deemed present when the morphological adaptations are present. In the arid west the most common morphological adaptations are adventitious roots and shallow root systems developed on or near the soil surface on FACU species. If more than 50 percent of the FACU species have morphological adaptations, then these species are classified as FAC species and the dominance test and/or prevalence index are recalculated. The vegetation is hydrophytic if either test is positive.

Hydric Soils

Hydric soils are defined as soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part. "Long enough" generally means 1 week during the growing season and soils that are saturated for this period usually support hydrophytic vegetation. The criteria for establishing the presence of hydric soils vary among different types of soils and between normal circumstances, disturbed areas, and problem areas. Due to their wetness during the growing season, hydric soils usually develop certain morphological properties that can be readily observed in the field. Prolonged anaerobic soil conditions typically lower the soil redox potential, causing a chemical reduction of some soil components, mainly iron oxides and manganese oxides. This reduction is typically reflected by the presence of iron or manganese concretions, gleying or mottling. Other field indicators of hydric soils include the presence of sulfidic material, an aquic or peraquic moisture regime, or a spodic horizon. (All organic soils, with the exception of Folists, are classified as hydric soils.)

Wetland Hydrology

Wetland hydrology is permanent or periodic inundation, or soil saturation for a significant period during the growing season. Numerous factors influence the wetness of an area, including precipitation, stratigraphy, topography, soil permeability, and plant cover. At certain times of the year in most wetlands, and in certain types of wetlands at most times, wetland hydrology is quite evident, since surface water or saturated soils may be observed. Yet, in many instances, especially along the uppermost boundary of wetlands, hydrology is not readily apparent. Despite this limitation, hydrologic indicators can be useful for confirming that a site with hydrophytic vegetation and hydric soils still exhibits wetland hydrology. While hydrologic indicators are sometimes diagnostic of the presence of wetlands, they are generally either operationally impracticable (e.g. in the case of recorded data) or technically inaccurate (e.g., in the case of some field indicators) for delineating wetland boundaries.

The following hydrologic indicators, while not necessarily indicative of hydrologic events during the growing season or in wetlands alone, do provide evidence that inundation or soil saturation has occurred at some time: visual observation of inundation, visual observation of soil saturation, oxidized channels (rhizospheres) associated with living roots and rhizomes, water marks, drift lines, waterborne sediment deposits, water-stained leaves, surface scoured areas, morphological plant adaptations, and hydric soil characteristics.

Problem Areas and Atypical Situations

In the arid west some wetlands may periodically lack indicators of hydrophytic vegetation, hydric soils or wetland hydrology due to normal (natural) seasonal or annual variability. Similarly, indicators in some areas may be affected by atypical situations brought about by recent human activities or unusual natural events. The Arid West Regional Guidance sets forth a number of procedures to identify and analyze problems areas. Examples of problem areas and atypical situations may include:

Problematic Vegetation:

- *Temporal Shifts in Vegetation:* plant communities in playas, venal pools, seepas and springs change in response to seasonal climatic fluctuations. These changes may result from:
  - Seasonal shifts in plant communities between normal wet/dry season
  - *Drought Conditions* lasting more than one growing season.
- *Sparse and Patchy Vegetation:* A seasonal pond must have at least 5 percent plant cover to be considered vegetated. To be considered jurisdictional, unvegetated areas may be considered as other waters of the U.S. if they exhibit Ordinary High Water (OHW) indicators as set forth in 33 CFR 328.3
- *Riparian Areas:* Where there is high variability in wetland vegetation indicator status between the different strata. (Usually the tree strata has wetter indicator status than other strata.)

- *Areas Affected by Grazing:*
- *Managed Plant Communities:* horticulture, tilling/disking.
- *Areas Affected by Fires, Floods and Other Natural Disturbances:*
- *Vigor and Stress Response to Wetland Conditions:* horticulture is either robust or impeded by hydric soils, and/or wetland hydrology.

Problematic Hydric Soils:

- *Moderately to Very Strong Alkaline Soils:* Redox concentrations and depletions are not always evident in soils with pH of 7.9 or higher.
- *Volcanic Ash:* Soils of volcanic origin are high in silica content and low in redoximorphic minerals such as iron, manganese, and sulfur.
- *Vegetated Sand and Gravel Bars within Flood Plains:* Flood plains may lack hydric soil indicators because seasonal flooding deposits new layers of soil material or the deposited material may lack redoximorphic minerals.
- *Recently Developed Wetlands:* may include mitigation sites, wetland management areas, unintentionally produced wetlands (flood irrigation, leaking water pipes, etc).
- *Seasonally Ponded Soils:* depressional wetlands, usually with perched systems above a restrictive soil layer (hardpan or clay) where the saturation depth or saline conditions prohibit hydric soil indicators.
- *Soils with Relict or Induced hydric Soil Indicators:* in some areas redoximorphic features in hydric soils were formed in the recent or distant past when conditions were substantially wetter than at present. Hydric soil indicators may persist in low land areas which were historically flooded (such as in California's Central Valley) even though the area has been drained for agricultural purposes. Alternatively, hydric soils indicators in upland areas may have formed historically from flood irrigation or like agricultural activities which no longer persist.

Problematic Wetland Hydrology:

- *Site Visits During the Dry Season*: Hydrophytic vegetation may be absent or diminished during the dry-season (when evapo-transpiration exceeds precipitation). When possible the site should be visited (or re-visited) during the normal wet season.
- *Periods with Below Normal Rainfall*: Rainfall in the 3-month period prior to the site visit should be compared to historical averages from the National Water and Climate Center (NRCS). Rainfall should be between the high and low 30 percent probability values.
- *Drought Years*: Areas subject to drought conditions particularly lasting several years may affect wetland hydrology indicators. The Palmer Drought Severity Index (PDSI) (known

operationally as the Palmer Drought Index (PDI)) attempts to measure the duration and intensity of the long-term drought-inducing circulation patterns. Long-term drought is cumulative, so the intensity of drought during the current month is dependent on the current weather patterns plus the cumulative patterns of previous months. Since weather patterns can change almost literally overnight from a long-term drought pattern to a long-term wet pattern, the PDSI (PDI) can respond fairly rapidly. PDSI values range between -6 and +6 with negative values indicating dry periods and positive values indicating wet periods:

- (-4 to -6) - Extreme Drought;
- (-3) - Severe Drought;
- (-2) - Moderate Drought; and
- (-1) - Mild Drought.

- *Years with Unusually Low Winter Snowpack*: the hydrology of areas with water-sheds in adjacent mountain regions may be affected by annual variability in the liquid equivalent of the snow pack.
- *Reference Sites*: If indicators of hydric soil and hydrophytic vegetation are present on a site that lacks wetland hydrology indicators, the site may be considered to be a wetland if the landscape setting, topography, soils, and vegetation are substantially the same as those on nearby reference areas.
- *Hydrology Tools*: A collection of methods can be used to determine whether wetland hydrology is present on a potential wetland site that lacks indicators due to disturbances or other reasons (particularly in agricultural areas).
- *Long-term Hydrological Monitoring*: Areas may be monitored over long periods of time.

California Department of Fish & Game

The California Wildlife Protection Act as codified in the Fish & Game code defines "wetlands" as "lands which may be covered periodically or permanently with shallow water and which include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, fens, and vernal pools." (Fish & Game Code §2785(g))

Significant NEXUS Determination

A significant nexus determination is required when the following water bodies are present: (1) Non-navigable tributaries that do not have relatively permanent water flow that flow directly or indirectly into TNWs (usually ephemeral and some intermittent streams); (2) Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs; or (3) Wetlands adjacent to, but not directly abutting RPWs that flow directly or indirectly into TNWs.

The determination begins by first identifying the relative reach of the applicable tributary. With respect to "significant nexus determinations," the "relevant reach" will include all tributary waters of the same order. Typically this will include the tributary and all adjacent wetlands reaching down stream from the project site to the confluence with the next tributary, and upstream to any a similar confluence.

To have a significant nexus a tributary and its adjacent wetlands must have more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. A significant nexus determination requires evaluation of hydrological and ecological factors, which may contribute to the maintenance of water quality, aquatic life, commerce, navigation, recreation, and public health in the TNW.

- Hydrological Factors:
  - Volume, duration, and frequency of flow: including consideration of certain characteristics of the tributary, including historic records of flow, flood predictions, gauge data and personal observations (OHWM, Shelving, water staining, sediment sorting and scouring);
  - Proximity to the TNW: If a tributary is too far from the TNW it's remoteness is more likely to make the impact on the TNW speculative;
  - Contextual hydrological factors: including (1) size of the watershed, (2) average annual rainfall, and (3) average annual snow pack, and
  - The presence of tributary or wetland within the flood plain: It should be noted, however that a significant nexus determination cannot be based solely on presence of the water body within or outside the flood plain.

- Ecological Factors:
  - The ability of the tributary and its adjacent wetlands (if any) to carry pollutants and flood waters to TNW;
  - The Ability of the tributary and its adjacent wetlands (if any) to provide aquatic habitat that supports biota of a TNW;
  - The ability of adjacent wetlands to trap and filter pollutants or store flood water, and
  - The ability to maintain water quality.

Coastal Zone

Jurisdictional assessments in the California coastal zone must also evaluate potential wetland areas using the criteria established in the California Coastal Act and set forth in the California Code of Regulations.

The California "Coastal zone" means that land and water area within the State extending seaward to the state's outer limit of jurisdiction, including all offshore islands, and extending inland generally

1,000 yards from the mean high tide line of the sea. In significant coastal estuarine, habitat, and recreational areas it extends inland to the first major ridgeline paralleling the sea or five miles from the mean high tide line of the sea, whichever is less, and in developed urban areas the zone generally extends inland less than 1,000 yards. The coastal zone does not include the area of jurisdiction of the San Francisco Bay Conservation and Development Commission, established pursuant to Title 7.2 (commencing with Section 66600) of the Government Code, nor any area contiguous thereto, including any river, stream, tributary, creek, or flood control or drainage channel flowing into such area.

The California Coast Act section 30121 defines the term "wetland" as, "*Lands within the coastal zone which be covered periodically or permanently with shallow water and includes saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mud flats, and fens.*"

The Coastal Act is administered in the State by the California Coastal Commission (CCC). Coastal Commission regulations (California Code of Regulations Title 14 (14CCR)) establish a "one parameter definition" that only requires evidence of a single parameter to establish wetland conditions:

> Wetland shall be defined as land where the water table is at near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentration of salts or other substances in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some during each year and their location within, or adjacent to vegetated wetland or deepwater habitats. (14 CCR 13577)

The Commission's one parameter definition is similar to the USFWS wetlands classification system, which states that wetlands must have one or more of the following three attributes: (1) at least periodically the land supports predominantly hydrophytes; (2) the substrate is predominantly un drained 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 of each year.

Attachment C: Glossary of Terms

GLOSSARY OF TERMS

Term	Source	Page	Definition
Abutting	6	69	With respect to jurisdictional determinations, wetlands that are not separated from the tributary by an upland feature, such as a berm or dike, is "abutting."
Adjacent	7	N/A	The term "adjacent" means bordering, contiguous, or neighboring. Wetlands separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes and the like are "adjacent wetlands."
Aerial Miles	6	53	With respect to jurisdictional determinations, "aerial miles" is the straight line (linear) distance between the water bodies in question.
Best Management Practices (BMPs)	4	11196	Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.
Clean Water Act (CWA) of 1972	NA	NA	Also known as the Federal Water Pollution Control Act (FWPCA) 33U.S.C.A §§1251 to 1387 (alternatively cited as §§101 - 607). The primary goal as defined in §1251(a) is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Jurisdiction to regulate "waters of the United States," vested under this Act include: §303 (Water Quality Standards and implementation Plans), §311 (Spill Program and Oil Pollution Act), §401 (State Water Quality Certification), §402 (National Pollutant Discharge Elimination System - NPDES), §404 (Permits for dredge or fill material).
Clean Water Act (CWA) §303	NA	NA	Section 303 Water Quality Standards Program: Under this program, State and authorized Indian Tribes establish water quality standards for navigable waters to "*protect the public health or welfare*" and "*enhance the quality of water,*" "*taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agriculture, industrial, and other purposes, and also taking into consideration their use and value for navigation.*"
Clean Water Act (CWA) §311	NA	NA	Section 311 Spill Program and the Oil Production Act (OPA): Under this program, the CWA addresses pollution from both oil and hazardous substance releases. Together with the Oil Pollution Act, it provides EPA and the U.S. Coast Guard with the authority to establish a program for preventing, preparing for, and responding to, spills that occur in navigable waters of the United States.
Clean Water Act (CWA) §401	NA	NA	Section 401 State Water-Quality Certification: Provides that no Federal permit or license for activities that might result in a discharge to navigable waters may be issued unless a CWA Section 401 water quality certification is obtained from or waived by States or authorized Tribes.

Term	Source	Page	Definition
Clean Water Act (CWA) §402	NA	NA	Section 402 National Pollutant Discharge Elimination Program (NPDES): This program established a permitting system to regulate point source discharges of pollutants (other than dredged or fill material) into waters of the United States.
Clean Water Act (CWA) §404	NA	NA	Section 404 Dredged and Fill Material Permit Program: This program established a permitting system to regulate discharges of dredged or fill material into waters of the United States.
Compensatory Mitigation	4	11196	The restoration, establishment (creation), enhancement, or reservation of aquatic resources for the purpose of compensating for unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.
Currently Serviceable	4	11196	Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.
Discharge	4	11196	The term "discharge'' means any discharge of dredged or fill material and any activity that causes or results in such a discharge.
Enhancement	4	11196	The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.
Ephemeral Stream	4	11196	An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.
Establishment (Creation)	4	11196	The manipulation of the physical, chemical, or biological characteristics preseSan Luis Obispo County - Los Osos Wastewater Project Delineation of Jurisdictional Waters and Wetlandsnt to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.
Facultative Plants (FAC)	1	14	Plants with a similar likelihood (estimated probability of 33 percent to 67 percent) of occurring in both wetlands and non-wetlands.
Facultative Wetland Plants (FACW)	1	14	Plants that occur usually (estimated probability >67 percent to 99 percent) in wetlands, but also occur (estimated probability 1 percent to 33 percent) in non-wetlands.
Facultative Upland Plants (FACU)	1	14	Plants that occur sometimes (estimated probability 1 percent to <33 percent) in wetlands, but occur more often (estimated probability >67 percent to 99 percent) in non-wetlands.

Term	Source	Page	Definition
High tide line	7	N/A	The term "high tide line" means the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.
Historic Property	4	11196	Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization which meet the National Register criteria (36 CFR part 60).
Hydrological Units	8	1-3	As prescribed by the USGS, refers to the four levels of subdivisions, used for the collection and organization of hydrological data. The hierarchy of hydrological units include: (1) Regions (2) Subregions (3) Accounting Units, and (4) Cataloging Units. The identifying codes associated with these units are "hydrological unit codes."
Hydrological Units - "Regions"	8	3	The first level of USGS hydrological classification, which divides the Nation into 21 Major geographic areas. These geographic areas (hydrologic areas based on surface topography) contain either the drainage area of a major river, or the combined drainage areas of a series of rivers. Most of California is located within region "18". Notable exceptions include the Tahoe basin (Great Basin Region 16) and the Colorado River (Lower Colorado Region 15). All smaller hydrological units with the region begin with the region number (18).
Hydrological Units - "Subregions"	8	3	The second level of USGS hydrological classification, divides the 21 regions into 222 subregions (nationally). A subregion includes the area drained by a river system a reach of a river and its tributaries in that reach, a closed basin(s), or a group of streams forming a coastal drainage area. Within Region 18, the state of California includes 10 sub-regions.
Hydrological Units - "Accounting Units"	8	3	The third level of USGS hydrological classification, subdivides many of the subregions in accounting units. These 352 hydrologic accounting units nest within, or are equivalent to, the subregions. The accounting units are used by the Geological Survey for designing and managing the National Water Data Network. Within Region 18, the state of California includes 16 Accounting Units.

Term	Source	Page	Definition
Hydrological Units - "Cataloging Units"	8	3	The fourth level of USGS hydrological classification is the cataloging unit, the smallest element in the hierarchy of hydrologic units. A cataloging unit is a gelographic area representing part of all of a surface drainage basin, a combination of drainage basins, or a distinct hydrological feature. There are 2,150 cataloging units in the United States. Within Region 18, the state of California includes 135 cataloging units.
Independent utility	4	11196	A test to determine what constitutes a single and complete project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.
Intermittent stream	4	11196	An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.
Loss of Waters of the United States	4	11196	Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a water body, or change the use of a water body. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters for determining whether a project may qualify for an Nationwide Permit (NWP); it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. The loss of stream bed includes the linear feet of stream bed that is filled or excavated. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities eligible for exemptions under Section 404(f) of the Clean Water Act are not considered when calculating the loss of waters of the United States.
Non-tidal wetland	4	11196	A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. The definition of a wetland can be found at 33 CFR 328.3(b). Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).
Obligate Wetland Plants (OBL)	1	14	Plants that occur almost always (estimated probability >99 percent) in wetlands under natural conditions, but which may also occur rarely (estimated probability <1 percent) in non-wetlands.

Term	Source	Page	Definition
Obligate Upland Plants (UPL)	1	14	Plants that occur rarely (estimated probability <1 percent) in wetlands, but occur almost always (estimated probability >99 percent) in non-wetlands under natural conditions.
Open Water	4	11196	For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of standing or flowing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of ``open waters'' include rivers, streams, lakes, and ponds.
Ordinary High Water Mark	7	N/A	The term "ordinary high water mark" means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.
Ordinary High Water Mark	4	11196	An ordinary high water mark is a line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas (see 33 CFR 328.3(e)).
Perennial Stream	4	11197	A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.
Practicable	4	11197	Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.
Pre-construction notification	4	11197	A request submitted by the project proponent to the USACE for confirmation that a particular activity is authorized by a NWP. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a NWP, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by a NWP.
Preservation	4	11197	The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Term	Source	Page	Definition
Re-establishment	4	11197	The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area.
Rehabilitation	4	11197	The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.
Relatively Permanent Water (RPW)	5,	5,69	In the context of CWA jurisdiction post-*Rapanos*, a water body is "relatively permanent" if it flows year round or its flow is continuous at least "seasonally," (e.g., typically 3 months). Wetlands adjacent to a "relatively permanent" tributary are also jurisdictional if those wetlands directly abut such a tributary.
Relevant Reach	6	40	With respect to "significant nexus determinations," the "relevant reach" will include all tributary waters of the same order. Typically this will include the tributary and all adjacent wetlands reaching down stream from the project site to the confluence with the next tributary or upstream to a similar confluence.
Restoration	4	11197	The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.
Riffle and pool complex	4	11197	Riffle and pool complexes are special aquatic sites under the CWA Section 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. Pools are characterized by a slower stream velocity, a streaming flow, a smooth surface, and a finer substrate.
Riparian area	4	11197	Riparian areas are lands adjacent to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects water bodies with their adjacent uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 20, in the NWP.)
River Miles	6	53	The flowing distance between the water bodies in question. Typically not a straight line; rather, the measurement is based on how far the water will travel from water body A to water body B. For example, the water in a meandering tributary will flow further than water flowing in a channelized tributary provided the two water bodies are the same distance apart in the landscape.

Term	Source	Page	Definition
Shellfish seeding	4	11197	The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.
Significant Nexus	5	40	In the context of CWA jurisdiction post-*Rapanos*, a water body is considered to have a "significant nexus" with a traditional navigable water if its flow characteristics and functions in combination with the ecological and hydrological functions performed by all wetlands adjacent to such a tributary, affect the chemical, physical, and biological integrity of a downstream traditional navigable water.
Single and complete project	4	11197	The term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete project must have independent utility (see definition). For linear projects, a "single and complete project" is all crossings of a single water of the United States (i.e., a single water body) at a specific location. For linear projects crossing a single water body several times at separate and distant locations, each crossing is considered a single and complete project. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate water bodies, and crossings of such features cannot be considered separately.
Stormwater management	4	11197	Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.
Stormwater management facilities	4	11197	Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.
Stream bed	4	11197	The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the streambed, but outside of the ordinary high water marks, are not considered part of the streambed.
Stream channelization	4	11197	The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a water of the United States.
Stream Order	NA	NA	A method of numbering streams as part of a drainage basin network. The smallest unbranched mapped tributary is called first order, the stream receiving the tributary is called second order, and so on.

Term	Source	Page	Definition
Structure	4	11197	An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.
Tidal waters	7	N/A	The term "tidal waters" means those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by hydrologic, wind, or other effects.
Tidal wetland	7	N/A	A tidal wetland is a wetland (i.e., water of the United States) that is inundated by tidal waters. The definitions of a wetland and tidal waters can be found at 33 CFR 328.3(b) and 33 CFR 328.3(f), respectively. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channel-ward of the high tide line, which is defined at 33 CFR 328.3(d).
Traditional Navigable Waters (TNW)	6	68	A "traditional navigable water" includes all the "navigable waters of the United States," defines in 33 CFR §329, and by numerous decisions of the Federal courts, plus all other waters that are navigable-in-fact. Per 33 CFR §329: Navigable waters of the United States are those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. A determination of navigability, once made, applies laterally over the entire surface of the waterbody, and is not extinguished by later actions or events which impede or destroy navigable capacity. The USACE is currently drafting new regulations defining TNWs.
Tributary	6	69	A "tributary," as defined in the *Rapanos* guidance document, means a natural, man-altered, or man-made water body that carries directly or indirectly into a traditional navigable water. For the purposes of determining significant nexus with a traditional navigable water, a "tributary" is the entire reach of the stream that is of the same order (i.e., from the point of confluence, where two lower order streams meet to form the tributary, downstream to the point such tributary enters a higher order stream).
Upland Plants (UPL)	1	14	Plants that occur rarely (estimated probability <1 percent) in wetlands, but occur almost always (estimated probability >99 percent) in non-wetlands under natural conditions.

Term	Source	Page	Definition
Vegetated shallows	4	11197	Vegetated shallows are special aquatic sites under the CWA Section 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as sea grasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.
Waterbody	4	11197	For purposes of the NWPs, a waterbody is a jurisdictional water of the United States that, during a year with normal patterns of precipitation, has water flowing or standing above ground to the extent that an ordinary high water mark (OHWM) or other indicators of jurisdiction can be determined, as well as any wetland area (see 33 CFR 328.3(b)). If a jurisdictional wetland is adjacent—meaning bordering, contiguous, or neighboring—to a jurisdictional waterbody displaying an OHWM or other indicators of jurisdiction, that waterbody and its adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)). Examples of "waterbodies" include streams, rivers, lakes, ponds, and wetlands.
Waters of The United States	7	N/A	The term "waters of the United States" means: (1) 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; (2) All interstate waters including interstate wetlands; (3) All other waters such as intrastate lakes, rivers, streams (including intermittent 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 including any such waters: (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (iii) Which are used or could be used for industrial purpose by industries in interstate commerce; (4) All impoundments of waters otherwise defined as waters of the United States under the definition; (5) Tributaries of waters identified in paragraphs (a)(1)-(4) of this section; (6) The territorial seas; (7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1)-(6) of this section, (Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA [other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition] are not waters of the United States.) and (8) Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with the EPA.

Term	Source	Page	Definition
Wetlands	1,2,7	N/A	The term "wetlands" means those areas that are inundated or saturated by surface or ground water 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 criteria for determining wetlands is set forth in the USACE Wetlands Delineation Manual (1987) and relevant Regional Supplements (Arid West, December 2006)

Sources:

1. USACE Wetlands Delineation Manual, January 1987
2. USACE Guidelines for Jurisdictional Determinations for Waters of the United States in the Arid Southwest, June 2001
3. USACE Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, December 2006
4. FEDERAL REGISTER: Department of Defense; Department of the Army, Corps of Engineers, Re-issuance of Nationwide Permits; Notice, March 12, 2007
5. EPA/USACE Joint Memorandum: Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos v. United States and Carabell v. United States,* (June 5, 2007)
6. USACE Jurisdictional Delineation Form Instructional Guidebook, May 30, 2007
7. Code of Federal Regulations (CFR): 33 CFR 328.3 Definitions of Waters of the United States and/or 33 CPR 329 Definitions of Navigable Waters of the United States.
8. USGS Hydrologic Unit Maps, U.S. Geological Survey Water-Supply Paper 2294 (1994), by Paul R. Seaber, F. Paul Kapinos, and George L Knapp.

Attachment D: Site Photographs

Photograph 1: Los Osos Creek taken downstream of Los Osos Valley Road overcrossing, facing south. Note sandy alluvial substrate and dense riparian canopy.

Photograph 2: View of Los Osos Creek Pit 1, facing north and downstream toward the Los Osos Valley Road overcrossing.

Source: Michael Brandman Associates, 2008.

Michael Brandman Associates

Appendix D
Site Photographs 1 and 2

Photograph 3: View of Los Osos Creek Pit 2 adjacent to Los Osos Valley Road, facing north.

Photograph 4: View of Drainage W-1 Pit 1 at headwaters, facing north.

Source: Michael Brandman Associates, 2008.

Photograph 5: View of Drainage W-1 Pit 2 taken within thalweg and upstream edge of riparian canopy, facing northeast.

Photograph 6: View of Drainage W-1 Pit 3, and upland reference sample taken outside riparian canopy for W-1, facing northwest.

Source: Michael Brandman Associates, 2008.

Michael Brandman Associates

Appendix D
Site Photographs 5 and 6

Photograph 7: View of Drainage W-1 Pit 4, taken within thalweg of W-1 and beneath riparian canopy, facing south and upstream.

Photograph 8: View of Drainage W-1 Pit 5, and upland reference sample taken at the edge of the riparian canopy for W-1, facing northeast.

Source: Michael Brandman Associates, 2008.

Michael Brandman Associates

Appendix D
Site Photographs 7 and 8

Photograph 9: View of Drainage W-1 Pit 6, taken within adjacent wetland for W-1, facing southeast.

Photograph 10: View of Drainage W-1 Pit 7, upland reference sample taken at edge of wetland, facing southeast.

Source: Michael Brandman Associates, 2008.

Michael Brandman Associates

Appendix D
Site Photographs 9 and 10

Photograph 11: View of Drainage W-2 Pit 1, taken at headwaters, facing northeast and downstream.

Photograph 12: Typical view of Drainage W-3, facing north and downstream. Note sandy alluvial substrate and sparse riparian canopy.

Source: Michael Brandman Associates, 2008.

Photograph 13: View of Drainage W-3 Pit 1, taken immediately downstream of Los Osos Valley Road culvert, facing north and downstream.

Photograph 14: Overview of Drainage W-4 immediately downstream and north of Los Osos Valley Road culvert, looking northwest from adjacent uplands.

Source: Michael Brandman Associates, 2008.

Michael Brandman Associates

Appendix D
Site Photographs 13 and 14

Photograph 15: View of twin culverts within Drainage W-4, facing south across Los Osos Valley Road.

Photograph 16: View of W-5 taken immediately north of Los Osos Valley Road, facing north and downstream.

Source: Michael Brandman Associates, 2008.

Photograph 17: Drainage W-5.a, from culverts, facing west along north side of Los Osos Valley Road

Photograph 18: View of Drainage W-5.a, facing east along north side of Los Osos Valley Road.

Source: Michael Brandman Associates, 2008.

Michael Brandman Associates

Appendix D
Site Photographs 17 and 18

Photograph 19: View of Drainage W-5.a. Facing west along north side of Los Osos Valley Road.

Photograph 20: View of Drainage W-5.a Pit 1, facing southwest toward culvert exiting northern side of Los Osos Valley Road.

Source: Michael Brandman Associates, 2008.

Michael Brandman Associates

Appendix D
Site Photographs 19 and 20

Photograph 21: View of Drainage W-5.a Pit 2, an upland reference sample, facing west.

Photograph 22: Typical view of thalweg for Drainage W-5.b.

Source: Michael Brandman Associates, 2008.

Michael Brandman Associates

Appendix D
Site Photographs 21 and 22

Photograph 23: View of Drainage W-5.b, facing east along north side of Los Osos Valley Road.

Photograph 24: Drainage W-5.b Pit 1, facing west along northern side of Los Osos Valley Road.

Source: Michael Brandman Associates, 2008.

Photograph 25: Typical view of Warden Creek taken from Turri Road overcrossing, facing east and upstream.

Photograph 26: Overview of Warden Creek at Turri Road overcrossing, facing west and downstream. Note standing water and perennial stream flows.

Source: Michael Brandman Associates, 2008.

Michael Brandman Associates

Appendix D
Site Photographs 25 and 26

Photograph 27: Drainage T-1 Pit 1, facing southeast from near to northern property boundary.

Photograph 28: Drainage T-1 Pit 2, facing northeast toward Turri Road.

Source: Michael Brandman Associates, 2008.

Michael Brandman Associates

Appendix D
Site Photographs 27 and 28

Photograph 29: Drainage T-1 Pit 3, facing south.

Photograph 30: View of Drainage T-1 Pit 4, taken within downstream limit of T-1 wetlands, facing south.

Source: Michael Brandman Associates, 2008.

Michael Brandman Associates

Appendix D
Site Photographs 29 and 30

Photograph 31: View of Drainage T-1 Pit 5, sample taken within thalweg of drainage, facing south. Note sandy alluvial substrate and lack of riparian vegetation.

Photograph 32: Drainage T-1.a Pit 1, taken at confluence with T-1, facing northwest.

Source: Michael Brandman Associates, 2008.

Michael Brandman Associates

Appendix D
Site Photographs 31 and 32

Photograph 33: View of Drainage T-2 Pit 1, sample within riparian canopy immediately west and downstream of Turri Road culvert, facing west and downstream.

Source: Michael Brandman Associates, 2008.

Michael Brandman Associates

Appendix D
Site Photograph 33

Attachment E: Jurisdictional Determination Form

Approved JD Form

Drainage T-1.a

Los Osos Wastewater Treatment Plant
Community of Los Osos, San Luis Obispo County, California

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:
Los Angeles District

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: County/parish/borough: Riverside City: Community of Los Osos, San Luis Obispo County, California
Center coordinates of site (lat/long in degree decimal format): Lat. 35 N, Long. 120 ° W.
Universal Transverse Mercator:
Name of nearest waterbody:
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Morro Bay
Name of watershed or Hydrologic Unit Code (HUC): 31023010
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☒ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: 80 linear feet: 1.5 feet width and/or 0.003 acres.
      Wetlands: acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): 120 feet above mean sea level (AMSL).

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: 11,400 **square miles**
   Drainage area: 42 **acres**
   Average annual rainfall: 19 inches
   Average annual snowfall: 0.0 inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **2** tributaries before entering TNW.

   Project waters are **5-10** river miles from TNW.
   Project waters are **1 (or less)** river miles from RPW.
   Project waters are **5-10** aerial (straight) miles from TNW.
   Project waters are **1 (or less)** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Identify flow route to TNW[5]: Drainage flows east to join Drainage T-1, which flows south to join Warden Creek. From confluence with Drainage T-1, water flows west for 5.9 river miles (3.4 linear miles) to enter Morro Bay (TNW), which is a bay of the Pacific Ocean.
Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☒ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: The drainage passes over land that is used for agriculture and has been disced and modified.

Tributary properties with respect to top of bank (estimate):
Average width: XXXX feet
Average depth: 1 to feet
Average side slopes: **3:1**.

Primary tributary substrate composition (check all that apply):

☒ Silts	☒ Sands	☐ Concrete
☐ Cobbles	☒ Gravel	☐ Muck
☐ Bedrock	☒ Vegetation. Type/30% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Meandering**
Tributary gradient (approximate average slope): 4.5 %

(c) Flow:
Tributary provides for: **Ephemeral flow**
Estimate average number of flow events in review area/year: **6-10**
Describe flow regime:
Other information on duration and volume: Rational Method used to calculate flow as 16.60 cfs for 50-year, 6-hour storm event.

Surface flow is: **Confined.** Characteristics: .

Subsurface flow: **Yes.** Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☒ the presence of litter and debris
☒ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☒ the presence of wrack line
☒ vegetation matted down, bent, or absent	☐ sediment sorting
☒ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☒ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:

[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
[6] A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7] Ibid.

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☒ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings:
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings:. .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:
Properties:
Wetland size: acres
Wetland type. Explain: .
Wetland quality. Explain: .
Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:
Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**
Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:
☐ Directly abutting
☐ Not directly abutting
☐ Discrete wetland hydrologic connection. Explain: .
☐ Ecological connection. Explain: .
☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW
Project wetlands are **Pick List** river miles from TNW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Flow is from: **Pick List**.
Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .
Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/30 percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**
Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed:.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:

Hydrological Factors

Los Osos/Baywood Park is located within the Central California Coastal Watershed (identified as United States Geological Survey (USGS) Region 18, Accounting Unit 180600, which has an area of approximately 11,400 square miles). Drainage T-1.a is tributary, via Drainage T-1, to Warden Creek (RPW), which is tributary to Morro Bay (TNW). The drainage conveys stormwater that originates as precipitation and agricultural runoff.

The tributary area to the drainage approximately 42 acres. The hilly land is used for agriculture or as open space and is largely permeable. An isopluvial map of the region shows that most of the project site is subject to an annual rainfall of approximately 19.0 inches. The Rational Method (Q = CIA, where Q is peak flow, C is coefficient of runoff, I is rainfall intensity, and A is area) is used to calculate approximate peak flow for the 50-year, 6-hour storm event (see Appendix H). The peak flow is approximately 16.60 cubic feet per second (cfs). The relative magnitude of this flow, combined with the presence of an OHWM that is discernible throughout a portion of the drainage, and the proximity of the drainage to an RPW (Warden Creek is less than 1.1 river miles from the confluence of Drainage T-1.a and Drainage T-1) makes it reasonable to assume that flows from the study area will be conveyed 4.8 river miles downstream via Warden Creek to Morro Bay (TNW).

Ecological Factors

Drainage T-1.a serves as an ephemeral conduit through which minerals and organic nutrients from agricultural fields and from farmhouses and barns within the Tonini properties are flushed downstream toward Morro Bay (TNW) via Drainage T-1 and Warden Creek (RPW). The drainage may also convey pollutants from surrounding land uses within the relevant reach (the land use is predominantly agricultural). These potential pollutants may include nitrogen/nitrates/ammonia, total dissolved solids, pesticides, and fertilizers. Warden Creek, into which the tributary discharges via Drainage T-1, is a CWA Section 303(d) listed 'limited water quality segment' that is impaired for fecal coliform, low dissolved oxygen, nitrate, nutrients, sedimentation/siltation, and pathogens. The contribution of any such pollutants by Drainage T-1.a would have a relatively rapid impact on Warden Creek. The fact that the creek is already impaired by these substances would reduce its capability

to attenuate such pollutants before their discharge into Morro Bay, and increase the likelihood and degree of their impact on the quality of bay waters. The discharge of such pollutants into the bay would ultimately influence the ecology of that water body.

Significant Nexus Determination

Table 1: Significant Nexus Determination – Drainage T-1.a

Factors	More than speculative or insubstantial effect
Hydrological Factors:	
Volume, duration, and frequency of flow This includes consideration of certain tributary characteristics, historic records of flow, flood predictions, gauge data, and personal observations (OHWM, shelving, water staining, sediment sorting, and scouring)	YES
Proximity to the TNW If a tributary is far from a TNW, the impact on the TNW is more likely to be speculative	YES
Contextual hydrological factors These include (1) size of the watershed, (2) average annual rainfall, and (3) average annual snow pack	YES
Presence of tributary or wetland within the flood plain Note that a significant nexus determination cannot be based solely on the presence of a water body within or outside the flood plain	YES
Ecological Factors:	
Ability of the tributary and its adjacent wetlands (if any) to carry pollutants and flood waters to a TNW	YES
Ability of the tributary and its adjacent wetlands (if any) to provide aquatic habitat that supports biota of a TNW	YES
Ability of adjacent wetlands to trap and filter pollutants or store flood water	YES
Ability to maintain water quality	NO

Based on factors discussed above, it is reasonable to assume the flows within Drainage T-1.a may be capable of at least partially flushing sediment, organic compounds, and / or nutrients downstream to Morro Bay (TNW). Though diluted and reduced in quantity from the project site where they originate, such substances could have a more than insubstantial or speculative effect on the chemical, physical, and biological integrity of a TNW. Therefore, a significant nexus can be established between Drainage T-1.a and the nearest TNW, and therefore Drainage T-1.a will be considered jurisdictional by the USACE.

The USACE and EPA, however, will make a final significant nexus determination.

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☐ Tributary waters: linear feet width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
   - ☒ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   - ☒ Tributary waters: **80** linear feet **1.5 feet** width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
   - ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
   - ☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   - ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.**[9]
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   - ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
   - ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
   - ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]

---

[8] See Footnote # 3.

[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above):
The drainage lacks continuous OHWM and lacks hydrologic connectivity to a downstream water of the United States. The drainage is an ephemeral roadside ditch draining wholly uplands. .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☐ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☐ U.S. Geological Survey Hydrologic Atlas: .
☐ USGS NHD data.
☐ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name Morro Bay South 7.5 minute series quadrangle.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Online data base.
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps:2008 online version.
☐ 100-year Floodplain Elevation is: 39 feet AMSL (National Geodectic Vertical Datum of 1929)
☐ Photographs: ☒ Aerial (Name & Date): Google Earth 2008
or ☒ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☒ Other information (please specify): Calculations of Rational Method included with submittal of jurisdictional delineation.

B. ADDITIONAL COMMENTS TO SUPPORT JD:

Approved JD Form

Drainage T-1.b

Los Osos Wastewater Treatment Plant
Community of Los Osos, San Luis Obispo County, California

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:
Los Angeles District

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: County/parish/borough: Riverside City: Community of Los Osos, San Luis Obispo County, California
Center coordinates of site (lat/long in degree decimal format): Lat. 35 N, Long. 120 ° W.
Universal Transverse Mercator:
Name of nearest waterbody:
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Morro Bay
Name of watershed or Hydrologic Unit Code (HUC): 31023010
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☒ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: 1,198 linear feet: 3 width and/or 0.06 acres.
      Wetlands: acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): 98 feet above mean sea level (AMSL).

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: 11,400 **square miles**
   Drainage area: 37 **acres**
   Average annual rainfall: 19 inches
   Average annual snowfall: 0.0 inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **2** tributaries before entering TNW.

   Project waters are **5-10** river miles from TNW.
   Project waters are **1-2** river miles from RPW.
   Project waters are **2-5** aerial (straight) miles from TNW.
   Project waters are **1-2** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Identify flow route to TNW[5]: Drainage flows southwest to join Drainage T-1, which flows south to join Warden Creek. From confluence with Drainage T-1, water flows west for 5.7 river miles (3.6 linear miles) to enter Morro Bay (TNW), which is a bay of the Pacific Ocean.
Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☒ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: The drainage passes over land that is used for agriculture and has been disced in the past and modified.

Tributary properties with respect to top of bank (estimate):
Average width: XXXX feet
Average depth: 1 to feet
Average side slopes: **3:1**.

Primary tributary substrate composition (check all that apply):

☒ Silts	☒ Sands	☐ Concrete
☐ Cobbles	☒ Gravel	☐ Muck
☐ Bedrock	☒ Vegetation. Type/20% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): 4.5 %

(c) Flow:
Tributary provides for: **Ephemeral flow**
Estimate average number of flow events in review area/year: **6-10**
Describe flow regime:
Other information on duration and volume: Rational Method used to calculate flow as 13.80 cfs for 50-year, 6-hour storm event.

Surface flow is: **Confined**. Characteristics: .

Subsurface flow: **Yes**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☒ the presence of litter and debris
☒ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☒ the presence of wrack line
☒ vegetation matted down, bent, or absent	☐ sediment sorting
☒ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☒ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:

[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
[6] A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7] Ibid.

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☒ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings:
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings:. .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:
Properties:
Wetland size: acres
Wetland type. Explain: .
Wetland quality. Explain: .
Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:
Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**
Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:
☐ Directly abutting
☐ Not directly abutting
☐ Discrete wetland hydrologic connection. Explain: .
☐ Ecological connection. Explain: .
☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW
Project wetlands are **Pick List** river miles from TNW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Flow is from: **Pick List.**
Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .
Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/30 percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**
Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed:.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:

Hydrological Factors

Los Osos/Baywood Park is located within the Central California Coastal Watershed (identified as United States Geological Survey (USGS) Region 18, Accounting Unit 180600, which has an area of approximately 11,400 square miles). Drainage T-1.b.a is tributary, via Drainage T-1, to Warden Creek (RPW), which is tributary to Morro Bay (TNW). The drainage conveys stormwater that originates as precipitation and agricultural runoff.

The tributary area to the drainage is approximately 37 acres. The hilly land is used for agriculture or is open space and is largely permeable. An isopluvial map of the region shows that most of the project site is subject to an annual rainfall of approximately 19.0 inches. The Rational Method (Q = CIA, where Q is peak flow, C is coefficient of runoff, I is rainfall intensity, and A is area) is used to calculate approximate peak flow for the 50-year, 6-hour storm event (see Appendix H). The peak flow is approximately 13.80 cubic feet per second (cfs). The relative magnitude of this flow, combined with the presence of an OHWM that is discernible throughout a portion of the drainage, and the proximity of the drainage to an RPW (Warden Creek is less than 0.9 river mile from the confluence of Drainage T-1.b and Drainage T-1) makes it reasonable to assume that flow from the study area will be conveyed 5.1 river miles downstream via Warden Creek to Morro Bay (TNW).

Ecological Factors

Drainage T-1.b serves as an ephemeral conduit through which minerals and organic nutrients from agricultural fields and from farmhouses and barns within the Tonini properties are flushed downstream toward Morro Bay (TNW) via Drainage T-1 and Warden Creek (RPW). The drainage may also convey pollutants/nutrients from surrounding land uses within the relevant reach (the land use is predominantly agricultural, but includes the use of tractors and vehicles which park at the farmhouse). These potential pollutants may include nitrogen/nitrates/ammonia, total dissolved solids, pesticides, and fertilizers. Warden Creek, into which the tributary discharges via Drainage T-1, is a CWA Section 303(d) listed 'limited water quality segment' that is impaired for fecal coliform, low dissolved oxygen, nitrate, nutrients, and sedimentation/siltation. The contribution of any such pollutants by Drainage T-1.b will have an immediate impact on Warden

Creek. The fact that the creek is already impaired by these substances would reduce its capability to attenuate such pollutants before their discharge into Morro Bay, and increase the likelihood and degree of their impact on the quality of bay waters. The discharge of such pollutants into the bay would ultimately influence the ecology of that water body.

Significant Nexus Determination

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Table 1: Significant Nexus Determination – Drainage T-1.b

Factors	More than speculative or insubstantial effect
Hydrological Factors:	
Volume, duration, and frequency of flow This includes consideration of certain tributary characteristics, historic records of flow, flood predictions, gauge data, and personal observations (OHWM, shelving, water staining, sediment sorting, and scouring)	YES
Proximity to the TNW If a tributary is far from a TNW, the impact on the TNW is more likely to be speculative	NO
Contextual hydrological factors These include (1) size of the watershed, (2) average annual rainfall, and (3) average annual snow pack	YES
Presence of tributary or wetland within the flood plain Note that a significant nexus determination cannot be based solely on the presence of a water body within or outside the flood plain	YES
Ecological Factors:	
Ability of the tributary and its adjacent wetlands (if any) to carry pollutants and flood waters to a TNW	YES
Ability of the tributary and its adjacent wetlands (if any) to provide aquatic habitat that supports biota of a TNW	YES
Ability of adjacent wetlands to trap and filter pollutants or store flood water	YES
Ability to maintain water quality	NO

Based on factors discussed above, it is reasonable to assume the flows within Drainage T-1.b may be capable of at least partially flushing sediment, organic compounds, and / or nutrients downstream to Morro Bay (TNW). Though diluted and reduced in quantity from the project site where they originate, such substances could have a more than insubstantial or speculative effect on the chemical, physical, and biological integrity of a TNW. Therefore, a significant nexus can be established between Drainage T-1.b and the nearest TNW, and therefore Drainage T-1.a will be considered jurisdictional by the USACE.

The USACE and EPA, however, will make a final significant nexus determination.

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☐ Tributary waters: linear feet width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
   - ☒ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   - ☒ Tributary waters: **1,198** linear feet **3 feet** width (ft) 0.10 acre.
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
   - ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
   - ☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   - ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   - ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
   - ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
   - ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]

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[8] See Footnote # 3.

[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above):
The drainage lacks continuous OHWM and lacks hydrologic connectivity to a downstream water of the United States. The drainage is an ephemeral roadside ditch draining wholly uplands. .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☐ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☐ U.S. Geological Survey Hydrologic Atlas: .
☐ USGS NHD data.
☐ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name Morro Bay South 7.5 minute series quadrangle.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Online data base.
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps:2008 online version.
☐ 100-year Floodplain Elevation is: 39 feet AMSL (National Geodectic Vertical Datum of 1929)
☐ Photographs: ☒ Aerial (Name & Date): Google Earth 2008
or ☒ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .

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[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

☐ Applicable/supporting scientific literature:
☒ Other information (please specify): Calculations of Rational Method included with submittal of jurisdictional delineation.

B. ADDITIONAL COMMENTS TO SUPPORT JD:

Approved JD Form

Drainage T-1

Los Osos Wastewater Treatment Plant
Community of Los Osos, San Luis Obispo County, California

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:
Los Angeles District

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: County/parish/borough: Riverside City: Community of Los Osos, San Luis Obispo County, California
Center coordinates of site (lat/long in degree decimal format): Lat. 35 N, Long. 120 ° W.
Universal Transverse Mercator:
Name of nearest waterbody:
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Morro Bay
Name of watershed or Hydrologic Unit Code (HUC): 31023010
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** *"waters of the U.S."* within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: 566 linear feet: 15 feet width and/or 0.08 acres.
      Wetlands: 1.22 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): 80 feet above mean sea level (AMSL).

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: 11,400 **square miles**
   Drainage area: 420 **acres**
   Average annual rainfall: 19 inches
   Average annual snowfall: 0.0 inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **2** tributaries before entering TNW.

   Project waters are **2-5** river miles from TNW.
   Project waters are **1 (or less)** river miles from RPW.
   Project waters are **2-5** aerial (straight) miles from TNW.
   Project waters are **1 (or less)** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

   Identify flow route to TNW[5]: T-1 flows south to join Warden Creek. From confluence with Drainage T-1, water flows west for 4.8 river miles (3.4 linear miles) to enter Morro Bay (TNW), which is a bay of the Pacific Ocean.

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☒ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: The drainage passes over land that is used for agriculture and has been disced and modified.

Tributary properties with respect to top of bank (estimate):
Average width: 15 feet
Average depth: 1 to feet
Average side slopes: **3:1** .

Primary tributary substrate composition (check all that apply):

☒ Silts	☒ Sands	☐ Concrete
☐ Cobbles	☒ Gravel	☐ Muck
☐ Bedrock	☒ Vegetation. Type/30% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Meandering**
Tributary gradient (approximate average slope): 1.5 %

(c) Flow:
Tributary provides for: **Ephemeral flow**
Estimate average number of flow events in review area/year: **6-10**
Describe flow regime:
Other information on duration and volume: Rational Method used to calculate flow as 157 cfs for 50-year, 6-hour storm event.

Surface flow is: **Confined.** Characteristics: .

Subsurface flow: **Yes.** Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☒ the presence of litter and debris
☒ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☒ the presence of wrack line
☒ vegetation matted down, bent, or absent	☐ sediment sorting
☒ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☒ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☒ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings:
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings:. .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: 1.22 acres

Wetland type. Explain:.

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Ephemeral flow**. Explain: .

Surface flow is: **Discrete and confined**

Characteristics: .

Subsurface flow: **Unknown**. Explain findings: .

- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- ☒ Directly abutting
- ☐ Not directly abutting
  - ☐ Discrete wetland hydrologic connection. Explain: .
  - ☐ Ecological connection. Explain: .
  - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **2-5** river miles from TNW.

Project waters are **2-5** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters.**

Estimate approximate location of wetland as within the **50 - 100-year** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☒ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/30 percent cover. Explain: .
- ☒ Habitat for:
  - ☒ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed:.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☒ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☐ Tributary waters: **0.08** linear feet **15** width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**

[8]See Footnote # 3.

☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):
- ☐ Tributary waters: linear feet width (ft).
- ☐ Other non-wetland waters: acres.
  - Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
     - ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
     - ☒ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   Provide acreage estimates for jurisdictional wetlands in the review area: **1.22** acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   - ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.**[9]
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   - ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
   - ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
   - ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
- ☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
- ☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- ☐ which are or could be used for industrial purposes by industries in interstate commerce.
- ☐ Interstate isolated waters. Explain: .
- ☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
- ☐ Tributary waters: linear feet width (ft).
- ☐ Other non-wetland waters: acres.
  - Identify type(s) of waters: .
- ☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
- ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- ☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.

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[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).

☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .

☐ Other: (explain, if not covered above):

The drainage lacks continuous OHWM and lacks hydrologic connectivity to a downstream water of the United States. The drainage is an ephemeral roadside ditch draining wholly uplands. .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).

☐ Lakes/ponds: acres.

☐ Other non-wetland waters: acres. List type of aquatic resource: .

☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).

☐ Lakes/ponds: acres.

☐ Other non-wetland waters: acres. List type of aquatic resource: .

☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .

☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.

☐ Office concurs with data sheets/delineation report.

☐ Office does not concur with data sheets/delineation report.

☐ Data sheets prepared by the Corps: .

☐ Corps navigable waters' study: .

☐ U.S. Geological Survey Hydrologic Atlas: .

☐ USGS NHD data.

☐ USGS 8 and 12 digit HUC maps.

☒ U.S. Geological Survey map(s). Cite scale & quad name Morro Bay South 7.5 minute series quadrangle.

☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Online data base.

☐ National wetlands inventory map(s). Cite name: .

☐ State/Local wetland inventory map(s): .

☐ FEMA/FIRM maps:2008 online version.

☐ 100-year Floodplain Elevation is: 39 feet AMSL (National Geodectic Vertical Datum of 1929)

☐ Photographs: ☒ Aerial (Name & Date): Google Earth 2008
or ☒ Other (Name & Date): .

☐ Previous determination(s). File no. and date of response letter: .

☐ Applicable/supporting case law: .

☐ Applicable/supporting scientific literature: .

☒ Other information (please specify): Calculations of Rational Method included with submittal of jurisdictional delineation.

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

Approved JD Form

Drainage T-2

Los Osos Wastewater Treatment Plant
Community of Los Osos, San Luis Obispo County, California

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:
Los Angeles District

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: California County/parish/borough: Riverside City: Community of Los Osos, San Luis Obispo County, California
Center coordinates of site (lat/long in degree decimal format): Lat. 35 N, Long. 120 ° W.
Universal Transverse Mercator:
Name of nearest waterbody:
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Morro Bay
Name of watershed or Hydrologic Unit Code (HUC): 31023010
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: 1,480 linear feet: 13 feet width and/or 0.10 acres.
      Wetlands: 0.08 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): 80 feet above mean sea level (AMSL).

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: 11,400 **square miles**
   Drainage area: 610 **acres**
   Average annual rainfall: 19 inches
   Average annual snowfall: 0.0 inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **2** tributaries before entering TNW.

   Project waters are **5-10** river miles from TNW.
   Project waters are **1 (or less)** river miles from RPW.
   Project waters are **2-5** aerial (straight) miles from TNW.
   Project waters are **1 (or less)** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Identify flow route to TNW[5]: Drainage flows west to join Drainage T-1, which flows south to join Warden Creek. From confluence with Drainage T-1, water flows west for 5.1 river miles (3.6 linear miles) to enter Morro Bay (TNW), which is a bay of the Pacific Ocean.
Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☒ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: The drainage passes over land that is used for agriculture and has been disced and modified.

Tributary properties with respect to top of bank (estimate):
Average width: 13 feet
Average depth: 1 to 8 feet
Average side slopes: **Vertical (1:1 or less).**

Primary tributary substrate composition (check all that apply):

☒ Silts	☒ Sands	☐ Concrete
☒ Cobbles	☒ Gravel	☐ Muck
☐ Bedrock	☒ Vegetation. Type/30% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Meandering**
Tributary gradient (approximate average slope): 1.5 %

(c) Flow:
Tributary provides for: **Ephemeral flow**
Estimate average number of flow events in review area/year: **6-10**
Describe flow regime:
Other information on duration and volume: Rational Method used to calculate flow as 227 cfs for 50-year, 6-hour storm event.

Surface flow is: **Discrete and confined.** Characteristics: .

Subsurface flow: **Yes.** Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☒ the presence of litter and debris
☒ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☒ the presence of wrack line
☒ vegetation matted down, bent, or absent	☐ sediment sorting
☒ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☒ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:

[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
[6] A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7] Ibid.

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☒ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings:
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings:. .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:
Properties:
Wetland size: acres
Wetland type. Explain: .
Wetland quality. Explain: .
Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:
Flow is: **Ephemeral flow**. Explain: .

Surface flow is: **Discrete and confined**
Characteristics: .

Subsurface flow: **Unknown**. Explain findings: .
☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:
☒ Directly abutting
☐ Not directly abutting
- ☐ Discrete wetland hydrologic connection. Explain: .
- ☐ Ecological connection. Explain: .
- ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW
Project wetlands are **5-10** river miles from TNW.
Project waters are **1-5** aerial (straight) miles from TNW.
Flow is from: **Pick List.**
Estimate approximate location of wetland as within the **50 - 100-year** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .
Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☒ Vegetation type/30 percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **1**
Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed:.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☒ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☐ Tributary waters: **0.10**linear feet **13** width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
   ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   ☐ Tributary waters: linear feet **feet** width (ft).
   ☐ Other non-wetland waters: acres.
   Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
   ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   ☒ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   Provide acreage estimates for jurisdictional wetlands in the review area: **0.08** acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
   ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
   ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .
Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.

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[8]See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  ☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above):
The drainage lacks continuous OHWM and lacks hydrologic connectivity to a downstream water of the United States. The drainage is an ephemeral roadside ditch draining wholly uplands. .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  ☐ Office concurs with data sheets/delineation report.
  ☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☐ U.S. Geological Survey Hydrologic Atlas: .
  ☐ USGS NHD data.
  ☐ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name Morro Bay South 7.5 minute series quadrangle.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Online data base.
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps:2008 online version.
☐ 100-year Floodplain Elevation is: 39 feet AMSL (National Geodectic Vertical Datum of 1929)
☐ Photographs: ☒ Aerial (Name & Date): Google Earth 2008
  or ☒ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☒ Other information (please specify): Calculations of Rational Method included with submittal of jurisdictional delineation.

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

Approved JD Form

Drainage W-1

Los Osos Wastewater Treatment Plant
Community of Los Osos, San Luis Obispo County, California

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:
Los Angeles District

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: County/parish/borough: Riverside City: Community of Los Osos, San Luis Obispo County, CA
Center coordinates of site (lat/long in degree decimal format): Lat. 35 N, Long. 120 ° W.
Universal Transverse Mercator:
Name of nearest waterbody:
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Morro Bay
Name of watershed or Hydrologic Unit Code (HUC): 31023010
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☒ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☒ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: 1,148 linear feet: 2.5 feet width and/or 0.09 acres.
      Wetlands: 0.42 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): 45 feet above mean sea level (AMSL).

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: 11,400 **square miles**
   Drainage area: 15 **acres**
   Average annual rainfall: 19.0 inches
   Average annual snowfall: 0.0 inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **Pick List** tributaries before entering TNW.

   Project waters are **2-5** river miles from TNW.
   Project waters are **1 (or less)** river miles from RPW.
   Project waters are **2-5** aerial (straight) miles from TNW.
   Project waters are **1 (or less)** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

   Identify flow route to TNW[5]: Drainage flows north to join Warden Creek wetland (part of Warden Creek), which flows northwest for 3.3 river miles (2.5 linear miles) to enter Morro Bay (TNW), which is a bay of the Pacific Ocean.

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[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☒ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: The drainage passes over land that has been used for agriculture and has been disced and modified.

Tributary properties with respect to top of bank (estimate):
Average width: XXXX feet
Average depth: 2 to 5 feet
Average side slopes: **2:1.**

Primary tributary substrate composition (check all that apply):

☒ Silts	☒ Sands	☐ Concrete
☒ Cobbles	☒ Gravel	☐ Muck
☐ Bedrock	☒ Vegetation. Type/50% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Meandering**
Tributary gradient (approximate average slope): 2.5 %

(c) Flow:
Tributary provides for: **Ephemeral flow**
Estimate average number of flow events in review area/year: **6-10**
Describe flow regime:
Other information on duration and volume: Rational Method used to calculate flow as 5.15 cfs for 50-year, 6-hour storm event.

Surface flow is: **Discrete and confined.** Characteristics: .

Subsurface flow: **Yes.** Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☒ the presence of litter and debris
☒ changes in the character of soil	☒ destruction of terrestrial vegetation
☒ shelving	☒ the presence of wrack line
☒ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☒ sediment deposition	☒ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☒ High Tide Line indicated by:	☒ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☒ Riparian corridor. Characteristics (type, average width): .
- ☒ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings:
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings:. .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: .

Surface flow is: **Overland sheetflow**

Characteristics: .

Subsurface flow: **Unknown**. Explain findings: .

- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- ☒ Directly abutting
- ☐ Not directly abutting
  - ☐ Discrete wetland hydrologic connection. Explain: .
  - ☐ Ecological connection. Explain: .
  - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **2-5** river miles from TNW.

Project waters are **2-5** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters.**

Estimate approximate location of wetland as within the **100 - 500-year** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☒ Riparian buffer. Characteristics (type, average width): .
- ☒ Vegetation type/percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed:.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

Hydrological Factors

Los Osos/Baywood Park is located within the Central California Coastal Watershed (identified as United States Geological Survey (USGS) Region 18, Accounting Unit 180600, which has an area of approximately 11,400 square miles). Drainage W-1 is a tributary to Warden Creek (RPW), which is tributary to Morro Bay (TNW). The drainage conveys stormwater as precipitation and agricultural runoff.

The drainage tributary area is approximately 15-acres. The land is partially disced for agriculture, and contains other fields that are either remnants of past agricultural activities or were fallow at the time of the survey. The land is largely permeable. An isopluvial map of the region shows that most of the project site is subject to an annual rainfall of approximately 19.0 inches. The Rational Method (Q = CIA, where Q is peak flow, C is coefficient of runoff, I is rainfall intensity, and A is area) is used to calculate approximate peak flow for the 50-year, 6-hour storm event (see Appendix XXX). The peak flow is approximately 5.15 cubic feet per second (cfs). This flow, combined with the presence of a discernible OHWM throughout a portion of the study area, and the fact that drainage discharges directly into an RPW(Warden Creek), makes it reasonable to assume that flow from the study area will be conveyed downstream 3.3 river miles via Warden Creek to Morro Bay (TNW).

Ecological Factors

Drainage W-1 serves as an ephemeral conduit through which minerals and organic nutrients from fields and open lands within the Cemetery and Branin properties are flushed downstream toward Morro Bay (TNW) via Warden Creek (RPW). The drainage may also convey pollutants from surrounding land uses within the relevant reach (these land uses include agriculture). These potential pollutants may include nitrogen/nitrates/ammonia, total dissolved solids, pesticides, and fertilizers. Warden Creek (into which this tributary discharges) is a CWA Section 303(d) listed 'water quality limited segment' that is impaired for fecal coliform, low dissolved oxygen, nitrate, nutrients, and sedimentation/siltation. The contribution of any such pollutants by Drainage W-1 will have an immediate impact on Warden Creek. The fact that the creek is already impaired by these substances will reduce its capability to attenuate such pollutants before their discharge into Morro

Bay, and increase the likelihood and degree of their impact on the quality of bay waters. The discharge of such pollutants into the bay will ultimately influence the ecology of that water body.

Table 1: Significant Nexus Determination – Drainage W-1

FACTORS	More than speculative or insubstantial effect
Hydrological Factors:	
Volume, duration, and frequency of flow This includes consideration of certain tributary characteristics, historic records of flow, flood predictions, gauge data, and personal observations (OHWM, shelving, water staining, sediment sorting, and scouring).	YES
Proximity to the TNW If a tributary is far from a TNW, the impact on the TNW is more likely to be speculative	YES
Contextual hydrological factors These include (1) size of the watershed, (2) average annual rainfall, and (3) average annual snow pack	NO
Presence of tributary or wetland within the flood plain Note that a significant nexus determination cannot be based solely on the presence of a water body within or outside the flood plain	YES
Ecological Factors:	
Ability of the tributary and its adjacent wetlands (if any) to carry pollutants and flood waters to a TNW	YES
Ability of the tributary and its adjacent wetlands (if any) to provide aquatic habitat that supports biota of a TNW	YES
Ability of adjacent wetlands to trap and filter pollutants or store flood water	YES
Ability to maintain water quality	NO

Based on factors discussed above, it is reasonable to assume the flows within Drainage W-1 may be capable of at least partially flushing sediment, organic compounds, and / or nutrients downstream to Morro Bay (TNW). Though diluted and reduced in quantity from the project site where they originate, such substances could have a more than insubstantial or speculative effect on the chemical, physical, and biological integrity of a TNW. Therefore, a significant nexus can be established between Drainage W-1 and the nearest TNW, and therefore Drainage W-1 will be considered jurisdictional by the USACE.

The USACE and EPA, however, will make a final significant nexus determination.

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .

☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
☒ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):
☒ Tributary waters: **1,148** linear feet **1.5** width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

☒ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: Wetland is within the Drainage W-1. .

Provide acreage estimates for jurisdictional wetlands in the review area: **0.42** acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
☒ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

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[8]See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
- ☐ Other non-wetland waters: acres.
  - Identify type(s) of waters: .
- ☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- ☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  - ☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- ☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
- ☐ Other: (explain, if not covered above):

The drainage lacks continuous OHWM and lacks hydrologic connectivity to a downstream water of the United States. The drainage is an ephemeral roadside ditch draining wholly uplands. .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☐ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: .
- ☐ Corps navigable waters' study: .
- ☐ U.S. Geological Survey Hydrologic Atlas: .
  - ☐ USGS NHD data.
  - ☐ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name Morro Bay South 7.5 minute series quadrangle.
- ☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Online data base.
- ☐ National wetlands inventory map(s). Cite name: .
- ☐ State/Local wetland inventory map(s): .
- ☐ FEMA/FIRM maps:2008 online version.
- ☐ 100-year Floodplain Elevation is: 39 feet AMSL (National Geodectic Vertical Datum of 1929)
- ☐ Photographs: ☒ Aerial (Name & Date): Google Earth 2008
  - or ☒ Other (Name & Date): .
- ☐ Previous determination(s). File no. and date of response letter: .
- ☐ Applicable/supporting case law: .
- ☐ Applicable/supporting scientific literature: .
- ☒ Other information (please specify): Calculations of Rational Method included with submittal of jurisdictional delineation.

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

Approved JD Form

Drainage W-2

Los Osos Wastewater Treatment Plant
Community of Los Osos, San Luis Obispo County, California

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:
Los Angeles District

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: County/parish/borough: Riverside City: Community of Los Osos, San Luis Obispo County, California
Center coordinates of site (lat/long in degree decimal format): Lat. 35 N, Long. 120 ° W.
Universal Transverse Mercator:
Name of nearest waterbody:
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Morro Bay
Name of watershed or Hydrologic Unit Code (HUC): 31023010
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Are no *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There Are *"waters of the U.S."* within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☒ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☒ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: 612 linear feet: 2 feet width and/or 0.03 acres.
      Wetlands: acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): 45 feet above mean sea level (AMSL).

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: 11,400 **square miles**
   Drainage area: 15 **acres**
   Average annual rainfall: 19.0 inches
   Average annual snowfall: 0.0 inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **Pick List** tributaries before entering TNW.

   Project waters are **2-5** river miles from TNW.
   Project waters are **1 (or less)** river miles from RPW.
   Project waters are **2-5** aerial (straight) miles from TNW.
   Project waters are **1 (or less)** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Identify flow route to TNW[5]: Drainage flows east to join Drainage W-1, which flows north to join Warden Creek wetland (part of Warden Creek), which flows northwest for 3.5 river miles (2.6 linear miles) to enter Morro Bay (TNW), which is a bay of the Pacific Ocean.
Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☒ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: The drainage passes over land that is used for agriculture and has been disced and modified.

Tributary properties with respect to top of bank (estimate):
Average width: XXXX feet
Average depth: 1 to 52feet
Average side slopes: **3:1** .

Primary tributary substrate composition (check all that apply):

☒ Silts	☒ Sands	☐ Concrete
☒ Cobbles	☒ Gravel	☐ Muck
☐ Bedrock	☒ Vegetation. Type/50% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Meandering**
Tributary gradient (approximate average slope): 2.5 %

(c) Flow:
Tributary provides for: **Ephemeral flow**
Estimate average number of flow events in review area/year: **6-10**
Describe flow regime:
Other information on duration and volume: Rational Method used to calculate flow as 4.48 cfs for 50-year, 6-hour storm event.

Surface flow is: **Discrete and confined**. Characteristics: .

Subsurface flow: **Yes**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☒ the presence of litter and debris
☒ changes in the character of soil	☐ destruction of terrestrial vegetation
☒ shelving	☒ the presence of wrack line
☒ vegetation matted down, bent, or absent	☐ sediment sorting
☒ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:

[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
[6] A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7] Ibid.

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☒ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings:
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings:. .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:
Properties:
Wetland size: acres
Wetland type. Explain: .
Wetland quality. Explain: .
Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:
Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**
Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:
☒ Directly abutting
☐ Not directly abutting
- ☐ Discrete wetland hydrologic connection. Explain: .
- ☐ Ecological connection. Explain: .
- ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW
Project wetlands are **Pick List** river miles from TNW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Flow is from: **Pick List.**
Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .
Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☒ Riparian buffer. Characteristics (type, average width): .
- ☒ Vegetation type/percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**
Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed:.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:

Hydrological Factors

Los Osos/Baywood Park is located within the Central California Coastal Watershed (identified as United States Geological Survey (USGS) Region 18, Accounting Unit 180600, which has an area of approximately 11,400 square miles). Drainage W-2 is a tributary to Warden Creek (RPW), which is tributary to Morro Bay (TNW). The drainage conveys stormwater that originates as precipitation and agricultural runoff.

The tributary area to the drainage is approximately 15 acres (approximately equal to the tributary area for Drainage W-1). The land is mostly disced for agriculture and is largely permeable. An isopluvial map of the region shows that most of the project site is subject to an annual rainfall of approximately 19.0 inches. The Rational Method (Q = CIA, where Q is peak flow, C is coefficient of runoff, I is rainfall intensity, and A is area) is used to calculate approximate peak flow for the 50-year, 6-hour storm event (see Appendix H). The peak flow is approximately 4.48 cubic feet per second (cfs). The relative magnitude of this flow, combined with the presence of an OHWM that is discernible throughout a portion of the drainage, and the proximity of the drainage to an RPW (Warden Creek is less than 0.14 river miles from the confluence of Drainage W-2 and W-1) makes it reasonable to assume that flow from the study area will be conveyed 3.5 river miles downstream via Warden Creek to Morro Bay (TNW).

Ecological Factors

Drainage W-1 serves as an ephemeral conduit through which minerals and organic nutrients from agricultural fields within the Branin properties are flushed downstream toward Morro Bay (TNW) via Drainage W-1 and Warden Creek (RPW). The drainage may also convey pollutants from surrounding land uses within the relevant reach (the land use is predominantly agricultural). These potential pollutants may include nitrogen/nitrates/ammonia, total dissolved solids, pesticides, and fertilizers. Warden Creek is a CWA Section 303(d) listed 'limited water quality segment' that is impaired for fecal coliform, low dissolved oxygen, nitrate, nutrients, and sedimentation/siltation. The contribution of any such pollutants by Drainage W-2 would have an immediate impact on Warden Creek. The fact that the creek is already impaired by these substances would reduce its capability to attenuate such pollutants before their discharge into Morro Bay, and increase the

likelihood and degree of their impact on the quality of bay waters. The discharge of such pollutants into the bay would ultimately influence the ecology of that water body.

Table 1: Significant Nexus Determination – Drainage W-2

Factors	More than speculative or insubstantial effect
Hydrological Factors:	
Volume, duration, and frequency of flow This includes consideration of certain tributary characteristics, historic records of flow, flood predictions, gauge data, and personal observations (OHWM, shelving, water staining, sediment sorting, and scouring)	YES
Proximity to the TNW If a tributary is far from a TNW, the impact on the TNW is more likely to be speculative	YES
Contextual hydrological factors These include (1) size of the watershed, (2) average annual rainfall, and (3) average annual snow pack	NO
Presence of tributary or wetland within the flood plain Note that a significant nexus determination cannot be based solely on the presence of a water body within or outside the flood plain	YES
Ecological Factors:	
Ability of the tributary and its adjacent wetlands (if any) to carry pollutants and flood waters to a TNW	YES
Ability of the tributary and its adjacent wetlands (if any) to provide aquatic habitat that supports biota of a TNW	YES
Ability of adjacent wetlands to trap and filter pollutants or store flood water	YES
Ability to maintain water quality	NO

Based on factors discussed above, it is reasonable to assume the flows within Drainage W-2 may be capable of at least partially flushing sediment, organic compounds, and / or nutrients downstream to Morro Bay (TNW). Though diluted and reduced in quantity from the project site where they originate, such substances could have a more than insubstantial or speculative effect on the chemical, physical, and biological integrity of a TNW. Therefore, a significant nexus can be established between Drainage W-2 and the nearest TNW, and therefore Drainage W-2 will be considered jurisdictional by the USACE.

The USACE and EPA, however, will make a final significant nexus determination.

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☐ Tributary waters: linear feet width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
   - ☒ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   - ☒ Tributary waters: **612** linear feet **2 feet** width (ft). XXX to XXX ft
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
     - ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
     - ☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: Wetland is within Drainage W-2.

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   - ☒ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   - ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
   - ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
   - ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
- ☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
- ☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.

---

[8] See Footnote # 3.

[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above):
The drainage lacks continuous OHWM and lacks hydrologic connectivity to a downstream water of the United States. The drainage is an ephemeral roadside ditch draining wholly uplands. .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☐ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☐ U.S. Geological Survey Hydrologic Atlas: .
☐ USGS NHD data.
☐ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name Morro Bay South 7.5 minute series quadrangle.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Online data base.
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps:2008 online version.
☐ 100-year Floodplain Elevation is: 39 feet AMSL (National Geodectic Vertical Datum of 1929)
☐ Photographs: ☒ Aerial (Name & Date): Google Earth 2008
or ☒ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☒ Other information (please specify): Calculations of Rational Method included with submittal of jurisdictional delineation.

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

Approved JD Form

Drainage W-3

Los Osos Wastewater Treatment Plant
Community of Los Osos, San Luis Obispo County, California

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:
Los Angeles District

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: County/parish/borough: Riverside City: Community of Los Osos, San Luis Obispo County, California
Center coordinates of site (lat/long in degree decimal format): Lat. 35 N, Long. 120 ° W.
Universal Transverse Mercator:
Name of nearest waterbody:
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Morro Bay
Name of watershed or Hydrologic Unit Code (HUC): 31023010
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** *"waters of the U.S."* within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: 410 linear feet: 9 feet width and/or 0.09 acres.
      Wetlands: acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): 30 feet above mean sea level (AMSL).

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: 11,400 **square miles**
   Drainage area: 220 **acres**
   Average annual rainfall: 19 inches
   Average annual snowfall: 0.0 inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **2** tributaries before entering TNW.

   Project waters are **2-5** river miles from TNW.
   Project waters are **1 (or less)** river miles from RPW.
   Project waters are **2-5** aerial (straight) miles from TNW.
   Project waters are **1 (or less)** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

   Identify flow route to TNW[5]: Drainage flows northeast to join Warden Creek, which flows northwest for 4.2 river miles (3.4 linear miles) to enter Morro Bay (TNW), which is a bay of the Pacific Ocean (TNW).

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[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☒ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: The drainage passes over land that is used for agriculture and has been disced and modified.

Tributary properties with respect to top of bank (estimate):
Average width: 9 feet
Average depth: 1 to 5 feet
Average side slopes: **2:1.**

Primary tributary substrate composition (check all that apply):
☒ Silts ☒ Sands ☐ Concrete
☐ Cobbles ☒ Gravel ☐ Muck
☐ Bedrock ☒ Vegetation. Type/30% cover:
☐ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): 1 %

(c) Flow:
Tributary provides for: **Ephemeral flow**
Estimate average number of flow events in review area/year: **6-10**
Describe flow regime:
Other information on duration and volume: Rational Method used to calculate flow as 68.9 cfs for 50-year, 6-hour storm event.

Surface flow is: **Discrete and confined.** Characteristics: .

Subsurface flow: **Yes.** Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):
☐ clear, natural line impressed on the bank ☒ the presence of litter and debris
☒ changes in the character of soil ☐ destruction of terrestrial vegetation
☐ shelving ☒ the presence of wrack line
☒ vegetation matted down, bent, or absent ☐ sediment sorting
☒ leaf litter disturbed or washed away ☐ scour
☐ sediment deposition ☐ multiple observed or predicted flow events
☒ water staining ☐ abrupt change in plant community
☐ other (list):
☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
☐ High Tide Line indicated by: ☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects ☐ survey to available datum;
☐ fine shell or debris deposits (foreshore) ☐ physical markings;
☐ physical markings/characteristics ☐ vegetation lines/changes in vegetation types.
☐ tidal gauges
☐ other (list):

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☒ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings:
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings:. .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- ☐ Directly abutting
- ☐ Not directly abutting
  - ☐ Discrete wetland hydrologic connection. Explain: .
  - ☐ Ecological connection. Explain: .
  - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List.**

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/30 percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed:.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☒ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☐ Tributary waters: **410** linear feet **9** width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**

[8]See Footnote # 3.

☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):
- ☐ Tributary waters: linear feet **feet** width (ft).
- ☐ Other non-wetland waters: acres.
  - Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
     - ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
     - ☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   - ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.**[9]
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   - ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
   - ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
   - ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
- ☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
- ☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- ☐ which are or could be used for industrial purposes by industries in interstate commerce.
- ☐ Interstate isolated waters. Explain: .
- ☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
- ☐ Tributary waters: linear feet width (ft).
- ☐ Other non-wetland waters: acres.
  - Identify type(s) of waters: .
- ☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
- ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- ☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.

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[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).

☒ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .

☒ Other: (explain, if not covered above):

The drainage lacks continuous OHWM and lacks hydrologic connectivity to a downstream water of the United States. The drainage is an ephemeral roadside ditch draining wholly uplands. .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

☒ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).

☒ Lakes/ponds: acres.

☒ Other non-wetland waters: acres. List type of aquatic resource: .

☒ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

☒ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).

☒ Lakes/ponds: acres.

☒ Other non-wetland waters: acres. List type of aquatic resource: .

☒ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .

☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.

☐ Office concurs with data sheets/delineation report.

☐ Office does not concur with data sheets/delineation report.

☒ Data sheets prepared by the Corps: .

☒ Corps navigable waters' study: .

☒ U.S. Geological Survey Hydrologic Atlas: .

☐ USGS NHD data.

☐ USGS 8 and 12 digit HUC maps.

☒ U.S. Geological Survey map(s). Cite scale & quad name Morro Bay South 7.5 minute series quadrangle.

☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Online data base.

☒ National wetlands inventory map(s). Cite name: .

☒ State/Local wetland inventory map(s): .

☒ FEMA/FIRM maps:2008 online version.

☒ 100-year Floodplain Elevation is: 39 feet AMSL (National Geodectic Vertical Datum of 1929)

☒ Photographs: ☒ Aerial (Name & Date): Google Earth 2008
or ☒ Other (Name & Date): .

☒ Previous determination(s). File no. and date of response letter: .

☒ Applicable/supporting case law: .

☒ Applicable/supporting scientific literature: .

☒ Other information (please specify): Calculations of Rational Method included with submittal of jurisdictional delineation.

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

Approved JD Form

Drainage W-4

Los Osos Wastewater Treatment Plant
Community of Los Osos, San Luis Obispo County, California

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:
Los Angeles District

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: California County/parish/borough: Riverside City: Community of Los Osos, San Luis Obispo County, California
Center coordinates of site (lat/long in degree decimal format): Lat. 35 N, Long. 120 ° W.
Universal Transverse Mercator:
Name of nearest waterbody:
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Morro Bay
Name of watershed or Hydrologic Unit Code (HUC): 31023010
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: 256 linear feet: 22 feet width and/or 0.11 acres.
      Wetlands: acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): 40 feet above mean sea level (AMSL).

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: 11,400 **square miles**
   Drainage area: 75 **acres**
   Average annual rainfall: 19 inches
   Average annual snowfall: 0.0 inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **2** tributaries before entering TNW.

   Project waters are **2-5** river miles from TNW.
   Project waters are **1 (or less)** river miles from RPW.
   Project waters are **2-5** aerial (straight) miles from TNW.
   Project waters are **1 (or less)** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

   Identify flow route to TNW[5]: Drainage flows north to join Warden Creek, which flows northwest for 4.4 river miles (3.8 linear miles) to enter Morro Bay (TNW), which is a bay of the Pacific Ocean.

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☒ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: The drainage passes over land that is used for agriculture and has been disced and modified.

Tributary properties with respect to top of bank (estimate):
Average width: 22 feet
Average depth: 1 to 5 feet
Average side slopes: **2:1.**

Primary tributary substrate composition (check all that apply):
☒ Silts ☒ Sands ☐ Concrete
☐ Cobbles ☒ Gravel ☐ Muck
☐ Bedrock ☒ Vegetation. Type/30% cover:
☐ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): 1.5 %

(c) Flow:
Tributary provides for: **Ephemeral flow**
Estimate average number of flow events in review area/year: **6-10**
Describe flow regime:
Other information on duration and volume: Rational Method used to calculate flow as 23.5 cfs for 50-year, 6-hour storm event.

Surface flow is: **Confined.** Characteristics: .

Subsurface flow: **Yes.** Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):
☐ clear, natural line impressed on the bank ☒ the presence of litter and debris
☒ changes in the character of soil ☐ destruction of terrestrial vegetation
☐ shelving ☒ the presence of wrack line
☒ vegetation matted down, bent, or absent ☐ sediment sorting
☒ leaf litter disturbed or washed away ☐ scour
☐ sediment deposition ☐ multiple observed or predicted flow events
☒ water staining ☐ abrupt change in plant community
☐ other (list):
☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
☒ High Tide Line indicated by: ☒ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects ☐ survey to available datum;
☐ fine shell or debris deposits (foreshore) ☐ physical markings;
☐ physical markings/characteristics ☐ vegetation lines/changes in vegetation types.
☐ tidal gauges
☐ other (list):

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☒ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings:
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings:. .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:
Properties:
Wetland size: acres
Wetland type. Explain: .
Wetland quality. Explain: .
Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:
Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**
Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:
☐ Directly abutting
☐ Not directly abutting
☐ Discrete wetland hydrologic connection. Explain: .
☐ Ecological connection. Explain: .
☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW
Project wetlands are **Pick List** river miles from TNW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Flow is from: **Pick List.**
Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .
Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/30 percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**
Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed:.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☒ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☐ Tributary waters: linear feet width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**

[8]See Footnote # 3.

☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.**[9]
As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .
Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.

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[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).

☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .

☐ Other: (explain, if not covered above):

The drainage lacks continuous OHWM and lacks hydrologic connectivity to a downstream water of the United States. The drainage is an ephemeral roadside ditch draining wholly uplands. .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).

☐ Lakes/ponds: acres.

☐ Other non-wetland waters: acres. List type of aquatic resource: .

☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).

☐ Lakes/ponds: acres.

☐ Other non-wetland waters: acres. List type of aquatic resource: .

☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .

☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.

☐ Office concurs with data sheets/delineation report.

☐ Office does not concur with data sheets/delineation report.

☐ Data sheets prepared by the Corps: .

☐ Corps navigable waters' study: .

☐ U.S. Geological Survey Hydrologic Atlas: .

☐ USGS NHD data.

☐ USGS 8 and 12 digit HUC maps.

☒ U.S. Geological Survey map(s). Cite scale & quad name Morro Bay South 7.5 minute series quadrangle.

☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Online data base.

☐ National wetlands inventory map(s). Cite name: .

☐ State/Local wetland inventory map(s): .

☐ FEMA/FIRM maps:2008 online version.

☐ 100-year Floodplain Elevation is: 39 feet AMSL (National Geodectic Vertical Datum of 1929)

☐ Photographs: ☒ Aerial (Name & Date): Google Earth 2008
or ☒ Other (Name & Date): .

☐ Previous determination(s). File no. and date of response letter: .

☐ Applicable/supporting case law: .

☐ Applicable/supporting scientific literature: .

☒ Other information (please specify): Calculations of Rational Method included with submittal of jurisdictional delineation.

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

Approved JD Form

Drainage W-5.a

Los Osos Wastewater Treatment Plant
Community of Los Osos, San Luis Obispo County, California

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:
Los Angeles District

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: California County/parish/borough: Riverside City: Community of Los Osos, San Luis Obispo County, California
Center coordinates of site (lat/long in degree decimal format): Lat. 35 N, Long. 120 ° W.
Universal Transverse Mercator:
Name of nearest waterbody:
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Morro Bay
Name of watershed or Hydrologic Unit Code (HUC): 31023010
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: 524 linear feet: 6 feet width and/or 0.07 acres.
      Wetlands: acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): 45 feet above mean sea level (AMSL).

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: 11,400 **square miles**
   Drainage area: 18 **acres**
   Average annual rainfall: 19 inches
   Average annual snowfall: 0.0 inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **2** tributaries before entering TNW.

   Project waters are **2-5** river miles from TNW.
   Project waters are **1 (or less)** river miles from RPW.
   Project waters are **2-5** aerial (straight) miles from TNW.
   Project waters are **1 (or less)** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Identify flow route to TNW[5]: Drainage flows north and then east to join Drainage W-5.a, which flows north to join Warden Creek. From the confluence with Drainage W-5, the distance is 4.7 river miles (3.9 linear miles) to Morro Bay (TNW), which is a bay of the Pacific Ocean.
Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☒ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: The drainage passes over land that is used for agriculture and has been disced and modified and passes below Los Osos Valley Road through a culvert.

Tributary properties with respect to top of bank (estimate):
Average width: 6 feet
Average depth: 1 to 4 feet
Average side slopes: **2:1.**

Primary tributary substrate composition (check all that apply):

☒ Silts	☒ Sands	☐ Concrete
☐ Cobbles	☒ Gravel	☐ Muck
☐ Bedrock	☒ Vegetation. Type/30% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): 1.5 %

(c) Flow:
Tributary provides for: **Ephemeral flow**
Estimate average number of flow events in review area/year: **6-10**
Describe flow regime:
Other information on duration and volume: Rational Method used to calculate flow as 5.4 cfs for 50-year, 6-hour storm event.

Surface flow is: **Confined.** Characteristics: .

Subsurface flow: **Yes.** Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☒ the presence of litter and debris
☒ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☒ the presence of wrack line
☒ vegetation matted down, bent, or absent	☐ sediment sorting
☒ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☒ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:

[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
[6] A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7] Ibid.

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☒ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings:
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings:. .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:
Properties:
Wetland size: acres
Wetland type. Explain: .
Wetland quality. Explain: .
Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:
Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**
Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:
☐ Directly abutting
☐ Not directly abutting
☐ Discrete wetland hydrologic connection. Explain: .
☐ Ecological connection. Explain: .
☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW
Project wetlands are **Pick List** river miles from TNW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Flow is from: **Pick List**.
Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .
Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/30 percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**
Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed:.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: 524 linear feet width 6 (ft), Or, 0.07acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☒ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☐ Tributary waters: linear feet width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
   ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   ☐ Tributary waters: linear feet width (ft).
   ☐ Other non-wetland waters: acres.
   Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
   ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   ☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
   ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
   ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .
Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

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[8]See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  ☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above):
The drainage lacks continuous OHWM and lacks hydrologic connectivity to a downstream water of the United States. The drainage is an ephemeral roadside ditch draining wholly uplands. .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  ☐ Office concurs with data sheets/delineation report.
  ☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☐ U.S. Geological Survey Hydrologic Atlas: .
  ☐ USGS NHD data.
  ☐ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name Morro Bay South 7.5 minute series quadrangle.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Online data base.
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps:2008 online version.
☐ 100-year Floodplain Elevation is: 39 feet AMSL (National Geodectic Vertical Datum of 1929)
☐ Photographs: ☒ Aerial (Name & Date): Google Earth 2008
  or ☒ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☒ Other information (please specify): Calculations of Rational Method included with submittal of jurisdictional delineation.

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

Approved JD Form

Drainage W-5.b

Los Osos Wastewater Treatment Plant
Community of Los Osos, San Luis Obispo County, California

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:
Los Angeles District

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: California County/parish/borough: Riverside City: Community of Los Osos, San Luis Obispo County, California
Center coordinates of site (lat/long in degree decimal format): Lat. 35 N, Long. 120 ° W.
Universal Transverse Mercator:
Name of nearest waterbody:
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Morro Bay
Name of watershed or Hydrologic Unit Code (HUC): 31023010
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: 748 linear feet: 6 feet width and/or 0.10 acres.
      Wetlands: acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): 55 feet above mean sea level (AMSL).

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: 11,400 **square miles**
   Drainage area: 18 **acres**
   Average annual rainfall: 19 inches
   Average annual snowfall: 0.0 inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **2** tributaries before entering TNW.

   Project waters are **2-5** river miles from TNW.
   Project waters are **1 (or less)** river miles from RPW.
   Project waters are **2-5** aerial (straight) miles from TNW.
   Project waters are **1 (or less)** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Identify flow route to TNW[5]: Drainage flows north and then west to join Drainage W-5.a, which flows north to form Drainage W-5, which enters Warden Creek to the north. From the north side of Los Osos Valley Road, the distance is 4.7 river miles (3.9 linear miles) to Morro Bay (TNW), which is a bay of the Pacific Ocean (TNW).
Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☒ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: The drainage passes over land that is used for agriculture and has been disced and modified.

Tributary properties with respect to top of bank (estimate):
Average width: 6 feet
Average depth: 1 to 4 feet
Average side slopes: **2:1.**

Primary tributary substrate composition (check all that apply):

☒ Silts	☒ Sands	☐ Concrete
☐ Cobbles	☒ Gravel	☐ Muck
☐ Bedrock	☒ Vegetation. Type/30% cover:	
☐ Other. Explain:		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): 1.5 %

(c) Flow:
Tributary provides for: **Ephemeral flow**
Estimate average number of flow events in review area/year: **6-10**
Describe flow regime:
Other information on duration and volume: Rational Method used to calculate flow as 5.9 cfs for 50-year, 6-hour storm event.

Surface flow is: **Confined.** Characteristics: .

Subsurface flow: **Yes.** Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☒ the presence of litter and debris
☒ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☒ the presence of wrack line
☒ vegetation matted down, bent, or absent	☐ sediment sorting
☒ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☒ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:

[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
[6] A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7] Ibid.

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☒ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings:
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings:. .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:
Properties:
Wetland size: acres
Wetland type. Explain: .
Wetland quality. Explain: .
Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:
Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**
Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:
☐ Directly abutting
☐ Not directly abutting
☐ Discrete wetland hydrologic connection. Explain: .
☐ Ecological connection. Explain: .
☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW
Project wetlands are **Pick List** river miles from TNW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Flow is from: **Pick List.**
Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .
Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/30 percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**
Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed:.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: 748 linear feet width 6 (ft), Or, 0.10 acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☒ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☐ Tributary waters: linear feet width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
   ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   ☐ Tributary waters: linear feet width (ft).
   ☐ Other non-wetland waters: acres.
   Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
   ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   ☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
   ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
   ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .
Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: lincar feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

---

[8]See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  ☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above):
The drainage lacks continuous OHWM and lacks hydrologic connectivity to a downstream water of the United States. The drainage is an ephemeral roadside ditch draining wholly uplands. .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  ☐ Office concurs with data sheets/delineation report.
  ☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☐ U.S. Geological Survey Hydrologic Atlas: .
  ☐ USGS NHD data.
  ☐ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name Morro Bay South 7.5 minute series quadrangle.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Online data base.
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps:2008 online version.
☐ 100-year Floodplain Elevation is: 39 feet AMSL (National Geodectic Vertical Datum of 1929)
☐ Photographs: ☒ Aerial (Name & Date): Google Earth 2008
  or ☒ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☒ Other information (please specify): Calculations of Rational Method included with submittal of jurisdictional delineation.

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

Approved JD Form

Drainage W-5

Los Osos Wastewater Treatment Plant
Community of Los Osos, San Luis Obispo County, California

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:
Los Angeles District

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: California County/parish/borough: Riverside City: Community of Los Osos, San Luis Obispo County, California
Center coordinates of site (lat/long in degree decimal format): Lat. 35 N, Long. 120 ° W.
Universal Transverse Mercator:
Name of nearest waterbody:
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Morro Bay
Name of watershed or Hydrologic Unit Code (HUC): 31023010
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Are no *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There Are *"waters of the U.S."* within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: 137 linear feet: 6 feet width and/or 0.02 acres.
      Wetlands: acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): 45 feet above mean sea level (AMSL).

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: 11,400 **square miles**
   Drainage area: 35 **acres**
   Average annual rainfall: 19 inches
   Average annual snowfall: 0.0 inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **2** tributaries before entering TNW.

   Project waters are **2-5** river miles from TNW.
   Project waters are **1 (or less)** river miles from RPW.
   Project waters are **2-5** aerial (straight) miles from TNW.
   Project waters are **1 (or less)** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Identify flow route to TNW[5]: Drainage W-5 is formed north of Los Osos Valley Road from the confluence of Drainage W-5.b and Drainage W-5.a. Warden Creek flows a distance of 4.5 river miles (3.7 linear miles) to Morro Bay (TNW), which is a bay of the Pacific Ocean (TNW).
Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☒ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: The drainage passes over land that is used for agriculture and has been disced and modified.

Tributary properties with respect to top of bank (estimate):
Average width: 6 feet
Average depth: 1 to 4 feet
Average side slopes: **2:1.**

Primary tributary substrate composition (check all that apply):

☒ Silts	☒ Sands	☐ Concrete
☐ Cobbles	☒ Gravel	☐ Muck
☐ Bedrock	☒ Vegetation. Type/30% cover:	
☐ Other. Explain:		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): 0.3 %

(c) Flow:
Tributary provides for: **Ephemeral flow**
Estimate average number of flow events in review area/year: **6-10**
Describe flow regime:
Other information on duration and volume: Rational Method used to calculate flow as 11.0 cfs for 50-year, 6-hour storm event.

Surface flow is: **Confined.** Characteristics: .

Subsurface flow: **Yes.** Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☒ the presence of litter and debris
☒ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☒ the presence of wrack line
☒ vegetation matted down, bent, or absent	☐ sediment sorting
☒ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☒ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:

[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
[6] A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7] Ibid.

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☒ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings:
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings:. .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:
Properties:
Wetland size: acres
Wetland type. Explain: .
Wetland quality. Explain: .
Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:
Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**
Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:
- ☐ Directly abutting
- ☐ Not directly abutting
  - ☐ Discrete wetland hydrologic connection. Explain: .
  - ☐ Ecological connection. Explain: .
  - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW
Project wetlands are **Pick List** river miles from TNW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Flow is from: **Pick List.**
Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .
Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/30 percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**
Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed:.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: 748 linear feet width 6 (ft), Or, 0.10 acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☒ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☐ Tributary waters: linear feet width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
   ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   ☐ Tributary waters: linear feet width (ft).
   ☐ Other non-wetland waters: acres.
   Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
   ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   ☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
   ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
   ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .
Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

---

[8]See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above):
The drainage lacks continuous OHWM and lacks hydrologic connectivity to a downstream water of the United States. The drainage is an ephemeral roadside ditch draining wholly uplands. .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☐ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☐ U.S. Geological Survey Hydrologic Atlas: .
☐ USGS NHD data.
☐ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name Morro Bay South 7.5 minute series quadrangle.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Online data base.
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps:2008 online version.
☐ 100-year Floodplain Elevation is: 39 feet AMSL (National Geodectic Vertical Datum of 1929)
☐ Photographs: ☒ Aerial (Name & Date): Google Earth 2008
or ☒ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☒ Other information (please specify): Calculations of Rational Method included with submittal of jurisdictional delineation.

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

Approved JD Form

Los Osos Creek

Los Osos Wastewater Treatment Plant
Community of Los Osos, San Luis Obispo County, California

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:
Los Angeles District

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: California County/parish/borough: Riverside City: Community of Los Osos, San Luis Obispo County, California
Center coordinates of site (lat/long in degree decimal format): Lat. 35 18' 21.7 " N, Long. 120 48' 40.4" ° W.
Universal Transverse Mercator:
Name of nearest waterbody: Warden Creek
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Morro Bay
Name of watershed or Hydrologic Unit Code (HUC): 31023010
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** *"waters of the U.S."* within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: 931 linear feet: 22 feet width and/or 0.27 acres.
      Wetlands: acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): 80 feet above mean sea level (AMSL).

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

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[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) **General Area Conditions:**
   Watershed size: 11,400 **square miles**
   Drainage area: 2500 **acres**
   Average annual rainfall: 19 inches
   Average annual snowfall: 0.0 inches

   (ii) **Physical Characteristics:**
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **2** tributaries before entering TNW.

   Project waters are **2-5** river miles from TNW.
   Project waters are **1 (or less)** river miles from RPW.
   Project waters are **2-5** aerial (straight) miles from TNW.
   Project waters are **1 (or less)** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Identify flow route to TNW[5]: Los Osos Creek is spanned by the Los Osos Valley Road bridge. From the northern edge of the bridge it flows approximately 3.7 river miles (2.4 linear miles) into Morro Bay (TNW), which is a bay of the Pacific Ocean (TNW).
Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☒ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: The drainage passes over land that is used for agriculture and has been disced and modified.

Tributary properties with respect to top of bank (estimate):
Average width: 22 feet
Average depth: 1 to 10 feet
Average side slopes: **2:1.**

Primary tributary substrate composition (check all that apply):
☒ Silts ☒ Sands ☐ Concrete
☒ Cobbles ☒ Gravel ☐ Muck
☐ Bedrock ☒ Vegetation. Type/85% cover:
☐ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Meandering**
Tributary gradient (approximate average slope): 0.7 %

(c) Flow:
Tributary provides for: **Ephemeral flow**
Estimate average number of flow events in review area/year: **6-10**
Describe flow regime:
Other information on duration and volume: Rational Method used to calculate flow as 745 cfs for 50-year, 6-hour storm event.

Surface flow is: **Discrete.** Characteristics: Also includes overland sheet flow.

Subsurface flow: **Yes**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):
☐ clear, natural line impressed on the bank ☒ the presence of litter and debris
☒ changes in the character of soil ☐ destruction of terrestrial vegetation
☐ shelving ☒ the presence of wrack line
☒ vegetation matted down, bent, or absent ☐ sediment sorting
☒ leaf litter disturbed or washed away ☐ scour
☐ sediment deposition ☐ multiple observed or predicted flow events
☒ water staining ☐ abrupt change in plant community
☐ other (list):
☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
☐ High Tide Line indicated by: ☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects ☐ survey to available datum;
☐ fine shell or debris deposits (foreshore) ☐ physical markings;
☐ physical markings/characteristics ☐ vegetation lines/changes in vegetation types.
☐ tidal gauges
☐ other (list):

(iii) Chemical Characteristics:

[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
[6] A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7] Ibid.

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: Land has been used for agriculture; specific pollutants may include pesticides and nutrients..

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☒ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings:
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings:. .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:
Properties:
Wetland size: acres
Wetland type. Explain: .
Wetland quality. Explain: .
Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:
Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**
Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:
☐ Directly abutting
☐ Not directly abutting
☐ Discrete wetland hydrologic connection. Explain: .
☐ Ecological connection. Explain: .
☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW
Project wetlands are **Pick List** river miles from TNW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Flow is from: **Pick List.**
Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .
Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/30 percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**
Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed:.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☐ Tributary waters: linear feet width (ft).
   - ☐ Other non-wetland waters: acres.

Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
   ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   ☐ Tributary waters: **80** linear feet **1.5 feet** width (ft).
   ☐ Other non-wetland waters: acres.
   Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
   ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   ☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
   ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
   ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .
Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

---

[8]See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  ☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above):
The drainage lacks continuous OHWM and lacks hydrologic connectivity to a downstream water of the United States. The drainage is an ephemeral roadside ditch draining wholly uplands. .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  ☐ Office concurs with data sheets/delineation report.
  ☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☐ U.S. Geological Survey Hydrologic Atlas: .
  ☐ USGS NHD data.
  ☐ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name Morro Bay South 7.5 minute series quadrangle.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Online data base.
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps:2008 online version.
☐ 100-year Floodplain Elevation is: 39 feet AMSL (National Geodectic Vertical Datum of 1929)
☐ Photographs: ☒ Aerial (Name & Date): Google Earth 2008
  or ☒ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☒ Other information (please specify): Calculations of Rational Method included with submittal of jurisdictional delineation.

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

Approved JD Form

Los Osos Valley Road Seasonal Wetland

Los Osos Wastewater Treatment Plant
Community of Los Osos, San Luis Obispo County, California

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:
Los Angeles District

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: California County/parish/borough: Riverside City: Community of Los Osos, San Luis Obispo County, California
Center coordinates of site (lat/long in degree decimal format): Lat. 35 N, Long. 120 ° W.
Universal Transverse Mercator:
Name of nearest waterbody:
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Morro Bay
Name of watershed or Hydrologic Unit Code (HUC): 31023010
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** *"waters of the U.S."* within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: linear feet: feet width and/or acres.
      Wetlands: 0.23 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): 50 feet above mean sea level (AMSL).

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: 11,400 **square miles**
   Drainage area: 35 **acres**
   Average annual rainfall: 19 inches
   Average annual snowfall: 0.0 inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **2** tributaries before entering TNW.

   Project waters are **2-5** river miles from TNW.
   Project waters are **1 (or less)** river miles from RPW.
   Project waters are **5-10** aerial (straight) miles from TNW.
   Project waters are **1 (or less)** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Identify flow route to TNW[5]: The wetland abuts Drainage W-5.b, which flows north below Los Osos Valley Road and then joins Drainage W-5, which flows approximately 4.7 river miles (3.9 linear miles) northwest to enter Morro Bay (TNW), which is a bay of the Pacific Ocean (TNW).
Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: The drainage passes over land that is used for agriculture and has been disced and modified.

Tributary properties with respect to top of bank (estimate):
Average width: feet
Average depth: to feet
Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply):
☐ Silts ☐ Sands ☐ Concrete
☐ Cobbles ☐ Gravel ☐ Muck
☐ Bedrock ☐ Vegetation. Type/30% cover:
☐ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Pick List**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime:
Other information on duration and volume: Flow was not calculated as this is a wetland associated with Drainage W-4 and Drainage W-5.a

Surface flow is: **Confined.** Characteristics: .

Subsurface flow: **Yes.** Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☐ Bed and banks
☐ OHWM[6] (check all indicators that apply):
☐ clear, natural line impressed on the bank ☐ the presence of litter and debris
☐ changes in the character of soil ☐ destruction of terrestrial vegetation
☐ shelving ☐ the presence of wrack line
☐ vegetation matted down, bent, or absent ☐ sediment sorting
☐ leaf litter disturbed or washed away ☐ scour
☐ sediment deposition ☐ multiple observed or predicted flow events
☐ water staining ☐ abrupt change in plant community
☐ other (list):
☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
☒ High Tide Line indicated by: ☒ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects ☐ survey to available datum;
☐ fine shell or debris deposits (foreshore) ☐ physical markings;
☐ physical markings/characteristics ☐ vegetation lines/changes in vegetation types.
☐ tidal gauges
☐ other (list):

(iii) Chemical Characteristics:

[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
[6] A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7] Ibid.

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☐ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings:
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings:. .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:
Properties:
Wetland size: acres
Wetland type. Explain: .
Wetland quality. Explain: .
Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:
Flow is: **Ephemeral flow**. Explain: .

Surface flow is: **Discrete**
Characteristics: .

Subsurface flow: **Unknown**. Explain findings: .
☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:
☒ Directly abutting
☐ Not directly abutting
- ☐ Discrete wetland hydrologic connection. Explain: .
- ☐ Ecological connection. Explain: .
- ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW
Project wetlands are **2-5** river miles from TNW.
Project waters are **2-5** aerial (straight) miles from TNW.
Flow is from: **Wetland to navigable waters.**
Estimate approximate location of wetland as within the **50 - 100-year** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .
Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☒ Riparian buffer. Characteristics (type, average width): .
- ☒ Vegetation type/80 percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **1**
Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed:.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☐ Tributary waters: linear feet width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
   ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   ☐ Tributary waters: linear feet **feet** width (ft).
   ☐ Other non-wetland waters: acres.
   Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
   ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   ☒ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area: **0.23** acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
   ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
   ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .
Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

---

[8]See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  ☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above):
The drainage lacks continuous OHWM and lacks hydrologic connectivity to a downstream water of the United States. The drainage is an ephemeral roadside ditch draining wholly uplands. .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  ☐ Office concurs with data sheets/delineation report.
  ☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☐ U.S. Geological Survey Hydrologic Atlas: .
  ☐ USGS NHD data.
  ☐ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name Morro Bay South 7.5 minute series quadrangle.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Online data base.
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps:2008 online version.
☐ 100-year Floodplain Elevation is: 39 feet AMSL (National Geodectic Vertical Datum of 1929)
☐ Photographs: ☒ Aerial (Name & Date): Google Earth 2008
  or ☒ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☒ Other information (please specify): Calculations of Rational Method included with submittal of jurisdictional delineation.

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

Approved JD Form

Warden Creek Wetland

Los Osos Wastewater Treatment Plant
Community of Los Osos, San Luis Obispo County, California

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:
Los Angeles District

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: California County/parish/borough: Riverside City: Community of Los Osos, San Luis Obispo County, California
Center coordinates of site (lat/long in degree decimal format): Lat. 35 N, Long. 120 ° W.
Universal Transverse Mercator:
Name of nearest waterbody:
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Morro Bay
Name of watershed or Hydrologic Unit Code (HUC): 31023010
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: linear feet: feet width and/or acres.
      Wetlands: 13.34 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): 25 feet above mean sea level (AMSL).

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: 11,400 **square miles**
   Drainage area: **acres**
   Average annual rainfall: 19 inches
   Average annual snowfall: 0.0 inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **2** tributaries before entering TNW.

   Project waters are **2-5** river miles from TNW.
   Project waters are **1 (or less)** river miles from RPW.
   Project waters are **2-5** aerial (straight) miles from TNW.
   Project waters are **1 (or less)** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

   Identify flow route to TNW[5]: Warden Creek wetland is part of Warden Creek. Flow leaves the wetland to the northwest and flows Drainage flows east to join Drainage T-1, which flows south to join Warden Creek. From confluence with

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Drainage T-1, water flows west for 2.7 river miles (2.1 linear miles) to enter Morro Bay (TNW), which is a bay of the Pacific Ocean.
Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: The drainage passes over land that is used for agriculture and has been disced and modified.

Tributary properties with respect to top of bank (estimate):
Average width: feet
Average depth: to feet
Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply):
☐ Silts ☐ Sands ☐ Concrete
☐ Cobbles ☐ Gravel ☐ Muck
☐ Bedrock ☐ Vegetation. Type% cover:
☐ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Pick List**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime:
Other information on duration and volume: .

Surface flow is: **Pick List.** Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☐ Bed and banks
☐ OHWM[6] (check all indicators that apply):
☐ clear, natural line impressed on the bank ☐ the presence of litter and debris
☐ changes in the character of soil ☐ destruction of terrestrial vegetation
☐ shelving ☐ the presence of wrack line
☐ vegetation matted down, bent, or absent ☐ sediment sorting
☐ leaf litter disturbed or washed away ☐ scour
☐ sediment deposition ☐ multiple observed or predicted flow events
☐ water staining ☐ abrupt change in plant community
☐ other (list):
☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
☐ High Tide Line indicated by: ☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects ☐ survey to available datum;
☐ fine shell or debris deposits (foreshore) ☐ physical markings;
☐ physical markings/characteristics ☐ vegetation lines/changes in vegetation types.
☐ tidal gauges
☐ other (list):

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known:.

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☐ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings:
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings:. .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size:13.34 acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Ephemeral flow**. Explain: .

Surface flow is: **Discrete**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- ☐ Directly abutting
- ☐ Not directly abutting
  - ☐ Discrete wetland hydrologic connection. Explain: .
  - ☐ Ecological connection. Explain: .
  - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **2-5** river miles from TNW.

Project waters are **2-5** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters.**

Estimate approximate location of wetland as within the **50 - 100-year** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/30 percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: 1

Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
Warden Creek Wetland (Y)	13.34 acres		

Summarize overall biological, chemical and physical functions being performed:.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☐ Tributary waters: linear feet width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
   ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   ☐ Tributary waters: linear feet width (ft).
   ☐ Other non-wetland waters: acres.
   Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
   ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   ☒ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
   ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
   ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .
Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.

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[8]See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  ☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above):
The drainage lacks continuous OHWM and lacks hydrologic connectivity to a downstream water of the United States. The drainage is an ephemeral roadside ditch draining wholly uplands. .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  ☐ Office concurs with data sheets/delineation report.
  ☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☐ U.S. Geological Survey Hydrologic Atlas: .
  ☐ USGS NHD data.
  ☐ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name Morro Bay South 7.5 minute series quadrangle.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Online data base.
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps:2008 online version.
☐ 100-year Floodplain Elevation is: 39 feet AMSL (National Geodectic Vertical Datum of 1929)
☐ Photographs: ☒ Aerial (Name & Date): Google Earth 2008
  or ☒ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☒ Other information (please specify): Calculations of Rational Method included with submittal of jurisdictional delineation.

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

Approved JD Form

Warden Creek

Los Osos Wastewater Treatment Plant
Community of Los Osos, San Luis Obispo County, California

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:
Los Angeles District

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: California County/parish/borough: Riverside City: Community of Los Osos, San Luis Obispo County, California
Center coordinates of site (lat/long in degree decimal format): Lat. 35 18' 08.6" N, Long. 120 46' 34.9" ° W.
Universal Transverse Mercator:
Name of nearest waterbody: Los Osos Creek
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Morro Bay
Name of watershed or Hydrologic Unit Code (HUC): 31023010
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: linear feet: feet width and/or acres.
      Wetlands: 0.12 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): 48 feet above mean sea level (AMSL).

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: 11,400 **square miles**
   Drainage area: 2100 **acres**
   Average annual rainfall: 19 inches
   Average annual snowfall: 0.0 inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **2** tributaries before entering TNW.

   Project waters are **1-2** river miles from TNW.
   Project waters are **1 (or less)** river miles from RPW.
   Project waters are **1 (or less)** aerial (straight) miles from TNW.
   Project waters are **1 (or less)** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

   Identify flow route to TNW[5]: Warden Creek flows west from Turri Road, then flows northtwest and flows toward Morro Bay (TNW), which is a bay of the Pacific Ocean (TNW).

---

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☒ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: The drainage passes over land that is used for agriculture and has been disced and modified.

Tributary properties with respect to top of bank (estimate):
Average width: 25 feet
Average depth: 1 to 6 feet
Average side slopes: **2:1.**

Primary tributary substrate composition (check all that apply):

☒ Silts	☒ Sands	☐ Concrete
☐ Cobbles	☒ Gravel	☐ Muck
☐ Bedrock	☒ Vegetation. Type/70% cover:	
☐ Other. Explain:		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Meandering**
Tributary gradient (approximate average slope): 0.01 %

(c) Flow:
Tributary provides for: **Ephemeral flow**
Estimate average number of flow events in review area/year: **6-10**
Describe flow regime:
Other information on duration and volume: Rational Method used to calculate flow as 626 cfs for 50-year, 6-hour storm event.

Surface flow is: **Confined.** Characteristics: Also includes overland sheet flow.

Subsurface flow: **Yes.** Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☒ the presence of litter and debris
☒ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☒ the presence of wrack line
☒ vegetation matted down, bent, or absent	☐ sediment sorting
☒ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☒ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: Land has been used for agriculture; specific pollutants may include pesticides and nutrients..

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☒ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings:
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings:. .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- ☐ Directly abutting
- ☐ Not directly abutting
  - ☐ Discrete wetland hydrologic connection. Explain: .
  - ☐ Ecological connection. Explain: .
  - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List.**

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/30 percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed:.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☒ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☒ Tributary waters: **214** linear feet **25** width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
   ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   ☐ Tributary waters: **80** linear feet **1.5 feet** width (ft).
   ☐ Other non-wetland waters: acres.
   Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
   ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   ☒ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
   ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
   ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .
Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.

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[8]See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  ☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above):
The drainage lacks continuous OHWM and lacks hydrologic connectivity to a downstream water of the United States. The drainage is an ephemeral roadside ditch draining wholly uplands. .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  ☐ Office concurs with data sheets/delineation report.
  ☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☐ U.S. Geological Survey Hydrologic Atlas: .
  ☐ USGS NHD data.
  ☐ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name Morro Bay South 7.5 minute series quadrangle.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Online data base.
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps:2008 online version.
☐ 100-year Floodplain Elevation is: 39 feet AMSL (National Geodectic Vertical Datum of 1929)
☐ Photographs: ☒ Aerial (Name & Date): Google Earth 2008
  or ☒ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☒ Other information (please specify): Calculations of Rational Method included with submittal of jurisdictional delineation.

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

Attachment F: Wetlands Data Sheets

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 04/24/08

Applicant Owner: County of San Luis Obispo State: CA Sampling Point: LOC PIT1

estigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSec/T30S/R11E

Landform (hillside, terrace, fan, etc.): Drainage Feature Local relief (concave, convex, none): Concave Slope (%): <5

Soil Map Unit Name: Marimel silty clay loam, drained NWI Classification:

Subregion (LRR): LRR-C = Mediterranean California Lat/Long: 35^18'21.22"N, 120^48'42.12"W Datum: NAD83

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? ☐ Yes ☒ No Are Normal Circumstances present? ☒ Yes ☐ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present?	☒ Yes	☐ No	**Is the Sample Area within a Wetland?** ☐ Yes ☒ No
Hydric Soil Present?	☐ Yes	☒ No	
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks Sample is a WET sample within Los Osos Creek, a tributary RPW to Pacific Ocean (TNW).

(2) VEGETATION

Tree Stratum (Use scientific names)	Absolute %Cover	Dominant Species	Indicator Status
1. Salix lasiolepis	60	YES	FACW
2.			
3.			
4.			
Total Cover:	60		

pling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:			

Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum: 40 % Cover of Biotic Crust:

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

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

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1=	
FACW species	60	x2=	120
FAC species		x3=	
FACU species		x4=	
UPL Species		x5=	
Column Totals:	**60** (A)		**120** (B)

Prevalence Index = B/A = **2.0**

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☒ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptions[1] (Provide supporting data in remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

Types of Problematic Vegetation:

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No

Remarks: Passes Dominance Test and Prevalence Index.

(3) SOIL

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

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10YR4/2	100					sand, gravel	

[1]Type: **C** = Concentration, **D** = Depletion, **RM** = Reduced [2](**Loc**) 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 Depresssions (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 Soils Present? ☐ Yes ☒ No

REMARKS: No Hydric Indicator. Sammple is within coarse sand gravelly active channel of Los Osos Creek.

(4) HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (any one indicator 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 (F8)

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)
- ☐ Thin Muck Surface (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	☐ Yes	☒ No	Depth (inches)	
Water Table Present?	☐ Yes	☒ No	Depth (inches)	
Saturation Present? (Includes Capillary Fringe)	☒ Yes	☐ No	Depth (inches)	12

Wetland Hydrology Present? ☒ Yes ☐ No

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

Remarks: Primary Hydrology Indicator A3. Secondary Hydrology Indicators B1, B2, B3 and B10.

▫WETLAND DETERMINATION DATA FORM - Arid West Region▫
Addendum – Additional Remarks

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 04/24/08

.plicant Owner: County of San Luis Obispo State: CA Sampling Point: LOC PIT1

Investigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSect/T30S/R11E

SECTION	Additional Remarks
1	
2	
3	
4	
REFERENCE	**Additional Comments**
N-1	
N-2	
N-3	
N-4	
N-5	

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Los Osos Wastewater Project | City/County: Los Osos/SLO Co. | Sampling Date: 04/24/08

Applicant Owner: County of San Luis Obispo | State: CA | Sampling Point: LOC PIT2

Investigator(s): Thomas Mullen, Karl Osmundson | Section/Township/Range: UnSec/T30S/R11E

Landform (hillside, terrace, fan, etc.): Drainage Feature | Local relief (concave, convex, none): Concave | Slope (%): <5

Soil Map Unit Name: Baywood fine sand, 2 to 9 percent slopes | NWI Classification:

Subregion (LRR): LRR-C = Mediterranean California | Lat/Long: 35^18'21.69"N, 120^48'44.28"W | Datum: NAD83

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? ☐ Yes ☒ No | Are Normal Circumstances present? ☒ Yes ☐ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? ☐ Yes ☒ No | (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present?	☒ Yes	☐ No	**Is the Sample Area within a Wetland?** ☒ Yes ☐ No
Hydric Soil Present?	☒ Yes	☐ No	
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks Sample is a WET sample within small RPW tributary to Los Osos Creek along, a tributary RPW to Pacific Ocean (TNW).

(2) VEGETATION

Tree Stratum (Use scientific names)	Absolute %Cover	Dominant Species	Indicator Status
1. Salix goodingii	50	YES	FACW
2. Quercus agrifolia	25	NO	UPL
3.			
4.			
Total Cover:	75		

Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum			
1. Toxicodendron diversilobum	15	YES	FAC
2. Equisetum hyemale	5	NO	FACW
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	20		

Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum: 5 | % Cover of Biotic Crust:

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

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1=	
FACW species	55	x2=	110
FAC species	15	x3=	45
FACU species		x4=	
UPL Species	25	x5=	75
Column Totals:	95 (A)		230 (B)

Prevalence Index = B/A = **2.42**

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☒ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptions[1] (Provide supporting data in remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

Types of Problematic Vegetation:

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No

Remarks: Passes Dominance Test and Prevalence Index.

(3) SOIL

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

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	10YR2/1	100					loam	
6-18	10YR4/1	50	10YR5/6	50	RM	M	loam	

[1]Type: **C** = Concentration, **D** = Depletion, **RM** = Reduced [2](**Loc**) 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 Depresssions (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 Soils Present? ☒ Yes ☐ No

REMARKS: Hydric Indicator F3, low chroma within 100% of upper 6", and redox greater than 10" thick below 6". Sample is wetland within OHWM of small tributary.

(4) HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (any one indicator 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 (F8)

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)
- ☐ Thin Muck Surface (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	☐ Yes	☒ No	Depth (inches)	
Water Table Present?	☒ Yes	☐ No	Depth (inches)	2
Saturation Present? (Includes Capillary Fringe)	☒ Yes	☐ No	Depth (inches)	0

Wetland Hydrology Present? ☒ Yes ☐ No

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

Remarks: Primary Hydrology Indicators A2 and A3. Secondary Hydrology Indicators B1, B2, B3 and B10.

▫WETLAND DETERMINATION DATA FORM - Arid West Region▫
Addendum – Additional Remarks

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 04/24/08

Applicant Owner: County of San Luis Obispo State: CA Sampling Point: LOC PIT2

Investigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSect/T30S/R11E

SECTION	Additional Remarks
1	
2	
3	
4	
REFERENCE	**Additional Comments**
N-1	
N-2	
N-3	
N-4	
N-5	

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Los Osos Wastewater Project | City/County: Los Osos/SLO Co. | Sampling Date: 05/50/08

Applicant Owner: County of San Luis Obispo | State: CA | Sampling Point: LOVRSW PIT1

Investigator(s): Thomas Mullen, Karl Osmundson | Section/Township/Range: UnSec/T30S/R11E

Landform (hillside, terrace, fan, etc.): Roadside Swale | Local relief (concave, convex, none): Concave | Slope (%): <5

Soil Map Unit Name: Cropley clay, 2 to 9 percent slopes | NWI Classification:

Subregion (LRR): LRR-C = Mediterranean California | Lat/Long: 35^17'56.16"N, 120^47'00.66"W | Datum: NAD83

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? ☐ Yes ☒ No Are Normal Circumstances present? ☒ Yes ☐ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present?	☒ Yes	☐ No	**Is the Sample Area within a Wetland?** ☒ Yes ☐ No
Hydric Soil Present?	☒ Yes	☐ No	
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks Sample is a WET sample at culvert outflow (adjacent to Los Osos Valley Road) within Drainage W-5.a.

(2) 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.			
Total Cover:			
Herb Stratum			
1. Eleocharis macrostachya	70	YES	OBL
2. Rumex crispus	10	NO	FACW
3. Typha latifolia	5	NO	OBL
4.			
5.			
6.			
7.			
8.			
Total Cover:	85		
Woody Vine Stratum			
1.			
2.			
Total Cover:			
% Bare Ground in Herb Stratum:	15	% Cover of Biotic Crust:	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

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

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

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	75	x1=	75
FACW species	10	x2=	20
FAC species		x3=	
FACU species		x4=	
UPL Species		x5=	
Column Totals:	85 (A)		95 (B)

Prevalence Index = B/A = **1.11**

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☒ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptions[1] (Provide supporting data in remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

Types of Problematic Vegetation:

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No

Remarks: Passes Dominance Test and Prevalence Index.

(3) SOIL

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

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	10YR3/1	95	10YR5/6	5	RM	M	loam	coarse aggr inc

[1]Type: **C** = Concentration, **D** = Depletion, **RM** = Reduced [2](Loc) 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 Depresssions (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 Soils Present? ☒ Yes ☐ No

REMARKS: Hydric Indicator F3, low chroma within 95% of upper 6", and redox greater than 2" within upper 6". Sample is seasonal wetland.

(4) HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (any one indicator 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 (F8)

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)
- ☐ Thin Muck Surface (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	☐ Yes	☒ No	Depth (inches)
Water Table Present?	☐ Yes	☒ No	Depth (inches)
Saturation Present? (Includes Capillary Fringe)	☐ Yes	☒ No	Depth (inches)

Wetland Hydrology Present? ☒ Yes ☐ No

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

Remarks: Primary Hydrology Indicators B1 and B3. Secondary Hydrology Indicators B10. Sample is within a swale with no OHWM.

▫WETLAND DETERMINATION DATA FORM - Arid West Region▫
Addendum – Additional Remarks

Project/Site:	Los Osos Wastewater Project	City/County:	Los Osos/SLO Co.	Sampling Date:	05/20/08
plicant Owner:	County of San Luis Obispo	State:	CA	Sampling Point:	LOVRSW PIT1
Investigator(s):	Thomas Mullen, Karl Osmundson	Section/Township/Range:	UnSect/T30S/R11E		

SECTION	Additional Remarks
1	
2	
3	
4	
REFERENCE	**Additional Comments**
N-1	
N-2	
N-3	
N-4	
N-5	

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Los Osos Wastewater Project | City/County: Los Osos/SLO Co. | Sampling Date: 05/20/08

Applicant Owner: County of San Luis Obispo | State: CA | Sampling Point: LOVRSW PIT2

Investigator(s): Thomas Mullen, Karl Osmundson | Section/Township/Range: UnSec/T30S/R11E

Landform (hillside, terrace, fan, etc.): Roadside Swale | Local relief (concave, convex, none): Concave | Slope (%): <5

Soil Map Unit Name: Cropley clay, 2 to 9 percent slopes | NWI Classification:

Subregion (LRR): LRR-C = Mediterranean California | Lat/Long: 35^17'56.65"N, 120^47'08.25"W | Datum: NAD83

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? ☐ Yes ☒ No | Are Normal Circumstances present? ☒ Yes ☐ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present?	☒ Yes	☐ No	**Is the Sample Area within a Wetland?** ☒ Yes ☐ No
Hydric Soil Present?	☒ Yes	☐ No	
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks Sample is an WET sample (adjacent to Los Osos Valley Road) within seasonal wetland adjacent to W-4, a trib RPW to Warden Creek.

(2) 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.			
Total Cover:			
Herb Stratum			
1. Sisyrinchium bellum	50	YES	FAC
2. Rumex crispus	25	NO	FACW
3. Lolium multiflorum	10	NO	FAC
4. Melilotus officinalis	10	NO	FAC
5.			
6.			
7.			
8.			
Total Cover:	95		
Woody Vine Stratum			
1.			
2.			
Total Cover:			
% Bare Ground in Herb Stratum:	5	% Cover of Biotic Crust:	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

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

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1=	
FACW species	25	x2=	50
FAC species	70	x3=	210
FACU species		x4=	
UPL Species		x5=	
Column Totals:	**95** (A)		**260** (B)

Prevalence Index = B/A = **2.73**

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☒ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptions[1] (Provide supporting data in remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

Types of Problematic Vegetation:

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No

Remarks: Passes the Dominance Test and Prevalence Test.

(3) SOIL

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

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10YR2/1	95	5YR4/6	5	RM	RC	loam	

[1]Type: **C** = Concentration, **D** = Depletion, **RM** = Reduced

[2](**Loc**) 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 Depresssions (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 Soils Present? ☒ Yes ☐ No

REMARKS: Hydric Indicator F3 with low chroma of 95% at least 2" thick in upper 6".

(4) HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (any one indicator 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 (F8)

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)
- ☐ Thin Muck Surface (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	☐ Yes	☒ No	Depth (inches)
Water Table Present?	☐ Yes	☒ No	Depth (inches)
Saturation Present? (Includes Capillary Fringe)	☐ Yes	☒ No	Depth (inches)

Wetland Hydrology Present? ☒ Yes ☐ No

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

Remarks: Primary Hydrology Indicators B1 and B2. Secondary Indicators B10. Sample is within a roadside swale and adjacent seasonal wetland.

▫WETLAND DETERMINATION DATA FORM - Arid West Region▫
Addendum – Additional Remarks

Project/Site:	Los Osos Wastewater Project	City/County:	Los Osos/SLO Co.	Sampling Date:	05/20/08
Applicant Owner:	County of San Luis Obispo	State:	CA	Sampling Point:	LOVRSW PIT2
Investigator(s):	Thomas Mullen, Karl Osmundson	Section/Township/Range:	UnSect/T30S/R11E		

SECTION	Additional Remarks
1	
2	
3	
4	
REFERENCE	**Additional Comments**
N-1	
N-2	
N-3	
N-4	
N-5	

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 04/23/08

Applicant Owner: County of San Luis Obispo State: CA Sampling Point: T-1.a PIT1

'estigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSec/T30S/R11E

Landform (hillside, terrace, fan, etc.): Drainage Feature Local relief (concave, convex, none): Concave Slope (%): <5

Soil Map Unit Name: Cropley clay, 2 to 9 % slopes NWI Classification:

Subregion (LRR): LRR-C = Mediterranean California Lat/Long: 35^18'50.81"N, 120^46'48.14"W Datum: NAD83

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? ☐ Yes ☒ No Are Normal Circumstances present? ☒ Yes ☐ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present?	☐ Yes	☒ No	**Is the Sample Area within a Wetland?** ☐ Yes ☒ No
Hydric Soil Present?	☐ Yes	☒ No	
Wetland Hydrology Present?	☐ Yes	☒ No	

Remarks Sample is a WET sample within lower reach of T-1.a, a non-RPW tributary to the upper reach of Drainage T-1, a tributary RPW to Warden Creek.

(2) 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.			
Total Cover:			
Herb Stratum			
1. Avena fatua	50	YES	UPL
2. Picris echoides	25	NO	FAC
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	75		
Woody Vine Stratum			
1.			
2.			
Total Cover:			
% Bare Ground in Herb Stratum:	25	% Cover of Biotic Crust:	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1=	
FACW species		x2=	
FAC species	25	x3=	75
FACU species		x4=	
UPL Species	50	x5=	250
Column Totals:	75 (A)		325 (B)

Prevalence Index = B/A = **4.33**

Hydrophytic Vegetation Indicators:

☐ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptions[1] (Provide supporting data in remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

Types of Problematic Vegetation:

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Remarks: Dominance of non-hydrophytes.

(3) SOIL

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

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-20	10YR3/1	100					loam	no redox

[1]Type: **C** = Concentration, **D** = Depletion, **RM** = Reduced [2](**Loc**) 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 Depresssions (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 Soils Present? ☐ Yes ☒ No

REMARKS: No Hydric Indicators observed. Low chroma but no redox features or sign of hydric conditions.

(4) HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (any one indicator 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 (F8)

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)
- ☐ Thin Muck Surface (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	☐ Yes	☒ No	Depth (inches)
Water Table Present?	☐ Yes	☒ No	Depth (inches)
Saturation Present? (Includes Capillary Fringe)	☐ Yes	☒ No	Depth (inches)

Wetland Hydrology Present? ☐ Yes ☒ No

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

Remarks: No Hydrology Indicators. Sample is within a erosion feature and tributary to T-1 that has limited upstream reach and hydrology regime.

▫WETLAND DETERMINATION DATA FORM - Arid West Region▫
Addendum – Additional Remarks

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 04/23/08

›plicant Owner: County of San Luis Obispo State: CA Sampling Point: T-1.a PIT1

Investigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSect/T30S/R11E

SECTION	Additional Remarks
1	
2	
3	
4	
REFERENCE	**Additional Comments**
N-1	
N-2	
N-3	
N-4	
N-5	

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 04/23/08

Applicant Owner: County of San Luis Obispo State: CA Sampling Point: T-1 PIT1

Investigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSec/T30S/R11E

Landform (hillside, terrace, fan, etc.): Drainage Feature Local relief (concave, convex, none): Concave Slope (%): <5

Soil Map Unit Name: Cropley clay, 2 to 9 % slopes NWI Classification:

Subregion (LRR): LRR-C = Mediterranean California Lat/Long: 35^19'10.50"N, 120^46'43.30"W Datum: NAD83

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? ☒ Yes ☐ No Are Normal Circumstances present? ☒ Yes ☐ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present?	☒ Yes	☐ No	**Is the Sample Area within a Wetland?** ☒ Yes ☐ No
Hydric Soil Present?	☒ Yes	☐ No	
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks Sample is a WET sample within upper reach of Drainage T-1, a tributary RPW to Warden Creek.

(2) 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.			
Total Cover:			
Herb Stratum			
1. Eleocharis macrostachya	70	YES	OBL
2.			
3.			
4. Bromus diandrus	15	NO	UPL
5. Bromus hordeaceus	15	NO	UPL
6.			
7.			
8.			
Total Cover:			
Woody Vine Stratum			
1.			
2.			
Total Cover:			
% Bare Ground in Herb Stratum:		% Cover of Biotic Crust:	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

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

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	70	x1=	70
FACW species		x2=	
FAC species		x3=	
FACU species		x4=	
UPL Species	30	x5=	150
Column Totals:	100 (A)		220 (B)

Prevalence Index = B/A = 2.2

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☒ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptions[1] (Provide supporting data in remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

Types of Problematic Vegetation:

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No

Remarks: Passes Dominance Test and Prevalence Index.

(3) SOIL

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

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-14	10YR3/1	90	10YR4/6	10	RM	RC		

[1]Type: **C** = Concentration, **D** = Depletion, **RM** = Reduced [2](**Loc**) 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 Depresssions (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 Soils Present? ☒ Yes ☐ No

REMARKS: Hydric Indicator F3 with 90% of chroma 1 in excess of 2" in the upper 6" and redox.

(4) HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (any one indicator 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 (F8)

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)
- ☐ Thin Muck Surface (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	☐ Yes	☒ No	Depth (inches)	
Water Table Present?	☒ Yes	☐ No	Depth (inches)	2
Saturation Present? (Includes Capillary Fringe)	☒ Yes	☐ No	Depth (inches)	0

Wetland Hydrology Present? ☒ Yes ☐ No

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

Remarks: Primary Hydrology Indicators A2 and A3. Sample is within a wetland within the OHWM for upper reach of T-1.

▫WETLAND DETERMINATION DATA FORM - Arid West Region▫
Addendum – Additional Remarks

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 04/23/08

Applicant Owner: County of San Luis Obispo State: CA Sampling Point: T-1 PIT1

Investigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSect/T30S/R11E

SECTION	Additional Remarks
1	Vegetation is disturbed as a result of active cattle grazing.
2	
3	
4	
REFERENCE	**Additional Comments**
N-1	
N-2	
N-3	
N-4	
N-5	

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 04/23/08

Applicant Owner: County of San Luis Obispo State: CA Sampling Point: T-1 PIT2

Investigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSec/T30S/R11E

Landform (hillside, terrace, fan, etc.): Drainage Feature Local relief (concave, convex, none): Concave Slope (%): <5

Soil Map Unit Name: Cropley clay, 2 to 9 % slopes NWI Classification:

Subregion (LRR): LRR-C = Mediterranean California Lat/Long: 35^19'10.49"N, 120^46'43.60"W Datum: NAD83

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? ☒ Yes ☐ No Are Normal Circumstances present? ☒ Yes ☐ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present?	☐ Yes	☒ No	**Is the Sample Area within a Wetland?** ☐ Yes ☒ No
Hydric Soil Present?	☐ Yes	☒ No	
Wetland Hydrology Present?	☐ Yes	☒ No	

Remarks Sample is an UPL reference sample adjacent to upper reach of Drainage T-1, a tributary RPW to Warden Creek.

(2) VEGETATION

Tree Stratum (Use scientific names)	Absolute %Cover	Dominant Species	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
apling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1.			
2.			
3. Plantago erecta	20	NO	UPL
4. Bromus diandrus	40	YES	UPL
5. Bromus hordeaceus	40	YES	UPL
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			
% Bare Ground in Herb Stratum:		% Cover of Biotic Crust:	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1=	
FACW species		x2=	
FAC species		x3=	
FACU species		x4=	
UPL Species	100	x5=	500
Column Totals:	100 (A)		500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

☐ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptions[1] (Provide supporting data in remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

Types of Problematic Vegetation:

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Remarks: Dominance of non-hydrophytes.

(3) SOIL

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

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	10YR2/2	100					loam	dark clay parent
6+								shovel refusal

[1]Type: **C** = Concentration, **D** = Depletion, **RM** = Reduced [2](Loc) 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 Depresssions (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 Soils Present? ☐ Yes ☒ No

REMARKS: No Hydric Indicators observed. Parent soils of Cropley clay dark with low chroma and value. No redox features or sign of hydric conditions.

(4) HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (any one indicator 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 (F8)

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)
- ☐ Thin Muck Surface (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	☐ Yes	☒ No	Depth (inches)
Water Table Present?	☐ Yes	☒ No	Depth (inches)
Saturation Present? (Includes Capillary Fringe)	☐ Yes	☒ No	Depth (inches)

Wetland Hydrology Present? ☐ Yes ☒ No

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

Remarks: No Hydrology Indicators.

▫WETLAND DETERMINATION DATA FORM - Arid West Region▫
Addendum – Additional Remarks

Project/Site:	Los Osos Wastewater Project	City/County:	Los Osos/SLO Co.	Sampling Date:	04/23/08
plicant Owner:	County of San Luis Obispo	State:	CA	Sampling Point:	T-1 PIT2
Investigator(s):	Thomas Mullen, Karl Osmundson	Section/Township/Range:	UnSect/T30S/R11E		

SECTION	Additional Remarks
1	Vegetation is disturbed as a result of active cattle grazing.
2	
3	
4	
REFERENCE	**Additional Comments**
N-1	
N-2	
N-3	
N-4	
N-5	

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 04/23/08

Applicant Owner: County of San Luis Obispo State: CA Sampling Point: T-1 PIT4

Investigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSec/T30S/R11E

Landform (hillside, terrace, fan, etc.): Drainage Feature Local relief (concave, convex, none): Concave Slope (%): <5

Soil Map Unit Name: Cropley clay, 2 to 9 % slopes NWI Classification:

Subregion (LRR): LRR-C = Mediterranean California Lat/Long: 35^18'27.63"N, 120^46'44.08"W Datum: NAD83

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? ☐ Yes ☒ No Are Normal Circumstances present? ☒ Yes ☐ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present?	☒ Yes	☐ No	**Is the Sample Area within a Wetland?** ☒ Yes ☐ No
Hydric Soil Present?	☒ Yes	☐ No	
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks Sample is a WET sample (downstream wetland limit) within lower reach of Drainage T-1, a tributary RPW to Warden Creek.

(2) 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.			
Total Cover:			
Herb Stratum			
1.			
2. Eleocharis macrostachya	10	YES	OBL
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	10		
Woody Vine Stratum			
1.			
2.			
Total Cover:			
% Bare Ground in Herb Stratum:	90	% Cover of Biotic Crust:	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100 (A/

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x1=	10
FACW species		x2=	
FAC species		x3=	
FACU species		x4=	
UPL Species		x5=	
Column Totals:	10 (A)		10 (B)

Prevalence Index = B/A = 1.00

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☒ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptions[1] (Provide supporting data in remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

Types of Problematic Vegetation:

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No

Remarks: Passes Dominance Test and Prevalence Index.

(3) SOIL

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

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-14	G1 6/10Y	50	10YR4/6	50	RM	M	loam	

[1]Type: **C** = Concentration, **D** = Depletion, **RM** = Reduced [2](Loc) 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 Depresssions (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 Soils Present? ☒ Yes ☐ No

REMARKS: Hydric Indicator F3, with redox features starting in upper 2". Sample is wetland within OHWM.

(4) HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (any one indicator 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 (F8)

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)
- ☐ Thin Muck Surface (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	☐ Yes	☒ No	Depth (inches)
Water Table Present?	☐ Yes	☒ No	Depth (inches)
Saturation Present? (Includes Capillary Fringe)	☐ Yes	☒ No	Depth (inches)

Wetland Hydrology Present? ☒ Yes ☐ No

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

Remarks: Secondary Hydrology Indicators B1, and B10.

▫WETLAND DETERMINATION DATA FORM - Arid West Region▫
Addendum – Additional Remarks

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 04/23/08

Applicant Owner: County of San Luis Obispo State: CA Sampling Point: T-1 PIT4

Investigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSect/T30S/R11E

SECTION	Additional Remarks
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REFERENCE	**Additional Comments**
N-1	
N-2	
N-3	
N-4	
N-5	

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Los Osos Wastewater Project | City/County: Los Osos/SLO Co. | Sampling Date: 04/23/08

Applicant Owner: County of San Luis Obispo | State: CA | Sampling Point: T-1 PIT5

'estigator(s): Thomas Mullen, Karl Osmundson | Section/Township/Range: UnSec/T30S/R11E

Landform (hillside, terrace, fan, etc.): Drainage Feature | Local relief (concave, convex, none): Concave | Slope (%): <5

Soil Map Unit Name: Cropley clay, 2 to 9 % slopes | NWI Classification:

Subregion (LRR): LRR-C = Mediterranean California | Lat/Long: 35^18'24.94"N, 120^46'44.01"W | Datum: NAD83

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? ☐ Yes ☒ No Are Normal Circumstances present? ☒ Yes ☐ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present?	☒ Yes	☐ No	**Is the Sample Area within a Wetland?** ☐ Yes ☒ No
Hydric Soil Present?	☐ Yes	☒ No	
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks Sample is a WET sample within lower reach (at southern property boundary) of Drainage T-1, a tributary RPW to Warden Creek.

(2) VEGETATION

Tree Stratum (Use scientific names)	Absolute %Cover	Dominant Species	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
apling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1.			
2. Eleocharis macrostachya	10	YES	OBL
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	10		
Woody Vine Stratum			
1.			
2.			
Total Cover:			
% Bare Ground in Herb Stratum:	90	% Cover of Biotic Crust:	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

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

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x1=	10
FACW species		x2=	
FAC species		x3=	
FACU species		x4=	
UPL Species		x5=	
Column Totals:	10 (A)		10 (B)

Prevalence Index = B/A = 1.00

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☒ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptions[1] (Provide supporting data in remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

Types of Problematic Vegetation:

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No

Remarks: Passes Dominance Test and Prevalence Index.

(3) SOIL

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

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-20	10YR3/3	100					crs sand pbls	moist at 20"

[1]Type: **C** = Concentration, **D** = Depletion, **RM** = Reduced [2](**Loc**) 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 Depresssions (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 Soils Present? ☐ Yes ☒ No

REMARKS: No Hydric Indicators. Sample is high mineral sandy substrate within drainage channel.

(4) HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (any one indicator 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 (F8)

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)
- ☐ Thin Muck Surface (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	☐ Yes	☒ No	Depth (inches)
Water Table Present?	☐ Yes	☒ No	Depth (inches)
Saturation Present? (Includes Capillary Fringe)	☐ Yes	☒ No	Depth (inches)

Wetland Hydrology Present? ☒ Yes ☐ No

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

Remarks: Secondary Hydrology Indicators B1, B3, and B10.

▫WETLAND DETERMINATION DATA FORM - Arid West Region▫
Addendum – Additional Remarks

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 04/23/08

plicant Owner: County of San Luis Obispo State: CA Sampling Point: T-1 PIT5

Investigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSect/T30S/R11E

SECTION	Additional Remarks
1	
2	
3	
4	
REFERENCE	**Additional Comments**
N-1	
N-2	
N-3	
N-4	
N-5	

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Los Osos Wastewater Project | City/County: Los Osos/SLO Co. | Sampling Date: 04/23/08

Applicant Owner: County of San Luis Obispo | State: CA | Sampling Point: T-2 PIT1

Investigator(s): Thomas Mullen, Karl Osmundson | Section/Township/Range: UnSec/T30S/R11E

Landform (hillside, terrace, fan, etc.): Drainage Feature | Local relief (concave, convex, none): Concave | Slope (%): <5

Soil Map Unit Name: Cropley clay, 2 to 9 % slopes | NWI Classification:

Subregion (LRR): LRR-C = Mediterranean California | Lat/Long: 35^18'34.41"N, 120^46'31.30"W | Datum: NAD83

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? ☐ Yes ☒ No | Are Normal Circumstances present? ☒ Yes ☐ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present?	☒ Yes	☐ No	**Is the Sample Area within a Wetland?** ☒ Yes ☐ No
Hydric Soil Present?	☒ Yes	☐ No	
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks Sample is a WET sample within upper reach of Drainage T-2, a tributary RPW to Warden Creek.

(2) VEGETATION

Tree Stratum (Use scientific names)	Absolute %Cover	Dominant Species	Indicator Status
1. Salix lasiolepis	60	YES	FACW
2.			
3.			
4.			
Total Cover:	50		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Rumex crispus	10	NO	FACW
2. Eleocharis macrostachya	30	YES	OBL
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	40		
Woody Vine Stratum			
1.			
2.			
Total Cover:			
% Bare Ground in Herb Stratum:	10	% Cover of Biotic Crust:	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

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

Percent of Dominant Species That are OBL, FACW, or FAC: 50 (A/

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	30	x1=	30
FACW species	70	x2=	140
FAC species		x3=	
FACU species		x4=	
UPL Species		x5=	
Column Totals:	100 (A)		170 (B)

Prevalence Index = B/A = 1.7

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☒ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptions[1] (Provide supporting data in remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

Types of Problematic Vegetation:

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No

Remarks: Passes Dominance Test and Prevalence Index.

(3) SOIL

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

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-12	10YR5/2	60	10YR4/6	40	RM	M	loam	

[1]Type: **C** = Concentration, **D** = Depletion, **RM** = Reduced [2](**Loc**) 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 Depresssions (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 Soils Present? ☒ Yes ☐ No

REMARKS: Hydric Indicator F3, with redox features starting in upper 2". Low chroma throughout upper 6". Sample is wetland within OHWM.

(4) HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (any one indicator 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 (F8)

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)
- ☐ Thin Muck Surface (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	☐ Yes	☒ No	Depth (inches)	
Water Table Present?	☒ Yes	☐ No	Depth (inches)	2
Saturation Present? (Includes Capillary Fringe)	☒ Yes	☐ No	Depth (inches)	0

Wetland Hydrology Present? ☒ Yes ☐ No

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

Remarks: Primary Hydrology Indicators A2 and A3. Secondary Hydrology Indicators B3 and B10.

▫WETLAND DETERMINATION DATA FORM - Arid West Region▫
Addendum – Additional Remarks

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 04/23/08

Applicant Owner: County of San Luis Obispo State: CA Sampling Point: T-2 PIT1

Investigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSect/T30S/R11E

SECTION	Additional Remarks
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REFERENCE	**Additional Comments**
N-1	
N-2	
N-3	
N-4	
N-5	

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 04/23/08

Applicant Owner: County of San Luis Obispo State: CA Sampling Point: W-1 PIT7

Investigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSec/T30S/R11E

Landform (hillside, terrace, fan, etc.): Drainage Feature Local relief (concave, convex, none): Concave Slope (%): <5

Soil Map Unit Name: Concepcion loam, 5 to 9 % slopes NWI Classification:

Subregion (LRR): LRR-C = Mediterranean California Lat/Long: 35^18'36.65"N, 120^47'56.84"W Datum: NAD83

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? ☐ Yes ☒ No Are Normal Circumstances present? ☒ Yes ☐ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present?	☐ Yes	☒ No	**Is the Sample Area within a Wetland?** ☐ Yes ☒ No
Hydric Soil Present?	☐ Yes	☒ No	
Wetland Hydrology Present?	☐ Yes	☒ No	

Remarks Sample is an UPL reference sample adjacent to wetland associated with Drainage W-1, a tributary Non-RPW to Warden Creek.

(2) VEGETATION

Tree Stratum (Use scientific names)	Absolute %Cover	Dominant Species	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. Baccharis pilularis	20	YES	UPL
2.			
3.			
4.			
5.			
Total Cover:	20		
Herb Stratum			
1. Distichlis spicata	3	NO	FACW
2. Potentilla gracilis	3	NO	FACW
3. Picris echoides	4	NO	FAC
4. Bromus diandrus	5	NO	UPL
5. Bromus hordeaceus	60	YES	UPL
6.			
7.			
8.			
Total Cover:	75		
Woody Vine Stratum			
1.			
2.			
Total Cover:			
% Bare Ground in Herb Stratum:	5	% Cover of Biotic Crust:	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1=	
FACW species	6	x2=	12
FAC species	4	x3=	12
FACU species		x4=	
UPL Species	85	x5=	425
Column Totals:	95 (A)		449 (B)

Prevalence Index = B/A = **4.72**

Hydrophytic Vegetation Indicators:

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

Types of Problematic Vegetation:

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Remarks: Dominance of non-hydrophytes.

(3) SOIL

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

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2	10YR4/3	100					loam	
2-8	10YR4/3	100					loam	
8-22	10YR3/3	95	10YR4/6	5	RM	RC	loam	

[1]Type: **C** = Concentration, **D** = Depletion, **RM** = Reduced [2](**Loc**) 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 Depresssions (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 Soils Present? ☐ Yes ☒ No

REMARKS: Marginal Redox features observed at 5% in lower horizon however does not meet any Hydric Indicators.

(4) HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (any one indicator 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 (F8)

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)
- ☐ Thin Muck Surface (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	☐ Yes	☒ No	Depth (inches)
Water Table Present?	☐ Yes	☒ No	Depth (inches)
Saturation Present? (Includes Capillary Fringe)	☐ Yes	☒ No	Depth (inches)

Wetland Hydrology Present? ☐ Yes ☒ No

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

Remarks: No Hydrology Indicators. Sample is within an upland area immedaitely adjacent and outside of wetland boundary.

▫WETLAND DETERMINATION DATA FORM - Arid West Region▫
Addendum – Additional Remarks

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 04/23/08

plicant Owner: County of San Luis Obispo State: CA Sampling Point: W-1 PIT7

Investigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSect/T30S/R11E

SECTION	Additional Remarks
1	
2	
3	
4	
REFERENCE	**Additional Comments**
N-1	
N-2	
N-3	
N-4	
N-5	

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Los Osos Wastewater Project | City/County: Los Osos/SLO Co. | Sampling Date: 04/23/08

Applicant Owner: County of San Luis Obispo | State: CA | Sampling Point: W-1 PIT1

Investigator(s): Thomas Mullen, Karl Osmundson | Section/Township/Range: UnSec/T30S/R11E

Landform (hillside, terrace, fan, etc.): Drainage Feature | Local relief (concave, convex, none): Concave | Slope (%): <5

Soil Map Unit Name: Concepcion loam, 5 to 9 % slopes | NWI Classification:

Subregion (LRR): LRR-C = Mediterranean California | Lat/Long: 35^18'28.62"N, 120^48'02.35"W | Datum: NAD83

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? ☐ Yes ☒ No | Are Normal Circumstances present? ☒ Yes ☐ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present?	☐ Yes ☒ No	Is the Sample Area within a Wetland? ☐ Yes ☒ No
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks Sample is an UPL sample within upper reach of Drainage W-1, a dry ephmeral wash and tributary Non-RPW to Warden Creek.

(2) 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.			
Total Cover:			
Herb Stratum			
1. Raphanus sativus	10	NO	UPL
2. Brassica rapa	15	YES	UPL
3. Conium maculatum	15	YES	FACW
4. Bromus diandrus	20	YES	UPL
5. Chamomilla suaveolens	5	NO	FACU
6. Vicia sativa	10	NO	FACU
7.			
8.			
Total Cover:			
Woody Vine Stratum			
1.			
2.			
Total Cover:			
% Bare Ground in Herb Stratum: 25		% Cover of Biotic Crust:	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 33 (A/

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1=	
FACW species	15	x2=	30
FAC species		x3=	
FACU species	15	x4=	60
UPL Species	45	x5=	235
Column Totals:	75 (A)		325 (B)

Prevalence Index = B/A = 4.3

Hydrophytic Vegetation Indicators:

☐ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptions[1] (Provide supporting data in remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

Types of Problematic Vegetation:

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Remarks: Dominance of non-hydrophytes.

(3) SOIL

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

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-14	10YR3/3	100					loam	

[1]Type: **C** = Concentration, **D** = Depletion, **RM** = Reduced [2](**Loc**) 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 Depresssions (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: N/A

Depth (inches): N/A

Hydric Soils Present? ☐ Yes ☒ No

REMARKS: Predominance of non-hydric loam soil. Typical of non-wetland conditions and adjacent upland areas.

(4) HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (any one indicator 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 (F8)

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)
- ☐ Thin Muck Surface (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	☐ Yes	☒ No	Depth (inches)
Water Table Present?	☐ Yes	☒ No	Depth (inches)
Saturation Present? (Includes Capillary Fringe)	☐ Yes	☒ No	Depth (inches)

Wetland Hydrology Present? ☐ Yes ☒ No

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

Remarks: The sample location is within the bed of a dry ephemeral wash with a discernable OHWM at 2' wide, and streambed and bank at 2' wide.

▫WETLAND DETERMINATION DATA FORM - Arid West Region▫
Addendum – Additional Remarks

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 04/23/08

Applicant Owner: County of San Luis Obispo State: CA Sampling Point: W-1 PIT1

Investigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSect/T30S/R11E

SECTION	Additional Remarks
1	
2	
3	
4	
REFERENCE	**Additional Comments**
N-1	
N-2	
N-3	
N-4	
N-5	

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Los Osos Wastewater Project | City/County: Los Osos/SLO Co. | Sampling Date: 04/23/08

Applicant Owner: County of San Luis Obispo | State: CA | Sampling Point: W-1 PIT2

Investigator(s): Thomas Mullen, Karl Osmundson | Section/Township/Range: UnSec/T30S/R11E

Landform (hillside, terrace, fan, etc.): Drainage Feature | Local relief (concave, convex, none): Concave | Slope (%): <5

Soil Map Unit Name: Concepcion loam, 5 to 9 % slopes | NWI Classification:

Subregion (LRR): LRR-C = Mediterranean California | Lat/Long: 35^18'33.70"N, 120^47'56.03"W | Datum: NAD83

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? ☐ Yes ☒ No | Are Normal Circumstances present? ☒ Yes ☐ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present?	☐ Yes	☒ No	**Is the Sample Area within a Wetland?** ☐ Yes ☒ No
Hydric Soil Present?	☐ Yes	☒ No	
Wetland Hydrology Present?	☐ Yes	☒ No	

Remarks Sample is a WET sample within middle reach of Drainage W-1, a dry ephmeral wash and tributary Non-RPW to Warden Creek.

(2) VEGETATION

Tree Stratum (Use scientific names)	Absolute %Cover	Dominant Species	Indicator Status
1. Salix lasiolepis	30	YES	FACW
2.			
3.			
4.			
Total Cover:	30		
Sapling/Shrub Stratum			
1. Baccharis pilularis	5	YES	UPL
2.			
3.			
4.			
5.			
Total Cover:	5		
Herb Stratum			
1. Plantago lanceolata	5	NO	FAC
2. Vicia sativa	5	NO	FACU
3. Bromus hordeaceus	20	YES	UPL
4. Avena fatua	5	NO	UPL
5.			
6.			
7.			
8.			
Total Cover:	35		
Woody Vine Stratum			
1.			
2.			
Total Cover:			
% Bare Ground in Herb Stratum:	30	% Cover of Biotic Crust:	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1=	
FACW species	30	x2=	60
FAC species	5	x3=	15
FACU species	5	x4=	20
UPL Species	30	x5=	150
Column Totals:	70 (A)		245 (B)

Prevalence Index = B/A = 3.5

Hydrophytic Vegetation Indicators:

☐ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptions[1] (Provide supporting data in remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

Types of Problematic Vegetation:

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Remarks: Dominance of non-hydrophytes.

(3) SOIL

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

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	10YR3/4	100					sandy loam	
6-10	10YR3/4	100					sandy loam	
10-20	10YR3/3	100					clay loam	

[1]Type: **C** = Concentration, **D** = Depletion, **RM** = Reduced [2](Loc) 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 Depresssions (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: N/A

Depth (inches): N/A

Hydric Soils Present? ☐ Yes ☒ No

REMARKS: Predominance of non-hydric sandy loam soil. No redox features observed.

(4) HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (any one indicator 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 (F8)

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)
- ☐ Thin Muck Surface (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	☐ Yes	☒ No	Depth (inches)
Water Table Present?	☐ Yes	☒ No	Depth (inches)
Saturation Present? (Includes Capillary Fringe)	☐ Yes	☒ No	Depth (inches)

Wetland Hydrology Present? ☒ Yes ☐ No

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

Remarks: Hydrology Indicators B1, B2, and B3 observed. The sample location is within the bed of a dry ephemeral wash with a discernable OHWM at 3' wide, and streambed and bank/riparian at 25'+ wide.

▫WETLAND DETERMINATION DATA FORM - Arid West Region▫
Addendum – Additional Remarks

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 04/23/08

plicant Owner: County of San Luis Obispo State: CA Sampling Point: W-1 PIT2

Investigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSect/T30S/R11E

SECTION	Additional Remarks
1	
2	
3	
4	
REFERENCE	**Additional Comments**
N-1	
N-2	
N-3	
N-4	
N-5	

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 04/23/08

Applicant Owner: County of San Luis Obispo State: CA Sampling Point: W-1 PIT3

Investigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSec/T30S/R11E

Landform (hillside, terrace, fan, etc.): Drainage Feature Local relief (concave, convex, none): Concave Slope (%): <5

Soil Map Unit Name: Concepcion loam, 5 to 9 % slopes NWI Classification:

Subregion (LRR): LRR-C = Mediterranean California Lat/Long: 35^18'33.78"N, 120^47'55.85"W Datum: NAD83

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? ☐ Yes ☒ No Are Normal Circumstances present? ☒ Yes ☐ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present?	☐ Yes ☒ No	**Is the Sample Area within a Wetland?** ☐ Yes ☒ No
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks Sample is a UPL reference sample adjacent to the middle reach of Drainage W-1, a dry ephmeral wash and tributary Non-RPW to Warden Creek.

(2) 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.			
Total Cover:			
Herb Stratum			
1. Plantago lanceolata	10	NO	FAC
2. Vicia sativa	10	NO	FACU
3. Bromus diandrus	50	YES	UPL
4. Avena fatua	20	YES	UPL
5. Erodium cicutarium	10	NO	UPL
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			
% Bare Ground in Herb Stratum:		% Cover of Biotic Crust:	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1=	
FACW species		x2=	
FAC species	10	x3=	30
FACU species	10	x4=	40
UPL Species	80	x5=	400
Column Totals:	100 (A)		470 (B)

Prevalence Index = B/A = 4.7

Hydrophytic Vegetation Indicators:

☐ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptions[1] (Provide supporting data in remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

Types of Problematic Vegetation:

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Remarks: Dominance of non-hydrophytes.

(3) SOIL

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

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-14	10YR5/4	100					sandy loam	

[1]Type: **C** = Concentration, **D** = Depletion, **RM** = Reduced [2](Loc) 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 Depresssions (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: N/A

Depth (inches): N/A

Hydric Soils Present? ☐ Yes ☒ No

REMARKS: Predominance of non-hydric sandy loam soil typical of adjacent upland areas. No redox features observed.

(4) HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (any one indicator 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 (F8)

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)
- ☐ Thin Muck Surface (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	☐ Yes	☒ No	Depth (inches)
Water Table Present?	☐ Yes	☒ No	Depth (inches)
Saturation Present? (Includes Capillary Fringe)	☐ Yes	☒ No	Depth (inches)

Wetland Hydrology Present? ☐ Yes ☒ No

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

Remarks: The sample location is an upland reference point at apex margin of eastern bank of middle reach of Drainage W-1. The sample is outside the OHWM and streambed and bank.

▫WETLAND DETERMINATION DATA FORM - Arid West Region▫
Addendum – Additional Remarks

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 04/23/08

Applicant Owner: County of San Luis Obispo State: CA Sampling Point: W-1 PIT3

Investigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSect/T30S/R11E

SECTION	Additional Remarks
1	
2	
3	
4	
REFERENCE	**Additional Comments**
N-1	
N-2	
N-3	
N-4	
N-5	

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Los Osos Wastewater Project | City/County: Los Osos/SLO Co. | Sampling Date: 04/23/08

Applicant Owner: County of San Luis Obispo | State: CA | Sampling Point: W-1 PIT4

/estigator(s): Thomas Mullen, Karl Osmundson | Section/Township/Range: UnSec/T30S/R11E

Landform (hillside, terrace, fan, etc.): Drainage Feature | Local relief (concave, convex, none): Concave | Slope (%): <5

Soil Map Unit Name: Concepcion loam, 5 to 9 % slopes | NWI Classification:

Subregion (LRR): LRR-C = Mediterranean California | Lat/Long: 35^18'34.15"N, 120^47'56.10"W | Datum: NAD83

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? ☐ Yes ☒ No Are Normal Circumstances present? ☒ Yes ☐ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present?	☒ Yes	☐ No	**Is the Sample Area within a Wetland?** ☒ Yes ☐ No
Hydric Soil Present?	☒ Yes	☐ No	
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks Sample is a WET sample within middle reach and riparian canopy of Drainage W-1, a tributary Non-RPW to Warden Creek.

(2) VEGETATION

Tree Stratum (Use scientific names)	Absolute %Cover	Dominant Species	Indicator Status
1. Salix lasiolepis	75	YES	FACW
2. Quercus agrifolia	5	NO	UPL
3.			
4.			
Total Cover:	80		

apling/Shrub Stratum			
1. Heteromeles arbutifolia	5	YES	UPL
2.			
3.			
4.			
5.			
Total Cover:	5		

Herb Stratum			
1. Claytonia perfoliata	5	YES	FAC
2. Bromus diandrus	5	YES	UPL
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	10		

Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum: 5 | % Cover of Biotic Crust:

Dominance Test Worksheet:

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

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

Percent of Dominant Species That are OBL, FACW, or FAC: **40** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1=	
FACW species	75	x2=	150
FAC species	5	x3=	15
FACU species		x4=	
UPL Species	15	x5=	75
Column Totals:	**95** (A)		**240** (B)

Prevalence Index = B/A = **2.5**

Hydrophytic Vegetation Indicators:

- ☐ Dominance Test is >50%
- ☒ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptions[1] (Provide supporting data in remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

Types of Problematic Vegetation:

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No

Remarks: Passes the Prevalence Test.

(3) SOIL

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

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2	10YR3/6	100					fine sand	
2-12	10YR2/2	65	10YR5/6	35	RM	RC	sandy loam	pbl/cobl incl
12+								shovel refusal

[1]Type: **C** = Concentration, **D** = Depletion, **RM** = Reduced [2](**Loc**) 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 Depresssions (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: coblble/clay conglomerate

Depth (inches): 12

Hydric Soils Present? ☒ Yes ☐ No

REMARKS: Hydric Indicator F3 demarcating wetland boundary.

(4) HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (any one indicator 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 (F8)

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)
- ☐ Thin Muck Surface (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	☐ Yes	☒ No	Depth (inches)
Water Table Present?	☐ Yes	☒ No	Depth (inches)
Saturation Present? (Includes Capillary Fringe)	☐ Yes	☒ No	Depth (inches)

Wetland Hydrology Present? ☒ Yes ☐ No

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

Remarks: Primary Hydrology Indicators B9, Secondary Hydrology Indicators B1, B2, B3. Wetland within OHWM of 6'. Streambed/riparian width at 25'+.

▫WETLAND DETERMINATION DATA FORM - Arid West Region▫
Addendum – Additional Remarks

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 04/23/08

Applicant Owner: County of San Luis Obispo State: CA Sampling Point: W-1 PIT4

Investigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSect/T30S/R11E

SECTION	Additional Remarks
1	
2	
3	
4	
REFERENCE	**Additional Comments**
N-1	
N-2	
N-3	
N-4	
N-5	

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Los Osos Wastewater Project | City/County: Los Osos/SLO Co. | Sampling Date: 04/23/08

Applicant Owner: County of San Luis Obispo | State: CA | Sampling Point: W-1 PIT5

Investigator(s): Thomas Mullen, Karl Osmundson | Section/Township/Range: UnSec/T30S/R11E

Landform (hillside, terrace, fan, etc.): Drainage Feature | Local relief (concave, convex, none): Concave | Slope (%): <5

Soil Map Unit Name: Concepcion loam, 5 to 9 % slopes | NWI Classification:

Subregion (LRR): LRR-C = Mediterranean California | Lat/Long: 35^18'34.35"N, 120^47'56.40"W | Datum: NAD83

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? ☒ Yes ☐ No Are Normal Circumstances present? ☒ Yes ☐ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present?	☒ Yes	☐ No	**Is the Sample Area within a Wetland?** ☐ Yes ☒ No
Hydric Soil Present?	☐ Yes	☒ No	
Wetland Hydrology Present?	☐ Yes	☒ No	

Remarks Sample is an UPL reference sample adjacent to middle reach and riparian canopy of Drainage W-1, a tributary Non-RPW to Warden Creek.

(2) VEGETATION

Tree Stratum (Use scientific names)	Absolute %Cover	Dominant Species	Indicator Status
1. Salix lasiolepis	50	YES	FACW
2.			
3.			
4.			
Total Cover:	50		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Anagallis arvensis	2	NO	FAC
2. Bromus diandrus	5	YES	UPL
3. Chamomilla suaveolens	3	NO	FACU
4.			
5.			
6.			
7.			
8.			
Total Cover:	10		
Woody Vine Stratum			
1.			
2.			
Total Cover:			
% Bare Ground in Herb Stratum:	40	% Cover of Biotic Crust:	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

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

Percent of Dominant Species That are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1=	
FACW species	50	x2=	100
FAC species	2	x3=	5
FACU species	3	x4=	12
UPL Species	5	x5=	25
Column Totals:	60 (A)		142 (B)

Prevalence Index = B/A = 2.36

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☒ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptions[1] (Provide supporting data in remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

Types of Problematic Vegetation:

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No

Remarks: Passes the Dominance Test and Prevalence Test.

(3) SOIL

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

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10YR3/2	100					loam	

[1]Type: **C** = Concentration, **D** = Depletion, **RM** = Reduced [2](Loc) 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 Depresssions (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 Soils Present? ☐ Yes ☒ No

REMARKS: No Redox or Hydric Indicators. Soil typical of upland areas adjacent to drainage feature.

(4) HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (any one indicator 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 (F8)

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)
- ☐ Thin Muck Surface (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	☐ Yes	☒ No	Depth (inches)
Water Table Present?	☐ Yes	☒ No	Depth (inches)
Saturation Present? (Includes Capillary Fringe)	☐ Yes	☒ No	Depth (inches)

Wetland Hydrology Present? ☐ Yes ☒ No

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

Remarks: No Hydrology Indicators. Sample is outside of OHWM and riparian canopy of Drainge W-1.

▫WETLAND DETERMINATION DATA FORM - Arid West Region▫
Addendum – Additional Remarks

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 04/23/08

Applicant Owner: County of San Luis Obispo State: CA Sampling Point: W-1 PIT5

Investigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSect/T30S/R11E

SECTION	Additional Remarks
1	Soils disturbed as a result of recent disking.
2	
3	
4	
REFERENCE	**Additional Comments**
N-1	
N-2	
N-3	
N-4	
N-5	

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Los Osos Wastewater Project | City/County: Los Osos/SLO Co. | Sampling Date: 04/23/08

Applicant Owner: County of San Luis Obispo | State: CA | Sampling Point: W-1 PIT6

estigator(s): Thomas Mullen, Karl Osmundson | Section/Township/Range: UnSec/T30S/R11E

Landform (hillside, terrace, fan, etc.): Drainage Feature | Local relief (concave, convex, none): Concave | Slope (%): <5

Soil Map Unit Name: Concepcion loam, 5 to 9 % slopes | NWI Classification:

Subregion (LRR): LRR-C = Mediterranean California | Lat/Long: 35^18'36.57"N, 120^47'56.53"W | Datum: NAD83

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? ☐ Yes ☒ No Are Normal Circumstances present? ☒ Yes ☐ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present?	☐ Yes	☐ No	**Is the Sample Area within a Wetland?** ☒ Yes ☐ No
Hydric Soil Present?	☒ Yes	☐ No	
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks Sample is a WET sample adjacent and outside OHWM and riparian canopy of middle reach Drainage W-1, a tributary Non-RPW to Warden Creek.

(2) 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.			
Total Cover:			
Herb Stratum			
1. Distichlis spicata	60	YES	FACW
2. Potentilla gracilis	40	NO	FACW
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum: | % Cover of Biotic Crust:

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

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

Percent of Dominant Species That are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1=	
FACW species	100	x2=	200
FAC species		x3=	
FACU species		x4=	
UPL Species		x5=	
Column Totals:	100 (A)		200 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☒ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptions[1] (Provide supporting data in remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

Types of Problematic Vegetation:

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No

Remarks:

(3) SOIL

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

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-20	G1 2.5/10	100					loam	

[1]Type: **C** = Concentration, **D** = Depletion, **RM** = Reduced [2](**Loc**) 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 Depresssions (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 Soils Present? ☒ Yes ☐ No

REMARKS: Hydric Indicator A4 and completely depleted gleyed matrix.

(4) HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (any one indicator 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 (F8)

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)
- ☐ Thin Muck Surface (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	☐ Yes	☒ No	Depth (inches)	
Water Table Present?	☒ Yes	☐ No	Depth (inches)	2
Saturation Present? (Includes Capillary Fringe)	☒ Yes	☐ No	Depth (inches)	0

Wetland Hydrology Present? ☒ Yes ☐ No

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

Remarks: Primary Hydrology Indicators A2 and A3. Sample is wetland adjacent and outside the OHWM and riparian canopy of an RPW.

▫WETLAND DETERMINATION DATA FORM - Arid West Region▫
Addendum – Additional Remarks

Project/Site:	Los Osos Wastewater Project	City/County:	Los Osos/SLO Co.	Sampling Date:	04/23/08
plicant Owner:	County of San Luis Obispo	State:	CA	Sampling Point:	W-1 PIT6
Investigator(s):	Thomas Mullen, Karl Osmundson	Section/Township/Range:	UnSect/T30S/R11E		

SECTION	Additional Remarks
1	
2	
3	
4	
REFERENCE	**Additional Comments**
N-1	
N-2	
N-3	
N-4	
N-5	

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 04/23/08

Applicant Owner: County of San Luis Obispo State: CA Sampling Point: W-2 PIT1

Investigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSec/T30S/R11E

Landform (hillside, terrace, fan, etc.): Drainage Feature Local relief (concave, convex, none): Concave Slope (%): <5

Soil Map Unit Name: Concepcion loam, 5 to 9 % slopes NWI Classification:

Subregion (LRR): LRR-C = Mediterranean California Lat/Long: 35^18'34.45"N, 120^48'02.78"W Datum: NAD83

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? ☐ Yes ☒ No Are Normal Circumstances present? ☒ Yes ☐ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present?	☐ Yes	☒ No	**Is the Sample Area within a Wetland?** ☐ Yes ☒ No
Hydric Soil Present?	☐ Yes	☒ No	
Wetland Hydrology Present?	☐ Yes	☒ No	

Remarks Sample is an UPL sample within upper reach of Drainage W-2, a dry ephmeral wash and tributary Non-RPW to Warden Creek.

(2) 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.			
Total Cover:			
Herb Stratum			
1. Raphanus sativus	10	NO	UPL
2. Brassica rapa	15	YES	UPL
3. Conium maculatum	15	YES	FACW
4. Bromus diandrus	20	YES	UPL
5. Chamomilla suaveolens	5	NO	FACU
6. Vicia sativa	10	NO	FACU
7.			
8.			
Total Cover:			
Woody Vine Stratum			
1.			
2.			
Total Cover:			
% Bare Ground in Herb Stratum:	25	% Cover of Biotic Crust:	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **33** (A/

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1=	
FACW species	15	x2=	30
FAC species		x3=	
FACU species	15	x4=	60
UPL Species	45	x5=	235
Column Totals:	**75** (A)		**325** (B)

Prevalence Index = B/A = **4.3**

Hydrophytic Vegetation Indicators:

☐ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptions[1] (Provide supporting data in remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

Types of Problematic Vegetation:

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Remarks: Dominance of non-hydrophytes.

(3) SOIL

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

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-12	10YR3/1	100					loam	

[1]Type: **C** = Concentration, **D** = Depletion, **RM** = Reduced [2](**Loc**) 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 Depresssions (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: N/A

Depth (inches): N/A

Hydric Soils Present? ☐ Yes ☒ No

REMARKS: Predominance of non-hydric loam soil. Typical of non-wetland conditions and adjacent upland areas.

(4) HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (any one indicator 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 (F8)

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)
- ☐ Thin Muck Surface (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	☐ Yes	☒ No	Depth (inches)
Water Table Present?	☐ Yes	☒ No	Depth (inches)
Saturation Present? (Includes Capillary Fringe)	☐ Yes	☒ No	Depth (inches)

Wetland Hydrology Present? ☐ Yes ☒ No

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

Remarks: The sample location is within the bed of a dry ephemeral wash with a discernable OHWM at 2' wide, and streambed and bank at 2' wide.

▫WETLAND DETERMINATION DATA FORM - Arid West Region▫
Addendum – Additional Remarks

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 04/23/08

Applicant Owner: County of San Luis Obispo State: CA Sampling Point: W-2 PIT1

Investigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSect/T30S/R11E

SECTION	Additional Remarks
1	
2	
3	
4	
REFERENCE	**Additional Comments**
N-1	
N-2	
N-3	
N-4	
N-5	

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Los Osos Wastewater Project | City/County: Los Osos/SLO Co. | Sampling Date: 05/20/08

Applicant Owner: County of San Luis Obispo | State: CA | Sampling Point: W-3 PIT1

Investigator(s): Thomas Mullen, Karl Osmundson | Section/Township/Range: UnSec/T30S/R11E

Landform (hillside, terrace, fan, etc.): Drainage Feature | Local relief (concave, convex, none): Concave | Slope (%): <5

Soil Map Unit Name: Cropley clay, 0 to 2 percent slopes | NWI Classification:

Subregion (LRR): LRR-C = Mediterranean California | Lat/Long: 35^18'00.73"N, 120^47'20.94"W | Datum: NAD83

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? ☐ Yes ☒ No Are Normal Circumstances present? ☒ Yes ☐ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present?	☒ Yes	☐ No	**Is the Sample Area within a Wetland?** ☐ Yes ☒ No
Hydric Soil Present?	☐ Yes	☒ No	
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks Sample is an WET sample (adjacent to Los Osos Valley Road) within culvert outfall and within Drainage W-3, a tributary RPW to Warden Creek.

(2) VEGETATION

Tree Stratum (Use scientific names)	Absolute %Cover	Dominant Species	Indicator Status
1. Salix lasiolepis	10	YES	FACW
2.			
3.			
4.			
Total Cover:	10		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Feoniculum vulgare	5	NO	FACU
2. Conium maculatum	5	NO	FACW
3. Artemisia douglasiana	10	YES	FACW
4.			
5.			
6.			
7.			
8.			
Total Cover:	20		
Woody Vine Stratum			
1.			
2.			
Total Cover:			
% Bare Ground in Herb Stratum:	70	% Cover of Biotic Crust:	

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		x1=	
FACW species	25	x2=	50
FAC species		x3=	
FACU species	5	x4=	20
UPL Species		x5=	
Column Totals:	30 (A)		70 (B)

Prevalence Index = B/A = 2.3

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☒ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptions[1] (Provide supporting data in remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

Types of Problematic Vegetation:

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No

Remarks: Passes the Dominance Test and Prevalence Test.

(3) SOIL

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

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10YR3/2	100					coarse sand	

[1]Type: **C** = Concentration, **D** = Depletion, **RM** = Reduced [2](Loc) 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 Depresssions (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 Soils Present? ☐ Yes ☒ No

REMARKS: Coarse sandy alluvium. Sample within active channel of Drainage W-3.

(4) HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (any one indicator 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 (F8)

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)
- ☐ Thin Muck Surface (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	☐ Yes	☒ No	Depth (inches)
Water Table Present?	☐ Yes	☒ No	Depth (inches)
Saturation Present? (Includes Capillary Fringe)	☐ Yes	☒ No	Depth (inches)

Wetland Hydrology Present? ☒ Yes ☐ No

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

Remarks: Primary Hydrology Indicators B1. Secondary Indicators B2 and B10.

▫WETLAND DETERMINATION DATA FORM - Arid West Region▫
Addendum – Additional Remarks

Project/Site:	Los Osos Wastewater Project	City/County:	Los Osos/SLO Co.	Sampling Date:	05/20/08
,pplicant Owner:	County of San Luis Obispo	State:	CA	Sampling Point:	W-3 PIT1
Investigator(s):	Thomas Mullen, Karl Osmundson	Section/Township/Range:	UnSect/T30S/R11E		

SECTION	Additional Remarks
1	
2	
3	
4	
REFERENCE	**Additional Comments**
N-1	
N-2	
N-3	
N-4	
N-5	

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Los Osos Wastewater Project | City/County: Los Osos/SLO Co. | Sampling Date: 05/20/08

Applicant Owner: County of San Luis Obispo | State: CA | Sampling Point: W-5.a PIT1

Investigator(s): Thomas Mullen, Karl Osmundson | Section/Township/Range: UnSec/T30S/R11E

Landform (hillside, terrace, fan, etc.): Roadside Swale | Local relief (concave, convex, none): Concave | Slope (%): <5

Soil Map Unit Name: Cropley clay, 2 to 9 percent slopes | NWI Classification:

Subregion (LRR): LRR-C = Mediterranean California | Lat/Long: 35^17'56.16"N, 120^47'00.66"W | Datum: NAD83

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? ☐ Yes ☒ No | Are Normal Circumstances present? ☒ Yes ☐ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? ☐ Yes ☒ No | (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sample Area within a Wetland?** ☒ Yes ☐ No
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks Sample is a WET sample at culvert outflow (adjacent to Los Osos Valley Road) within Drainage W-5.a.

(2) VEGETATION

Tree Stratum (Use scientific names)	Absolute %Cover	Dominant Species	Indicator Status
1. Salix lasiolepis	25	YES	FACW
2. Populus fremontii	10	NO	FACW
3.			
4.			
Total Cover:	35		
Sapling/Shrub Stratum			
1. Baccharis pilularis	10	YES	UPL
2.			
3.			
4.			
5.			
Total Cover:	10		
Herb Stratum			
1. Artemisia douglasiana	20	YES	FACW
2. Rumex crispus	5	NO	FACW
3. Lolium multiflorum	10	NO	FAC
4. Foeniculum vulgare	5	NO	FACU
5.			
6.			
7.			
8.			
Total Cover:	40		
Woody Vine Stratum			
1.			
2.			
Total Cover:			
% Bare Ground in Herb Stratum:	15	% Cover of Biotic Crust:	

Dominance Test Worksheet:

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

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 66 (A/

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1=	
FACW species	60	x2=	120
FAC species	10	x3=	30
FACU species	5	x4=	20
UPL Species	10	x5=	50
Column Totals:	85 (A)		220 (B)

Prevalence Index = B/A = 2.58

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☒ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptions[1] (Provide supporting data in remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

Types of Problematic Vegetation:

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No

Remarks: Passes Dominance Test and Prevalence Index.

(3) SOIL

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

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-4	none						very crs sand	no reading
4-10	10YR3/1	60	10YR5/6	40	D	M	loam	
10-18	10YR3/3	100					sandy loam	

[1]Type: **C** = Concentration, **D** = Depletion, **RM** = Reduced [2](**Loc**) 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 Depresssions (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 Soils Present? ☒ Yes ☐ No

REMARKS: Hydric Indicator F3, low chroma of 60% at least 6" within upper 10", with redox.

(4) HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (any one indicator 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 (F8)

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)
- ☐ Thin Muck Surface (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	☐ Yes	☒ No	Depth (inches)
Water Table Present?	☐ Yes	☒ No	Depth (inches)
Saturation Present? (Includes Capillary Fringe)	☐ Yes	☒ No	Depth (inches)

Wetland Hydrology Present? ☒ Yes ☐ No

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

Remarks: Primary Hydrology Indicators B1 and B2. Secondary Hydrology Indicators B3 and B10. Sample is within OHWM of Drainage W-5.a.

▫WETLAND DETERMINATION DATA FORM - Arid West Region▫
Addendum – Additional Remarks

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 05/20/08

Applicant Owner: County of San Luis Obispo State: CA Sampling Point: W-5.a PIT1

Investigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSect/T30S/R11E

SECTION	Additional Remarks
1	
2	
3	
4	
REFERENCE	**Additional Comments**
N-1	
N-2	
N-3	
N-4	
N-5	

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Los Osos Wastewater Project | City/County: Los Osos/SLO Co. | Sampling Date: 05/20/08

Applicant Owner: County of San Luis Obispo | State: CA | Sampling Point: W-5.a PIT2

Investigator(s): Thomas Mullen, Karl Osmundson | Section/Township/Range: UnSec/T30S/R11E

Landform (hillside, terrace, fan, etc.): Roadside Swale | Local relief (concave, convex, none): Concave | Slope (%): <5

Soil Map Unit Name: Cropley clay, 2 to 9 percent slopes | NWI Classification:

Subregion (LRR): LRR-C = Mediterranean California | Lat/Long: 35^17'55.99"N, 120^47'00.41"W | Datum: NAD83

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? ☐ Yes ☒ No | Are Normal Circumstances present? ☒ Yes ☐ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present?	☐ Yes	☒ No	**Is the Sample Area within a Wetland?** ☐ Yes ☒ No
Hydric Soil Present?	☐ Yes	☒ No	
Wetland Hydrology Present?	☐ Yes	☒ No	

Remarks Sample is an UPL sample (adjacent to Los Osos Valley Road) outside of OHWM for Drainage W-5.a.

(2) VEGETATION

Tree Stratum (Use scientific names)	Absolute %Cover	Dominant Species	Indicator Status
1.			
2. Populus fremontii	10	YES	FACW
3.			
4.			
Total Cover:	**10**		

Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum			
1. Artemisia douglasiana	10	NO	FACW
2. Avena fatua	30	YES	UPL
3. Bromus hordaeceous	30	YES	UPL
4. Brassica rapa	10	NO	UPL
5. Equisetum hyemale	10	NO	FACW
6.			
7.			
8.			
Total Cover:	**90**		

Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum: | % Cover of Biotic Crust:

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **33** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1=	
FACW species	30	x2=	60
FAC species		x3=	
FACU species		x4=	
UPL Species	70	x5=	350
Column Totals:	**100** (A)		**410** (B)

Prevalence Index = B/A = **4.10**

Hydrophytic Vegetation Indicators:

☐ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptions[1] (Provide supporting data in remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

Types of Problematic Vegetation:

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Remarks: Dominance of non-hydrophytes.

(3) SOIL

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

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10YR3/3	100					loamy sand	

[1]Type: **C** = Concentration, **D** = Depletion, **RM** = Reduced [2](**Loc**) 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 Depresssions (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 Soils Present? ☐ Yes ☒ No

REMARKS: Non-hydric upland soils.

(4) HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (any one indicator 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 (F8)

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)
- ☐ Thin Muck Surface (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	☐ Yes	☒ No	Depth (inches)
Water Table Present?	☐ Yes	☒ No	Depth (inches)
Saturation Present? (Includes Capillary Fringe)	☐ Yes	☒ No	Depth (inches)

Wetland Hydrology Present? ☐ Yes ☒ No

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

Remarks: Sample is outside of OHWM and streambed and bank of Drainage W-5.a

▫WETLAND DETERMINATION DATA FORM - Arid West Region▫
Addendum – Additional Remarks

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 05/20/08

Applicant Owner: County of San Luis Obispo State: CA Sampling Point: W-5.a PIT1

Investigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSect/T30S/R11E

SECTION	Additional Remarks
1	
2	
3	
4	
REFERENCE	**Additional Comments**
N-1	
N-2	
N-3	
N-4	
N-5	

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Los Osos Wastewater Project | City/County: Los Osos/SLO Co. | Sampling Date: 04/23/08

Applicant Owner: County of San Luis Obispo | State: CA | Sampling Point: WCW PIT1

Investigator(s): Thomas Mullen, Karl Osmundson | Section/Township/Range: UnSec/T30S/R11E

Landform (hillside, terrace, fan, etc.): Drainage Feature | Local relief (concave, convex, none): Concave | Slope (%): <5

Soil Map Unit Name: Concepcion loam, 5 to 9 % slopes | NWI Classification:

Subregion (LRR): LRR-C = Mediterranean California | Lat/Long: 35^18'35.76"N, 120^47'49.85"W | Datum: NAD83

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? ☐ Yes ☒ No | Are Normal Circumstances present? ☒ Yes ☐ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present?	☒ Yes	☐ No	**Is the Sample Area within a Wetland?** ☒ Yes ☐ No
Hydric Soil Present?	☒ Yes	☐ No	
Wetland Hydrology Present?	☒ Yes	☐ No	

Remarks Sample is an WET sample at wetland boundary for Warden Creek Wetlands, a large contiguous wetland with the RPW Warden Creek.

(2) 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.			
Total Cover:			
Herb Stratum			
1. Distichlis spicata	10	NO	FACW
2. Potentilla gracilis	60	YES	FACW
3. Picris echoides	25	NO	FAC
4.			
5.			
6.			
7.			
8.			
Total Cover:	95		
Woody Vine Stratum			
1.			
2.			
Total Cover:			
% Bare Ground in Herb Stratum:	5	% Cover of Biotic Crust:	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100 (A/

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1=	
FACW species	70	x2=	140
FAC species	25	x3=	75
FACU species		x4=	
UPL Species		x5=	
Column Totals:	95 (A)		215 (B)

Prevalence Index = B/A = **2.26**

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☒ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptions[1] (Provide supporting data in remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

Types of Problematic Vegetation:

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No

Remarks:

(3) SOIL

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

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-24	10YR3/1	95	10YR3/6	5	RM	RC	loam	

[1]Type: **C** = Concentration, **D** = Depletion, **RM** = Reduced [2](**Loc**) 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 Depresssions (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 Soils Present? ☒ Yes ☐ No

REMARKS: Marginal Hydric Indicator F8.

(4) HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (any one indicator 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 (F8)

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)
- ☐ Thin Muck Surface (C2)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	☐ Yes	☒ No	Depth (inches)
Water Table Present?	☐ Yes	☒ No	Depth (inches)
Saturation Present? (Includes Capillary Fringe)	☐ Yes	☒ No	Depth (inches)

Wetland Hydrology Present? ☒ Yes ☐ No

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

Remarks: Secondary Hydrology Indicators B10 and C9.

▫WETLAND DETERMINATION DATA FORM - Arid West Region▫
Addendum – Additional Remarks

Project/Site: Los Osos Wastewater Project City/County: Los Osos/SLO Co. Sampling Date: 04/23/08

Applicant Owner: County of San Luis Obispo State: CA Sampling Point: W-1 PIT7

Investigator(s): Thomas Mullen, Karl Osmundson Section/Township/Range: UnSect/T30S/R11E

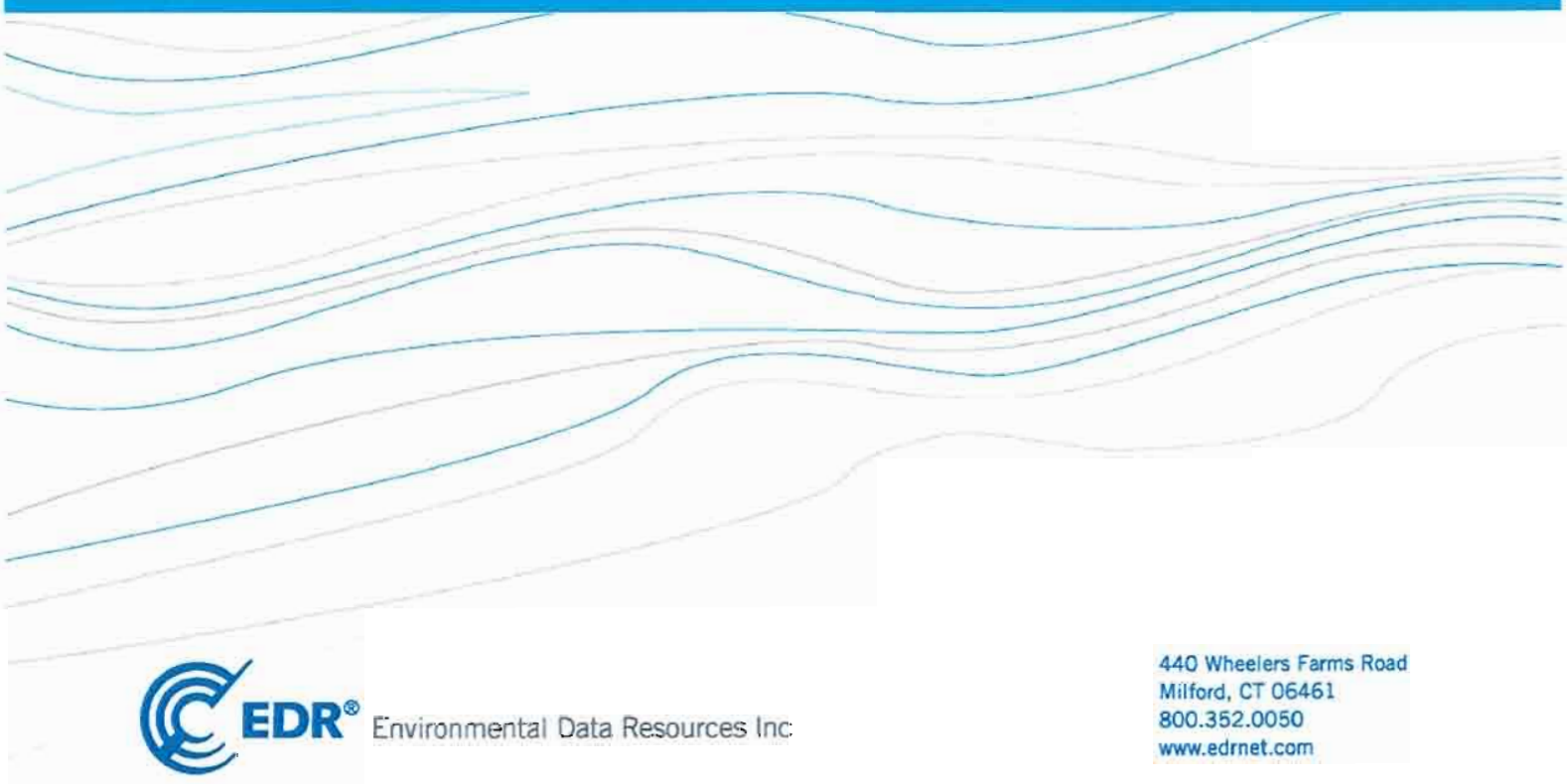
SECTION	Additional Remarks
1	
2	
3	
4	
REFERENCE	**Additional Comments**
N-1	
N-2	
N-3	
N-4	
N-5	

Attachment G: Historical Aerial Photography

Los Osos - Tonini
Los Osos, San Luis Obispo County
Los Osos, CA 93405

Inquiry Number: 2245375.3
June 18, 2008

The EDR Aerial Photo Decade Package



EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

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with any questions or comments.

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Date EDR Searched Historical Sources:

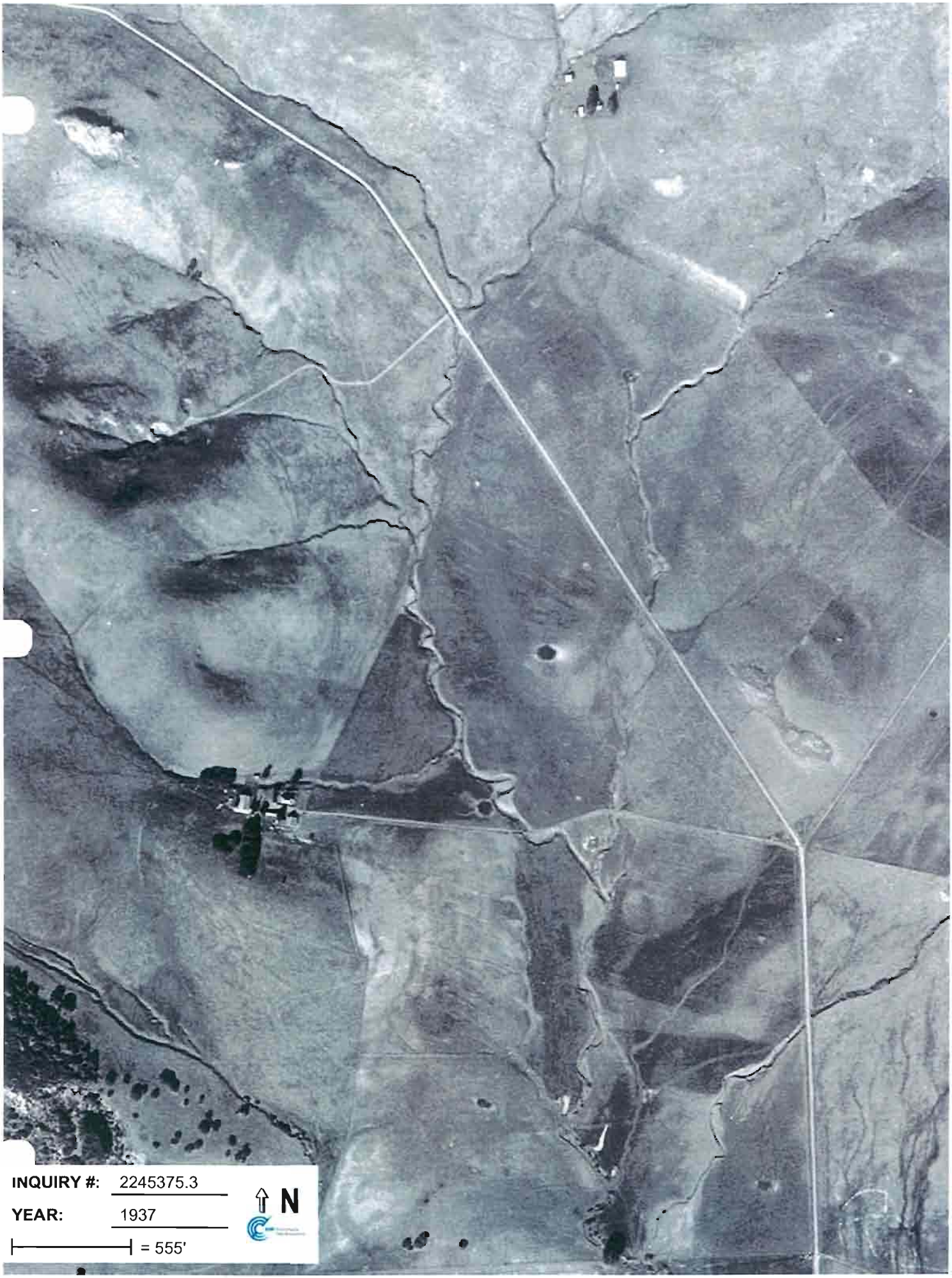
Aerial Photography June 18, 2008

Target Property:

Los Osos, San Luis Obispo County

Los Osos, CA 93405

Year	*Scale*	*Details*	*Source*
1937	Aerial Photograph. Scale: 1"=555'	Flight Year: 1937	Army
1949	Aerial Photograph. Scale: 1"=555'	Flight Year: 1949	Aero
1956	Aerial Photograph. Scale: 1"=555'	Flight Year: 1956	Hycon
1969	Aerial Photograph. Scale: 1"=666'	Flight Year: 1969	Western
1978	Aerial Photograph. Scale: 1"=666'	Flight Year: 1978	Pacific Air
1989	Aerial Photograph. Scale: 1"=666'	Flight Year: 1989	USGS
1994	Aerial Photograph. Scale: 1"=666'	Flight Year: 1994	USGS
2002	Aerial Photograph. Scale: 1"=666'	Flight Year: 2002	USGS
2005	Aerial Photograph. Scale: 1"=484'	Flight Year: 2005	EDR


INQUIRY #: 2245375.3
YEAR: 1937
= 555'
N

INQUIRY #: 2245375.3
YEAR: 1949
= 555'
N

INQUIRY #: 2245375.3
YEAR: 1956
= 555'
N

INQUIRY #: 2245375.3
YEAR: 1969
= 666'
N

INQUIRY #: 2245375.3
YEAR: 1978
= 666'
N

INQUIRY #: 2245375.3
YEAR: 1989
= 666'
N

INQUIRY #: 2245375.3
YEAR: 1994
= 666'
N

INQUIRY #: 2245375.3
YEAR: 2002
= 666'
N

INQUIRY #: 2245375.3
YEAR: 2005
= 484'
N

Los Osos
Community of Los Osos
Los Osos, CA 93402

Inquiry Number: 2245375.1
June 17, 2008

The EDR Aerial Photo Decade Package

EDR® Environmental Data Resources Inc

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Date EDR Searched Historical Sources:

Aerial Photography June 17, 2008

Target Property:

Community of Los Osos

Los Osos, CA 93402

Year	Scale	Details	Source
1937	Aerial Photograph. Scale: 1"=555'	Flight Year: 1937	Army
1949	Aerial Photograph. Scale: 1"=555'	Flight Year: 1949	Aero
1956	Aerial Photograph. Scale: 1"=555'	Flight Year: 1956	Hycon
1969	Aerial Photograph. Scale: 1"=666'	Flight Year: 1969	Western
1978	Aerial Photograph. Scale: 1"=666'	Flight Year: 1978	Pacific air
1989	Aerial Photograph. Scale: 1"=666'	Flight Year: 1989	USGS
1994	Aerial Photograph. Scale: 1"=666'	Flight Year: 1994	USGS
2002	Aerial Photograph. Scale: 1"=666'	Flight Year: 2002	USGS
2005	Aerial Photograph. Scale: 1"=484'	Flight Year: 2005	EDR

INQUIRY #: 2245375.1
YEAR: 1937
= 555'
N

INQUIRY #: 2245375.1
YEAR: 1949
= 555'
N

INQUIRY #: 2245375.1
YEAR: 1956
= 555'
N

INQUIRY #: 2245375.1

YEAR: 1969

= 666'

N

INQUIRY #: 2245375.1

YEAR: 1978

= 666'

N

INQUIRY #: 2245375.1
YEAR: 1989
= 666'
N

INQUIRY #: 2245375.1
YEAR: 1994
= 666'
N

INQUIRY #: 2245375.1
YEAR: 2002
= 666'
N

INQUIRY #: 2245375.1
YEAR: 2005
= 484'
N

Attachment H: Q Value Calculations for Significant Nexus Evaluation

Rational Method to Determine Peak Flow - Non-RPWs

Project number:	**0224.0002**
Project Name:	**Los Osos Community Wastewater Project**

Peak Flow = Q = CIA Units = cubic feet per second (cfs)
Peak Flow (Q) = 1.008CIA Where 1.008 is conversion factor to change acres and inches/hr (input units) into cfs (output units)
C = Coefficient of Runoff See Note 1, below

NOTE: Isopluvial Precipitation Data acquired from the following websites:
http://www.slocity.org/publicworks/download/wmp/ddm.pdf
http://www.slocounty.ca.gov/AssetFactory.aspx?did=9671

Drainage Description	Relevant Reach	Drainage Area (acres) (A)	Impervious Area (acres)	Coefficient of Runoff (C)[1]	Isopluvial	Rainfall Intensity in inches/hour (I)[2]	Peak Flow Cubic feet per second((Q) (cfs)	$Q_{(Year)}$
Drainage W-1		15		0.460	2Yr 6Hr	0.29	2.02	$Q_{(2)}$
					5Yr 6Hr	0.41	2.85	$Q_{(5)}$
					10Yr 6Hr	0.50	3.48	$Q_{(10)}$
					25Yr 6Hr	0.64	4.45	$Q_{(25)}$
					50Yr 6Hr	0.74	5.15	$Q_{(50)}$
					100Yr 6Hr	0.80	5.56	$Q_{(100)}$
Drainage W-2		15		0.400	2Yr 6Hr	0.29	1.75	$Q_{(2)}$
					5Yr 6Hr	0.41	2.48	$Q_{(5)}$
					10Yr 6Hr	0.50	3.02	$Q_{(10)}$
					25Yr 6Hr	0.64	3.87	$Q_{(25)}$
					50Yr 6Hr	0.74	4.48	$Q_{(50)}$
					100Yr 6Hr	0.80	4.84	$Q_{(100)}$
Drainage T-1.a		42		0.530	2Yr 6Hr	0.29	6.51	$Q_{(2)}$
					5Yr 6Hr	0.41	9.20	$Q_{(5)}$
					10Yr 6Hr	0.50	11.22	$Q_{(10)}$
					25Yr 6Hr	0.64	14.36	$Q_{(25)}$
					50Yr 6Hr	0.74	16.60	$Q_{(50)}$
					100Yr 6Hr	0.80	17.95	$Q_{(100)}$
Drainage T-1.b		37		0.500	2Yr 6Hr	0.29	5.41	$Q_{(2)}$
					5Yr 6Hr	0.41	7.65	$Q_{(5)}$
					10Yr 6Hr	0.50	9.32	$Q_{(10)}$
					25Yr 6Hr	0.64	11.93	$Q_{(25)}$
					50Yr 6Hr	0.74	13.80	$Q_{(50)}$
					100Yr 6Hr	0.80	14.92	$Q_{(100)}$

1. SLOC Dept. of Public Works Improvements Standards, Section 5.1.1.D specifies that runoff coefficients for Rational Method shall be determined using County Standard Construction Drawing Sheet H-3a for undeveloped areas.
W-1: normal relief (0.18); moderately well drained (0.07); vegetal cover poor (0.12); surface storage low (0.09)
W-2: normal relief (0.18); moderately well drained (0.07); vegetal cover fair (0.08); surface storage normal (0.07)
T-1.a: hilly relief (0.24); poor drainage (0.10); poor vegetal cover (0.10); low surface storage (0.09)
T-2.b: hilly relief (0.24); normal drainage (0.07); poor vegetal cover (0.10), low surface storage (0.09)

2. San Luis Obispo County Department of Public Works Standard Construction Drawings Sheet H-4, Rainfall Intensity Data, Table 2 and Table 3.

Rational Method to Determine Peak Flow - RPWs

Project number:	**0224.0002**
Project Name:	**Los Osos Community Wastewater Project**

Peak Flow = Q = CIA Units = cubic feet per second (cfs)
Peak Flow (Q) = 1.008CIA Where 1.008 is conversion factor to change acres and inches/hr (input units) into cfs (output units)
C = Coefficient of Runoff See Note 1, below

NOTE: Isopluvial Precipitation Data acquired from the following websites:

http://www.slocity.org/publicworks/download/wmp/ddm.pdf
http://www.slocounty.ca.gov/AssetFactory.aspx?did=9671

Drainage Description	Relevant Reach	Drainage Area (acres) (A)	Impervious Area (acres)	Coefficient of Runoff (C)[1]	Isopluvial	Rainfall Intensity in inches/hour (I)[2]	Peak Flow Cubic feet per second((Q) (cfs)	$Q_{(Year)}$
Drainage W-3		220		0.420	2Yr 6Hr	0.29	27.01	$Q_{(2)}$
					5Yr 6Hr	0.41	38.19	$Q_{(5)}$
					10Yr 6Hr	0.50	46.57	$Q_{(10)}$
					25Yr 6Hr	0.64	59.61	$Q_{(25)}$
					50Yr 6Hr	0.74	68.92	$Q_{(50)}$
					100Yr 6Hr	0.80	74.51	$Q_{(100)}$
Drainage W-4		75		0.420	2Yr 6Hr	0.29	9.21	$Q_{(2)}$
					5Yr 6Hr	0.41	13.02	$Q_{(5)}$
					10Yr 6Hr	0.50	15.88	$Q_{(10)}$
					25Yr 6Hr	0.64	20.32	$Q_{(25)}$
					50Yr 6Hr	0.74	23.50	$Q_{(50)}$
					100Yr 6Hr	0.80	25.40	$Q_{(100)}$
Drainage W-5		35		0.420	2Yr 6Hr	0.29	4.30	$Q_{(2)}$
					5Yr 6Hr	0.41	6.08	$Q_{(5)}$
					10Yr 6Hr	0.50	7.41	$Q_{(10)}$
					25Yr 6Hr	0.64	9.48	$Q_{(25)}$
					50Yr 6Hr	0.74	10.97	$Q_{(50)}$
					100Yr 6Hr	0.80	11.85	$Q_{(100)}$
Drainage W-5.a		18		0.400	2Yr 6Hr	0.29	2.10	$Q_{(2)}$
					5Yr 6Hr	0.41	2.98	$Q_{(5)}$
					10Yr 6Hr	0.50	3.63	$Q_{(10)}$
					25Yr 6Hr	0.64	4.64	$Q_{(25)}$
					50Yr 6Hr	0.74	5.37	$Q_{(50)}$
					100Yr 6Hr	0.80	5.81	$Q_{(100)}$

1. SLOC Dept. of Public Works Improvements Standards, Section 5.1.1.D specifies that runoff coefficients for Rational Method shall be determined using County Standard Construction Drawing Sheet H-3a for undeveloped areas.
W-3: normal relief (0.18); moderately well drained (0.07); vegetal cover fair (0.08); surface storage poor (0.09)
W-4: normal relief (0.18); moderately well drained (0.07); vegetal cover fair (0.08); surface storage poor (0.09)
W-5: normal relief (0.18); moderately well drained (0.07); vegetal cover fair (0.08); surface storage poor (0.09)
W-5.a: normal relief (0.18); moderately well drained (0.07); vegetal cover fair (0.08); surface storage normal (0.07)

2. San Luis Obispo County Department of Public Works Standard Construction Drawings Sheet H-4, Rainfall Intensity Data, Table 2 and Table 3.

Rational Method to Determine Peak Flow - RPWs

Project number:	**0224.0002**
Project Name:	**Los Osos Community Wastewater Project**

Peak Flow = Q = CIA Units = cubic feet per second (cfs)
Peak Flow (Q) = 1.008CIA Where 1.008 is conversion factor to change acres and inches/hr (input units) into cfs (output units)
C = Coefficient of Runoff See Note 1, below

NOTE: Isopluvial Precipitation Data acquired from the following websites:

http://www.slocity.org/publicworks/download/wmp/ddm.pdf
http://www.slocounty.ca.gov/AssetFactory.aspx?did=9671

Drainage Description	Relevant Reach	Drainage Area (acres) (A)	Impervious Area (acres)	Coefficient of Runoff (C)[1]	Isopluvial	Rainfall Intensity in inches/hour (I)[2]	Peak Flow Cubic feet per second((Q) (cfs)	$Q_{(Year)}$
Drainage W-5.b		18		0.440	2Yr 6Hr	0.29	2.32	$Q_{(2)}$
					5Yr 6Hr	0.41	3.27	$Q_{(5)}$
					10Yr 6Hr	0.50	3.99	$Q_{(10)}$
					25Yr 6Hr	0.64	5.11	$Q_{(25)}$
					50Yr 6Hr	0.74	5.91	$Q_{(50)}$
					100Yr 6Hr	0.80	6.39	$Q_{(100)}$
Drainage T-1		420		0.500	2Yr 6Hr	0.29	61.39	$Q_{(2)}$
					5Yr 6Hr	0.41	86.79	$Q_{(5)}$
					10Yr 6Hr	0.50	105.84	$Q_{(10)}$
					25Yr 6Hr	0.64	135.48	$Q_{(25)}$
					50Yr 6Hr	0.74	156.64	$Q_{(50)}$
					100Yr 6Hr	0.80	169.34	$Q_{(100)}$
Drainage T-2		610		0.500	2Yr 6Hr	0.29	89.16	$Q_{(2)}$
					5Yr 6Hr	0.41	126.05	$Q_{(5)}$
					10Yr 6Hr	0.50	153.72	$Q_{(10)}$
					25Yr 6Hr	0.64	196.76	$Q_{(25)}$
					50Yr 6Hr	0.74	227.51	$Q_{(50)}$
					100Yr 6Hr	0.80	245.95	$Q_{(100)}$
Los Osos Creek		2500		0.400	2Yr 6Hr	0.29	292.32	$Q_{(2)}$
					5Yr 6Hr	0.41	413.28	$Q_{(5)}$
					10Yr 6Hr	0.50	504.00	$Q_{(10)}$
					25Yr 6Hr	0.64	645.12	$Q_{(25)}$
					50Yr 6Hr	0.74	745.92	$Q_{(50)}$
					100Yr 6Hr	0.80	806.40	$Q_{(100)}$

1. SLOC Dept. of Public Works Improvements Standards, Section 5.1.1.D specifies that runoff coefficients for Rational Method shall be determined using County Standard Construction Drawing Sheet H-3a for undeveloped areas.
W-5.b: normal relief (0.18); moderately well drained (0.07); vegetal cover poor (0.12); surface storage normal (0.07)
T-1: hilly relief (0.24); moderately well drained (0.07); vegetal cover poor (0.12); surface storage normal (0.07)
T-2: hilly relief (0.24); moderately well drained (0.07); vegetal cover poor (0.12); surface storage normal (0.07)
Los Osos Creek; hilly relief (0.24); normal drainage (0.07); good vegetal cover (0.04); high surface storage (0.05)

2. San Luis Obispo County Department of Public Works Standard Construction Drawings Sheet H-4, Rainfall Intensity Data, Table 2 and Table 3.

Rational Method to Determine Peak Flow - RPWs

Project number:	**0224.0002**
Project Name:	**Los Osos Community Wastewater Project**

Peak Flow = Q = CIA Units = cubic feet per second (cfs)
Peak Flow (Q) = 1.008CIA Where 1.008 is conversion factor to change acres and inches/hr (input units) into cfs (output units)
C = Coefficient of Runoff See Note 1, below

NOTE: Isopluvial Precipitation Data acquired from the following websites:
http://www.slocity.org/publicworks/download/wmp/ddm.pdf
http://www.slocounty.ca.gov/AssetFactory.aspx?did=9671

Drainage Description	Relevant Reach	Drainage Area (acres) (A)	Impervious Area (acres)	Coefficient of Runoff (C)[1]	Isopluvial	Rainfall Intensity in inches/hour (I)[2]	Peak Flow Cubic feet per second((Q) (cfs)	$Q_{(Year)}$
Warden Creek		2100		0.400	2Yr 6Hr	0.29	245.55	$Q_{(2)}$
					5Yr 6Hr	0.41	347.16	$Q_{(5)}$
					10Yr 6Hr	0.50	423.36	$Q_{(10)}$
					25Yr 6Hr	0.64	541.90	$Q_{(25)}$
					50Yr 6Hr	0.74	626.57	$Q_{(50)}$
					100Yr 6Hr	0.80	677.38	$Q_{(100)}$
					2Yr 6Hr	0.29	0.00	$Q_{(2)}$
					5Yr 6Hr	0.41	0.00	$Q_{(5)}$
					10Yr 6Hr	0.50	0.00	$Q_{(10)}$
					25Yr 6Hr	0.64	0.00	$Q_{(25)}$
					50Yr 6Hr	0.74	0.00	$Q_{(50)}$
					100Yr 6Hr	0.80	0.00	$Q_{(100)}$
					2Yr 6Hr	0.29	0.00	$Q_{(2)}$
					5Yr 6Hr	0.41	0.00	$Q_{(5)}$
					10Yr 6Hr	0.50	0.00	$Q_{(10)}$
					25Yr 6Hr	0.64	0.00	$Q_{(25)}$
					50Yr 6Hr	0.74	0.00	$Q_{(50)}$
					100Yr 6Hr	0.80	0.00	$Q_{(100)}$
					2Yr 6Hr	0.29	0.00	$Q_{(2)}$
					5Yr 6Hr	0.41	0.00	$Q_{(5)}$
					10Yr 6Hr	0.50	0.00	$Q_{(10)}$
					25Yr 6Hr	0.64	0.00	$Q_{(25)}$
					50Yr 6Hr	0.74	0.00	$Q_{(50)}$
					100Yr 6Hr	0.80	0.00	$Q_{(100)}$

1. SLOC Dept. of Public Works Improvements Standards, Section 5.1.1.D specifies that runoff coefficients for Rational Method shall be determined using County Standard Construction Drawing Sheet H-3a for undeveloped areas.
Warden Creek: hilly relief (0.24); moderately well drained (0.07); good vegetal cover (0.04); high surface storage (0.05)

2. San Luis Obispo County Department of Public Works Standard Construction Drawings Sheet H-4, Rainfall Intensity Data, Table 2 and Table 3.

Los Osos Wastewater Disposal Project
Lupine Street Pump Station
Los Osos, California

WETLAND DELINEATION REPORT

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Environmental Services

June 14, 2004

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ATTACHMENTS

Attachment A. Field Data Sheets
Attachment B. Photo Documentation

1.0 INTRODUCTION

1.1 SCOPE

This Wetland Delineation Report summarizes existing soil, hydrology and vegetative conditions found within and adjacent to the Lupine Street Pump Station site in Los Osos, San Luis Obispo County, California (refer to Figures 1 through 4). Morro Group, Inc. has prepared this report at the request of Crawford Multari Clark Associates, and it is intended for use by the Los Osos Community Services District (LOCSD), and regulatory agencies. This report identifies potential waters of the United States, as defined by the U.S. Army Corps of Engineers (ACOE) and the California Coastal Commission (CCC), found adjacent to the proposed project area, and is intended to assist in the identification of related constraints that could affect project construction. Findings reported herein are based on information gathered in the field at the time of investigation, and on Morro Group's understanding of the ACOE 1987 Wetlands Delineation Manual, and federal, state, and local guidelines for identification of wetland areas. This report is subject to jurisdictional review by the ACOE, and should be submitted to the ACOE for confirmation if impacts to jurisdictional areas are proposed.

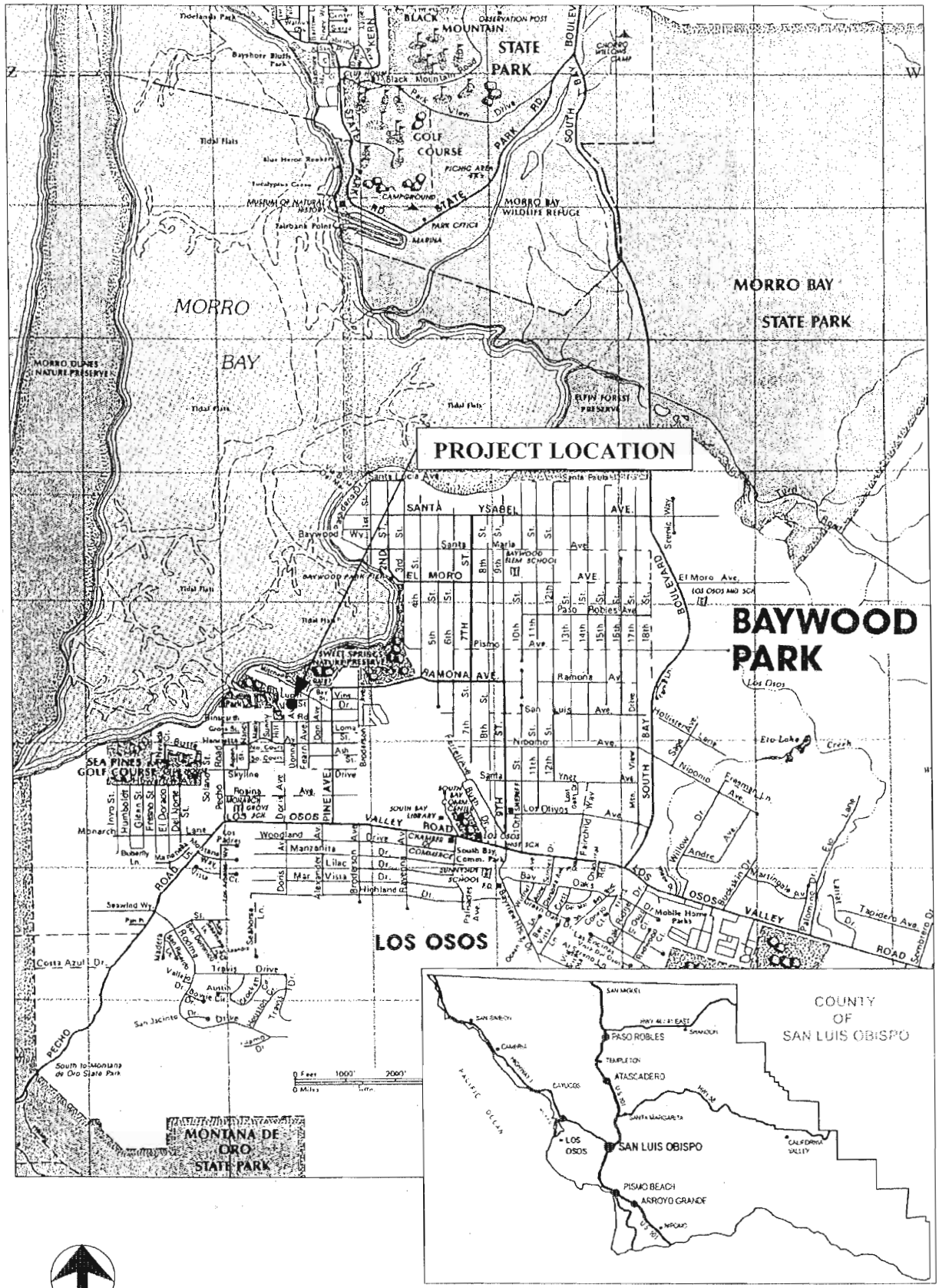
1.2 PROJECT BACKGROUND

The project site is located in the western portion of the community of Los Osos, at the corner of Lupine Street and Donna Avenue, near the eastern edge of the Morro Bay estuary (refer to Figures 1 through 4). A Soil Conservation Service (SCS) soil survey map of the site is included as Figure 5, and soil pit locations and the resulting delineation of jurisdictional areas are shown on Figure 6. The proposed site is located in the Coastal Zone, and is adjacent to ACOE and CCC jurisdictional areas associated with Morro Bay.

The proposed Lupine Street pump station is one of seven submersible pump stations that will be installed with standby power facilities as part of the Los Osos Wastewater Disposal Project. The area of disturbance for each pump station including the standby power facility will be approximately 750 square feet. Underground sewer lines following existing road rights of way along Lupine Street and Donna Avenue will connect the pump station to other components of the sewer project (refer to Figure 6).

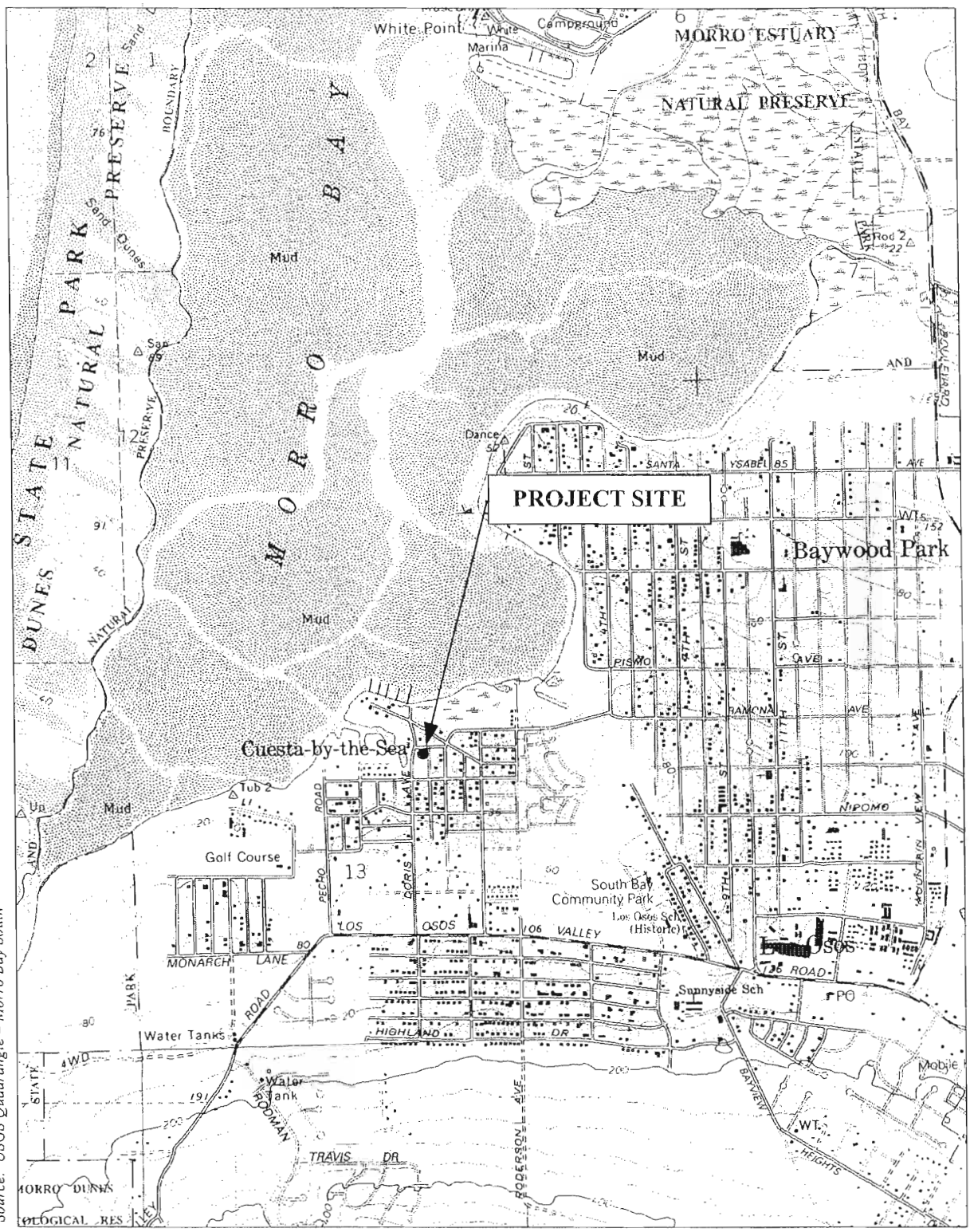
1.3 SITE DESCRIPTION

The pump station site consists of a level residential lot dominated by non-native grasses and weeds at the corner of Lupine Street and Donna Avenue, with established residences present on the north, west, and east, and a depressional wetland area associated with Morro Bay to the south. Donna Avenue ends at the eastern portion of the depressional wetland area. The pump station site contains sandy soils, and no trees or shrubs are present within the proposed project area. To the south of the pump station site, the level terrain ends at an abrupt 2:1 slope that drops 4 to 5 feet into a depressional area dominated by hydrophytic plant species. This area receives runoff from residential areas to the east and south. Under high tide and or high stormwater runoff conditions water present in the depressional area travels through a 12-inch metal culvert under Doris Avenue and enters the Morro Bay estuary.



NORTH
Not to Scale

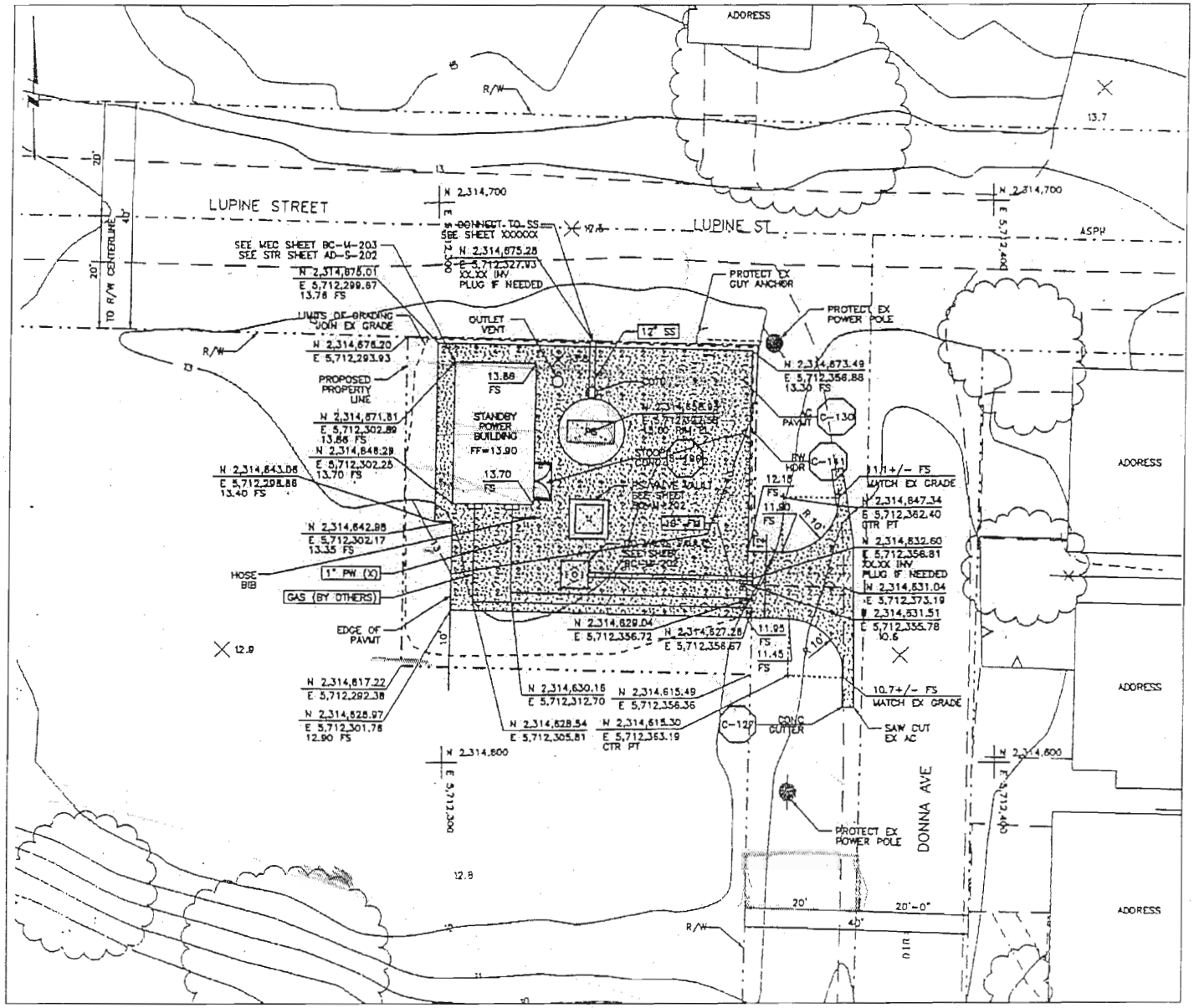
VICINITY MAP
FIGURE 1



Source: USGS Quadrangle – Morro Bay South

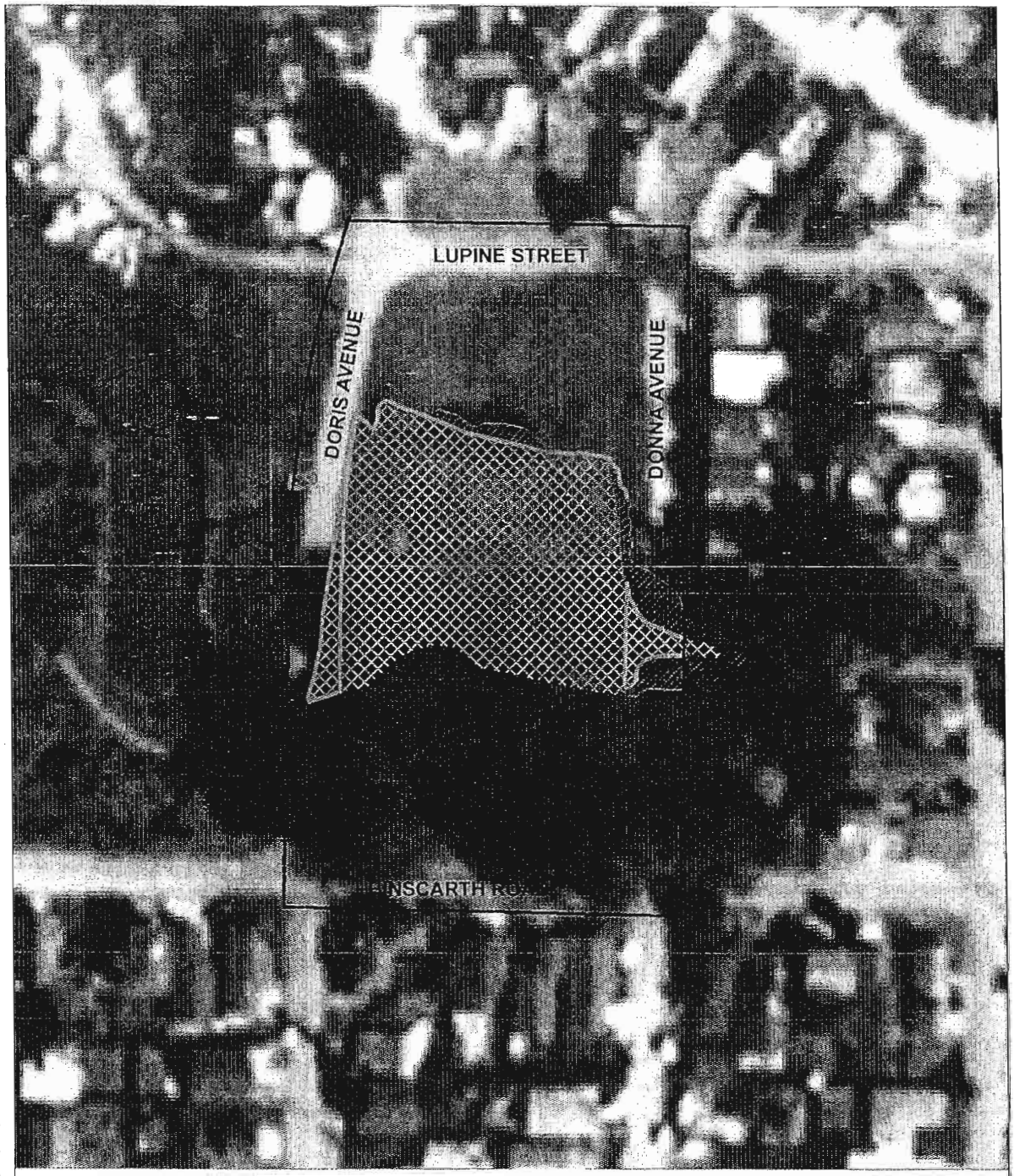
NORTH
Not to Scale

PROJECT LOCATION MAP
FIGURE 2



NORTH
Not to Scale

LUPINE PUMP STATION SITE PLAN
FIGURE 3



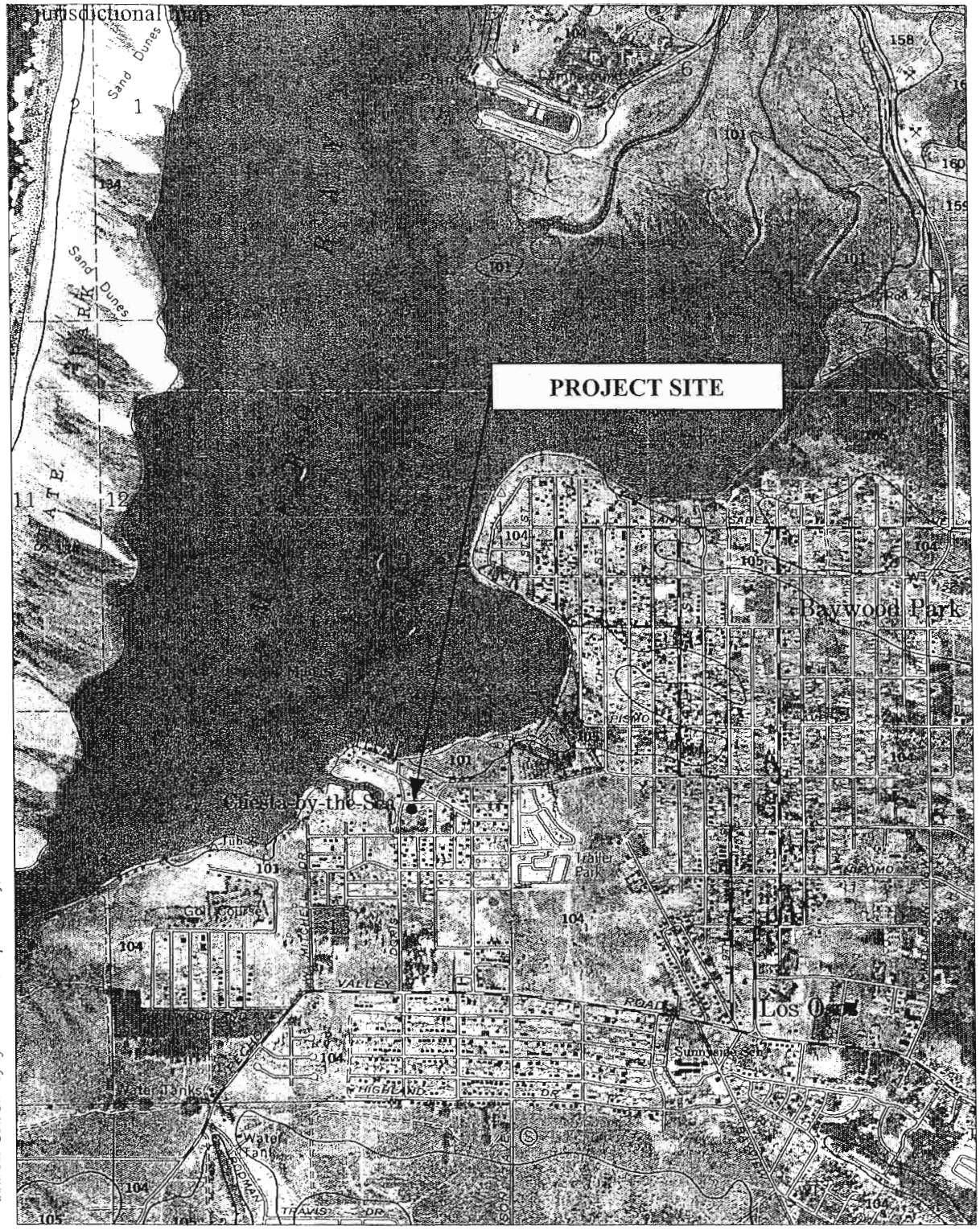
Source: aerial base - CMCA

see Figure 6 for wetland mapping

NORTH
Not to Scale

PROJECT LOCATION AERIAL
FIGURE 4

back of aerial



Source: Soil Survey of San Luis Obispo County, Coastal Part – Sheet 8

SOIL KEY

104 Baywood fine sand, 2-9% slopes

NORTH
Not to Scale

SOIL SURVEY MAP
FIGURE 5

insert fig 6

back of fig 6

2.0 METHODOLOGY

The primary literature reviewed and referenced as part of this wetland determination included SCS (1983, 1992), USGS (1979), Cowardin et al. (1979), Hickman (1993), Hoover (1970), Holland (1986), and Reed (1988, 1996). Specific references not listed above are cited in text.

2.1 DELINEATION PROCEDURE

Determination and delineation of wetland areas near the Lupine Street Pump Station site were based on review of pertinent literature and a thorough on-site investigation conducted on May 6 and May 18, 2004, by Bob Sloan and Geoff Hoetker of Morro Group, Inc. The routine wetland determination methodology, as described in the 1987 ACOE Wetlands Delineation Manual (Environmental Laboratory 1987), was utilized throughout the delineation. Potential wetland areas were also evaluated using the CCC single parameter wetland definition in addition to the ACOE three-parameter methodology. Representative soil pits and surrounding vegetation were evaluated to investigate the presence of hydric soils, hydrophytic vegetation, and wetland hydrology. Jurisdictional boundaries identified during the delineation followed topographic relief and vegetative conditions, and were mapped using a Trimble Pathfinder GPS unit capable of accuracy to approximately 10 centimeters.

2.2 FUNCTION AND VALUE ASSESSMENT

The functions and values of the identified jurisdictional areas identified at the project site were evaluated according to ACOE protocol (Adamus et al. 1987). Table 1 is a synthesis of methodologies used to evaluate the functions and values of wetland habitats. Rating criteria were derived from Adamus et al. (1987), Adamus and Stockwell (1983), and Reppert et al. (1979).

TABLE 1
Wetland Function and Value Rating Criteria

Function / Value	Rating		
	Low	Moderate	High
Water Quality Improvement	<5 acres in size; <50% vegetation density; no proximity to pollutants.	5-10 acres in size; 50-80% vegetation density; adjacent to non-point pollutants.	>10 acres in size; >80% vegetation density; downstream from point discharges.
Storm- and Floodwater Storage	<5 acres in size; <10% woody cover; permanently flooded; unconstrained outlet.	5-10 acres in size; 10-30% woody cover.	>10 acres in size; urban and developable areas; >30% woody cover; seasonal hydroperiod; constrained outlet.
Groundwater Discharge	Isolated depression; temporarily saturated or inundated.	Open drainage system; seasonally flooded.	Open tidal systems; permanent saturation or inundation.
Groundwater Recharge	<5 acres in size; isolated depression; temporarily saturated or inundated; impermeable substrate.	5-10 acres in size; seasonally flooded.	>10 acres in size; permanent inundation; several feet deep; permeable substrate.
Natural Biological Support	Small size; low species diversity; one vegetation layer; no sensitive or water-dependent species.	Medium size; moderate species diversity; several vegetation layers; water-dependent species; no sensitive species.	Large size; high species diversity; water-dependent and sensitive species; many vegetation layers.

3.0 RESULTS

3.1 SOIL CONDITIONS

The Soil Conservation Service (1983) mapped one soil series within the project site: Baywood fine sand, 2 to 9 percent slopes (refer to Figure 5).

Baywood fine sand (moist) consists of a very dark grayish brown (10YR 2/2 moist) fine sand about 36 inches thick, above dark grayish brown (10YR 5/3) mottled (5YR 3/2) fine sand to a depth of 60 inches or more. Permeability of Baywood fine sand soil is rapid, and the available water capacity is low. Baywood fine sand is not listed as a hydric soil in the SCS Comprehensive Hydric Soils List for San Luis Obispo County (SCS 1992).

3.1.1 Soil Test Pits

Four soil test pits were excavated during the delineation: two within the upper bank and the bottom of the depressional area adjacent to the Lupine Street site, and two along the proposed sewer line route traversing the undeveloped right of way portion of Donna Avenue (refer to Figure 6 for pit locations). The investigation found dry sand and sandy clay soils in upland areas, and moist to saturated sand and sandy clay loam soils in the depressional area. The dry sand soil observed in pit #1 exhibited dark brown (10YR3/2 moist) colors, and matched the Baywood fine sand description. The dry to moist sand and sandy clay loam soils in pits 2-4 exhibited very dark brown and black (10YR 2/2, 2/1 moist) colors. Soil in pit #2 contained faint oxidized rhizospheres within the upper 12 inches of the profile.

3.2 HYDROLOGIC CONDITIONS

The Lupine Street Pump Station site is a level parcel with no hydrologic features present (refer to Photo #1). The delineation identified a depressional area near the southern project boundary that receives runoff from surrounding residential areas. This depressional area is separated from the Morro Bay estuary by Doris Avenue. A 12-inch corrugated metal culvert under Doris Avenue connects the depressional area to a defined channel leading to Cuesta Inlet, and under high tide and or high stormwater runoff conditions, water present in the depressional area may flow under Doris Avenue and enter the estuary. No flowing or ponded water, or evidence of tidal influence was observed in the depressional area during the delineation, although areas of mud flats and moist soils were observed.

The narrow upper portion of the depressional area is bisected by the undeveloped section of Donna Avenue. This area contains a weakly defined channel that directs urban runoff into the depressional area, but shows no evidence of ponding.

3.3 VEGETATIVE CONDITIONS

The project site is dominated by non-native grasses and weeds, including veldt grass (*Ehrharta calycina*), ripgut brome (*Bromus diandrus*), Bermuda grass (*Cynodon dactylon*), wild radish (*Raphanus sativus*), sea fig (*Carpobrotus edulis*), telegraph weed (*Heterotheca grandiflora*), California croton (*Croton californicus*), and California poppy (*Eschscholzia californica*) (refer to Photo #1).

The adjacent depressional area delineated in this report contained a mixture of common wetland and riparian plant species. The upper or eastern portion of the depressional area was densely vegetated with freshwater marsh species, including silverweed (*Potentilla anserina*), three-square (*Scirpus americanus*), curly dock (*Rumex crispus*), cattail (*Typha latifolia*), and arroyo willow (*Salix lasiolepis*) (refer to Photo #2 and #4). Kikuyu grass (Pennisetum *clandestinum*), sand dune sedge (*Carex pansa*), goldenbush (*Isocoma menziesii*), gazania (*Gazania linearis*), blue gum (*Eucalyptus globulus*), Pampas grass (*Cortedaria jubata*), and sweet fennel (*Foeniculum vulgare*), were present along the eastern edge of the depressional area near Donna Avenue (refer to Photo #3).

The lower or western portion nearest Doris Avenue contained a small area of mud flats and some salt marsh plant species, including saltgrass (*Distichlis spicata*), fleshy jaumea (*Jaumea carnosa*), frankenia (*Frankenia grandiflora*), blackberry (*Rubus ursinus*), and arroyo willow.

3.4 JURISDICTIONAL DETERMINATION

Jurisdictional wetland habitat that met ACOE and CCC criteria were found to be associated with the depressional area adjacent to the proposed pump station site (refer to Figure 6). Jurisdictional boundaries identified during the delineation followed topographic relief and vegetative conditions on the site. The examination of the site resulted in the identification of a total of 3,084 square feet (0.07 acres) of jurisdictional ACOE/CCC wetlands and 2,236 square feet (0.05 acres) of CCC wetlands in or adjacent to road rights of way leading to the pump station site (refer to Figure 6). ACOE/CCC wetlands shown on Figure 6 are areas that met soil, vegetative, and hydrologic criteria per ACOE guidelines, while the CCC wetland areas shown contained hydric vegetation or evidence of hydrology. Table 2 summarizes the results of the wetland assessment by sample plot (refer to Figure 6 for soil pit locations).

Table 2

Jurisdictional Determination Summary

Sample Plot	Hydrophytic Vegetation	Hydric Soils	Wetland Hydrology	Determination	
				Corps	CCC
1	No	No	No	Non-Wetland	Non-Wetland
2	**Yes**	**Yes**	**Yes**	**Wetland**	**Wetland**
3	**Yes**	**Yes**	**Yes**	**Wetland**	**Wetland**
4	No	No	No	Non-Wetland	Non-Wetland

3.5 FUNCTIONS AND VALUES OF IDENTIFIED JURISDICTIONAL AREAS

Using the rating criteria from Table 1 (refer to Section 2.2), the identified jurisdictional area ranks low to moderate in function and value, being limited primarily by its small size and lack of tidal influence (refer to following Table 3). The adjacent Morro Bay estuary is a highly diverse and valuable biological and hydrologic resource.

Table 3

Function and Value Ratings of Identified Wetland Areas

Resource	Size	Water Quality	Storage	Discharge	Recharge	Biological Support
ACOE/CCC Wetlands	3,084 ft2 0.07 acres	Moderate	Low	Moderate	Low	Moderate
CCC Wetlands	2, 236 ft² (0.05 acres)	Low	Low	Low	Low	Low

4.0 DISCUSSION

The wetland areas identified in this report consist of a small, depressional fresh/brackishwater marsh area separated from tidal portions of Morro Bay by an unpaved road. The wetland area is dominated by low-growing plant species, and is surrounded by residential development and vacant upland property. The central portions of the area meet ACOE wetland criteria, with some fringe areas that meet only the CCC wetland definition also present. The wetland receives rainfall and urban runoff, and may occasionally drain into or receive tidal flow from Morro Bay through a 12-inch culvert under extreme weather conditions. The closest identified wetland area is located 47 feet south of the proposed pump station fenceline, and would not be directly affected by pump station construction (refer to Figure 6). The proposed sewer line routes connecting to the pump station will cross the upper portion of the depressional area along the undeveloped section of Donna Avenue, and will skirt the edges of wetland areas along Doris Avenue (refer to Figure 6).

5.0 REGULATORY IMPLICATIONS

5.1 U.S. ARMY CORPS OF ENGINEERS

Section 404 of the Clean Water Act (CWA) regulates activities that result in the discharge of dredge or fill materials into Waters of the United States, including wetlands. The ACOE is charged with administering and regulating various sections of the CWA. Any activity within the jurisdictional areas mapped on Figure 6 would be subject to regulation by the ACOE, and would likely require the submittal of a permit application to the ACOE for: 1) verification of this wetland assessment, and 2) determination of permitting/mitigation requirements.

5.2 CALIFORNIA DEPARTMENT OF FISH AND GAME

Sections 1600 through 1607 of the California Fish and Game (CDFG) Code regulate activities that would alter the flow, bed, channel, or bank of streams and lakes. CDFG jurisdiction typically extends to the top of the creek bank or the outside edge of riparian vegetation. Any activity affecting the mapped jurisdictional areas as shown on Figure 6 will likely require coordination with and permit approval from the CDFG.

5.3 REGIONAL WATER QUALITY CONTROL BOARD

Section 401 of the Clean Water Act regulates activities that have the potential to cause water quality impacts to Waters of the United States, including wetlands, as defined by the ACOE. A Section 401 Water Quality Certification from the Regional Water Quality Control Board would be required for any development activity affecting the mapped jurisdictional areas as shown on Figure 6. This certification typically precedes ACOE permit issuance.

5.4 CALIFORNIA COASTAL COMMISSION

The California Coastal Act was enacted in 1976 to provide long-term protection of California's coastal resources. The Act's coastal resources management policies are based on recommendations contained in the California Coastal Plan. One such policy includes "*Protection, enhancement and restoration of environmentally sensitive habitats, including intertidal and nearshore waters, wetlands, bays and estuaries, riparian habitat, certain wood and grasslands, streams, lakes, and habitat for rare or endangered plants or animals.*"

The CDFG is the agency charged with verifying coastal wetlands. Coastal wetland protection requirements as established in the California Coastal Act and the County of San Luis Obispo Local Coastal Plan must be addressed in the proposed project design.

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United States Geological Service. 1994. 7.5 minute series quadrangle for Morro Bay South.

Routine Wetland Determination Form

Applicant: Crawford Multari Clark Assoc. **Project:** Lupine St. Pump Station **Date:** 5/6/04

State: CA **County:** SLO **Transect/Pit No.:** 1

Investigators: Sloan **Transect/Pit Area:** Top of bank above depressional area

Vegetation Community (Cowardin Classification): Upland annual grassland

VEGETATION

Dominant Plant Species	Habit	Indicator	Percent Cover	Dominant Plant Species	Habit	Indicator	Percent Cover
Cynodon dactylon	Grass	FAC	25				
Bromus diandrus	Grass	none	25				
Ehrhrarta calycina	Grass	none	20				
Raphanus sativus	Forb	none	5				
Carpobrotus edulis	Forb	none	20				

Percent of Dominant Species that are OBL, FACW, or FAC: 20% **Taxonomic Reference:** Hickman/Reed

SOIL

Map Unit: Baywood fine sand, 2-9 percent slopes

Profile Description: 0-16 dry sand. 10YR3/2

Hydric Soil List?	☐ Yes	☒ No
Mottles?	☐ Yes	☒ No
Gleyed?	☐ Yes	☒ No
NRCS Match?	☒ Yes	☐ No

Other Indicators: none

HYDROLOGY

Inundated?	☐ Yes	☒ No	**Saturated Soil?**	☐ Yes	☒ No	**Depth:**
Sediment Deposits?	☐ Yes	☒ No	**Drift Lines?**	☐ Yes	☒ No	
Depth of Surface Water:	none		**Water Marks?**	☐ Yes	☒ No	
Depth of Free Water in Pit:	none		**Oxidized Rhizospheres?**	☐ Yes	☒ No	**Color:**

Other Indicators: none

WETLAND DETERMINATION

Vegetation Criterion Met?	☐ Yes	☒ No	**Normal Circumstances?**	☒ Yes	☐ No
Hydric Soil Criterion Met?	☐ Yes	☒ No			
Hydrology Criterion Met?	☐ Yes	☒ No	**Is this Plot within a Wetland?**	☐ Yes	☒ No

Comments: Site consists of annual grassland at higher elevation than adjacent marsh area

Morro Group Determination by: _____

Signature

Rev: 12/1/00

Routine Wetland Determination Form

Applicant: Crawford Multari Clark Assoc. **Project:** Lupine St. Pump Station **Date:** 5/6/04

State: CA **County:** SLO **Transect/Pit No.:** 2

Investigators: Sloan **Transect/Pit Area:** Bottom of depressional area

Vegetation Community (Cowardin Classification): Fresh/Brackishwater Marsh

VEGETATION

Dominant Plant Species	Habit	Indicator	Percent Cover	Dominant Plant Species	Habit	Indicator	Percent Cover
Potentilla anserina	Forb	OBL	25				
Bromus diandrus	Grass	none	5				
Scirpus americanus	Forb	OBL	40				
Rumex crispus	Forb	FACW	5				

Percent of Dominant Species that are OBL, FACW, or FAC: 75% **Taxonomic Reference:** Hickman/Reed

SOIL

Map Unit: Baywood fine sand, 2-9 percent slopes

Profile Description:

0-12 moist sandy clay loam, 10YR2/1, w/ faint oxidized rhizospheres 10YR4/4

12-16 saturated sandy clay loam, 10YR2/1

Hydric Soil List?	☐ Yes	☒ No
Mottles?	☐ Yes	☒ No
Gleyed?	☐ Yes	☒ No
NRCS Match?	☒ Yes	☐ No

Other Indicators: none

HYDROLOGY

Inundated?	☐ Yes	☒ No	**Saturated Soil?**	☒ Yes	☐ No	**Depth:**	12 inches
Sediment Deposits?	☐ Yes	☒ No	**Drift Lines?**	☐ Yes	☒ No		
Depth of Surface Water:	none		**Water Marks?**	☐ Yes	☒ No		
Depth of Free Water in Pit:	none		**Oxidized Rhizospheres?**	☒ Yes	☐ No	**Color:**	10YR4/4

Other Indicators: Pit located in depressional area that receives stormwater runoff

WETLAND DETERMINATION

Vegetation Criterion Met?	☒ Yes	☐ No	**Normal Circumstances?**	☒ Yes	☐ No
Hydric Soil Criterion Met?	☒ Yes	☐ No			
Hydrology Criterion Met?	☒ Yes	☐ No	**Is this Plot within a Wetland?**	☒ Yes	☐ No

Comments: Fresh/brackish depressional wetland area in high groundwater area

Morro Group Determination by: _____

Signature

Routine Wetland Determination Form

Applicant: Crawford Multari Clark Assoc. **Project:** Lupine St. Pump Station **Date:** 5/6/04

State: CA **County:** SLO **Transect/Pit No.:** 4

Investigators: Sloan **Transect/Pit Area:** Top of bank above depressional area

Vegetation Community (Cowardin Classification): Upland (ruderal)

VEGETATION

Dominant Plant Species	Habit	Indicator	Percent Cover	Dominant Plant Species	Habit	Indicator	Percent Cover
Pennisetum clandestinum	Grass	FACU+	75				
Cortaderia jubata	Grass	none	20				
Delairea odorata	Vine	none	10				
Gazania linearis	Forb	none	30				
Eucalyptus globulus	Tree	none	50				

Percent of Dominant Species that are OBL, FACW, or FAC: 0% **Taxonomic Reference:** Hickman/Reed

SOIL

Map Unit: Baywood fine sand, 2-9 percent slopes

Profile Description:

0-4 sandy clay, 10YR2/1
4-16 sand, 10YR2/2

Hydric Soil List?	☐ Yes	☒ No
Mottles?	☐ Yes	☒ No
Gleyed?	☐ Yes	☒ No
NRCS Match?	☒ Yes	☐ No

Other Indicators: none

HYDROLOGY

Inundated?	☐ Yes	☒ No	**Saturated Soil?**	☐ Yes	☒ No	**Depth:**	
Sediment Deposits?	☐ Yes	☒ No	**Drift Lines?**	☐ Yes	☒ No		
Depth of Surface Water:	none		**Water Marks?**	☐ Yes	☒ No		
Depth of Free Water in Pit:	none		**Oxidized Rhizospheres?**	☐ Yes	☒ No	**Color:**	

Other Indicators: none

WETLAND DETERMINATION

Vegetation Criterion Met?	☐ Yes	☒ No	**Normal Circumstances?**	☒ Yes	☐ No
Hydric Soil Criterion Met?	☒ Yes	☐ No			
Hydrology Criterion Met?	☐ Yes	☒ No	**Is this Plot within a Wetland?**	☐ Yes	☒ No

Comments: Site consists of ruderal/escaped ornamental plants at higher elevation than adjacent drainage area

Morro Group Determination by: _____
Signature

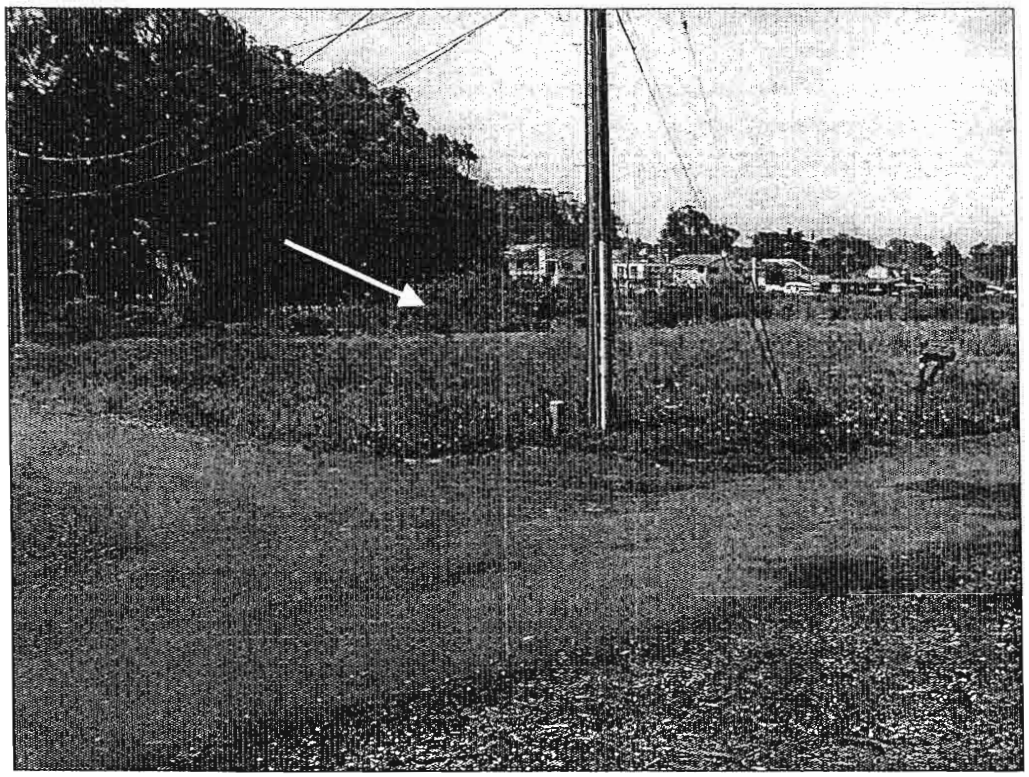

Photo 1:

View of proposed pump station site at the corner of Lupine street and Donna Avenue, looking southwest from Lupine Street. Note grass and iceplant cover in proposed project area. The arrow points to willows present along the bank of the identified wetland area.

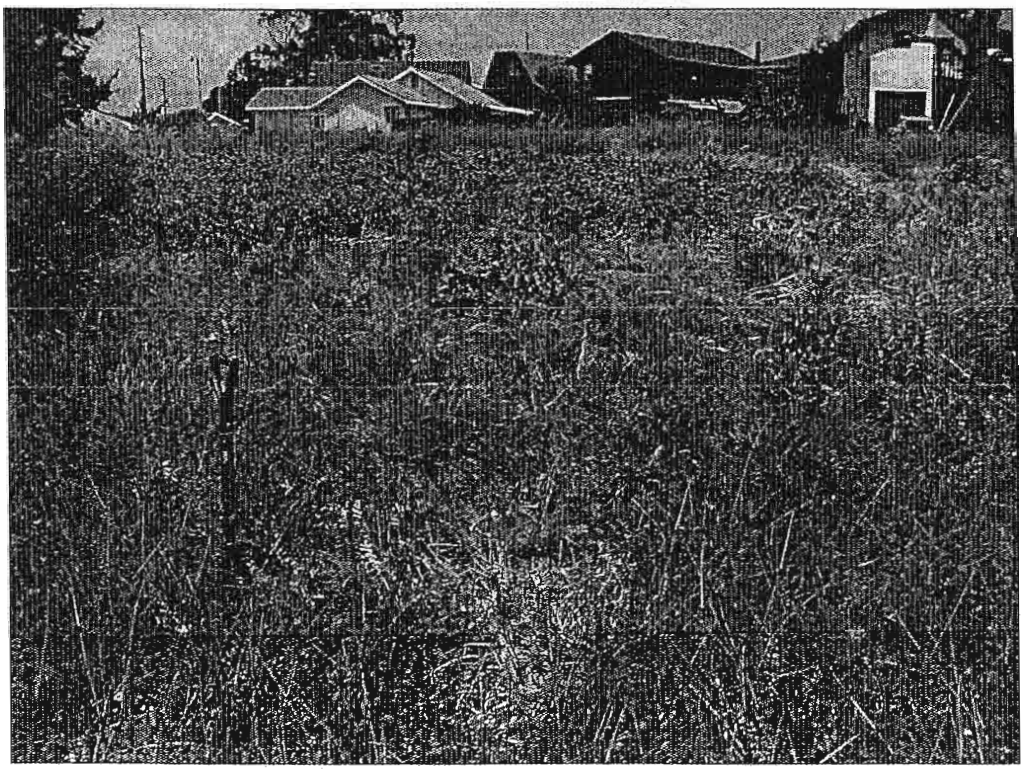

Photo 2:

Viewing north from the depressional wetland area toward the project site. Note willows along bank at left of picture, and shovel marking the location of soil pit #2.

PHOTO DOCUMENTATION

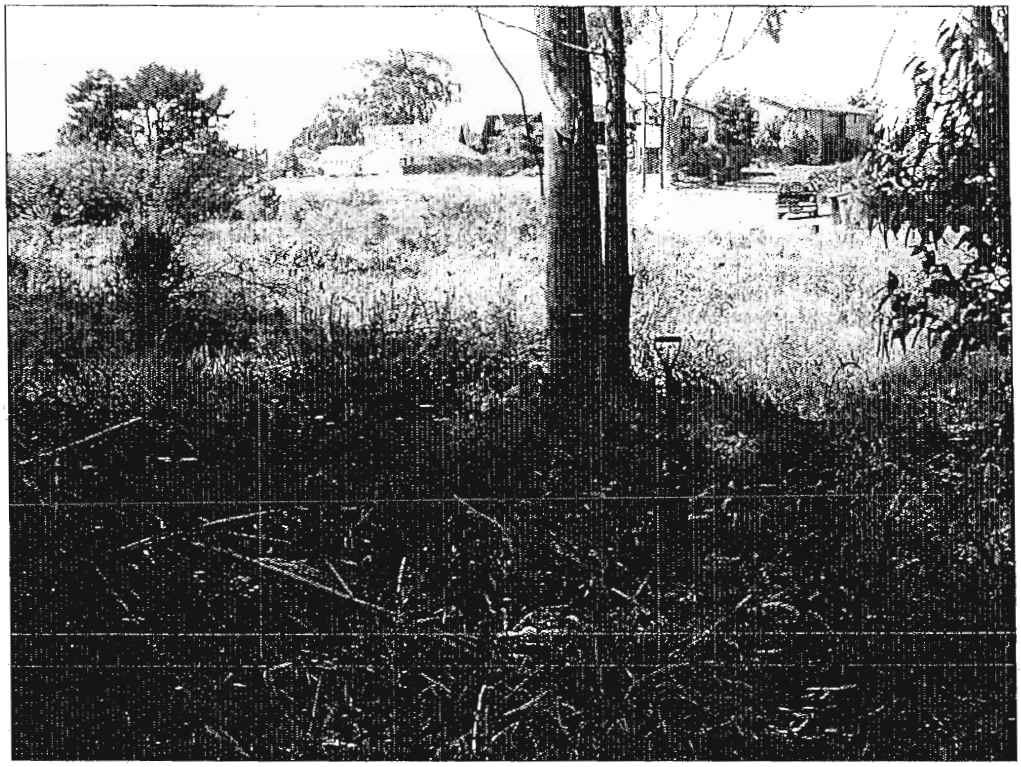

Photo 3:

Viewing north along the Donna Avenue right of way proposed for sewer line installation. Shovel marks the location of Soil pit #3.

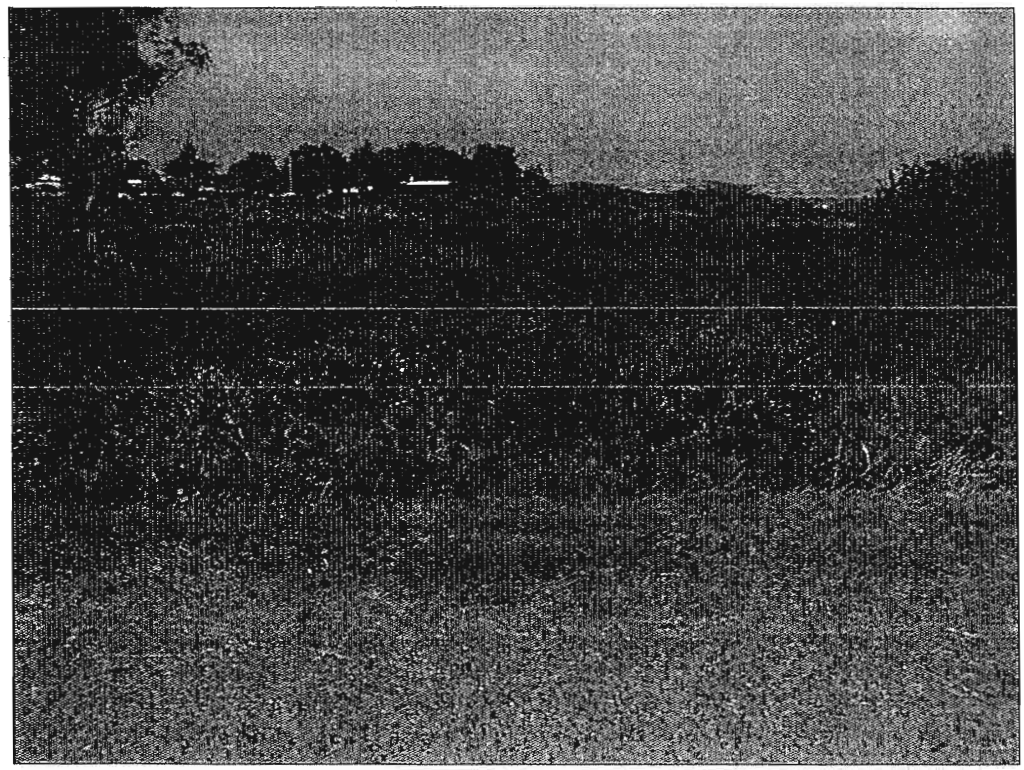

Photo 4:

Viewing west from the southern end of Donna Avenue over the depressional wetland area. Willows at right mark the northern wetland boundary nearest to the proposed pump station.

LOS OSOS COMMUNITY SERVICES DISTRICT

To: Dave Morsa

It is our pleasure to provide you with the attached information.

re Lynne Side

Power Profiles

Select a property to build a profile report

Search New Property

Total of 5 Match Returned. Please select the property you are looking for.

Click Here to Get Profile	**Owner:**	STATE OF CALIFORNIA (935) DEPT OF GENERAL SERVICES
	Address:	1798 DORIS AVE
	City/State:	LOS OSOS CA 93402
	APN:	074-141-002
Click Here to Get Profile	**Owner:**	THE LOS OSOS COMMUNITY SERVICES DISTRICT, ,
	Address:	DONNA AVE
	City/State:	LOS OSOS CA 93402
	APN:	074-141-003
Click Here to Get Profile	**Owner:**	GOEDINGHAUS CLAIRE D (TRE)
	Address:	DORIS AVE
	City/State:	LOS OSOS CA 93402
	APN:	074-141-004
Click Here to Get Profile	**Owner:**	GOEDINGHAUS CLAIRE D (TRE)
	Address:	DORIS AVE
	City/State:	LOS OSOS CA 93402
	APN:	074-141-005
Click Here to Get Profile	**Owner:**	MURATET JOHN R
	Address:	DONNA AVE
	City/State:	LOS OSOS CA 93402
	APN:	074-141-006

A

APR 2 2 2004

The orig. APN was 074-141-001 prior to lot line adj.

Page: 1

Search New Property

Data Deemed Reliable, But Not Guaranteed.
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EDA
ENGINEERING DEVELOPMENT ASSOCIATES

August 30, 1995

Jeff Edwards
P.O. Box 6070
Los Osos, CA 93402

Re: Grading Plan for Carl Goedinghaus,
Doris Avenue in Los Osos

Dear Jeff:

In 1985, we prepared and processed a grading plan for Carl Goedinghaus so that he could establish future building pads on his parcels under County Permit Number 51365. This grading activity involved Lots 8 through 13, inclusive.

The pad elevation was established in order to provide for separation from ground water for anticipated septic systems. At that time, Mr. Goedinghaus was over-seeing the grading activities and working as an owner/contractor. To our knowledge, the project was finalized in March of 1987, with all grading being completed in substantial conformance with the approved plan.

If I can provide any other background information relative to this property, please do not hesitate to call.

Sincerely,

ENGINEERING DEVELOPMENT ASSOCIATES

Dan Lloyd

Daniel R. Lloyd

DRL\PA\1615EDWARDS.LTR

'95 AUG 31 PM 2 26

PLANNING • CIVIL ENGINEERING • LAND SURVEYING
1320 NIPOMO ST. • SAN LUIS OBISPO, CA 93401 • 805-549-8658 • FAX 805-549-8561
744 OAK ST. • PASO ROBLES, CA 93446 • 805-237-1953 • FAX 805-237-3954

Coastal Development Notice

San Luis Obispo County Planning Department

NOTICE AND ACKNOWLEDGEMENT OF
COASTAL DEVELOPMENT PERMIT REQUIREMENTS

I understand that my proposed development must be approved both under the San Luis Obispo County Land Use Element and Land Use Ordinance and as a project under the requirements of the California Coastal Act. I understand this means that if the county approves the project under the Land Use Element/Land Use Ordinance, I must still also obtain a Coastal Development Permit. If I do not obtain a Coastal Development Permit from the California Coastal Commission before the San Luis Obispo County Local Coastal Plan goes into effect, then I must obtain a Coastal Development Permit from the county of San Luis Obispo before any grading or construction or other development activity. I understand that the San Luis Obispo Local Coastal Plan (as required by state law) may impose additional requirements on my development that were not required by the Land Use Element/Land Use Ordinance, or could result in the disapproval of my development if it is not allowed by the Local Coastal Plan, even though it was previously approved by the county under the Land Use Element/Land Use Ordinance.

I hereby certify that I have read and understand this notice.

Signature _____ Date 12/24/80

5J

Owner-Builder Verification

San Luis Obispo County Planning Department

55600 .

Information Bulletin

Please complete and return to:

PLANNING DEPARTMENT
DIVISION OF BUILDING AND SAFETY
COUNTY GOVERNMENT CENTER
SAN LUIS OBISPO, CA 93408 ATT. Charlene

Attention Property Owner:

An 'owner-builder' building permit has been applied for in your name and bearing your signature.

Please complete and return this information in the envelope provided at your earliest opportunity to avoid unnecessary delay in processing and issuing your building permit. No building permit will be issued until this verification is received.

1. I personally plan to provide the major labor and materials for construction of the proposed property improvement (yes or no) YES . (FROM VARIOUS LICENSED EARTH MOVING CONTRACTORS)

2. I (have/have not) HAVE signed an application for a ~~building~~ GRADING permit for the proposed work.

3. I have contacted with the following person (firm) to provide the proposed construction:
   Name ED'S EXCAVATING - STROLE'S TRI-SERVICE, INC
   Address _____ City _____
   Phone _____ Contractor's License No. _____

4. I plan to provide portions of the work, but I have hired the following person to coordinate, supervise and provide the major work:
   SEE ABOVE
   Name _____
   Address _____ City _____
   Phone _____ Contractor's License No. _____

5. I will provide some of the work but I have contracted (hired) the following persons to provide the work indicated:

Name	Address	Phone	Type of Work
SEE ABOVE			

Signed:
Property owner: Barbara Boatwright
Date: 12/30/86

1960n

Last Name GOEDINGHAUS, Carl A. 51365

Construction Permit

SEP 11 1985

Plans attached

San Luis Obispo County Planning Department

THIS PERMIT CONSTITUTES AUTHORIZATION BY THE COUNTY OF SAN LUIS OBISPO ALLOWING CONSTRUCTION OF THE PROJECT DESCRIBED HEREIN, SUBJECT TO ALL APPLICABLE PROVISIONS OF THE COUNTY CODE.

Project Address: Doris & Lupine — Locality: Los Osos — A.P.N.: 74-141-0

Lot Number: 8-12 — Block — Tract / Other: CUESTA BY THE SEA

P.A.: CST — Comm.: LSOS — LUC: RSF — Comb. Desig: LCP — In Coastal Zone: IN — Lot Size

GOEDINGHAUS, Carl A. 381 Mitchell Dr. Los Osos, CA 93402 — 528-0786

Owner Name(s) — Mailing Address — Zip Code — Business Hour Phone

Ed's Excavating Los Osos

Contractor or Mover — Mailing Address — Phone No — State License No

Architect, Engineer or Designer — Mailing Address — Phone No — State License No

LEGAL DECLARATIONS

LICENSED CONTRACTORS DECLARATION:
I am licensed under the provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the California Business and Professions Code, and my license is in full force and effect

License Class

License Number

Contractor — Date

OWNER BUILDER DECLARATION:
I am exempt from the contractor's License Law for the following reason

☐ I, as owner of the property, or my employees with wages as their sole compensation will do the work, and the structure is not intended or offered for sale

☒ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project

☐ I am exempt under Sec.

this reason

Date 9/11 — Applicant

Here's permit & Final

WORKERS COMPENSATION DECLARATI
I hereby affirm that I have a certificate of consent Compensation Insurance or a certified copy hereof

☐ Certified copy is hereby furnished
☐ Certified copy is filed with the county Planning Dr

Date — Applicant

CERTIFICATE OF EXEMPTION FROM WORKER
I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California

Date — Applicant

NOTICE TO APPLICANT: If after making this Certificate of Exemption you should become subject to the Worker's Compensation provisions of the Labor Code, you must comply with such provisions or this permit shall be deemed revoked

CONSTRUCTION LENDING AGENCY
I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Calif. Civil Code)

Lender's Name

Lender's Address

NOTICE

The Uniform Building Code requires that this permit become null and void if work or construction authorized is not started within 180 days after the permit is issued, or if construction or work is suspended or abandoned for a period of 180 days any time after

PROJECT INFORMATION

Type of Project: GRADING

Proposed Use

Setbacks: Front — Side — Rear

Habitable Floor Area — Garage — Barn

Carport — Covered Porch — Deck — Storage

No. Bedrooms — No. Bathrooms — No. Stories

Retaining Wall Information — Square Feet

Height — Length

Mobile, Modular Home Information — Manufacturer

Year — Serial No. — D.O.H. No.

D.M.V. License No. — State — No. Bedrooms

Moved Building Information — Locality

Present Location

Proposed Use — Tot. Lin. Ft. of Foin.

Grading Information — Tot. Cut: none — Cu. Yds.

Tot. Fill: 1500 — Cu. Yds. — Area of Disturbance: 18,160 sf

TYPE OF CONSTRUCTION

Foundation — Frame — Roof Pitch

Roof Material — Exterior Wall

Mechanical and Energy Information — Type Space Heating

Type Water Heating — Fireplace Type

Utility Information — Water Source

Sewage Disposal — Gas Type

Method of Energy Compliance

S

TOTAL VALUATION (for bldg. permit use only) = $

Plan Check	$	100.00	Building	$	
Energy Review	$		Grading	$	205.00
Plot Plan	$	16.00	Plumbing	$	
Microform	$	4.00	Electrical	$	
Drainage	$	25.00	SMIP Tax	$	
Fire Plan	$		Encroachment	$	
Tree Removal	$			$	
Adjustment	$			$	
Investigation	$			$	
Violation Fee	$			$	
	$		Subtotal	$	205.0
Subtotal	$	145.00	Total Fee	$	350.0

REQUIREMENTS FOR FINAL INSPECTION

___ Curb, gutter and sidewalk — ___ Fire Safety Improvements
___ Road Tax — ___ Parking Lot Improvements
___ Land Use Permit Conditions — ___ Fencing Improvements
___ Landscaping Improvements — ___ Other

"the California Business and Professions Code, and my license is in full force and effect."

License Class

License Number

Contractor Date

OWNER BUILDER DECLARATION.

I am exempt from the contractor's License Law for the following reason:

[ ] I, as owner of the property, or my employees with wages as their sole compensation will do the work, and the structure is not intended or offered for sale.

[ ] I, as owner of the property, am exclusively contracting with licensed contractors to construct the project.

I am exempt under B.P. & S.C. for this reason

Date Applicant

WORKERS COMPENSATION DECLARATION

I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Workers' Compensation Insurance, or a certified copy hereof (Sec. 3800, Calif. Labor Code).

[ ] Certified copy is hereby furnished.

[ ] Certified copy is filed with the county Planning Department.

Date Applicant

CERTIFICATE OF EXEMPTION FROM WORKERS COMP. INSURANCE

I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of California.

Date Applicant

NOTICE TO APPLICANT: If after making this Certificate of Exemption, you should become subject to the Worker's Compensation provisions of the Labor Code, you must comply with such provisions or this permit shall be deemed revoked.

CONSTRUCTION LENDING AGENCY

I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Calif. Civil Code).

Lender's Name

Lender's Address

NOTICE

The Uniform Building Code requires that this permit become null and void if work or construction authorized is not started within 180 days after the permit is issued, or if construction or work is suspended or abandoned for a period of 180 days any time after work is commenced.

I certify under penalty of perjury that I have read this application and state that the above information is correct. I agree to comply with all county ordinances and state laws relating to building construction, and hereby authorize representatives of this county to enter upon the above-mentioned property for inspection purposes.

Failure to request a progress inspection in any 180-day period is evidence that work has been abandoned.

Signature of Contractor or Authorized Agent

Signature of Owner (If Owner Builder)

I.D. Verification Date

Setbacks Front Side

Habitable Floor Area Garage Barn

Carport Covered Porch Deck Storage

No. Bedrooms No. Bathrooms No. Stories

Retaining Wall Information Square Feet

Height Length

Mobile Modular Home Information Manufacturer

Year Serial No. D.O.H. No.

D.M.V. License No. State No. Bedrooms

Moved Building Information Locality

Present Location

Proposed Use Tot. Lin. Ft. of Fdn.

Grading Information Tot. Cut none Cu. Yds.

Tot. Fill 1600 Cu. Yds. Area of Disturbance 18,160 sf

TYPE OF CONSTRUCTION

Foundation Frame Roof Pitch

Roof Material Exterior Wall

Mechanical and Energy Information Type Space Heating

Type Water Heating Fireplace Type

Utility Information Water Source

Sewage Disposal Gas Type

Method of Energy Compliance

FEES

TOTAL VALUATION (for bldg. permit use only) = $

Plan Check	= $	100.00	Building	$	
Energy Review	= $		Grading	= $	205.00
Plot Plan	= $	16.00	Plumbing	= $	
Microform	= $	4.00	Electrical	$	
Drainage	$	25.00	SMIP Tax	$	
Fire Plan	$		Encroachment	$	
Tree Removal	$			$	
Adjustment	= $			$	
Investigation	$			$	
Violation Fee	$			$	
	$		Subtotal	$	205.00
*Subtotal	$	145.00	Total Fee	$	350.0

REQUIREMENTS FOR FINAL INSPECTION

Curb, gutter and sidewalk — Fire Safety Improvements

Road Tax — Parking Lot Improvements

Land Use Permit Conditions — Fencing Improvements

Landscaping Improvements — Other

Encroachment Type — Other

Septic Tank Requirements.

Gallon Septic Tank: Sq. Ft. Leach Area

SPECIAL CONDITIONS:

See Comment

PERMIT NO. 51365

Date Received: Receipt No.

Date Issued 10/2/85 Issued By Charlie

MAILING ADDRESS: COUNTY GOVERNMENT CENTER, SAN LUIS OBISPO, CA 93408 (805) 549-5600

STRUCTURES/BUILDINGS

EXCAVATION AND SETBACK INSPECTIONS

To be Made Before Concrete Is Poured	Setback, Excavations
	Footings, Forms
	Block, Steel

SUB-FLOOR AND ROUGH PLUMBING INSPECTIONS

To be Made Before Sub-Floor Is Laid	Foundations
	Joists and Sills
	Drain Plumbing (Water Test)
	Gas Lines (Air Test)

ROUGH INSPECTIONS

To be Made Before Insulation or Drywall is Applied	Framing
	Wiring
	Top Plumbing
	Heating
	Roof Nailing
	Roof Covering
	Stucco Wire
	Fireplace and Chimney

Insulation Walls _____ Ceiling _____
Drywall _____
Septic Sewer _____
Ordinance App _____
Fire Dist _____
Health Dept _____
Encroachment _____

Do not occupy building until these are signed	Finish Grading 3/25/87 DMT
	Mechancial
	Electrical
	Plumbing
	Building

This card when signed below constitutes a Certificate of Occupancy

Don Taylor

MODULAR/MOBILEHOME

FOUNDATION

- Setbacks, Excavation
- Forms
- Piers
- Clearances, Ventilation
- Access Panel
- Steel
- Tie Downs

FRAME

- Leveling of Floor
- Ridge, Floor Connection
- Stairs

ELECTRICAL

- Continuity, Grounding
- Feeder Assembly
- Disconnect, Pedestal
- Crossover

PLUMBING

- Gas test
- Water Test
- Septic Tank
- Leach Field
- Sewer Hook up

MECHANICAL (additional)

- Installation
- Heating Ducts
- Power Hook-up

FINAL

- Road Encroachment
- Skirting
- Roof Cap
- Service Meter
- Well Approval
- Grading
- Driveway

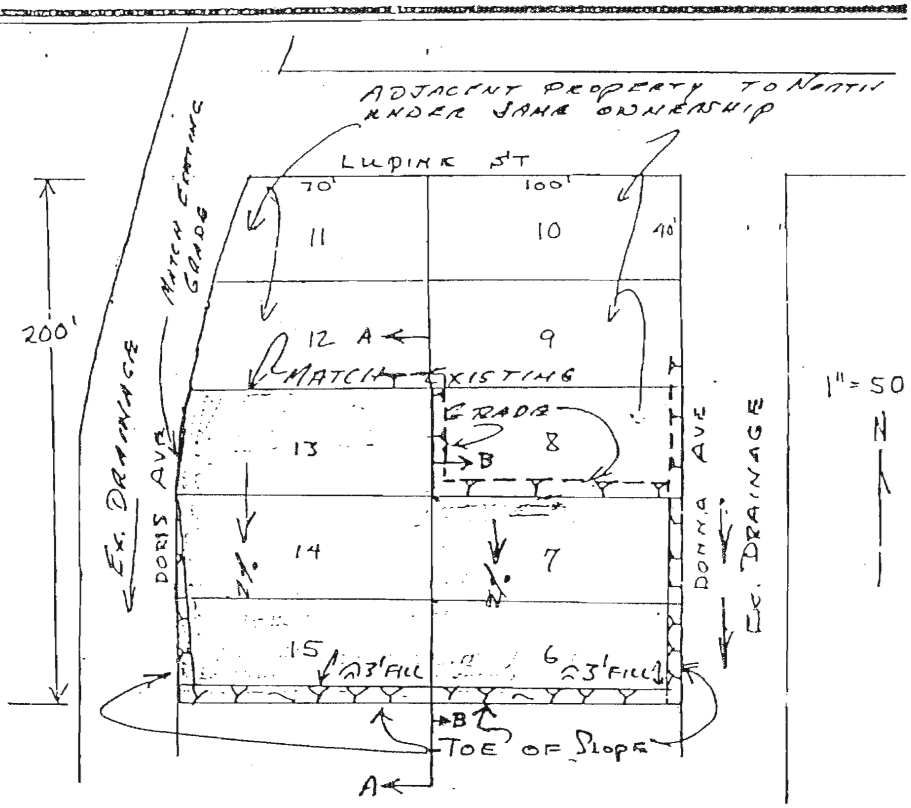
COMPLETED
DATE

COMMENTS AND CORRECTIONS

Work has been done a long time!
No call for Comp.
12/29/86

Property and Project Layout

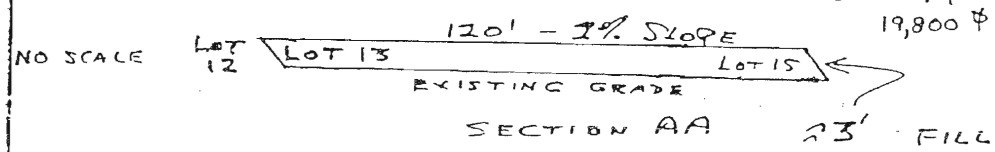
San Luis Obispo County Planning Department (See instructions on bac

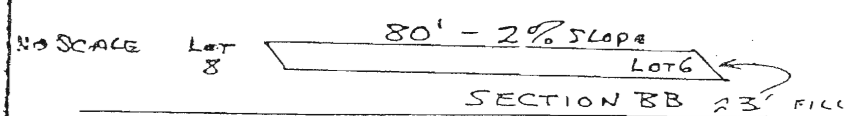


NO SCALE - LUPINE

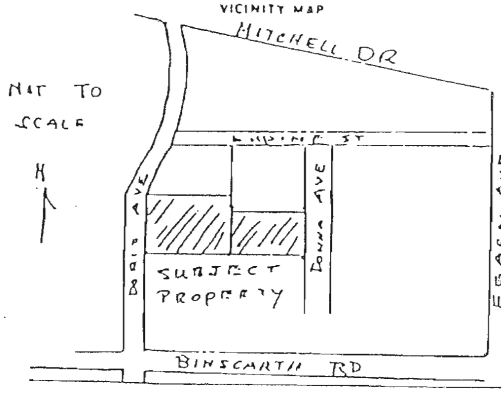
DORIS AVE. SLOPES DOWNHILL TO BINSCARTH RD → BINSCARTH LEVELS OFF & RISES NEAR BINSCARTH

TOTAL SQ. FOOTAGE 19,800 ¢.





VICINITY MAP



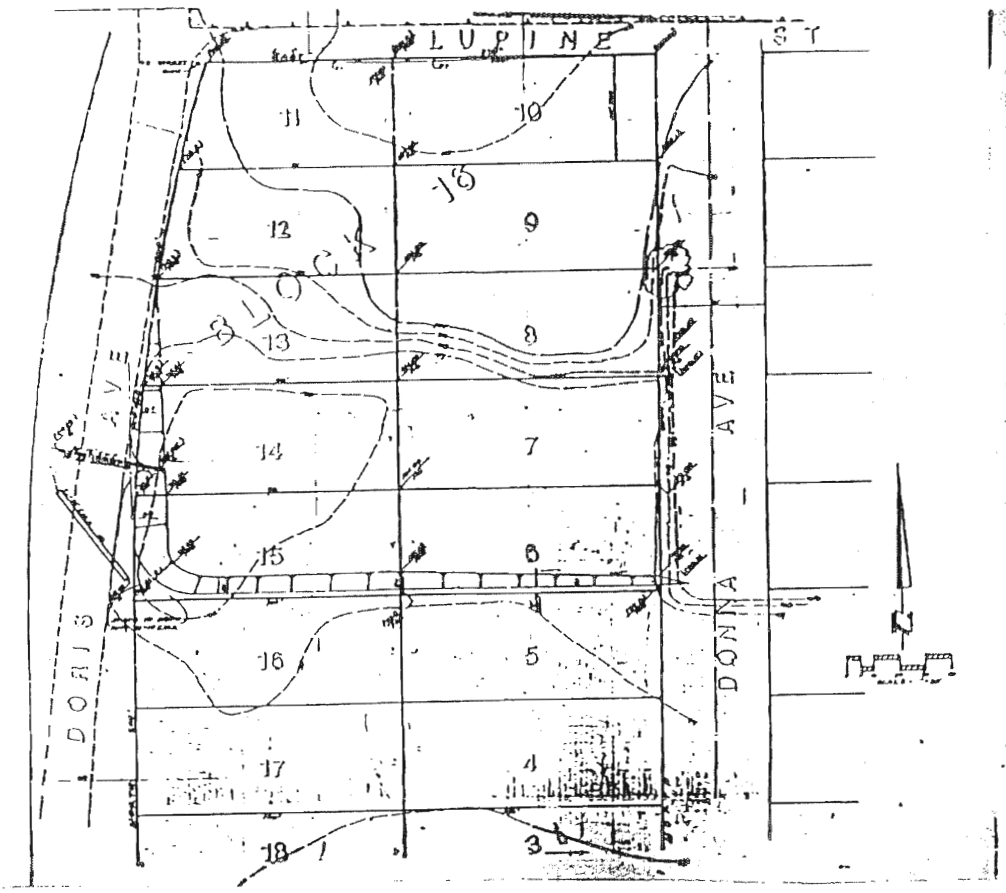
TO BE COMPLETED BY STAFF

REQUIREMENTS TO BE MET PRIOR TO PERMIT ISSUANCE:	INITIAL
☐ DEED VERIFICATION	
☐ FIRE SAFETY PLAN	
☒ LAND USE APPROVAL	SEV. REVIEW
☐ LEGAL DECLARATIONS	
☐ GRADING APPROVAL	
☒ COUNTY ENGINEERING	DRAINAGE
☐ RECORD DOCUMENT	
☐ PERFORMANCE BOND	
☐ TREE REMOVAL	
☐ SPECIAL DISTRICT	
☐ INSPECTOR VERIFY	
☒ BALANCE OF FEES	215.00
☐ OTHER	
☐ OTHER	

County Government Center, San Luis Obispo, CA 93408. (805) 549-5600

Property and Project Layout

San Luis Obispo County Planning Department (See Instructions on back)



VICINITY MAP

TO BE COMPLETED BY STAFF

REQUIREMENTS TO BE MET PRIOR TO PERMIT ISSUANCE:		INITIAL/DATE
☐	DEED VERIFICATION	
☐	FIRE SAFETY PLAN	
☒	LAND USE APPROVAL	SITE PLAN? D860058
☐	LEGAL DECLARATIONS	
☐	GRADING APPROVAL	
☒	COUNTY ENGINEERING	DRAINAGE
☐	RECORD DOCUMENT	
☐	PERFORMANCE BOND	
☐	TREE REMOVAL	
☐	SPECIAL DISTRICT	
☐	INSPECTOR VERIFY	
☒	BALANCE OF FEES	126.50
☐	OTHER	
☒	OTHER	ENV. deter.

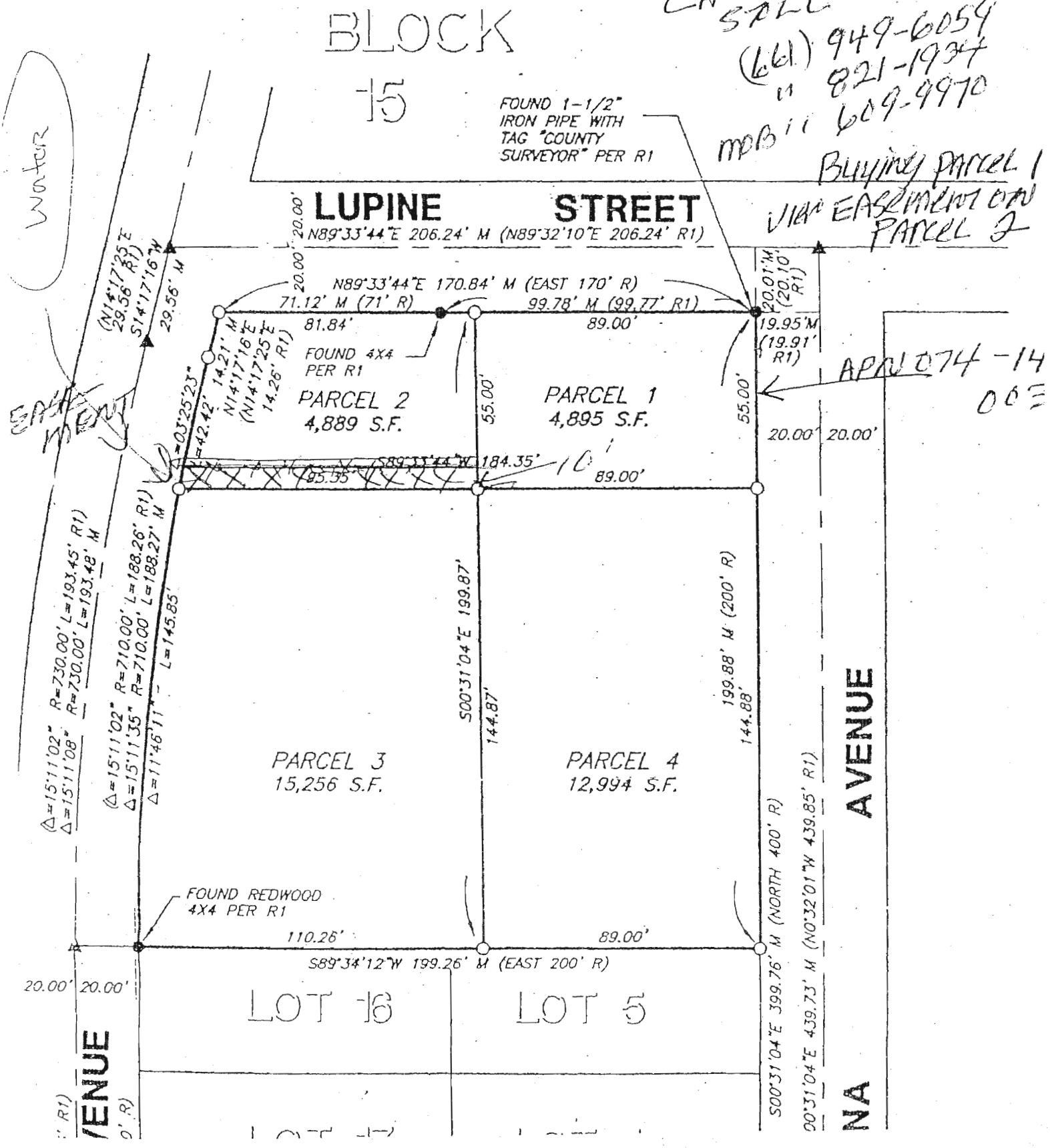
County Government Center, San Luis Obispo, CA 93408. (805) 549-5600

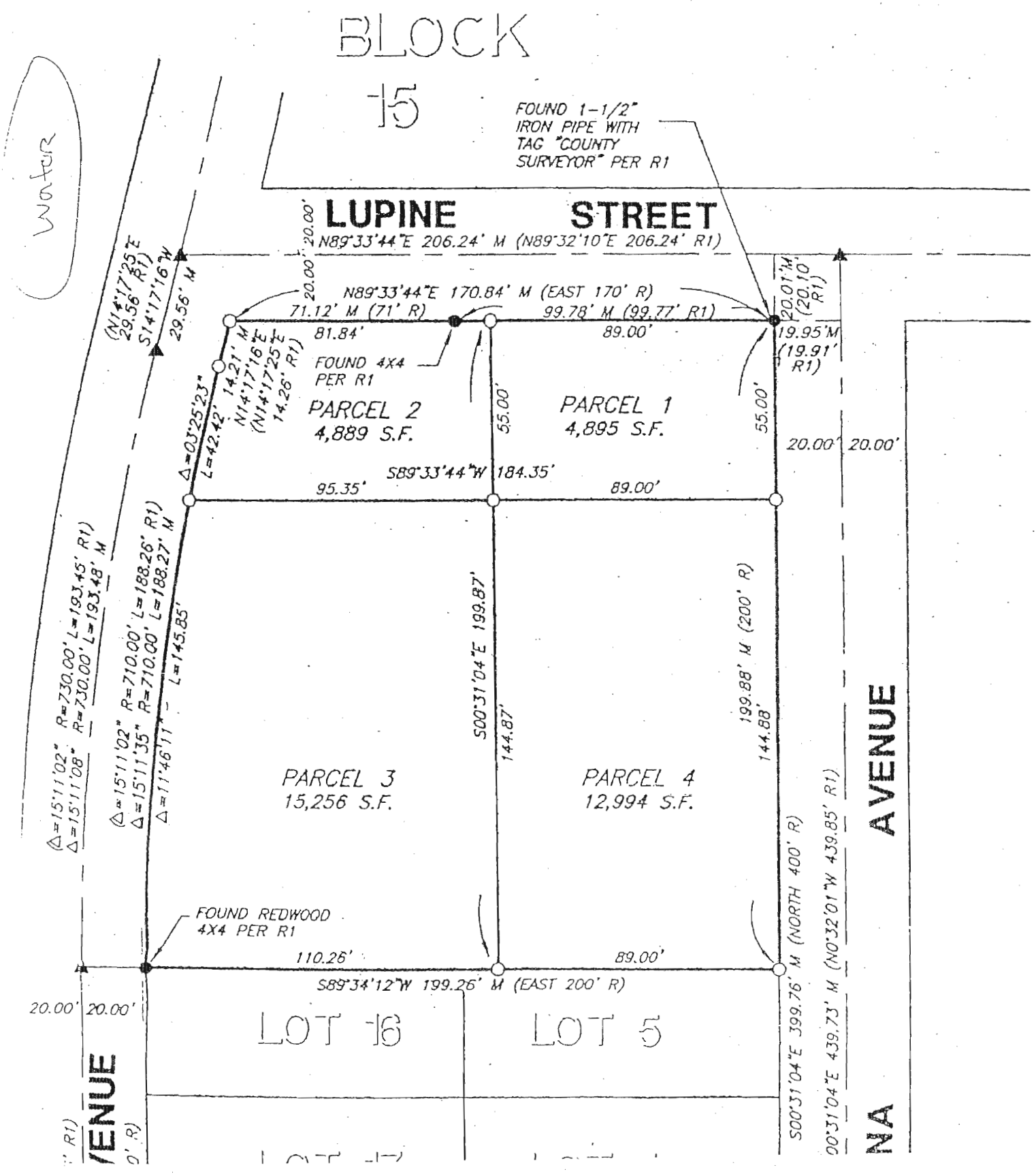
EXHIBIT B

Buyer's

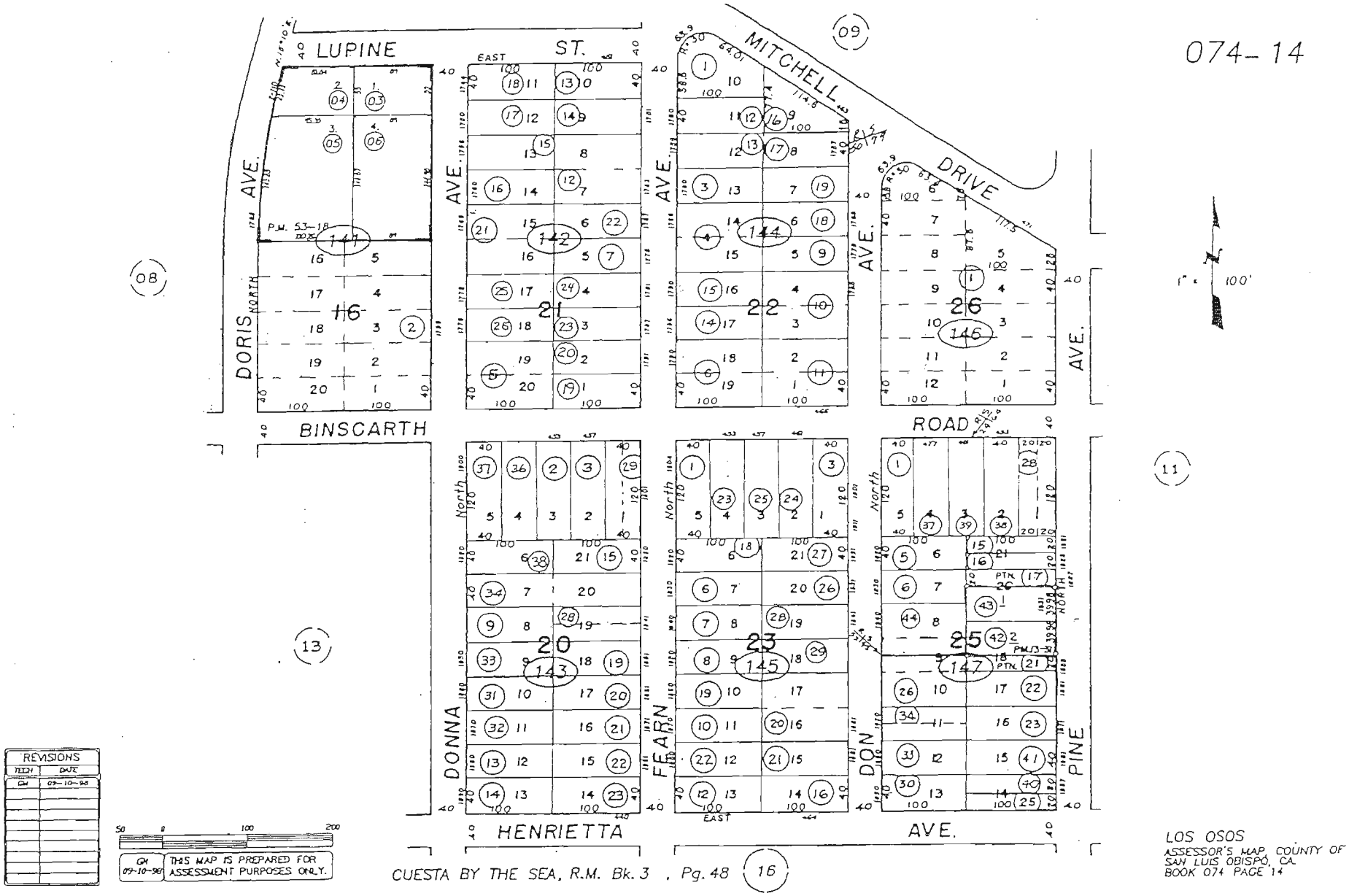
CHUCK & DONNA SELL
(661) 949-6059
" 821-1937
mobile 609-9970

Buying PARCEL 1 VIA EASEMENT ON PARCEL 2





BLOCK 15
FOUND 1-1/2" IRON PIPE WITH TAG "COUNTY SURVEYOR" PER R1
LUPINE STREET
N89°33'44"E 206.24' M (N89°32'10"E 206.24' R1)
N89°33'44"E 170.84' M (EAST 170' R)
71.12' M (71' R)
99.78' M (99.77' R1)
81.84'
89.00'
20.01'M (20.10' R1)
19.95'M (19.91' R1)
FOUND 4X4 PER R1
PARCEL 2
4,889 S.F.
PARCEL 1
4,895 S.F.
55.00'
55.00'
20.00'
20.00'
S89°33'44"W 184.35'
95.35'
89.00'
PARCEL 3
15,256 S.F.
PARCEL 4
12,994 S.F.
S00°31'04"E 199.87'
144.87'
199.88' M (200' R)
144.88'
FOUND REDWOOD 4X4 PER R1
110.26'
89.00'
S89°34'12"W 199.26' M (EAST 200' R)
LOT 16
LOT 5
S00°31'04"E 399.76' M (NORTH 400' R)
00°31'04"E 439.73' M (N0°32'01"W 439.85' R1)
AVENUE
NA
VENUE
Water
(N14°17'25"E 29.56' R1)
S14°17'16"W 29.56' M
Δ=03°25'23" L=42.42'
14.21' M
N14°17'16"E (N14°17'25"E 14.26' R1)
Δ=15°11'02" R=730.00' L=193.45' R1)
Δ=15°11'08" R=730.00' L=193.48' M
Δ=15°11'02" R=710.00' L=188.26' R1)
Δ=15°11'35" R=710.00' L=188.27' M
Δ=11°46'11" L=145.85'
20.00'
20.00'



074-14

LOS OSOS
ASSESSOR'S MAP, COUNTY OF SAN LUIS OBISPO, CA.
BOOK 074 PAGE 14

Department of Planning and Building
San Luis Obispo County

Alex Hinds, Director
Bryce Tingle, Assistant Director
Ellen Carroll, Environmental Coordinator

Barney McCay, Chief Building Official
Norma Salisbury, Administrative Services Officer

Jeff Edwards
P.O. Box 6070
Los Osos, Ca 93412

JAN 29, 1995

Subject: COAL 4-097- GOEDINGHAUS

Your application has been accepted for processing by the Planning Department. Your file has been forwarded to the Environmental Coordinator for an environmental determination. The Environmental Coordinator will determine if the project qualifies for an Exemption or Negative Declaration; or if the project requires the preparation of an Environmental Impact Report. The Environmental Coordinator will notify you by letter of the results of the environmental analysis.

Under state law, the county must act to approve or deny this application within 90-days after approval of an Exemption or Negative Declaration, or within 180 days after certification of an Environmental Impact Report. These time frames may be extended upon mutual consent by the applicant and county.

As the applicant for this project, you may request notice of any proposed changes in the County General Plan, specific plans, land use ordinance or building ordinances that may effect your project. To receive this service, you must submit the request in writing.

During the processing of the application by the Environmental Coordinator and following a more detailed staff evaluation additional information may be required. Based upon the current number of applications, we are unable to give you an approximate date when your application will be acted upon. You will be notified prior to any action taken. If you have any questions regarding the processing of your application, please contact me or the Environmental Coordinator at (805) 781-5600.

Sincerely,

Development Review Section

mitigate potential environmental impacts for [illegible] own actions and when permitting private projects. The Act also requires that an environmental imp[illegible]ort (EIR) be prepared for all actions that may significantly affect the quality of the environment. The p[illegible]se of this form is to obtain information concerning your project to help the Environmental Division of the County of San Luis Obispo Department of Planning and Building determine whether or not your project will significantly affect the quality of the environment.

Please answer all of the following questions as accurately and completely as possible. Where explanations of your answers are required, or where you believe an explanation would be helpful to government decision makers, include your explanation in the space provided or use additional pages if necessary. You should include references to any reports or studies of which you are aware and which are relevant to the answers you provide. Complete answers to these questions now will help all agencies involved with your proposal to undertake the required environmental review without unnecessary delay. Should the Environmental Division determine that the information is inaccurate or insufficient, you will be required to submit additional information upon request. Please note that land divisions and rezonings will eventually result in development of the property. Therefore, your responses should also take this into consideration.

As soon as possible, the Environmental Division will review your project. If a Negative Declaration (no EIR required) is issued, you will be notified by letter. If preparation of an EIR is recommended, you will be notified and your project will be scheduled before the San Luis Obispo County Board of Supervisors for an environmental determination.

I. General Information

1. Applicant: Claire D. Goedinghaus
   a. Contact Person: Jeff Edwards
   b. Address: P.O. Box 6070 Los Osos, CA 93412
   c. Telephone: (805) 528-1567
2. Describe the project in detail (discuss what you are going to do, such as subdivide and sell lots, build a shopping center...) Lot line adjustment resulting in the voluntary merger of ten lots into four
3. Project Location:
   a. Legal Description: Lots 6-15 inclusive in Block 16 of Cuests-by-the-[illegible]
   b. Assessor's Parcel Number: 074-141-001
   c. Address: between Doris Ave. and Donna Ave. just south of Lupin St. in Los Osos
   d. City/Community (if rural, select closest to project site): Los Osos
   e. Include vicinity map showing nearest crossroads on site plan and exact location of site.
4. Size of Project:
   a. Total acreage of subject property: 0.87 acres
   b. Total acreage of owners' property immediately surrounding subject property: n/a
   c. If the project involves a land division, please answer the following:
      1) Check one: _____ Parcel Map _____ Tract Map
      2) How many lots will be created? _____
      3) What size will the lots be? _____
   d. If the project includes development of structures, please answer the following:
      1) What is total floor space area? _____ sq. ft.
      2) Indicate what percentage of the total site will be used for:
         a) building _____ c) landscaping _____
         b) paving _____ d) other (specify) _____

(x) Residential ( ) Industrial ( ) Comm ( ) Agricultural ( ) Other

6. If your land is vacant or in agricultural producti here any restrictions on the crop productivity of the land? That is, are there any reasons (i.e. poor soil, steep slopes) the land cannot support a profitable agricultural crop? Please explain in detail:

7. What is the existing use(s) on the property? vacant

   a. How many structures exist on the property?

   Please identify what each of these structures are.

8. What is the existing zoning? RSF

9. What is the land use of the surrounding area? (When applicable, please specify all agricultural uses)

   a. North: RSF

   b. South: RSF

   c. East: RSF

   d. West: RSF

10. Do you plan to request a rezone? no

11. Will development occur in phases? _____ Describe:

12. Do you have any plans for future additions, expansion or further activity related to or connected with this proposal? Yes _____ No x If yes, explain:

13. Do you know of any plans by others which may affect the property covered by your proposal? _____ If yes, explain: no

14. Have you considered alternative development schemes? _____ If so, list and briefly state why each was found to be unacceptable:

15. List all permits, licenses or government approvals that will be required for your project (federal, state & local): SLO CO approval of lot line adjustment

II. Water

NOT APPLICABLE

1. Please check all applicable items for type of water system:

   ( ) On-site ( ) Individual well ( ) Shared well

   ( ) Off-site ( ) Community ( ) Water Co.

3. What is the proposed use of the water? ( ) Residential

( ) Agricultural: explain _____

( ) Commercial: explain _____

( ) Industrial: explain _____

4. What is the expected daily water demand associated with the project? _____

5. Is there sufficient water available for the project? _____ If known, please specify quantity. _____

6. How many service connections will be required? _____

7. Population served? _____

8. Do operable water facilities exist on the site? _____ Describe: _____

9. Does water meet Health Department quality requirements?

Bacteriological: Yes _____ No _____

Chemical: Yes _____ No _____

Physical: Yes _____ No _____

Water analysis report submitted: Yes _____ No _____

10. Please check if any of the following have been completed on the subject property and/or submitted to Environmental Health.

( ) Well Driller's Letter ( ) Water Quality Analysis _____ OK _____ Problems

( ) Will Serve Letter ( ) Pump Test _____ hours _____ GPM

( ) Surrounding Well Logs ( ) Hydrologic Study

( ) Other _____

11. Please attach any letters or documents to verify that water is available for the proposed project.

III. Waste Disposal

NOT APPLICABLE

Please check all applicable items for type of system to be used:

( ) On-site ( ) Off-site ( ) Individual Septic ( ) Community ( ) Public

( ) Shared ( ) Evapo-transpiration ( ) Engineered System ( ) Other _____

If a community/public system will be used:

1. Is this project to be connected to an existing sewer line? _____ Yes _____ No

a. Distance to nearest sewer line: _____

2. What agency or company is responsible for sewage disposal? _____

3. What is the capacity of existing or new sewage treatment facilities? _____ g.p.d.

4. What is the amount of proposed flow? _____ g.p.d.

5. Does the existing collection treatment and disposal system have adequate additional capacity to accept the proposed flow? _____ Yes _____ No

6. Do you have letters or documents from the facility operator verifying all of the above?

_____ Yes _____ No If yes, please attach.

If an on-site (individual) subsurface sewage disposal system will be used:

7. Has an engineered percolation test accomplished? _____ Yes _____ No

If yes, please attach copy and answer the following (a - d):

c. Has a conclusion been stated on the amount of required cubic feet of seepage pits per 100 gal. of septic tank capa _____ Yes _____ No

d. Is the area (parcel, lot, etc.) of sufficient size to provide an area equal to 100% of original installation to provide for expansion? _____ Yes _____ No

e. What is the depth of the water table? _____

f. Please explain the quality of any shallow water table (in relation to existing ground elevations). _____

g. Is there a portion of the lot(s) that is unsuitable for individual installations due to soil or geologic conditions, slope, etc.? _____ Yes _____ No If yes, please explain: _____

8. What is the distance from proposed leach field to any neighboring water wells? _____ ft.

9. Will subsurface drainage result in the effluent reappearing on adjacent lands? ____ Yes ____ No

10. Will subsurface drainage result in the possibility of effluent reappearing in surface water? _____

11. What type of solid waste will be generated by the project? Domestic _____ Industrial _____ Agricultural _____ Other (explain) _____

12. What type of storage will be used for solid waste? Dumpster _____ Single containers _____ Other (explain) _____

13. Where is the waste disposal storage in relation to buildings? _____

14. Has a piezometer test been completed? _____

15. Will a Waste Discharge Permit (Regional Water Quality Control Board) be required? _____

IV. Physical Site Characteristics

1. Describe the topography of the site: level

Level to gently rolling, 0-10% slopes: 0.87 acres

Moderate slopes of 10-30%: _____ acres

Steep slopes over 30%: _____ acres

2. Are there any springs, streams, lakes or marshes on or near the site? yes If yes, describe: Please see botanical report

3. What types of vegetation exist on the site? Please see botanical report

4. Will the project necessitate tree removal? Yes _____ No x If yes, please specify number, size and type to be removed. _____

5. Describe any unique or significant features on or adjacent to the site: Cuesta Inlet lies to the west of the site

6. Are you aware of any unique, rare or endangered species (vegetation or wildlife) associated with

7. Please describe the drainage pattern of th south and southwesterly

8. Has a drainage plan been prepared? ____ Yes x No

9. Are there any flooding problems on the site or in the surrounding area? ____ Yes x No
If yes, describe: ____

10. Has there been any grading or earthwork on the project site? ____ Explain: ____

11. Will any grading or alteration of the existing topography be necessary? ____ Yes x No
a. If yes, describe purpose and extent: ____
b. Total area of site disturbance (include grading and vegetation removal) ____ sq. ft.
c. Has a grading plan been submitted? ____

12. Will there be any drainage swale or streambed alteration associated with the project? no
Is yes, explain: ____

V. Community Services

NOT APPLICABLE

1. Number of school children in project: ____ School District: ____
2. Location of nearest police station: ____ Response time (in minutes): ____
3. Location of nearest fire station: ____ Response time (in minutes): ____

VI. Commercial/Industrial Projects

1. Hours of operation: ____
2. Days of operation: ____
3. Will this project produce any emissions (i.e. gases, smoke, odors, fumes, vapors)? ____
Explain: ____
4. Will this project increase the noise level in the immediate vicinity? ____ Explain: ____
5. What type of industrial waste materials will result from the project? Explain in detail: ____
6. How many people will this project employ? ____

VIII. Miscellaneous

1. Are there any proposed or existing deed restrictions? ____ Yes ____ No
If yes, describe: ____
2. Is a railroad or highway within 300 feet of your project site? ____

VERIFICATION OF PROJECT LOCATION RELATIVE TO KNOWN HAZARDOUS WASTE AND SUBSTANCES SITES LIST PURSUANT TO AB 3750

I acknowledge that I have reviewed the list of known Hazardous Waste and Substances Sites List and find the following:

X The site is not shown on the list of known Hazardous Waste and Substances Sites.

___ The site is shown on the Hazardous Waste and Substances Sites List dated August 1988, or any later list published by the State Office of Planning and Research.

5/31/94
Date

Applicant or Agent

ACKNOWLEDGEMENT OF RECEIPT OF REQUIREMENTS OF APPLICANT NOTICE AS REQUIRED UNDER THE CALIFORNIA GOVERNMENT CODE

I have received the Project Deadline Requirements and Notice Requirement Information Bulletin provided by San Luis Obispo County Department of Planning and Building.

5/31/94
Date

Applicant or Agent

LOT LINE ADJUSTMENT
Project Type

COAL 94-057

PI-182
155k/2261k2
02/02/89

Department of Planning and Building
San Luis Obispo County

Alex Hinds, Director
Bryce Tingle, Assistant Director
Ellen Carroll, Environmental Coordinator
Barney McCay, Chief Building Official
Norma Salisbury, Administrative Services Officer

ENVIRONMENTAL DIVISION

January 28, 1995

Mr. Jeff Edwards
P.O. Box 6070
Los Osos, CA 93412-6070

RE: Goodinghaus Lot Line Adjustment, ED95-022 (COAL94-097, S940025L)

Dear Mr. Edwards:

Your file has been received by the Environmental Division of the Department of Planning and Building for an environmental determination as required by the California Environmental Quality Act (CEQA) and will be processed as soon as possible.

Each project is reviewed in the order received for processing by this office. As this office reviews your project in more detail, additional information may be required from you in order to complete the environmental determination. If additional information is required, you will be notified of what is needed.

Recently enacted State law requires that the State Department of Fish and Game collect filing fees for projects that require consultation, review, or development of mitigation measures by Fish and Game. Applicants whose projects have involved the Department of Fish and Game will be notified of the need to pay the filing fees at the completion of the environmental review process.

An administrative fee for the processing of all environmental determinations filed with the County Clerk became effective July 1, 1991. Currently, this fee is in the amount of $25.00 and is due and payable to the County Clerk's Office within 2 days after the approval of the project.

Please fill out the enclosed environmental description form and send it to this office. We require the additional information in order to continue processing your application.

If a Negative Declaration (no EIR required) determination is made, you will be notified by letter and your file will be returned to the Planning Department to complete processing. If preparation of an Environmental Impact Report (EIR) is recommended, you will be notified and your project will be scheduled before the Board of Supervisors for an environmental determination.

As you may know, workload in the Environmental Division is heavy and there have been many requests to process projects within very short time frames. In response to these requests, the County has contracted with a consultant to expedite preparation of environmental determinations. The Environmental Coordinator has determined that the environmental determination for your project is eligible to be prepared by our consultant. The use of the consultant is at your option and expense. Choosing this option will reduce the processing time for environmental review of your project.

The consultant selected by the County is M.R. Enterprises, a local firm whose principals have prepared many environmental determinations for the County. Environmental determinations are expected to cost between $1,500 and $2,000. We expect that M.R. Enterprises will be able to complete most environmental determinations within 30 to 45 days.

If you choose to use our consultant, a deposit of $2,000 will be necessary. Any remaining balance will be refunded to you. If the costs of preparing the required documents will exceed the deposit, we will notify you to see if you wish to pay the additional costs and proceed with the consultant's services, or wait for County staff to complete the environmental determination.

If at any point during the consultant's analysis, potentially significant impacts are identified that will require preparation of a more comprehensive environmental document (e.g., an Expanded Initial Study or Environmental Impact Report), the consultant will immediately stop work and notify this office. We will then meet with you to discuss further processing of your project.

If you wish to use the services of our consultant, please sign and return the enclosed form along with your deposit check in the amount of $2,000 made payable to the "County of San Luis Obispo." We will then send you a receipt and authorize the consultant to begin work immediately.

If you do not wish to use the consultant, County staff will prepare your environmental determination. Projects are processed in the order received.

Thank you for your cooperation. If you have any questions, please feel free to call me.

Sincerely,

MARK HUTCHINSON
Environmental Specialist

Enclosures

cc: Claire D. Goedinghaus
381 Mitchell Dr.
Los Osos, CA 93402

Department of Planning and Building
San Luis Obispo County

Alex Hinds, Director

Bryce Tingle, Assistant Director
Ellen Carroll, Environmental Coordinator

Barney McCay, Chief Building Official
Norma Salisbury, Administrative Services Officer

ENVIRONMENTAL DIVISION

March 30, 1995

Jeff Edwards
P.O. Box 6070
Los Osos, CA 93412

SUBJECT: ENVIRONMENTAL DETERMINATION FOR GOEDINGHOUSE LOT LINE ADJUSTMENT; ED95-022 (COAL94-097)

Dear Mr. Edwards:

Your proposed project has been reviewed by the Environmental Coordinator. It can be seen with certainty that there is no possibility that this project may have a significant effect on the environment. Therefore, it has been determined that the project is exempt from the California Environmental Quality Act (CEQA) for the following reasons:

Exempt Status:

X Categorical Exemption {Sec.21084; 15305 Class 5}

__ General Rule Exemption {Sec. 21080; 15061(b)(3)}

Your project has been returned to the Planning Division and will be processed on the basis of this exemption. If you have any questions regarding the action taken by the Environmental Coordinator, please contact this office as soon as possible at (805) 781-5600.

Sincerely,

MARK HUTCHINSON
Environmental Specialist

Staff Report

San Luis Obispo County Department of Planning and Building

A-1

DATE: JULY 10, 1995

TO: SUBDIVISION REVIEW BOARD

FROM: JAY JOHNSON, ASSOCIATE PLANNER

SUBJECT: LOT LINE ADJUSTMENT AND COASTAL DEVELOPMENT PERMIT FOR CLAIRE GOEDINGHAUS/JEFF EDWARDS (COAL 94-097)

ATTACHMENTS
1. Findings
2. Conditions of Approval
3. Graphics

SUMMARY

The applicant is proposing an adjustment between ten lots resulting in four lots Los Osos. The existing lots are approximately 4,000 square feet each totaling 0.87 acres. The proposed lots would be 4,849 square feet, 4,857 square feet, 12,854 square feet, and 15,033 square feet each. Supervisorial District No.: 2

RECOMMENDATION

Approve the lot line adjustment as described in this report based on the findings found in Exhibit A, in accordance with Section 21.02.030 of the Real Property Division Ordinance.

PROJECT DESCRIPTION AND ENVIRONMENTAL SETTING

Location: The south side of Lupine Street between Doris Avenue and Donna Avenue in the community of Los Osos in the Estero planning area. Assessor Parcel Number: 074-141-001

General Plan: Residential Single Family/ Environmentally Sensitive Habitat/Non-open space

Planning Area Stds: None applicable

Existing Uses and Improvements: Vacant

Surrounding Land Uses (category):

North: Residences (Residential Single Family)
East: Residences (Residential Single Family)
South: Vacant (Residential Single Family)
West: Wetland (Recreation)

A-5

Site Area:	0.87 acres
Topography:	Nearly level
Vegetation:	Wetland vegetation and grasses
Water and Sewer:	Community water and on-site septic
Fire Protection:	South Bay Fire Department

ENVIRONMENTAL DETERMINATION

Categorical Exemption

DISCUSSION

Legal Lot Determination - The existing parcels are Lots 6 to 15, Block 16, in Cuesta by the Sea.

Ordinance Compliance

The proposed lot line adjustment is consistent with the provisions of Section 21.02.030 of the Real Property Division Ordinance because it will not worsen the situation as applicable to parcel design and is consistent with the minimum site area and setbacks for the single family land use category.

This application improves the situation for biological reasons because six existing lots that are within a wetland area will be eliminated. A botanical assessment was prepared for the property and identified the edge of the wetland. The building pad areas shown on the adjustment map meet the wetland setback established by the Coastal Zone Land Use Ordinance.

A-5-3

EXHIBIT A

FINDINGS - COAL 94-097
CLAIRE GOEDINGHAUS/JEFF EDWARDS

A. As conditioned, the proposed parcels, with respect to parcel design and wetland setbacks and other zoning and building ordinances are acceptable.

EXHIBIT B

CONDITIONS OF APPROVAL - COAL 94-097
CLAIRE GOEDINGHAUS/JEFF EDWARDS

1. Prior to filing of a map or recordation of a certificate of compliance effectuating the adjustment, the map or certificate shall provide a minimum 30 foot setback between the adjusted property line and the existing structures on Parcel 1, or the structures shall be relocated to allow for the 30 foot side setback required by the county Land Use Ordinance.

2. If a map is filed, it shall show:
   a. All public utility easements.
   b. All approved street names.

3. Any private easements described in the title report must be shown on the map, with recording data.

4. When the map is submitted for checking, or when the certificate of compliance is filed for review, provide a preliminary title report to the County Engineer or the Planning Director for review.

5. All conditions of approval herein specified are to be complied with prior to the recordation of the map or certificates of compliance which effectuate the adjustment. Recordation of a map is at the option of the applicant. However, if a map is not filed, recordation of a certificate of compliance is mandatory.

6. The map or certificates of compliance shall be filed with the County Recorder prior to transfer of the adjusted portions of the property or the conveyance of the new parcels.

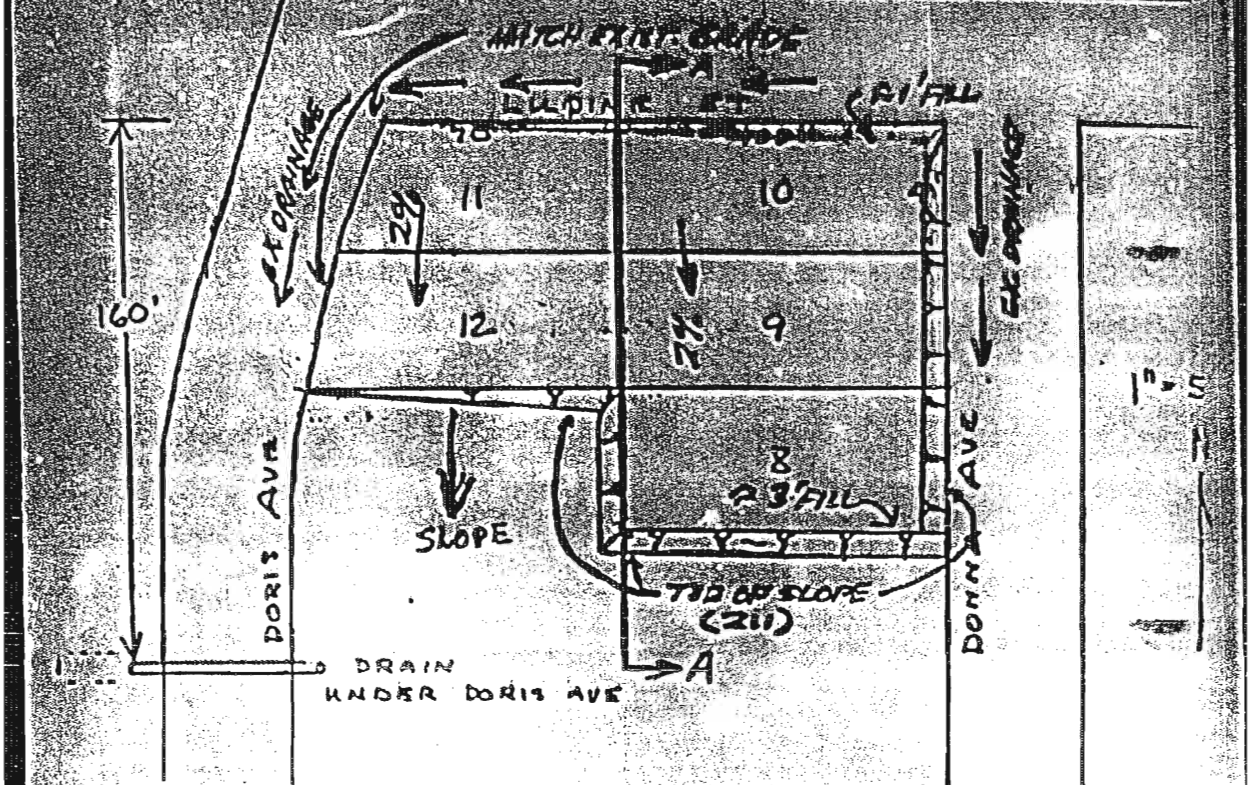
7. In order to consummate the adjustment of the lot lines to the new configuration when there is multiple ownerships involved, it is required that the parties involved quitclaim their interest in one another new parcels. Any deeds of trust involving the parcels must also be adjusted by recording new trust deeds concurrently with the map or certificates of compliance.

8. After approval by the Subdivision Review Board, compliance with the preceding conditions will bring the proposed adjustment into conformance with the Subdivision Map Act and Section 21.02.030 of the Real Property Division Ordinance.

9. The lot line adjustment will expire two years (24 months) from the date of the approval, unless the map or certificates of compliance effecting the adjustment is recorded first. Adjustments may be granted extensions of time. The applicant must submit a written request with appropriate fees to the Planning Department prior to the expiration date.

Staff report prepared by Jay Johnson,
Development Review Section and reviewed
by Michael Draze, Supervising Planner

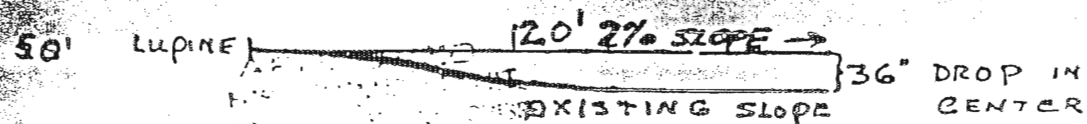
A-2-2



TOTAL SQ FOOTAGE
18,160 #

NT PROPERTY
SAME OWNERSHIP

LE - LUPINE
AVE SLOPES DOWNHILL TO BINSCARTH RD → BINSCAR
LEVELS OFF & RISES NEAR BINSCART



SECTION AA

SP 10/7/85

51365 10/7/85

A-2-1

Department of Planning and Building
San Luis Obispo County

Alex Hinds, Director
Bryce Tingle, Assistant Director
Barney McCay, Chief Building Official
Norma Salisbury, Administrative Services Officer
Ellen Carroll, Environmental Coordinator

TO: SUBDIVISION REVIEW BOARD

FROM: JAY JOHNSON, DEVELOPMENT REVIEW SECTION

SUBJECT: COAL 94-097 (GOEDINGHAUS)

DATE: AUGUST 7, 1995

This item was continued from the July 10, 1995 Subdivision Review Board meeting for staff to provide information about previous grading, the lot consolidation portion of the Coastal Zone Land Use Ordinance and depth to groundwater as applicable to septic systems.

Grading - The applicant was issued a grading permit (no. 51365) on October 7, 1985 to place approximately 1,600 yards of fill over a 18,160 square foot area. The depth of the fill ranged from 1 foot to 3 feet. Please refer to the attached site map. The project was completed on March 25, 1987.

Lot Consolidation - Under the lot consolidation section of the Coastal Zone Land Use Ordinance each parcel must be 6,000 square feet in area with a minimum of fifty feet of frontage to be sold or transferred independently. Based on lot consolidation existing Lots 6 and 7 are combined, Lots 8, 9 and 10 are combined, Lots 11, 12 and 13 are combined, and Lots 14 and 15 are combined. The number of transferrable sites is four. With the proposed lot configuration, Lots 3 and 4 may be transferred independently, whereas, Lots 1 and 2 must be transferred with another lot.

Depth to Ground Water - The depth to ground water in the Cuesta-by-the-Sea area is approximately ten feet. The shallow depth often requires the use of mounded septic systems or other methods besides standard septic systems.

In addition condition number one was inadvertently carried over from another staff report and should be deleted.

Department of Planning and Building
San Luis Obispo County

Alex Hinds, Director
Bryce Tingle, Assistant Director
Barney McCay, Chief Building Official
Norma Salisbury, Administrative Services Officer
Ellen Carroll, Environmental Coordinator

TO: SUBDIVISION REVIEW BOARD

FROM: JAY JOHNSON, DEVELOPMENT REVIEW SECTION

SUBJECT: COAL 94-097 (GOEDINGHAUS)

DATE: SEPTEMBER 11, 1995

This item was continued from the August 7 (and July 10), 1995 Subdivision Review Board meeting for staff to provide additional information about the previous grading. The applicant was issued a grading permit (no. 51365) on October 7, 1985 to place approximately 1,600 yards of fill over a 18,160 square foot area. The depth of the fill ranged from 1 foot to 3 feet. At the time of preparing the SRB agenda, staff had no additional information to report. Staff's findings will be sent under a separate cover or presented at the hearing. Please bring your materials for this item from the July 10 and August 7 meetings.

EDA
ENGINEERING DEVELOPMENT ASSOCIATES

July 9, 1997

7/9/97
appid 5/10/95 → 7/10/97
OK-lj #153

EDA Job Number 201188

Planning Department
Attn: Development Review
County of San Luis Obispo
County Government Center
San Luis Obispo, CA 93408

Re: Time Extension for CoAl 94-097

Dear Sir or Madam:

Please consider this a notification of request for a first one (1) year time extension on approved CoAl 94-097 located at the corner of Doris and Lupine Street in the community of Los Osos.

Thank you for your consideration in scheduling this item on the Board agenda.

Sincerely,

ENGINEERING DEVELOPMENT ASSOCIATES

Terry Payne
Administrative Coordinator

Enclosure: Check #4922 for $153.00

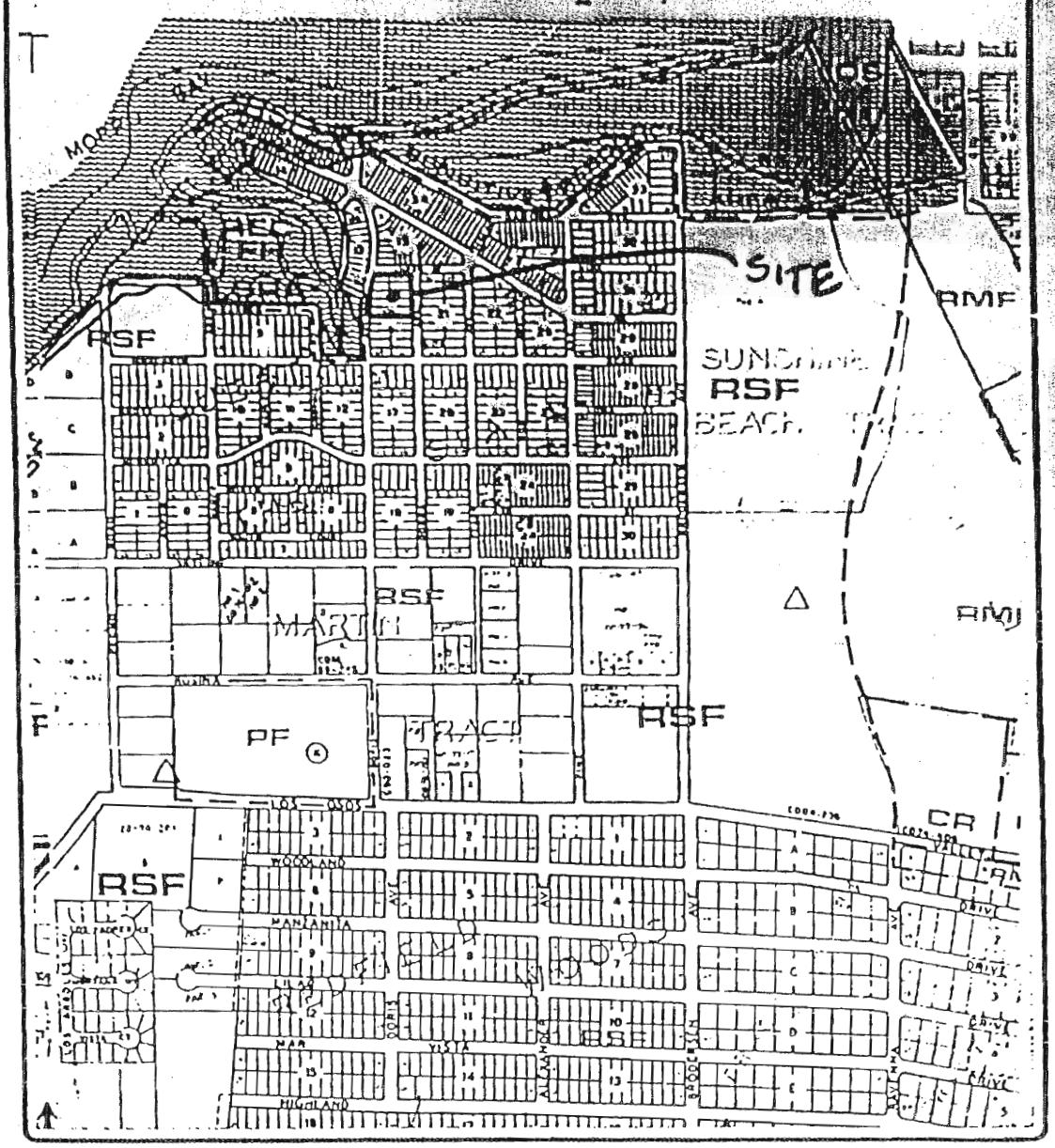
TP\ltr\1188ime.ext

RECEIVED
JUL 09 1997
S.L.O. COUNTY
PLANNING DEPT.

AC 9/1200-yr

PLANNING • CIVIL ENGINEERING • LAND SURVEYING
1320 NIPOMO ST. • SAN LUIS OBISPO, CA 93401 • 805-549-8658 • FAX 805-549-8704
744 OAK ST. • PASO ROBLES, CA 93446 • 805-237-1033 • FAX 805-237-3797

SAN LUIS OBISPO COUNTY DEPARTMENT OF PLANNING & BUILDING



PROJECT: COAL 94-097

EXHIBIT: LAND USE CATEGORY

SAN LUIS OBISPO COUNTY
DEPARTMENT OF PLANNING AND BUILDING

ALEX HINDS
DIRECTOR

BRYCE TINGLE
ASSISTANT DIRECTOR

ELLEN CARROLL
ENVIRONMENTAL COORDINATOR

BARNEY McCAY
CHIEF BUILDING OFFICIAL

NORMA SALISBURY
ADMINISTRATIVE SERVICES OFFICER

DATE: SEPTEMBER 15, 1995

Jeff Edwards
P. O. Box 6070
Los Osos, CA 93412

SUBJECT: COAL 94-097 – CLAIRE GOEDINGHAUS/JEFF EDWARDS

The county Subdivision Review Board approved your application on September 11, 1995, based on enclosed Findings and Conditions. If you are dissatisfied with any aspect of this approval, you have the right to appeal this decision to the Board of Supervisors up to 14 days after the date of approval, in writing on an appeal form, to the Planning and Building Department. The appeal fee is $456 and must accompany your appeal form. If this project is located in the coastal area of the county, and if the appeal is based on a coastal issue, there is no fee for the appeal to the county.

Exhaustion of coastal appeals at the county level is required prior to appealing the matter to the California Coastal Commission. If you wish to appeal the action of the Board of Supervisors of a coastal project, you have the right to appeal to the California Coastal Commission pursuant to Coastal Act Section 30603 and County Coastal Zone Land Use Ordinance 23.01.043. These regulations contain specific time limits, criteria, and procedures that must be followed to appeal this action. This appeal must be made directly to the California Coastal Commission Office at their Santa Cruz Office. Call (408) 427-4863 for further information on appeal procedures.

If you have any questions regarding this matter, please contact the Department of Planning and Building at 781-5600.

Sincerely,

Jean McKown

Jean McKown, Secretary
County Subdivision Review Board

c: County Engineering
Environmental Health

e:\wpdocs\srb\sept\v9501011.ltr

EXHIBIT A

FINDINGS - COAL 94-097
CLAIRE GOEDINGHAUS/JEFF EDWARDS

A. As conditioned, the proposed parcels, with respect to parcel design and wetland setbacks and other zoning and building ordinances are acceptable.

B. Approval of the proposed project will not significantly affect public access to the coast because the project site is not located between the first public road and the shoreline and because the project does not propose any development that would block, hinder, or deter any known physical access route to the shoreline.

EXHIBIT B

CONDITIONS OF APPROVAL - COAL 94-097
CLAIRE GOEDINGHAUS/JEFF EDWARDS

1. If a map is filed, it shall show:
   a. All public utility easements.
   b. All approved street names.

2. Any private easements described in the title report must be shown on the map, with recording data.

3. When the map is submitted for checking, or when the certificate of compliance is filed for review, provide a preliminary title report to the County Engineer or the Planning Director for review.

4. All conditions of approval herein specified are to be complied with prior to the recordation of the map or certificates of compliance which effectuate the adjustment. Recordation of a map is at the option of the applicant. However, if a map is not filed, recordation of a certificate of compliance is mandatory.

5. The map or certificates of compliance shall be filed with the County Recorder prior to transfer of the adjusted portions of the property or the conveyance of the new parcels.

6. In order to consummate the adjustment of the lot lines to the new configuration when there is multiple ownerships involved, it is required that the parties involved quitclaim their interest in one another new parcels. Any deeds of trust involving the parcels must also be adjusted by recording new trust deeds concurrently with the map or certificates of compliance.

7. After approval by the Subdivision Review Board, compliance with the preceding conditions will bring the proposed adjustment into conformance with the Subdivision Map Act and Section 21.02.030 of the Real Property Division Ordinance.

8. The lot line adjustment will expire two years (24 months) from the date of the approval, unless the map or certificates of compliance effecting the adjustment is recorded first. Adjustments may be granted extensions of time. The applicant must submit a written request with appropriate fees to the Planning Department prior to the expiration date.

Based on the revised map submitted January 4, 1995, it appears the proposed lot line adjustment will provide buildable areas that are consistent with the Coastal Zone Land Use Ordinance wetland setback requirements. As mentioned in previous letters, the adjusted lots must be consistent with Section 23.04.048(2) that requires a 6,000 square foot minimum lot size and a minimum lot width of 50 feet. Please provide a revised adjustment map consistent with this standard prior to this application being scheduled for hearing.

If you have any questions or would like to discuss the project, please call me at 781-4573 or 781-5600.

SAN LUIS OBISPO COUNTY
DEPARTMENT OF PLANNING AND BUILDING

ALEX HINDS
DIRECTOR

BRYCE TINGLE
ASSISTANT DIRECTOR

JULIE CARROLL
ENVIRONMENTAL COORDINATOR

BARNEY McCAY
CHIEF BUILDING OFFICIAL

NORMA SALISBURY
ADMINISTRATIVE SERVICES OFFICER

September 10, 1997

EDA
1320 Nipomo
San Luis Obispo, CA 93407

SUBJECT: LOT LINE ADJUSTMENT COAL 94-097 -- CLAIRE GOEDINGHAUS -- ONE YEAR TIME EXTENSION

The County Subdivision Review Board approved your application on September 8, 1997 which was a Consent item, and we are attaching Exhibit A, approved maps, for your records.

If you are dissatisfied with any aspect of this approval, you have the right to appeal this decision to the Board of Supervisors up to 14 days after the date of approval. in writing, to the Planning Department. The appeal fee is $474 and must accompany your appeal letter.

If you have any questions regarding this matter, please contact our department at 781-5600.

Sincerely,

Jean McKown

Jean McKown, Secretary
County Subdivision Review Board

c: County Engineering
Environmental Health

SAN LUIS OBISPO COUNT

DEPARTMENT OF PLANNING AND BUILDIN(

ALEX HINI
DIRECTO

BRYCE TIN
ASSISTANT DIRECT

ELLEN CARR
ENVIRONMENTAL COORDINAT

BARNEY MC
CHIEF BUILDING OFFIC

NORMA SALISB
ADMINISTRATIVE SERVICES OFFI

DATE: 1/14/98

TO: Jerry Payne / EDA

FROM: LINDA JONES, CURRENT DEVELOPMENT

SUBJECT: COAL 94-097 / S940052 Goedinghaus

The following is status information pertaining to the above-mentioned project:

Initial approval: 7/10/95 Good until: 7/10/97

1st time extension, good until: 7/10/98

_____ extension, good until: _____

_____ extension, good until: _____

_____ extension, good until: _____

_____ extension, good until: _____

_____ extension, good until: _____

_____ extension, good until: _____

As of this date, you have X more one-year time extensions available on this project. A time extension must be submitted in writing and be in the Planning & Building Department receipted by the expiration date of the project. Please call (805) 781-5183 for the curren extension fee for your project before submitting.

status.ltr

Construction Permit Application

San Luis Obispo County Planning Department 54702

SITE INFORMATION. 1766 DONNA AVE

Project Address DORIS/DONNA AVE & LUPINE Locality LOS OSOS

Lot Number 6-7 13-14-15 Block 16 Tract QUESTA BY THE SEA or: Sec ____ TSP ____ Range ____

Assessor Parcel Number(s) 74-141-9 6,7,13,14,15 Lot Size SEE Date of App. ____

APPLICANT INFORMATION 01 DRAWING 27000 Ø

("x" contact person)

(x) CARL H. GOEDINGHAUS - 381 MITCHELL DR. LOS OSOS 93402 527-0789
Owner Name(s) Mailing Address City, State, Zip Code Business Hour Phone

( ) ED'S EXCAVATING LOS OSOS
Contractor Mailing Address City, State, Zip Code Bus. Hr. Phone License No.

( ) [illegible]
Architect, Engineer or Designer Mailing Address City, State, Zip Code Bus. Hr. Phone License No.

PROJECT DESCRIPTION

TYPE (X) All new ( ) Addition ( ) Alteration ( ) Repair ( ) Demolish ( ) Moved Building ( ) ____

OF ( ) Single-Family Dwelling ( ) Multi-Family Dwelling ( ) Mobile Home ( ) Barn (X) Grading

PROJECT ( ) Sign ( ) Commercial ( ) Industrial ( ) Other FILL

USE: Describe Specific Project FILL FOR BUILDING SITE

AREA AND SIZES PROPOSED

Total Habitable Floor Area ____ Garage Area ____ Barn ____ Storage Area ____

Deck Area ____ Height Above Finish Grade ____ Carport Area ____ Covered Porch Area ____

No. of Bedrooms ____ No. of Bathrooms ____ No. of Stories ____ Retaining/Garden Wall Area ____ Height ____ Length ____

MOVED BUILDING(S)

Existing Location ____ Locality ____

MANUFACTURED HOUSING

Manufacturer ____ Serial Number ____ Dept. of Housing No. ____

Number of Bedrooms ____ Size ____ DMV License Number ____ Year ____ State ____

GRADING Less than 10% Slope.

Depth of Cuts (min. & max.) NONE Depth of Fills (min. & max.) @ 36" Cu. Yds. Cut. NONE Fill @ 2000

Total Cu. Yds. of Material @ 2000 Area of Site Disturbance 19,800 #

TYPE OF CONSTRUCTION

Foundation: ( ) Slab ( ) Perimeter & Piers ( ) Pole ( ) Other ____

Framework: ( ) Wood Stud ( ) Masonry ( ) Metal ( ) Timber

Exterior Siding: ( ) Stucco ( ) Plywood ( ) Board ( ) Stone Veneer

( ) Brick Veneer ( ) Concrete Tilt-up ( ) Metal ( ) Other ____

Roof Pitch ____ Material: ( ) Wood Shakes, Shingles ( ) Tile ( ) Built-up Comp. ( ) [illegible]

( ) Metal ( ) Other ____

MECHANICAL AND ENERGY INFORMATION

METHOD OF ENERGY COMPLIANCE ____

TYPE OF SPACE HEATING: LIST MFS., MODEL #, AND SIZE OF EACH APPLIANCE

( ) Gas ____ ( ) Fireplace ____

( ) Butane LPG, etc. ____ Other ____

( ) Active Solar ____ TYPE OF SPACE COOLING (A.C.) ____

( ) Passive Solar ____

( ) Electric Heatpump ____ TYPE OF WATER HEATING ____

UTILITIES

WATER: ( ) well ( ) public SEWAGE DISP: ( ) septic ( ) sewer ( ) GAS: ( ) natural ( ) LPG ( ) TEMP POWER

OFFICE USE ONLY 2000 CY

Sq. ft. at	=	TOTAL VARIATION (for bldg. permit use only)	= $
Sq. ft. at	=	Plan Check = $ 100.00	Building = $
Sq. ft. at	=	Energy Review = $	Grading = $ 215.00
Sq. ft. at	=	Plot Plan = $ [illegible]	Plumbing = $
		Microform = $ 4	Electrical = $
PROJECT: Grading		Drainage = $	SMIP Tax = $
LUE CAT: PSF	COM. DESIG: LCP	Fire Plan = $	Encroachment = $
PLAN AREA/URB. OR VIL. AREA: EST/CSOS		Tree Removal = $	= $
PARKING SPACES REQUIRED		Adjustment = $	= $
COUNTY ROAD NO.	MAP NO. 25	Investigation = $	= $
SETBACKS: Front ____ Sides ____ Rear		Violation Fee = $	= $
COASTAL ZONE: IN (X) OUT ( )		= $	Subtotal = $ 215.00
CURB, GUTTER, AND SIDEWALK: YES( ) NO (X)		*Subtotal = $ 104.00	Total Fee = $ 319.00
LAND USE/DIVISIONS:		*Do now, balance upon issuance	
LUE STANDARDS:		Requirements for final inspection	
LDO STANDARDS:		( ) Land Use Conditions ( ) Fire Safety Inspection	
By: [signature]	Date: 9/5/85	( ) Other ____	

County Government Center, San Luis Obispo, CA 93408. (805) 549-5600

Last Name GOEDINGHAUS, Carl A. 54702

Construction Permit

San Luis Obispo County Planning Department

THIS PERMIT CONSTITUTES AUTHORIZATION BY THE COUNTY OF SAN LUIS OBISPO ALLOWING CONSTRUCTION OF THE PROJECT DESCRIBED HEREIN, SUBJECT TO ALL APPLICABLE PROVISIONS OF THE COUNTY CODE.

Project Address 1765 Donna Ave. Los Osos APN 74-141-01

Lot Number C-7 Block 18 Tract / Other CUESTA BY THE SEA

P A EST Comm LSOS LUC RSF Comb Desig LCP In Coastal Zone IN Lot Size 12,000 SF

X GOEDINGHAUS, Carl A. 381 Mitchell Dr. Los Osos, CA 93402 528-0789

Owner Name(s) Mailing Address Zip Code Business Phone

ED'S Excavating Los Osos, CA 93402

Contractor or Mover Mailing Address Phone No State License No

OWNER

Architect, Engineer or Designer Mailing Address Phone No State License No

LEGAL DECLARATIONS

LICENSED CONTRACTORS DECLARATION

I am licensed under the provisions of Chapter 9 (commencing with [illegible]) of the California Business and Professions Code and my license is in full force and effect.

License Class EXPIRED 9-30-92 Date

License Number

Contractor by

OWNER BUILDER DECLARATION

I am exempt from the contractor's License Law for the following reason:

☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale.

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project.

☐ I am exempt under [illegible]

this reason

Date Applicant

WORKERS COMPENSATION DECLARATION

I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Workers' Compensation Insurance, or a certified copy, hereof, [illegible]

☐ Certified copy is hereby furnished

☐ Certified copy is filed with the County Planning Department

Date Applicant

CERTIFICATE OF EXEMPTION FROM WORKERS COMP. INSURANCE

I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation laws of California.

Date Applicant

NOTICE TO APPLICANT: If you hereby file Certificate of Exemption, you should become subject to the Workers Compensation provisions of the Labor Code, you must comply with such provisions or this permit shall be revoked.

CONSTRUCTION LENDING AGENCY

I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civ. Code).

Lender's Name

Lender's Address

NOTICE

The Uniform Building Code requires that this permit become void and all work or construction authorized is not started within 180 days after the permit is issued or construction or work is suspended or abandoned for a period of 180 days any time after work is commenced.

I certify under penalty of perjury that I have read this application and state that the above information is correct. I agree to comply with all county ordinances and state laws relating to building construction, and hereby authorize representatives of this county to enter upon the above-mentioned property for inspection purposes.

Signature of Contractor or Authorized Agent

Signature of Owner or Owner Builder

I.D. Verification Date

PROJECT INFORMATION

Type of Project GRADING

Proposed Use FILL FOR BUILDING SITE

Setbacks: Front Sides Rear

Floor Area Parking Area

Ridge Ht. Stories Basement Area

Sq. Ft. Existing Sq. Ft. New Sq. Ft. Total

Valuation Name of Business

Name of Subdivision Lot No.

Address of Site

Assessor Parcel No.

Type of Sewage Disposal Water Supply

Fire Sprinklers Heat Type

Total Fee none Cu. Yds. Area of Disturbance 19,800 SF

TYPE OF CONSTRUCTION SLOPE LESS THAN 10%

Foundation Roof Slope

Roof Covering Material

Mechanical Equipment Information Type of Heating

Energy Information Water Source

Fire Sprinklers Roof Type

Method of Energy Compliance

FEES

Plan Review	$ 100.00	[illegible]	$
Energy Review	$	Building	$ 215.00
Plot Plan	$	Plumbing	$
Microfilm	$ 4.00	Electrical	$
Drainage	$	Mechanical	$
Fire Plan	$	SMIP Fee	$
Tree Removal	$	Encroachment	$
Abatement	$		$
Investigation	$		$
Vegetation	$		$
	$	Subtotal	$ 215.00
Subtotal	$ 104.00	Total Fee	$ 319.00

REQUIREMENTS FOR FINAL INSPECTION BAL OF FEES 215.00

Curb, gutter and sidewalk	Fire Safety Improvements
Road Tie	Planting Improvements
XXX Land Use Permit Conditions	Fencing Improvements
Landscaping Improvements	Other
Encroachment Type	Other

Private Sewage Disposal System Requirements

Gallon Septic Tank sq. ft. Leach Area

SPECIAL CONDITIONS

DO NOT FINAL OR APPROVE THIS PERMIT WITH OUT DEPARTMENT APPROVAL

PERMIT NO. 54702

Date Received: Receipt No

Ready To Issue Date: By

Date Issued: Issued By

MAILING ADDRESS: COUNTY GOVERNMENT CENTER, SAN LUIS OBISPO, CA 93408 (805) 549-5602

Last Name GOEDINGHAUS, Carl A. 54702

Construction Permit

San Luis Obispo County Planning Department

THIS PERMIT CONSTITUTES AUTHORIZATION BY THE COUNTY OF SAN LUIS OBISPO ALLOWING CONSTRUCTION OF THE PROJECT DESCRIBED HEREIN, SUBJECT TO ALL APPLICABLE PROVISIONS OF THE COUNTY CODE.

Project Address 1765 Donna Ave. Los Osos 74-141-01

Lot Number C-7 Block 16 Tract - Other COLSTA BY THE SEA

P.A. LSI LSOS SSF LCP TS 37,[illegible] sf

X GOEDINGHAUS, Carl A. 331 Mitchell Dr. Los Osos, CA 93402 [illegible]

Owner Name(s)

EJ'S Excavating Los Osos, CA 93402

Contractor or Mover

OWNER

Architect, Engineer or Designer

LEGAL DECLARATIONS

LICENSED CONTRACTORS DECLARATION

OWNER BUILDER DECLARATION

WORKERS COMPENSATION DECLARATION

CERTIFICATE OF EXEMPTION FROM WORKERS COMP. INSURANCE

NOTICE TO APPLICANT

CONSTRUCTION LENDING AGENCY

NOTICE

Signature of Contractor or Authorized Agent

Signature of Owner or Owner Builder

E.U. Verification

PROJECT INFORMATION

GRADING

FILL FOR BUILDING SITE

2000 none 19,500 sf.

TYPE OF CONSTRUCTION SLOPE LESS 10%

100.00 215.00

4.00

215.00

104.00 319.00

REQUIREMENTS FOR FINAL INSPECTION BAL OF FEES 215.00

XXX

Private Sewage Disposal System Requirements

SPECIAL CONDITIONS

DO NOT FINAL OR APPROVE [illegible] CHANGES WITH OUT DEVELOPMENT REVIEW SECTION APPROVAL

PERMIT NO. 54702

Date Received

Ready To Issue Date:

Date Issued: Issued By

MAILING ADDRESS: COUNTY GOVERNMENT CENTER, SAN LUIS OBISPO, CA 93408 (805) 549-5602

San Luis Obispo County
Planning Department

County Government Center
San Luis Obispo
California 93408
(805) 549-5600

Paul C. Crawford, AICP
Planning Director

September 3, 1987

Mr. Carl Goedinghaus
381 Mitchell Drive
Los Osos, California 93402

Dear Mr. Goedinghaus:

SUBJECT: APPLICATION FOR PERMIT NO. 54702

This is to advise you that your application for building construction No. 54702 has been in our office for more than 180 days.

We would like to call your attention to the Uniform Administrative Code (UAC) provisions governing the expiration of plan review (Section 304(d)):

> "(d) Expiration of Plan Review. Applications for which no permit is issued within 180 days following the date of application shall expire by limitation, and plans and other data submitted for review may thereafter be returned to the applicant or destroyed by the building official. The building official may extend the time for action by the applicant for a period not exceeding 180 days upon request by the applicant showing that circumstances beyond the control of the applicant have prevented action from being taken. No application shall be extended more than once. In order to renew action on an application after expiration, the applicant shall resubmit plans and pay a new plan review fee."

Please be advised that your application which was filed on September 3, 1986, has expired by limitation and become void. Your plans are at our office where you may pick them up. If not picked up in 30 days, they will be discarded.

If you wish to discuss this matter with us in person, please phone (805) 549-5602 and we will arrange an appointment.

Sincerely,

Fred Norton

FRED NORTON
Chief Building Inspector
cc: Ed's Excavating

B-12

Construction Permit Application

San Luis Obispo County Planning Department

SITE INFORMATION

Project Address — DIANA AVE. Locality Co. Oso -

Lot Number 6-25 Block 16 Tract 200SH By the Sea Sec TSP Range

Assessor Parcel Number(s) 74-141-001 Lot Size 40x90 Date of App. 12/24/86

APPLICANT INFORMATION

("x" contact person)

( ) Owner Name(s) GREGORIAS CARL Mailing Address City, State, Zip Code Business Hour Phone

( ) Contractor Mailing Address City, State, Zip Code Bus. Hr. Phone License No.

(X) Architect, Engineer or Designer EDA 1320 Nipomo St Glo. CAL. 93401 549-8450 Mailing Address City, State, Zip Code Bus. Hr. Phone License No.

PROJECT DESCRIPTION

TYPE ( ) All new ( ) Addition ( ) Alteration ( ) Repair ( ) Demolish ( ) Moved Building ( )

OF ( ) Single-Family Dwelling ( ) Multi-Family Dwelling ( ) Mobile Home ( ) Barn (X) Grading

PROJECT ( ) Sign ( ) Commercial ( ) Industrial ( ) Other

USE: Describe Specific Project GRADING

AREA AND SIZES PROPOSED

Total Habitable Floor Area Garage Area Barn Storage Area

Deck Area Height Above Finish Grade Carport Area Covered Porch Area

No. of Bedrooms No. of Bathrooms No. of Stories Retaining/Cordon Wall Area Height Length

MOVED BUILDING(S)

Existing Location Locality

MANUFACTURED HOUSING

Manufacturer Serial Number Dept. of Housing No.

Number of Bedrooms Size DMV License Number Year State

GRADING

Depth of Cuts (min. & max.) .5'-0' Depth of Fills (min. & max.) 3'-0' Cu. Yds. Cut 26 Fill 2150

Total Cu. Yds. of Material 2176 Area of Site Disturbance

TYPE OF CONSTRUCTION

Foundation: ( ) Slab ( ) Perimeter & Piers ( ) Pole ( ) Other

Framework: ( ) Wood Stud ( ) Masonry ( ) Metal ( ) Tilt-up

Exterior Siding: ( ) Stucco ( ) Plywood ( ) Board ( ) Brick Veneer ( ) Concrete Tilt-up ( ) Metal ( ) Other

Roof Pitch Material: ( ) Wood Shakes, Shingles ( ) Tile ( ) Built-up Comp. ( ) Metal ( ) Other

MECHANICAL AND ENERGY INFORMATION

METHOD OF ENERGY COMPLIANCE

TYPE OF SPACE HEATING: LIST MFG., MODEL #, AND SIZE OF EACH APPLIANCE

( ) Gas ( ) Fireplace

( ) Butane LPG, etc. Other

( ) Active Solar TYPE OF SPACE COOLING (A.C.)

( ) Passive Solar

( ) Electric Heatpump TYPE OF WATER HEATING

UTILITIES

WATER: ( ) well ( ) public SEWAGE DISP: ( ) septic ( ) sewer ( ) GAS: ( ) natural ( ) LPG ( ) TEMP POWER

OFFICE USE ONLY

2150 Cy

Sq. ft. at - Sq. ft. at - Sq. ft. at - Sq. ft. at -

PROJECT: Grading

LDR CAT: RSF-1 COM. DESIG. LCP

PLAN AREA/URB. OR VIL. AREA: Est/Cso

PARKING SPACES REQUIRED

COUNTY ROAD NO. MAP NO. V-25

SETBACKS: Front Sides Rear

COASTAL ZONE: IN (X) OUT ( )

CURB, GUTTER, AND SIDEWALK: YES ( ) NO (X)

LAND USE/DIVISIONS:

LUE/LUO STANDARDS:

ENFORCEMENT CASE: ( ) YES ( ) NO (X)

By: Date: 12/24/86

TOTAL VALUATION (For bldg. permit use only)	- $		- $
Plan Check	- $ 100.00	Building	- $
Energy Review	- $	Grading	- $ 205.00
Plot Plan	- $ 75.00	Plumbing	- $ 78.50
Microfilm	- $ 4.00	Electrical	- $ (126.50)
Drainage	- $	SMIP Fee	- $
Fire Plan	- $	Encroachment	- $
Tree Removal	- $		- $
Adjustment	- $		- $
Investigation	- $		- $
Violation Fee	- $		- $
	$	Subtotal	- $ 205.00
*Subtotal	$ 179.00	Total Fee	- $ 32 4.00

*Due now, balance upon issuance CK NO 906 197.50

Requirements for final inspection P.D.C. DUE 126.50

( ) Land Use Conditions ( ) Fire Safety Inspection

( ) Other

DEC 29 1986 DEC Comp. Plan San Luis Obispo Co. Planning Department

Last Name GOEDIKSHAUS, C. 55600

Expired 6-24-87 fred nelson

Construction Permit

San Luis Obispo County Planning Department

THIS PERMIT CONSTITUTES AUTHORIZATION BY THE COUNTY OF SAN LUIS OBISPO ALLOWING CONSTRUCTION OF THE PROJECT DESCRIBED HEREIN, SUBJECT TO ALL APPLICABLE PROVISIONS OF THE COUNTY CODE.

Project Address: Donna Avenue — Locality: LOS OSOS — A P N: 74-141-01

Lot Number: 6-15 — Block: 15 — Project Tract: Cuesta by the Sea

P A: EST — Comm: — LDC: RSF — Comb Desig: LCP — In Coastal Zone: IN — Lot Size: 40 x 100

Owner Name(s): GOEDIKSHAUS, Carl — Mailing Address: — Zip Code: — Phone No:

Contractor or Owner — Mailing Address — Phone No — State License No

Architect, Engineer or Designer: EDA — Mailing Address: 1320 Nipomo Street, SLO, CA, 93401 — Phone No: 549-8858 — State License No:

LEGAL DECLARATIONS

LICENSED CONTRACTORS DECLARATION

I am licensed under the provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the California Business and Professions Code and my license is in full force and effect.

License Class: —

License Number: —

Contractor: —

OWNER BUILDER DECLARATION

I am exempt from the contractors license law for the following reason:

( ) I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale.

( ) I, as owner of the property, am exclusively contracting with licensed contractors to construct the project.

( ) I am exempt under Sec. — B. & P. C. for this reason: —

Date: — Applicant: —

WORKERS COMPENSATION DECLARATION

I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Workers' Compensation Insurance, or a certified copy thereof (Sec. 3800, Labor Code).

( ) Certificate copy is hereby furnished.

( ) Certificate copy is filed with the county Planning department.

Date: — Applicant: —

CERTIFICATE OF EXEMPTION FROM WORKERS COMP INSURANCE

I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation laws of California.

Date: — Applicant: —

NOTICE TO APPLICANT: If after making this Certificate of Exemption you should become subject to the Workers' Compensation provisions of the Labor Code, you must comply with such provisions or this permit shall be deemed revoked.

CONSTRUCTION LENDING AGENCY

I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civil Code).

Lender's Name: —

Lender's Address: —

NOTICE

The Uniform Building Code requires that this permit become null and void if work or construction authorized is not started within 180 days after the permit is issued, or if construction or work is suspended or abandoned for a period of 180 days any time after work is commenced.

I certify under penalty of perjury that I have read this application and state that the above information is correct. I agree to comply with all county ordinances and state laws relating to building construction, and hereby authorize representatives of this county to enter upon the above-mentioned property for inspection purposes.

Signature of Contractor or Authorized Agent

Signature of Owner or Owner-Builder

I.D. Verification — Date

PROJECT INFORMATION

Type of Project: GRADING

Proposed Use — Sewer — Water

Dwelling Units: Total — Studio — 1 Bdrm — 2 Bdrm — 3 Bdrm — 4 Bdrm

Total Floor Area — Garage Area — Carport — Covered Porch — Garage

No. Stories — No. Bathrooms — Fireplaces — Basement

Heating Fuel Information — Type — Roof

Height — Roof Material — Exterior Finish

Mobile Manufactured Home Information: Make — Model — Serial No. — Year

Lot — Block — Tract — Lot Area — Sq. Ft. or Acres

Mobile Dealer's License No. — Name — No. Bedrooms

Mobile Building Information: Size — Year — Insignia No.

Present Use (if any) — Last Use (if any)

Proposed Use — Est. Cost (if any)

Grading Information: Tot. Cut — 26 — Cu. Yds.

Tot. Fill — 2150 — Cu. Yds. Area (sq. ft. or acres)

TYPE OF CONSTRUCTION

— OCC. Group —

Foundation — Frame — Roof Slope —

Roof Covering Material — Exterior —

Mechanical and Energy Information — Type of Heating —

Solar Water Heating — Energy Conservation —

Utility Information: Water Source — Sewage Disposal —

Method of Energy Conservation —

FEES

TOTAL VALUATION (for bldg. permit use only): $ —

Plan Review	$ 100.00	Building	$ —
Energy Review	$ —	Grading	$ 205.00
Plot Plan	$ 15.00	Plumbing	$ —
Mechanical	$ 4.00	Electrical	$ —
Other	$ —	Other	$ —
Fire Plan	$ —	State Fee	$ —
Fire Approval	$ —	Encroachment	$ —
Other	$ —	drainage	25.00
Investigation	$ —	—	$ —
Validation Fee	$ —	—	$ —
—	$ —	Sub-total	$ 205.00
Additional	$ 119.00	Total Fee	$ 324.00

REQUIREMENTS FOR FINAL INSPECTION: BAL DUE $126.50 + 25.00

— Curb, gutter and sidewalk — Fire Safety Improvements

— Road Cut — Fencing Improvements

— Land Use Permit Conditions — Retaining Improvements

— Landscaping Improvements — Other —

— Encroachment Type — Other —

Private Sewage Disposal System Requirements:

Gallon Septic Tank — Leach Area —

SPECIAL CONDITIONS:

PERMIT NO. 55600

Date Received: — Receipt No. —

Ready To Issue Date: — By —

Date Issued: — Issued By —

MAILING ADDRESS: COUNTY GOVERNMENT CENTER, SAN LUIS OBISPO, CA 93408 (805) 549-5602

BOTANICAL ASSESSMENT OF COAL 94-097 ON DORIS AVE. LOS OSOS, CALIFORNIA

Prepared for:

J.H. Edwards
P.O. Box 6070
Los Osos, CA 93412

Prepared by:

Susan Weis
Field Botanist

with

V.L. Holland
Plant Ecologist
1697 El Cerrito Ct.
San Luis Obispo, CA 93401

September 1994

INTRODUCTION

The site, designated COAL 94-097, is the northern end of the unimproved block delimited by Doris Ave. on the west, Lupine St. on the north, and Donna Ave. on the east. There are residences on the opposite sides of Lupine St. and Donna Ave. Donna Ave. ends at the eucalyptus grove which takes up the southern part of the block and is bounded by Binscarth Rd. to the south. A coastal salt marsh bordering Morro Bay is to the west of Doris Ave.

The property is divided physically into two relatively flat areas by a bank or slope. The elevation difference between the two areas is about three feet. The upper (northern) area, along Lupine St., is covered by **disturbed grassland** dominated by introduced, weedy grasses and forbs. The four lots resulting from the merger of existing lots will cover this upper area. **Coastal salt marsh** is the dominant vegetation type on the lower (southern) area which is connected to the Morro Bay salt marsh by a drainage system.

The purpose of this study is to evaluate the effects of a lot line adjustment and creation of four building envelopes on the upper area along Lupine St. in place of the ten existing lots (Fig. 1). The salt marsh would not be developed in the new arrangement.

BOTANICAL SURVEY

A vegetation survey of the site was carried out in late July and early August, 1994. The area was canvassed on foot and a list of plants in identifiable condition was made (Table 1). Since the survey was conducted during the summer, many plant species were not in identifiable conditions. Spring-blooming annuals were represented only by last year's remains. As a result, this is not a complete list of the plants present on the site. A thorough study through an entire year with normal rainfall would be necessary for a complete listing of the flora.

Disturbed Grassland

The northernmost section of the property is flat and covered with Bermuda grass (*Cynodon dactylon*) and veldt grass (*Ehrharta calycina*) with scattered California popples (*Eschscholzia californica*) and wild radish (*Raphanus sativa*). Weedy forbs like telegraph weed (*Heterotheca grandiflora*) and English plantain (*Plantago lanceolata*) occur along the street edges. Other species are listed in Table 1.

Coastal Salt Marsh

An arm of Morro Bay coastal salt marsh vegetation extends into the lowest area of the lot. Typical salt marsh plants, including saltgrass (*Distichlis spicata*), pickleweed (*Salicornia virginica*), Frankenia (*Frankenia salina*), and fleshy jaumea (*Jaumea carnosa*), occur near the drain on Doris Ave. Further east, rushes (*Juncus leseurii*), cinquefoil (*Potentilla anserina*) and goldenrod (*Solidago confinis*) dominate. Closest to Donna Ave., there is a stand of coyote brush (*Baccharis pilularis*) and taller marsh plants. Three patches of pampas grass (*Cortaderia jubata*) occur in or near the marshy area as well as some weedy thistles (*Picris echioides* and *Sonchus asper*). Ice plant (*Carpobrotus* spp. and *Conicosia pugioniformis*) is encroaching along both side margins. Two willows (*Salix lasiolepis*) are growing on the bank of the salt marsh area near the middle of the site. For a complete list of plant species present, see Revegetation and Habitat Enhancement report.

CONCLUSION

Although no rare or endangered plant species were found in this survey, the proximity of the saltmarsh is of concern. Coastal wetlands are rapidly disappearing in California due to extensive development along the coast, so particular care should be exercised to avoid negative impacts.

The proposed building pad areas cover an anthropogenic community dominated mostly by lawn grass (*Cynodon dactylon*), so the main concern in developing these lots is disturbance of the adjacent saltmarsh. Care should be taken to avoid erosion, dissolved chemical flows or mechanical disturbance due to construction on the site, particularly on Lot 13 which gradually slopes toward the saltmarsh. Employ a weed control program that eliminates weedy plants along disturbed sites on a regular basis so that they do not penetrate the fringe of the saltmarsh. Homeowners should be made aware of the importance of protecting the saltmarsh and discouraged from planting anything that is not native and indigenous to the riparian or saltmarsh communities.

Table 1. Plant species of the lower (southern) salt marsh area.

SHRUBS and TREES	
Baccharis pilularis	Coyote brush
Cortaderia jubata	Pampas grass
Rubus ursinus	Blackberry
Salix lasiolepis	Arroyo willow
Salvia mellifera	Black sage
Toxicodendron diversilobum	Poison oak

HERBS	
Atriplex patula	Annual saltbush
Calamagrostis nutkaensis	Reed grass
Carex praegracilis	Sedge
Carpobrotus chilensis	Ice plant (sea fig)
Conicosia pugioniformis	Slender leaved iceplant
Cotula coronopifolia	Brass buttons
Distichlis spicata	Saltgrass
Foeniculum vulgare	Fennel
Frankenia salina	Frankenia
Jaumea carnosa	Fleshy jaumea
Juncus acutus	Rush
Juncus leseurii	Rush
Juncus patens	Rush
Lobularia maritimus	Sweet alyssum
Lythrum hyssopifolium	Lythrum
Picris echioides	Bristly ox tongue
Polypogon monspeliensis	Rabbitsfoot grass
Potentilla anserina	Cinquefoil
Rumex crispus	Curly dock
Salicornia virginica	Pickleweed
Solidago confinis	Southern goldenrod
Sonchus asper	Prickly sow thistle

Table 1. Plant species of upper (northern) disturbed grassland area.

SCIENTIFIC NAME	COMMON NAME
Achillea millefolium	Yarrow
Agrostis stolonifera	Bent grass
Arctotis sp.	African daisy
Avena barbata	Slender wild oats
Bromus madritensis	Red brome
Calamagrostis nutkaensis	Reed grass
Carpobrotus chilensis	Sea fig
Carpobrotus edulis	Iceplant
Cynodon dactylon	Bermuda grass
Ehrharta calycina	Veldt grass
Eschscholzia californica	California poppy
Foeniculum vulgare	Fennel
Heterotheca grandiflora	Telegraph weed
Hirschfeldia incana	Mustard
Plantago lanceolata	English plantain
Raphanus sativa	Wild radish
Rumex sp.	Dock
Sonchus asper	Prickly sow thistle
Toxicodendron diversilobum	Poison oak

REFERENCES

California Department of Fish and Game, The Resources Agency. 1982. Designated Endangered or Rare Plants (Alphabetical by Scientific Name). 4 pp.

California Department of Fish and Game. 1988. Natural Diversity Data Base. Special Plants. 58 pp.

Callaway, Ragan M. 1990. Effects of Soil Water Distribution on the Lateral Root Development of Three Species of California Oaks. Amer. J. Bot. 77(11): 1469-1475.

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Holland, V. L. and D. J. Keil. 1990. California Vegetation. El Corral Publications. 318 pp.

Hoover, Robert F. 1970. The Vascular Plants of San Luis Obispo County, California. U. C. Press, Berkeley, CA.

Munz, P. A., and D. D. Keck. 1959. A California Flora. University of California Press, Berkeley.

———. 1968. Supplement to A California Flora. University of California Press, Berkeley.

Skinner, M.W. and B.M. Pavlik, eds. 1994. Inventory of Rare and Endangered Vascular Plants of California, Fifth Edition. California Native Plant Society, Sacramento, CA.

United States Department of the Interior, Fish and Wildlife Service. 1990. Endangered and Threatened Wildlife and Plants; Review of Plant Taxa for Listing as Endangered or Threatened Species; Federal Register 55 (35):6184-6229.

C.A. SINGER & ASSOCIATES INC.
Prehistoric Archaeology • Cultural Resources • Lithic Studies

INVOICE FOR SERVICES

INVOICE NO. 2721 **DATE** November 16, 2001

John Saurwein, III
Bay Osos Brokers
1236 Los Osos Valley Road
Suite I
Los Osos, CA 93402

PROJECT/REPORT TITLE

Archaeological report dated November 15, 2001

"Subject: Cultural resources survey and impact assessment for two adjacent parcels on Donna Street in Los Osos - Baywood Park, San Luis Obispo County, California [APN 074-141-003 and APN 074-141-006]"

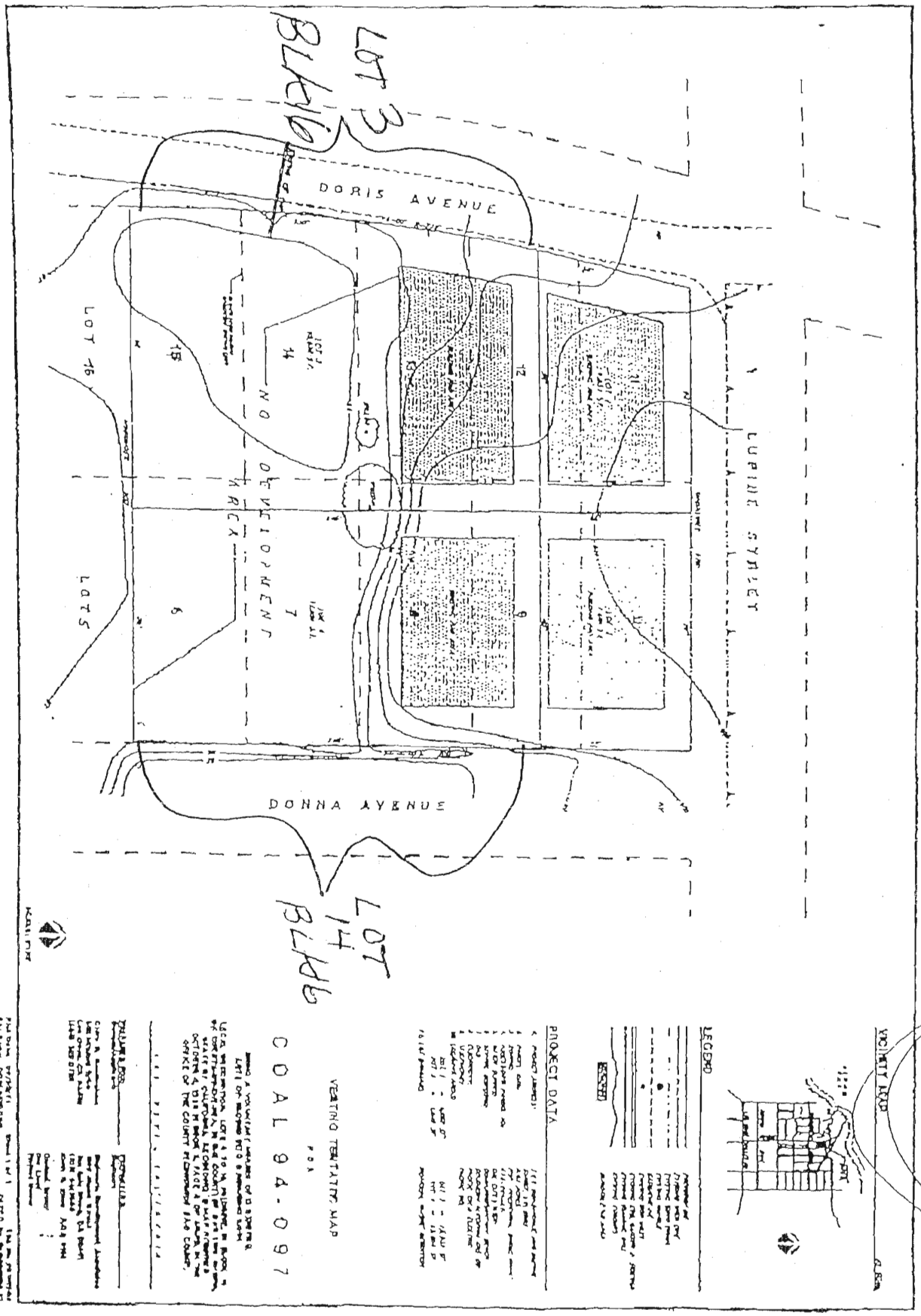
AMOUNT DUE

$350.00

P.O. Box #99 · Cambria · California 93428-0099

phone (805) 927-0455 fax (805) 927-0414

Figure 1.



EDA ASSOC S.L.O.

C.A. SINGER & ASSOCIATES, Inc.
Archaeology · Cultural Resources & Lithic Studies

November 15, 2001

Mr. John Saurwein, III
Bay Osos Brokers
1236 Los Osos Valley Road
Suite I
Los Osos, CA 93402

Subject: Cultural resources survey and impact assessment for two adjacent parcels on Donna Avenue in Los Osos - Baywood Park, San Luis Obispo County, California [APN 074-141-003 and APN 074-141-006].

Dear Mr. Saurwein;

Per your request, a cultural resource survey and impact assessment was conducted for two adjacent residential properties on Donna Avenue in Los Osos-Baywood Park. The subject properties, designated APN 074-141-003 and APN 074-141-006, are located on the west side of Donna Avenue in the neighborhood called Cuesta-By-The-Sea. The edge of Morro Bay is 50 meters west and the Pacific shoreline is 2 km west. Two maps are attached that show the location and dimensions of the surveyed property. Map 1 is a portion of the USGS Morro Bay South, Calif., 7.5' topographic quadrangle, and Map 2 is a small part of the County Assessor's Map.

A reconnaissance survey was conducted to determine if any type of cultural resources, such as prehistoric or historic archaeological materials, were present either on or next to the property. Since prehistoric archaeological sites are known to exist in the near vicinity, and because construction on the property could affect known or suspected resources, a cultural resources investigation was requested by the County of San Luis Obispo, Department of Planning and Building, Environmental Coordinator's Office. To comply with the County request an examination of the property was carried out on November 9, 2001. The surface examination produced no prehistoric or early historic archaeological materials of any kind. The topography and soils observed suggest that buried cultural resources are not likely to be present at this location.

In 1985, many properties along Los Osos Valley Road were partially inspected during a survey for the CSA 9 Wastewater Treatment System EIR (Singer 1985). At that time a comprehensive archaeological records search was prepared by the Archaeological Information Center at the University of California, Santa Barbara (UCSB). That document showed that no archaeological deposits had been recorded either on or next to the subject property, and that the nearest recorded site, CA-SLO-14, was about 0.5 km away. In 1996, site CA-SLO-819 was "reconfigured" (i.e. destroyed) during expansion of the Sea Pines Golf Course (Singer 1996). An updated records search completed on November 15, 2001, indicated that since 1985, two additional sites had been recorded nearby, CA-SLO-1236 and CA-SLO-1241/H; both are within 200 meters of the subject properties (cf. UCSB mss. E-4090 and E-3065).

The community of Los Osos falls within the region historically occupied by Obispeño (Northern) Chumash and neighboring Playano (Southern) Salinan Indians. People from both tribal groups still live in the region and maintain somewhat different cultural traditions. Although Native American occupation of the central coast extends back more than 9,000 years (Greenwood 1972), the oldest known site in the Los Osos vicinity may be only 6,000 years old (Singer 1985). Another nearby site, CA-SLO-819, was investigated as it was destroyed; the deposits yielded a small collection suggesting a Middle Period date, circa AD 1000-2500 BC (Singer 1996). Since 1948, about 40 prehistoric sites have been recorded in the Los Osos-Baywood Park area. However, during the past century all these sites have been damaged by construction activities and by relic collectors and some have been completely destroyed. Some sites have also been sampled by archaeologists, but few have been systematically studied and only one site has been reported in publication (Hoover and Sawyer 1977).

The area examined consists of two contiguous parcels at the southwest corner of Lupine Street and Donna Avenue; both are undeveloped (see Map 2). The northern parcel (Parcel 1) measures 55 x 89 feet; the southern parcel (Parcel 4) measures 89 x 145 feet. The surface is nearly flat, but the southern edge of Parcel 4 dips southward into a marshy area -- a truncated arm of a Morro Bay inlet. Surface elevation ranges from ca. 3 to 5 m above sea level. The two parcels are bounded on the east by Donna Avenue, an unpaved street, and on the north by Lupine Street, also unpaved. At the time of the survey a carpet of rhizome grass and ice plant obscured 100% of the surface of both properties. The southern end of Parcel 4 is also marked by a stand of willows and various wetland plants. Soils underneath the ice plant and grass were loose brown sand with small shale clasts. No archaeological materials were observed on next to the properties.

The sandy brown soils, the overall topographic conditions, and the total absence of prehistoric and early historic materials all suggest that archaeological resources are not present on or beneath the surface of these properties. Contemporary cultural resources, such as important stands of native plants, animal habitats, and lithic materials, are present but of limited extent and present evidence suggests that neither prehistoric nor early historic activities took place at this location. Planned construction on either property should have no direct or measurable indirect impact on cultural resources. Consequently, actions to mitigate adverse impacts are not needed and additional archaeological investigations are not recommended. In the unlikely event that subsurface archaeological materials are unearthed during construction, all work in the area of the discovery must be suspended and the County Office of Environmental Coordinator must be contacted immediately (telephone 781-5600). After the find has been examined and evaluated, and, if necessary, appropriate mitigation measures are agreed upon by the involved parties, work can usually be resumed.

Should you have any questions about the survey, or wish further information about the archaeology of Los Osos, please call our office at any time.

Most sincerely,

Clay A. Singer
Anthropologist

References Cited

Greenwood, Roberta S.
1972 "9000 Years of Prehistory at Diablo Canyon, San Luis Obispo County, California". *San Luis Obispo County Archaeological Society Occasional Papers* 7, San Luis Obispo.

Hoover, Robert L. And Col. W. B. Sawyer
1977 "Los Osos Junior High School Site 4-SLO-214". *San Luis Obispo County Archaeological Society Occasional Papers* 11, San Luis Obispo.

Singer, Clay A.
1985 "Cultural Resources Survey, Impact Assessment, And Mitigation Proposals For The CSA 9 Wastewater Treatment Facilities EIR, Los Osos - Baywood Park, San Luis Obispo County, California". Report prepared for The Morro Group, Los Osos.

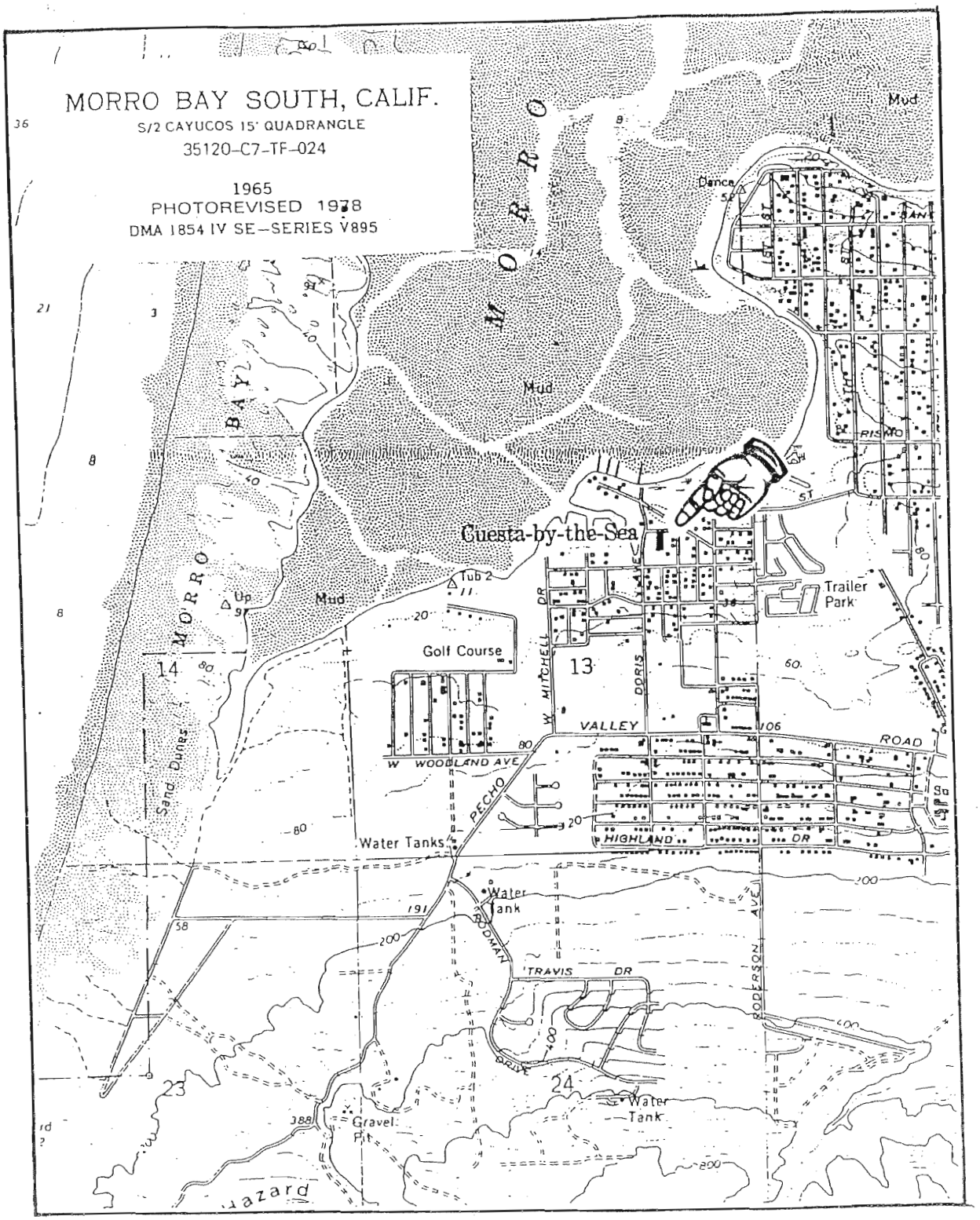
1988 "Cultural Resources Survey And Impact Assessment For The Monarch Grove Development, Tract No. 1589 In Los Osos, San Luis Obispo County, California". Report prepared for The Morro Group, Los Osos.

1996 "Archaeological Monitoring at Site CA-SLO-819: Expansion of Sea Pines Golf Course in Los Osos, San Luis Obispo County, California". Report prepared for Anastasi Construction Co., Los Osos.

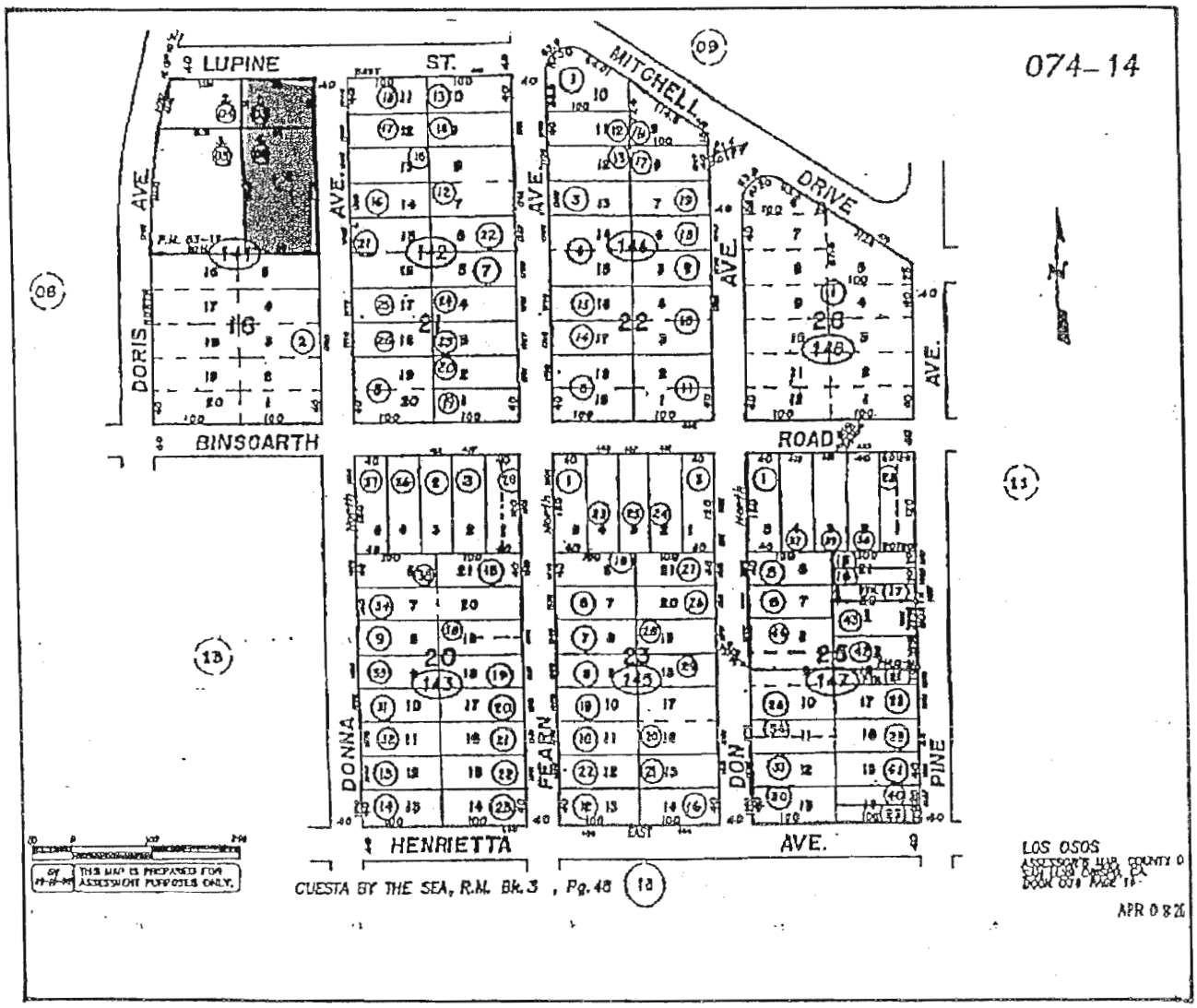
Attachments

Map 1. A portion of the USGS Morro Bay South, Calif., 7.5' topographic quadrangle showing the area surveyed for cultural resources, two adjacent parcels on Donna Avenue in Los Osos - Baywood Park, APN 074-141-003/006.

Map 2. Part of the County Assessor's Maps showing the surveyed properties on Donna Avenue in Los Osos - Baywood Park, APN 074-141-003/006 (shaded).



Map 1. A portion of the USGS Morro Bay South, Calif., 7.5' topographic quadrangle showing the area surveyed for cultural resources, two adjacent properties on Donna Street, APN 074-141-003 and APN 074-141-006.



Map 2. Part of the County Assessor's Map showing the surveyed properties in Los Osos - Baywood Park, APN 074-141-003 and APN 074-141-006 (shaded)

Peter Goedinghaus
902 Almond Dr.
Brea, Ca. 92821
714-671-3154

facsimile transmittal

$100 APPL FEE

To: John S. Fax: 805-528-5620

From: Peter G. Date: 01/08/02

Re: Donna Ave-both lots Pages: 2

CC:

Urgent For Review Please Comment Please Reply Please Recycle

Notes:

John,

The letter about tree trimming is being sent in this fax. I will mail the original to you. Claire called the title company and the attorney about the property description we discussed. I believe this has all been strained out.

Thank-you,

Peter Goedinghaus

COPY TO MURRAY TOO

CONFIDENTIAL

PB40 SAN LUIS OBISPO COUNTY PROPERTY SYSTEM PDV007
04/20/04 GENERAL INQUIRY PDM106

PE ASSMT: 074,141,002 STATUS: A 05/22/1984 CREATED: 1983-R-C61061 12/08/1983
SECURED TRA: 112-098 UNSECURED TRA: 112-098 KILLED:
DESC: 000.92AC VACANT ZONING:

ASSMT: 074,141,002 STATUS: A 05/22/1984 CREATED: 1983-R-C61061 12/08/1983
TRA: 112-098 TAX CODE: 3-00 BASE: KILLED:
DESC: 000.92AC VACANT FEE TRANSFER: N
ASSESSEE REF: G0235 611 FLAG: N
STATE OF CALIF - COASTAL CONSERVANCY (935) ROLL ASSE/COM: C
%JOE BALANDA MULTIPLE SITUS: N
1330 BROADWAY STE 1100 TAX SUBPRCL: 935
OAKLAND CA 94612-2530 SENIOR POST:

SITUS: 1798 DORIS AV LSOS

OPTION: hvl NXT OWN USE HVL ASM KIL
SC2 LGL SIT HON H13

PRESS (PF8) FOR STANDARD FUNCTIONS PRESS (PF5) TO DISPLAY PREVIOUS RECORD

April 10, 2002

Mr. Bruce Buel
General Manager
Los Osos Community Services District
2122 9th Street
Los Osos, CA 93402

SUBJECT: *Due Diligence Survey Results*

Dear Mr. Buel:

This letter documents our findings during the brief due diligence biological site assessment conducted on the proposed sewer lift station site at the corner of Lupine Street and Donna Avenue in Los Osos, California. (refer to Figure 1). Per your request, Morro Group biologist Bob Sloan performed a brief survey of Lots 10 and 11 on Lupine Street between Doris Avenue and Donna Avenue on April 3, 2002, to identify any potentially significant biological resource constraints that could affect the proposed project.

Both lots were examined, however the survey concentrated on the 50 by 60 foot eastern portion of Lot 10 proposed for use by the Community Services District. The primary concern focused upon was the presence or absence of wetland areas on or adjacent to the site, however the potential for the presence of special-status plant and animal species, including the Morro shoulderband snail *(Helminthoglypta walkeriana)* was also considered. Please note that formal wetland delineation and Morro shoulderband snail surveys per U.S. Army Corps of Engineers and U.S. Fish & Wildlife Service protocols were not performed as part of this report. The following is a description of our findings:

Existing Conditions

The surveyed lots are located on the southern side of Lupine Street, and are bordered by Doris Avenue to the west, Donna Avenue to the east, and undeveloped property to the south. The lots are rectangular, level, and undeveloped, and are dominated by non-native plant species commonly found in disturbed areas of Los Osos. The two lots appear to have been graded during adjacent residential development, and may have been a receiving site for fill material from dredging operations conducted in Shark Inlet many years ago. Veldt grass (*Ehrharta calycina*), ripgut brome (*Bromus diandrus*), and Bermuda grass (*Cynodon dactylon*), are the dominant plants present, with freeway daisy (*Osteospermum fruticosum*), wild radish (*Raphanus sativus*), and California poppy (*Eschscholzia californica*), also present.

A patch of ice plant (*Carpobrotus edulis*) is present at the corner of Lupine Street and Donna Avenue. No shrubs or trees are present on the two lots.

Findings

No wetland areas or native coastal scrub habitat for the Morro shoulderband snail (MSS) are present on the two lots. The ice plant present at the corner of Lupine Street and Donna Avenue does constitute suitable non-native habitat for MSS. No live Morro shoulderband snails or empty shells were found during the survey of the two lots, and no special status plant species were observed. Several live common garden snails (*Helix aspersa*) and empty shells were observed during the survey.

The 50 by 60 foot area of Lot 10 at the corner of Lupine Street and Donna Avenue proposed for lift station construction contains approximately 600 square feet of ice plant that could provide suitable habitat for MSS. No other constraints are present within this area. The adjacent undeveloped properties to the south contain a depressional wetland area composed of arroyo willow (*Salix lasiolepis*), cattail (*Typha latifolia*), blackberry (*Rubus ursinus*), water parsley (*Oenanthe sarmentosa*), and other common wetland species. The wetland boundary is located approximately 60 feet south of the southern property line of Lot 10, based on the occurrence of wetland plant species. These wetland areas do not contain suitable habitat for MSS.

Conclusions

Based on the observed site conditions, construction of the proposed lift station at the corner of Lupine Street and Donna Avenue will not impact wetland areas. Construction does have potential to result in "take" of Morro shoulderband snail and approximately 600 square feet of suitable non-native habitat (ice plant). Section 3(18) of the Endangered Species Act defines "take" to mean "*to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.*"

As defined by the U.S. Fish and Wildlife Service (USFWS), "*harm*" includes significant habitat modification or degradation which actually kills or injures wildlife by significantly impairing essential behavioral patterns, which include, but are not limited to, breeding, feeding, or sheltering.

Recommendations

Prior to and during lift station construction, erosion and spill control best management practices should be implemented at the site. To reduce the potential for inadvertent release of sediment, construction materials, or fuel from construction areas to adjacent

wetland habitats, appropriate erosion control devices (i.e., hay bales, silt fences) should be installed around the southern perimeter of the construction zone, and around any gutters leading to the wetland area. Erosion control devices should be checked on a daily basis to ensure proper function. During construction, avoid all cleaning and refueling of equipment and vehicles within the vicinity of the identified wetland habitat.

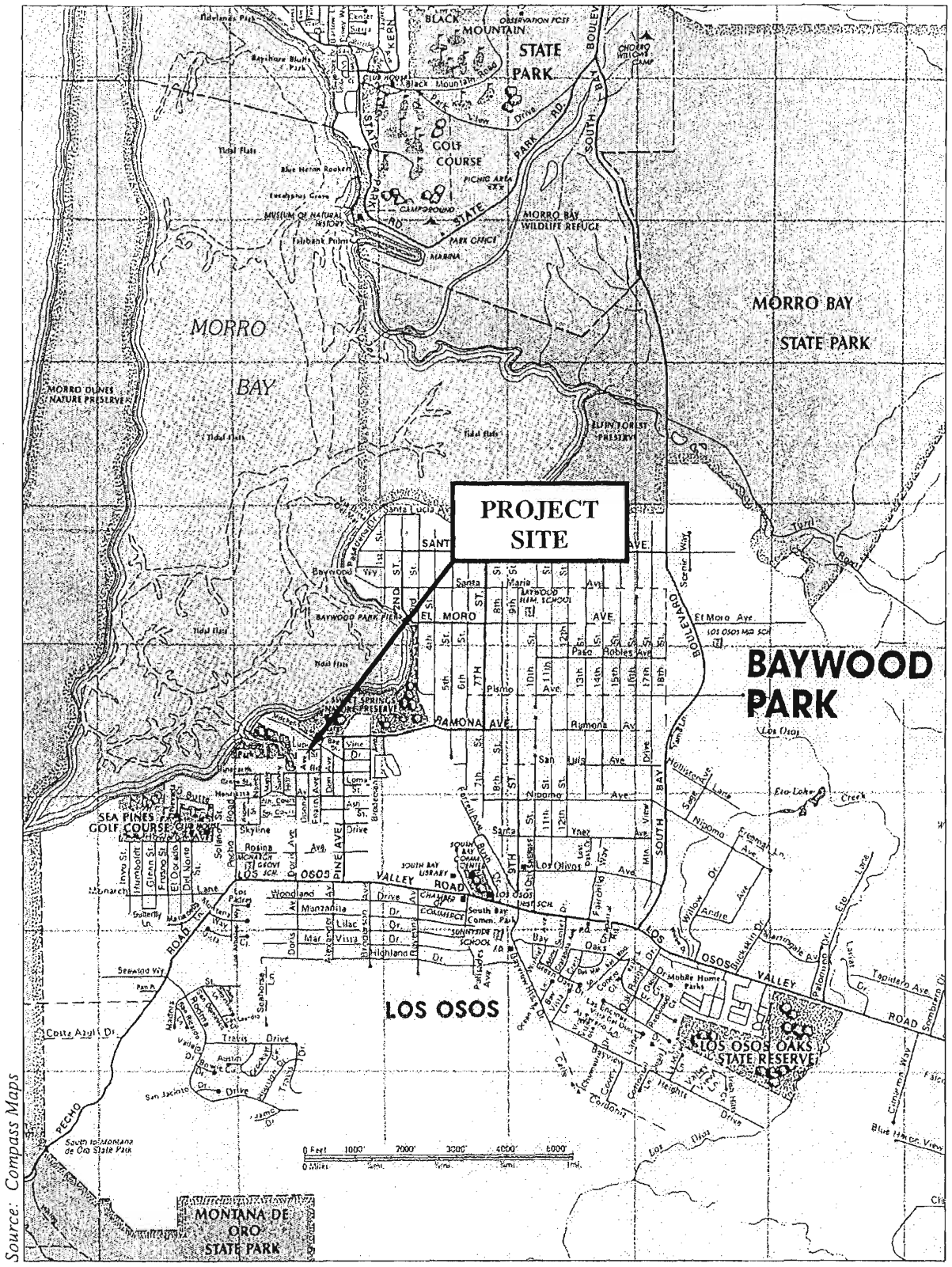
Following completion of construction activities, all disturbed previously vegetated areas should be revegetated with appropriate native plant species to reduce the risk of erosion and sedimentation into adjacent wetland areas.

If you have any questions or comments regarding these findings or recommendations, please do not hesitate to call me at (805) 543-7095.

Sincerely,

MORRO GROUP, INC.

Robert Sloan,
Resource Specialist



Source: Compass Maps

NORTH
Not to Scale

VICINITY MAP
FIGURE 1

Los Osos Wastewater Disposal Project
Treatment Plant Area
Los Osos, California

WETLAND DELINEATION REPORT

Prepared for:

Mr. Dave Moran
Crawford, Multari & Clark Associates
641 Higuera Street, Suite 302
San Luis Obispo, CA 93401

Prepared by:

MORRO GROUP, INC.
Environmental Services

September 8, 2004

1422 Monterey Street, Suite C200 • San Luis Obispo, CA 93401 • (805) 543-7095 • FAX 543-2367

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ATTACHMENTS

Attachment A. Field Data Sheets
Attachment B. Photo Documentation

1.0 INTRODUCTION

1.1 SCOPE

This Wetland Delineation Report summarizes existing soil, hydrology and vegetative conditions found within and adjacent to a swale traversing the proposed Wastewater Treatment Plant (WWTP) site in Los Osos, San Luis Obispo County, California (refer to Figures 1 through 4). Morro Group, Inc. has prepared this report at the request of Crawford, Multari & Clark Associates, and it is intended for use by the Los Osos Community Services District (LOCSD), and regulatory agencies. This report examines potential waters of the United States, as defined by the U.S. Army Corps of Engineers (ACOE) and the California Coastal Commission (CCC) (1994), found in the swale at the proposed WWTP site. Findings reported herein are based on information gathered in the field at the time of investigation, an on-site meeting with ACOE staff, and on Morro Group's understanding of the ACOE 1987 Wetlands Delineation Manual, and federal, state, and local guidelines for identification of wetland areas.

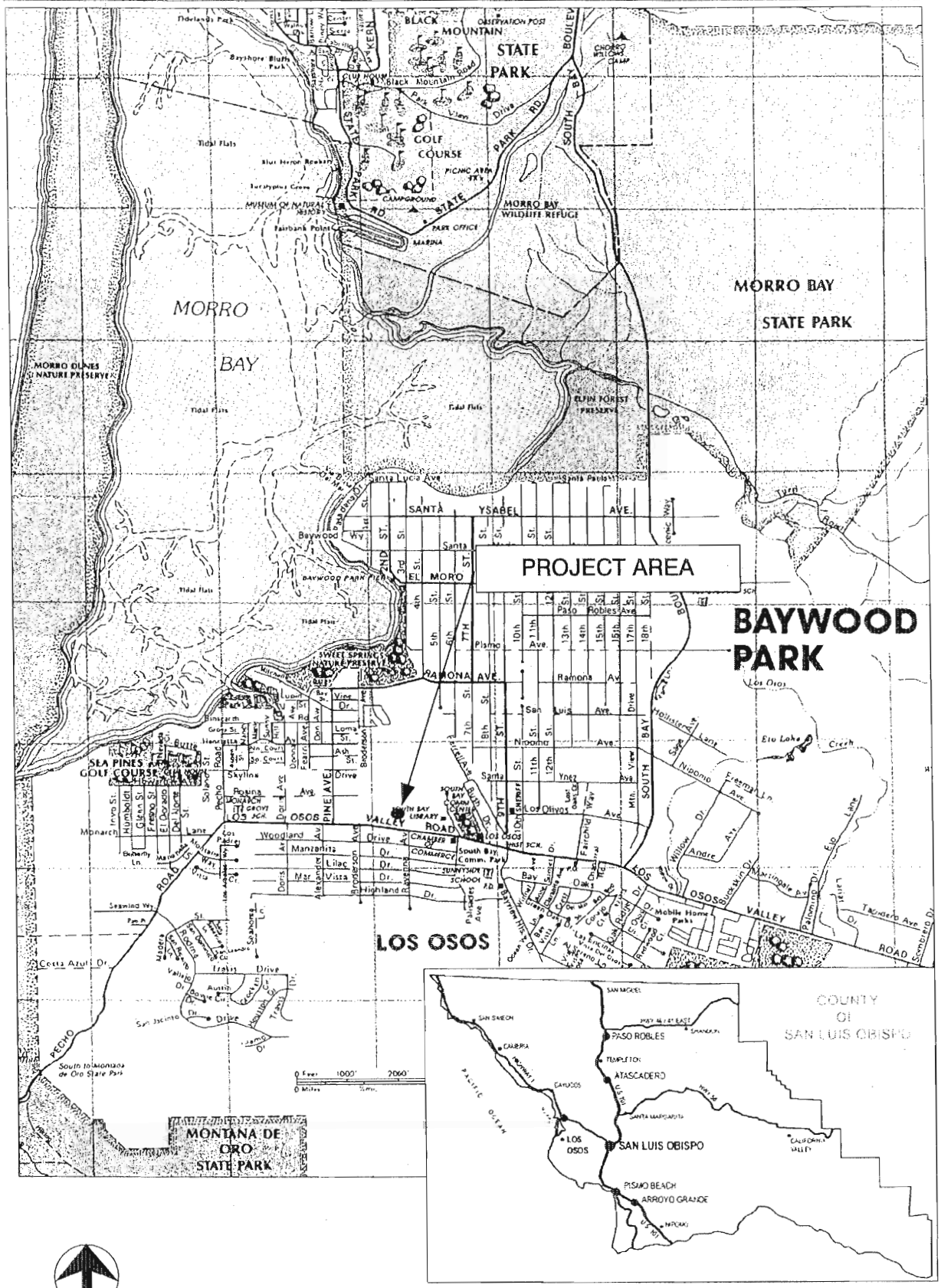
1.2 PROJECT BACKGROUND

The WWTP site is located in the central portion of the community of Los Osos, on the north side of Los Osos Valley Road (LOVR) between Palisades Avenue and a proposed extension of Ravenna Avenue (refer to Figures 1 and 2). The swale examined for ACOE jurisdictional wetlands in this report traverses the WWTP site. A Soil Conservation Service (SCS) soil survey map of the area (SCS, 1984) is included as Figure 3, and soil pit locations and the resulting delineation of jurisdictional areas are shown on Figure 4. Figure 5 provides an aerial view of the area. The proposed WWTP site is located in the Coastal Zone, and the CCC has requested additional information about the swale in an effort to determine whether setbacks from wetland areas will be required for the project.

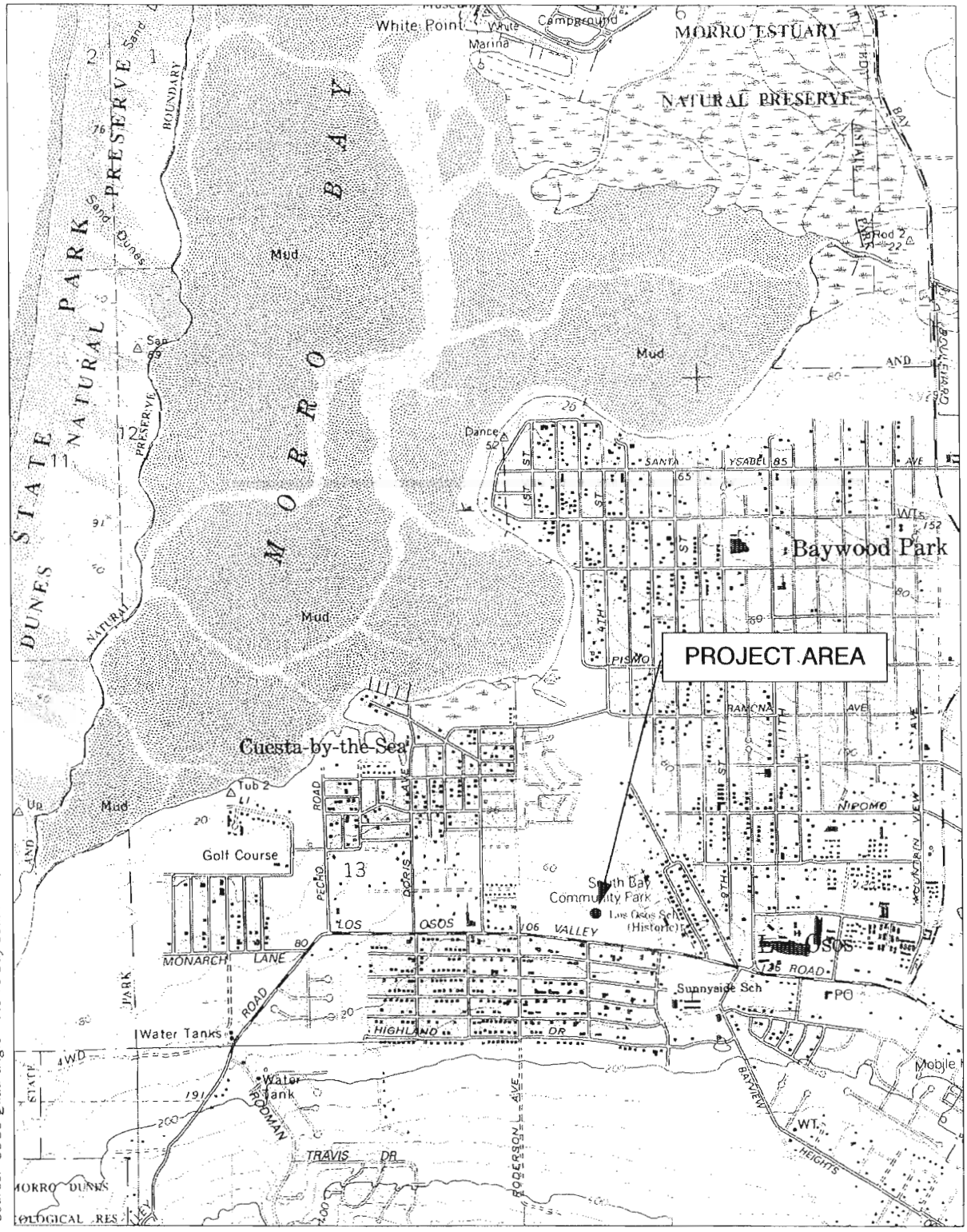
The proposed WWTP is a major part of the Los Osos Wastewater Disposal Project. The plant will cover a small portion of the approximately 11-acre site between Ravenna Avenue and Palisades Avenue. Underground sewer lines following existing road rights of way will connect the plant to other components of the sewer project.

1.3 SITE DESCRIPTION

The WWTP site consists of gently sloping sandy soils dominated by non-native grasses, coastal scrub, and eucalyptus trees on the northern side of LOVR (refer to Figures 4 and 5). The swale examined in this report originates approximately 380 feet west Palisades Avenue, at a 40-inch corrugated metal culvert under LOVR. The swale is approximately 6 to 20 feet wide and approximately 1 to 2 feet deep in most sections. The bed and banks of the swale are vegetated with mostly exotic annual grasses and a few weedy forbs, with no hydrophytic plant species present. The swale travels in a northerly direction for a distance of approximately 110 feet, before it begins to trend roughly northwest for approximately 620 feet, until reaching its terminus in a relatively level, grassy area. No bed, bank, or channel is visible past the northern terminus of the swale, and adjacent areas contain coastal scrub vegetation, non-native grasses, and a stand of large eucalyptus trees.

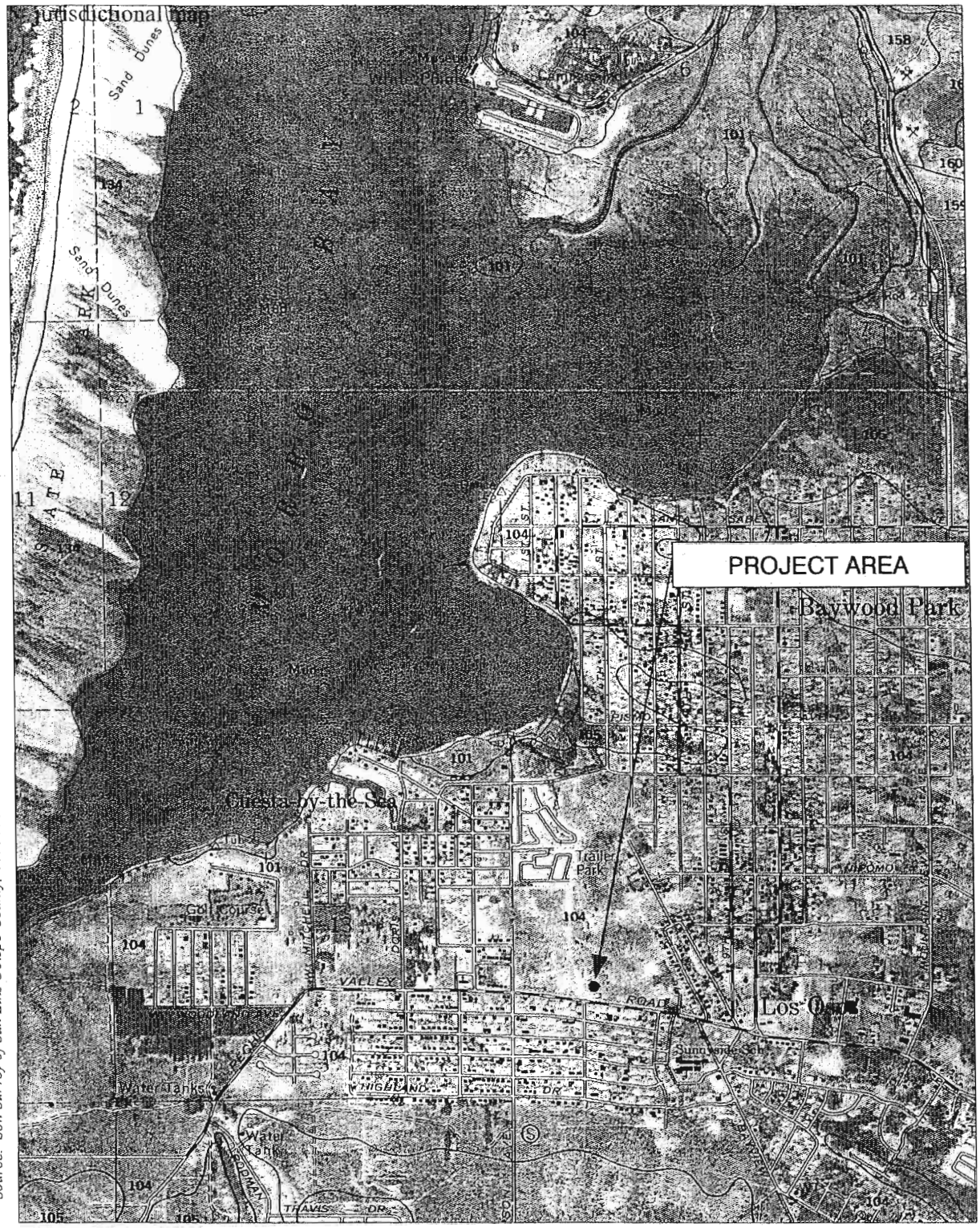


VICINITY MAP
FIGURE 1



NORTH
Not to Scale

PROJECT LOCATION MAP
FIGURE 2



Source: Soil Survey of San Luis Obispo County, Coastal Part – Sheet 8

SOIL KEY

104 Baywood fine sand, 2-9% slopes

NORTH
Not to Scale

SOIL SURVEY MAP
FIGURE 3

SHEET: 1 OF 1 SCALE: 1" = 120'	MORRO GROUP, INC. Environmental Services	LOS OSOS WASTEWATER DISPOSAL PROJECT TREATMENT PLANT AREA	WETLAND DELINEATION MAP
CADD FILE: 03-205 LOCSD\ treatment plant\wetdel 9-1-04/impacts			FIGURE 4
DATE: 09-07-04 BY: DH REV. 0			

Back of Figure 4.

NORTH
Not to Scale

Aerial Source: Tri-W project aerial

PROJECT LOCATION AERIAL
FIGURE 5

back of fig 5

2.0 METHODOLOGY

The primary literature reviewed and referenced as part of this wetland determination included SCS (1983, 1992), USGS (1979), Cowardin et al. (1979), Hickman (1993), Hoover (1970), Holland (1986), and Reed (1988, 1996). Specific references not listed above are cited in text.

2.1 DELINEATION PROCEDURE

Examination of the swale at the WWTP site was based on review of pertinent literature and a thorough on-site investigation conducted in August and September 2004 by Morro Group, Inc. Biologist and Wetland Training Institute certified wetland delineator Geoff Hoetker. The routine wetland determination methodology, as described in the 1987 ACOE Wetlands Delineation Manual (Environmental Laboratory, 1987), was utilized throughout the delineation. Potential wetland areas were also evaluated using the CCC single parameter wetland definition in addition to the ACOE three-parameter methodology. Representative soil pits and surrounding vegetation were evaluated to investigate the presence of hydric soils, hydrophytic vegetation, and wetland hydrology. The swale boundaries identified during the delineation followed the observed topographic relief, and were mapped using a Trimble Pathfinder GPS unit capable of accuracy to approximately 10 centimeters.

2.2 FUNCTION AND VALUE ASSESSMENT

The functions and values of the swale traversing the WWTP site were evaluated according to ACOE protocol (Adamus et al., 1987). Table 1 is a synthesis of methodologies used to evaluate the functions and values of wetland habitats. Rating criteria were derived from Adamus et al. (1987), Adamus and Stockwell (1983), and Reppert et al. (1979).

TABLE 1
Wetland Function and Value Rating Criteria

Function / Value	Rating		
	Low	Moderate	High
Water Quality Improvement	<5 acres in size; <50% vegetation density; no proximity to pollutants.	5-10 acres in size; 50-80% vegetation density; adjacent to non-point pollutants.	>10 acres in size; >80% vegetation density; downstream from point discharges.
Storm- and Floodwater Storage	<5 acres in size; <10% woody cover; permanently flooded; unconstrained outlet.	5-10 acres in size; 10-30% woody cover.	>10 acres in size; urban and developable areas; >30% woody cover; seasonal hydroperiod; constrained outlet.
Groundwater Discharge	Isolated depression; temporarily saturated or inundated.	Open drainage system; seasonally flooded.	Open tidal systems; permanent saturation or inundation.
Groundwater Recharge	<5 acres in size; isolated depression; temporarily saturated or inundated; impermeable substrate.	5-10 acres in size; seasonally flooded.	>10 acres in size; permanent inundation; several feet deep; permeable substrate.
Natural Biological Support	Small size; low species diversity; one vegetation layer; no sensitive or water-dependent species.	Medium size; moderate species diversity; several vegetation layers; water-dependent species; no sensitive species.	Large size; high species diversity; water-dependent and sensitive species; many vegetation layers.

3.0 RESULTS

3.1 SOIL CONDITIONS

The Soil Conservation Service (1983) mapped one soil series within the project site: Baywood fine sand, 2 to 9 percent slopes (refer to Figure 3).

Baywood fine sand (moist) consists of a very dark grayish brown (10YR 2/2 moist) fine sand about 36 inches thick, above dark grayish brown (10YR 5/3) mottled (5YR 3/2) fine sand to a depth of 60 inches or more. Permeability of Baywood fine sand soil is rapid, and the available water capacity is low. Baywood fine sand is not listed as a hydric soil in the SCS Comprehensive Hydric Soils List for San Luis Obispo County (SCS, 1992).

3.1.1 Soil Test Pits

Three soil test pits were excavated during the delineation: one on level soil east of the swale, one within the bottom of the swale just before it begins to trend to the northwest, and one at the center of the swale terminus (refer to Figure 4 for pit locations). The investigation found dry sand soils in all pits. The dry sand soil observed in test pits #1, #2, and #3 exhibited very dark grayish brown (10YR 2/2 moist) colors to the bottom of each test pit (0-16 inches), matching the Baywood fine sand description. No evidence of mottling or redoxomorphic features were observed within any of the pits.

3.2 HYDROLOGIC CONDITIONS

The swale originates at a 40-inch culvert under LOVR between Palisades Avenue and the proposed Ravenna Avenue extension. This swale is apparently man-made and receives stormwater flows from a drop inlet on the south side of LOVR. Runoff from residential areas along LOVR is conveyed through the culvert under LOVR into the swale, which has no connection to any natural water source. The swale continues to meander north and then northwest and gradually ends in a grassy field northwest of where it originates at the culvert under LOVR. In some areas, the swale has not eroded away to form an open channel, where flows evidently have cut under and around large chunks of sand, creating a "honeycomb" effect. This suggests that flows in the swale have been infrequent or of short duration. The bottom and sides of the swale are dominated by non-native grass species similar to conditions observed on the treatment plant site and surrounding areas, and did not contain any hydrophytic plant species. No flowing or ponded water was observed in the swale during the delineation.

3.3 VEGETATIVE CONDITIONS

Upland areas of the WWTP site and the swale are dominated by non-native grasses and weedy forbs. Upland areas surrounding the swale are vegetated by mainly veldt grass (*Ehrharta calycina*), with coastal scrub species in some areas including coyote brush (*Baccharis pilularis*), dune bush lupine (*Lupinus chammissonis*), and mock heather (*Ericameria ericoides*). A stand of large blue gum (*Eucalyptus globulus*) is also present in the area. The man-made swale delineated in this report contained no wetland or riparian plant species. Vegetation within the swale is dominated by veldt grass, fennel (*Foeniculum vulgare*), and wild radish (*Raphanus sativus*). Sea fig (*Carporbrotus edulis*) is also growing near the outlet of the culvert passing under LOVR, which conveys runoff into the swale. None of the species observed in upland areas on the

WWTP site, or in the swale examined in this report, support hydrophytic vegetation (Reed, 1988; 1996).

3.4 JURISDICTIONAL DETERMINATION

No areas that exhibited hydric soil or vegetative indicators per ACOE guidelines were observed, and hydrologic criteria per ACOE guidelines was not present due to the lack of any connection between the swale and a natural water source or wetland area (refer to Figures 4 and 5). The swale appears to be man-made and does not appear to meet CCC jurisdictional wetland guidelines. Swale boundaries identified during the delineation followed the tops of banks on the site. The swale area as mapped for this report covered a total of 7,957 square feet (0.18 acres) as shown on Figure 4. Table 2 summarizes the results of the wetland assessment by soil pit sample plot (refer to Figure 4 for soil pit locations).

Table 2

Jurisdictional Determination Summary

Soil Pit/Sample Plot Area	Hydrophytic Vegetation	Hydric Soils	Wetland Hydrology	Determination	
				Corps	CCC
1	No	No	No	Non-Wetland	Non-Wetland
2	No	No	No	Non-Wetland	Non-Wetland
3	No	No	No	Non-Wetland	Non-Wetland

3.5 FUNCTIONS AND VALUES OF IDENTIFIED JURISDICTIONAL AREAS

Using the rating criteria from Table 1 (refer to Section 2.2), the identified swale area ranks low in function and value, being limited primarily by lack of connection with a natural water source, limited vegetative diversity, and highly erodible soils (refer to following Table 3).

Table 3

Function and Value Ratings of Mapped Areas

Resource	Size	Water Quality	Storage	Discharge	Recharge	Biological Support
Swale	7,957 ft^2 0.18 acres	None	None	Low	None	Low

4.0 DISCUSSION

The swale identified in this report consists of a sandy wash that conveys stormwater runoff from residential areas adjacent to and south of LOVR, with no connection to natural water sources. The swale is dominated with non-native upland grasses and weedy forb species, and consists of highly erodible sandy soils. No areas that exhibited hydric soil, vegetation, or hydrology indicators per ACOE guidelines were observed. No significant biological functions and values typically associated with wetland or riparian areas were identified within the swale area. The

observed conditions indicate that the swale does not qualify as a wetland under ACOE or CCC definitions.

5.0 REGULATORY IMPLICATIONS

5.1 U.S. ARMY CORPS OF ENGINEERS

Section 404 of the Clean Water Act (CWA) regulates activities that result in the discharge of dredge or fill materials into Waters of the United States, including wetlands. The ACOE is charged with administering and regulating various sections of the CWA. Wetlands are defined in the ACOE Wetlands Delineation Manual (Environmental Laboratory, 1987) 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.*"

No areas were identified that fall under ACOE jurisdiction.

5.2 CALIFORNIA DEPARTMENT OF FISH AND GAME

Sections 1600 through 1607 of the California Fish and Game (CDFG) Code regulate activities that would alter the flow, bed, channel, or bank of streams and lakes. CDFG jurisdiction typically extends to the top of the creek bank or the outside edge of riparian vegetation. It is unlikely that the swale falls under CDFG jurisdiction, because 1) it is apparently a man-made drainage ditch with no hydrological connection to any other streams or tributaries; 2) there is no stream or wetland function or value; and 3) there is no riparian corridor associated with the swale.

5.3 REGIONAL WATER QUALITY CONTROL BOARD

Section 401 of the Clean Water Act regulates activities that have the potential to cause water quality impacts to Waters of the United States, including wetlands, as defined by the ACOE. No areas were identified that fall under Regional Water Quality Control Board jurisdiction.

5.4 CALIFORNIA COASTAL COMMISSION

The California Coastal Act was enacted in 1976 to provide long-term protection of California's coastal resources. The Act's coastal resources management policies are based on recommendations contained in the California Coastal Plan. One such policy includes "*Protection, enhancement and restoration of environmentally sensitive habitats, including intertidal and nearshore waters, wetlands, bays and estuaries, riparian habitat, certain wood and grasslands, streams, lakes, and habitat for rare or endangered plants or animals.*"

The California Coastal Commission regulates wetland areas within the coastal zone as defined under Coastal Act Section 30121. The Coastal Act defines a wetland as:

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

The swale contains no wetland vegetation and does not provide any biological functions and values typically associated with wetland areas.

6.0 REFERENCES

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Soil Conservation Service (SCS). 1992. Comprehensive hydric soils list for San Luis Obispo County, California. United States Department of Agriculture, Washington, D.C.

United States Geological Service. 1994. 7.5 minute series quadrangle for Morro Bay South.

ATTACHMENT A

- Field Data Sheets

Routine Wetland Determination Form

Applicant: LOCSD **Project:** Los Osos WWTP **Date:** 8/24/04

State: CA **County:** SLO **Transect/Pit No.:** 1

Investigators: Hoetker **Transect/Pit Area:** East of swale on proposed WWTP site

Vegetation Community (Cowardin Classification):

VEGETATION

Dominant Plant Species	Habit	Indicator	Percent Cover	Dominant Plant Species	Habit	Indicator	Percent Cover
Ehrharta calycina	herb	FACW	75				

Percent of Dominant Species that are OBL, FACW, or FAC: 0% **Taxonomic Reference:** Hickman, Reed

SOIL

Map Unit: Baywood fine sand, 2-9% slopes

Profile Description: 0-16" very dark grayish brown dry sand (10YR 2/2 moist)

Hydric Soil List?	☐ Yes	☒ No
Mottles?	☐ Yes	☒ No
Gleyed?	☐ Yes	☒ No
NRCS Match?	☐ Yes	☒ No

Other Indicators: None.

HYDROLOGY

Inundated?	☐ Yes	☒ No	**Saturated Soil?**	☐ Yes	☒ No	**Depth:**
Sediment Deposits?	☐ Yes	☒ No	**Drift Lines?**	☐ Yes	☒ No	
Depth of Surface Water:	none		**Water Marks?**	☐ Yes	☒ No	
Depth of Free Water in Pit:	none		**Oxidized Rhizospheres?**	☐ Yes	☒ No	**Color:**

Other Indicators: None.

WETLAND DETERMINATION

Vegetation Criterion Met?	☐ Yes	☒ No	**Normal Circumstances?**	☒ Yes	☐ No
Hydric Soil Criterion Met?	☐ Yes	☒ No			
Hydrology Criterion Met?	☐ Yes	☒ No	**Is this Plot within a Wetland?**	☐ Yes	☒ No

Comments: Upland area dominated by veldt grass.

Morro Group Determination by: _____

Signature

Rev: 12/1/00

Routine Wetland Determination Form

Applicant: LOCSD **Project:** Los Osos WWTP **Date:** 8/24/04

State: CA **County:** SLO **Transect/Pit No.:** 2

Investigators: Hoetker **Transect/Pit Area:** Bottom of swale on proposed WWTP site

Vegetation Community (Cowardin Classification):

VEGETATION

Dominant Plant Species	Habit	Indicator	Percent Cover	Dominant Plant Species	Habit	Indicator	Percent Cover
Ehrharta calycina	herb	UPL	30				
Raphanus sativus	herb	UPL	20				
Foeniculum vulgare	herb	FACU-	20				

Percent of Dominant Species that are OBL, FACW, or FAC: 0% **Taxonomic Reference:** Hickman, Reed

SOIL

Map Unit: Baywood fine sand, 2-9% slopes

Profile Description: 0-16" very dark grayish brown dry sand (10YR 2/2 moist)

Hydric Soil List?	☐ Yes	☒ No
Mottles?	☐ Yes	☒ No
Gleyed?	☐ Yes	☒ No
NRCS Match?	☐ Yes	☒ No

Other Indicators: None.

HYDROLOGY

Inundated?	☐ Yes	☒ No	**Saturated Soil?**	☐ Yes	☒ No	**Depth:**
Sediment Deposits?	☐ Yes	☒ No	**Drift Lines?**	☐ Yes	☒ No	
Depth of Surface Water:	none		**Water Marks?**	☐ Yes	☒ No	
Depth of Free Water in Pit:	none		**Oxidized Rhizospheres?**	☐ Yes	☒ No	**Color:**

Other Indicators: None.

WETLAND DETERMINATION

Vegetation Criterion Met?	☐ Yes	☒ No	**Normal Circumstances?**	☒ Yes	☐ No
Hydric Soil Criterion Met?	☐ Yes	☒ No			
Hydrology Criterion Met?	☐ Yes	☒ No	**Is this Plot within a Wetland?**	☐ Yes	☒ No

Comments: Drainage swale.

Morro Group Determination by: _____

Signature

Rev: 12/1/00

Routine Wetland Determination Form

Applicant: LOCSD **Project:** Los Osos WWTP **Date:** 8/24/04

State: CA **County:** SLO **Transect/Pit No.:** 3

Investigators: Hoetker **Transect/Pit Area:** Terminus of swale on proposed WWTP site

Vegetation Community (Cowardin Classification):

VEGETATION

Dominant Plant Species	Habit	Indicator	Percent Cover	Dominant Plant Species	Habit	Indicator	Percent Cover
Ehrharta calycina	herb	UPL	100				

Percent of Dominant Species that are OBL, FACW, or FAC: 0% **Taxonomic Reference:** Hickman, Reed

SOIL

Map Unit: Baywood fine sand, 2-9% slopes

Profile Description: 0-16" very dark grayish brown dry sand (10YR 2/2 moist)

Hydric Soil List? ☐ Yes ☒ No

Mottles? ☐ Yes ☒ No

Gleyed? ☐ Yes ☒ No

NRCS Match? ☐ Yes ☒ No

Other Indicators: None.

HYDROLOGY

Inundated? ☐ Yes ☒ No **Saturated Soil?** ☐ Yes ☒ No **Depth:**

Sediment Deposits? ☐ Yes ☒ No **Drift Lines?** ☐ Yes ☒ No

Depth of Surface Water: none **Water Marks?** ☐ Yes ☒ No

Depth of Free Water in Pit: none **Oxidized Rhizospheres?** ☐ Yes ☒ No **Color:**

Other Indicators: None.

WETLAND DETERMINATION

Vegetation Criterion Met? ☐ Yes ☒ No **Normal Circumstances?** ☒ Yes ☐ No

Hydric Soil Criterion Met? ☐ Yes ☒ No

Hydrology Criterion Met? ☐ Yes ☒ No **Is this Plot within a Wetland?** ☐ Yes ☒ No

Comments: Terminus of swale in level area dominated by veldt grass with no defined bed or bank.

Morro Group Determination by: _____

Signature

Rev: 12/1/00

ATTACHMENT B

- Photo Documentation

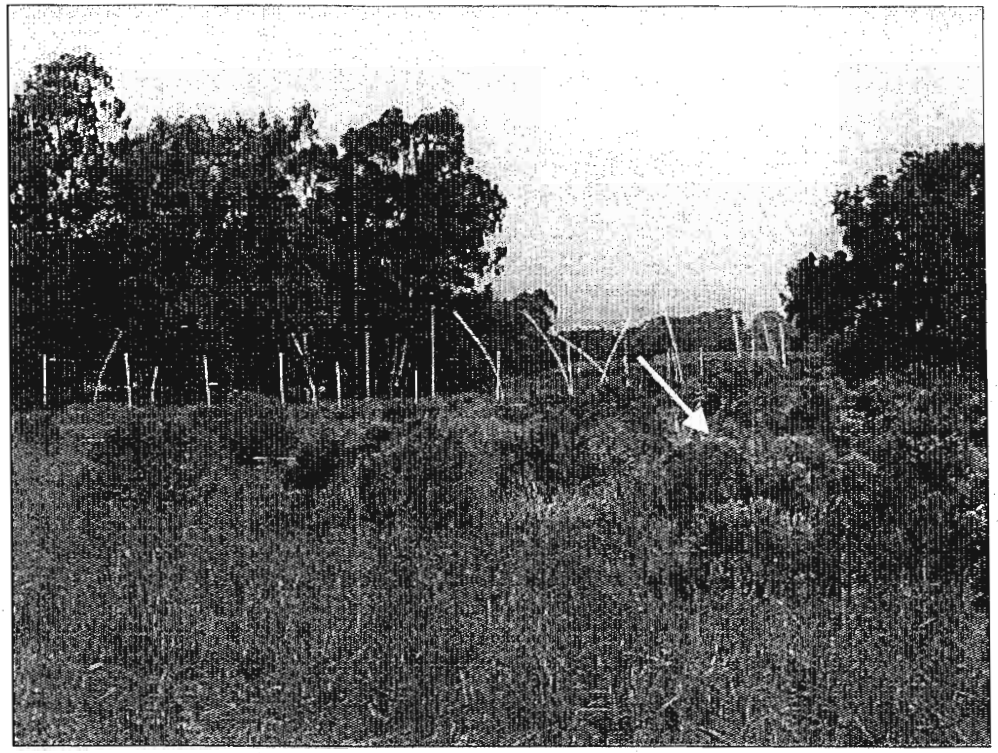


Photo 1:

View of proposed Wastewater Disposal Project Treatment Plant site. The swale examined in the Wetland Delineation Report originates southeast of this location and traverses this area. General vicinity of swale is marked by white arrow. Photo taken September 3,

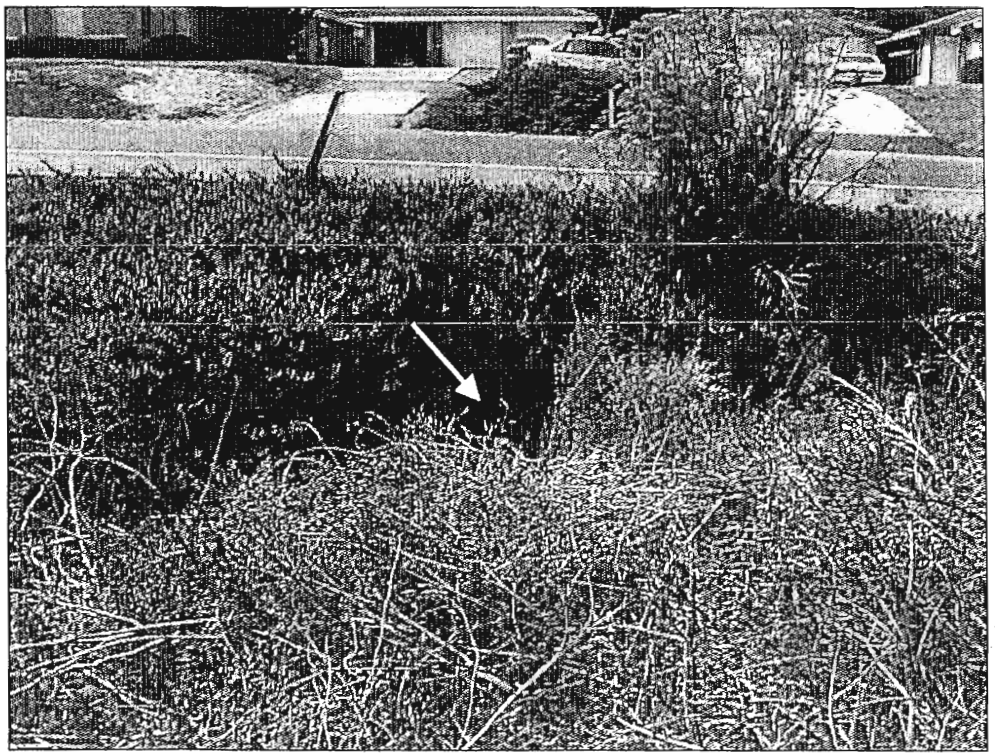


Photo 2:

View of culvert outlet to swale, running under LOVR, marked by white arrow. Note presence of sea-fig around culvert outlet and weedy vegetation such as fennel and wild radish. Photo taken September 3, 2004.

PHOTO DOCUMENTATION

Photo 3:

North-facing view of swale from culvert outlet under LOVR. Note presence of sea-fig and weedy vegetation such as fennel and wild radish. Photo taken September 3, 2004.

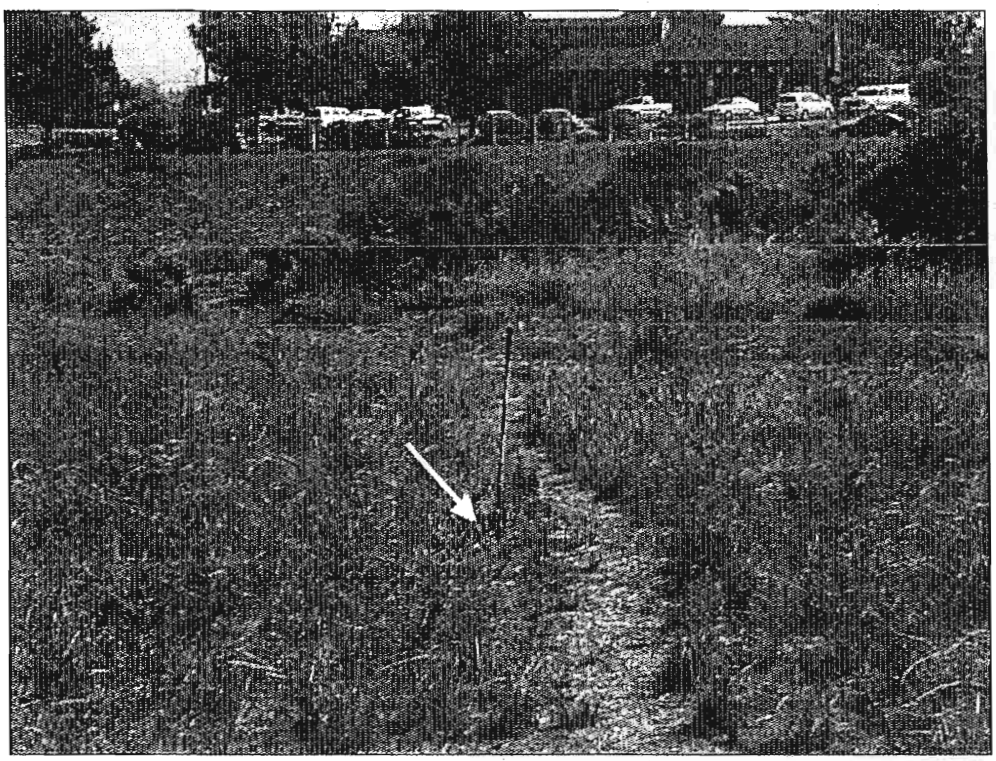


Photo 4:

East-facing view of location for soil test pit #1, marked by shovel and white arrow. Note presence of upland vegetation such as veldt grass and scattered mock heather shrubs. Photo taken September 3, 2004.

PHOTO DOCUMENTATION

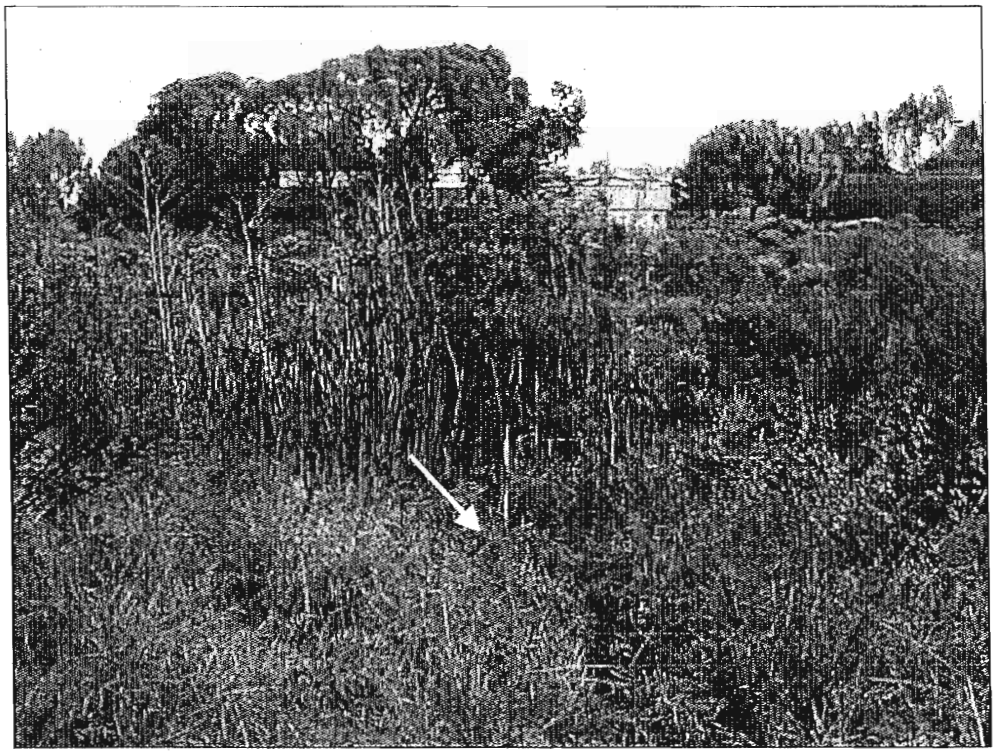


Photo 5:

North-facing view of location for soil test pit #2 in swale, marked by shovel and white arrow. Note presence of veldt grass and fennel, with scattered areas of coastal scrub. Photo taken September 3, 2004.

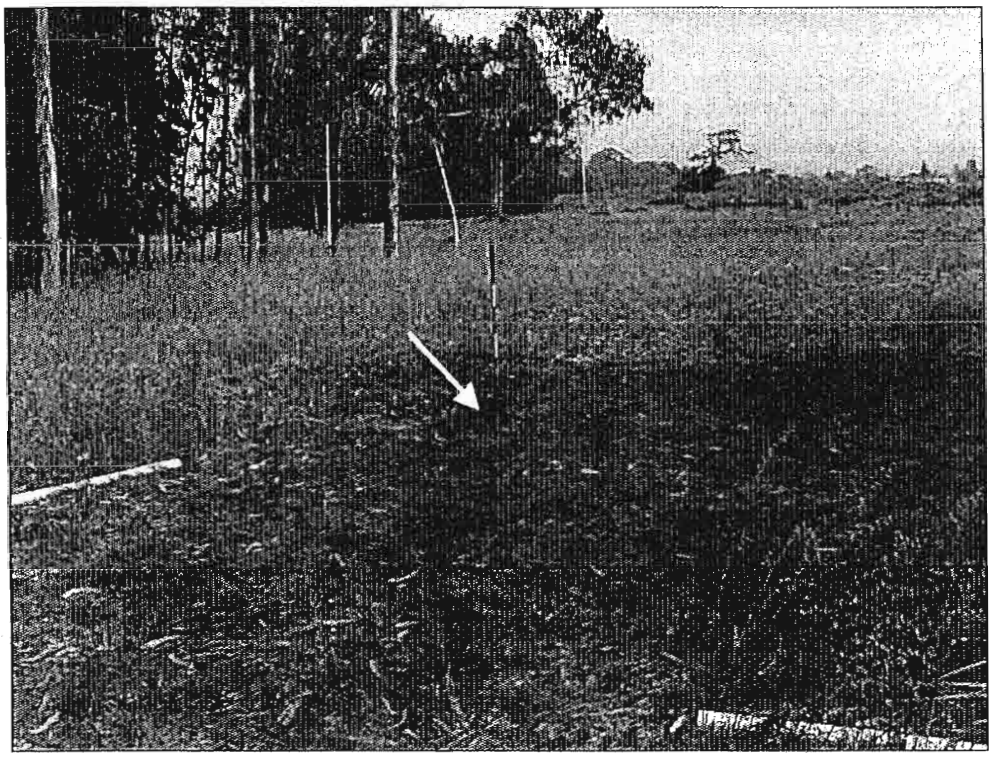


Photo 6:

North-facing view of location for soil test pit #3 at swale terminus, marked by shovel and white arrow. Note dominance of veldt grass. Photo taken September 3, 2004.

PHOTO DOCUMENTATION

ATTACHMENT A

- Field Data Sheets

Routine Wetland Determination Form

Applicant: Crawford Multari Clark Assoc. **Project:** Lupine St. Pump Station **Date:** 5/6/04

State: CA **County:** SLO **Transect/Pit No.:** 3

Investigators: Sloan **Transect/Pit Area:** Donna Ave. right-of-way

Vegetation Community (Cowardin Classification): Seasonal drainage channel

VEGETATION

Dominant Plant Species	Habit	Indicator	Percent Cover	Dominant Plant Species	Habit	Indicator	Percent Cover
Carex pansa	Forb	FACU	60				
Bromus carinatus	Grass	none	15				
Juncus acutus	Forb	FACW	10				
Eucalyptus globulus	Tree	none	80				
Cortedaria jubata	Grass	none	15				

Percent of Dominant Species that are OBL, FACW, or FAC: 20% **Taxonomic Reference:** Hickman/Reed

SOIL

Map Unit: Baywood fine sand, 2-9 percent slopes

Profile Description:

0-2 moist sandy clay, 10YR2/2
2-16 moist sand, 10YR3/1

Hydric Soil List?	☐ Yes	☒ No
Mottles?	☐ Yes	☒ No
Gleyed?	☐ Yes	☒ No
NRCS Match?	☒ Yes	☐ No

Other Indicators: none

HYDROLOGY

Inundated?	☐ Yes	☒ No	**Saturated Soil?**	☐ Yes	☒ No	**Depth:**	
Sediment Deposits?	☐ Yes	☒ No	**Drift Lines?**	☐ Yes	☒ No		
Depth of Surface Water:	none		**Water Marks?**	☐ Yes	☒ No		
Depth of Free Water in Pit:	none		**Oxidized Rhizospheres?**	☐ Yes	☒ No	**Color:**	

Other Indicators: Pit located within seasonal drainage that receives stormwater runoff and connects to Morro Bay estuary

WETLAND DETERMINATION

Vegetation Criterion Met?	☐ Yes	☒ No	**Normal Circumstances?**	☒ Yes	☐ No
Hydric Soil Criterion Met?	☒ Yes	☐ No			
Hydrology Criterion Met?	☒ Yes	☐ No	**Is this Plot within a Wetland?**	☐ Yes	☒ No

Comments: ruderal extension of larger depressional wetland area-appears to meet ACOE Other Waters definition

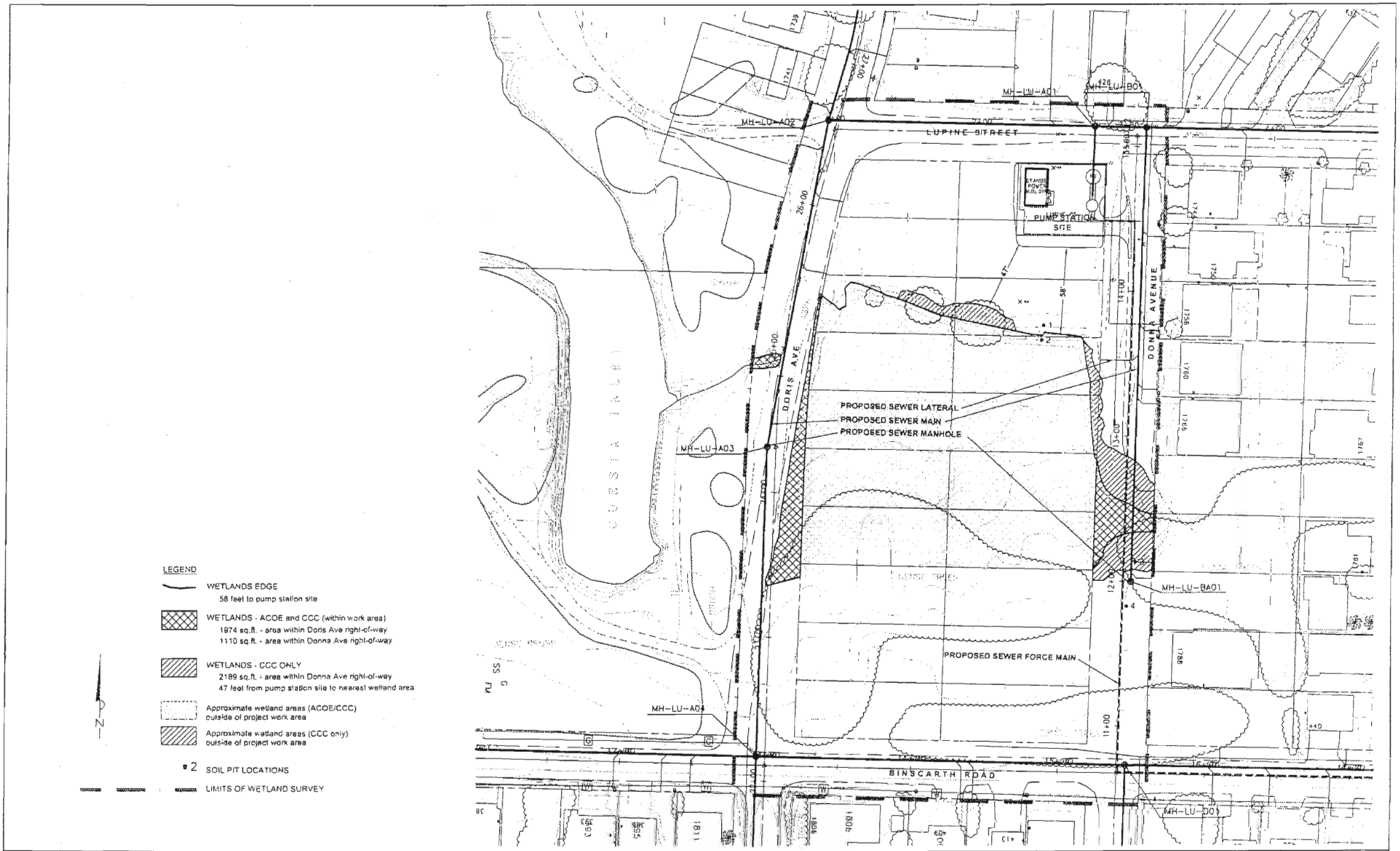
Morro Group Determination by: _____

Signature

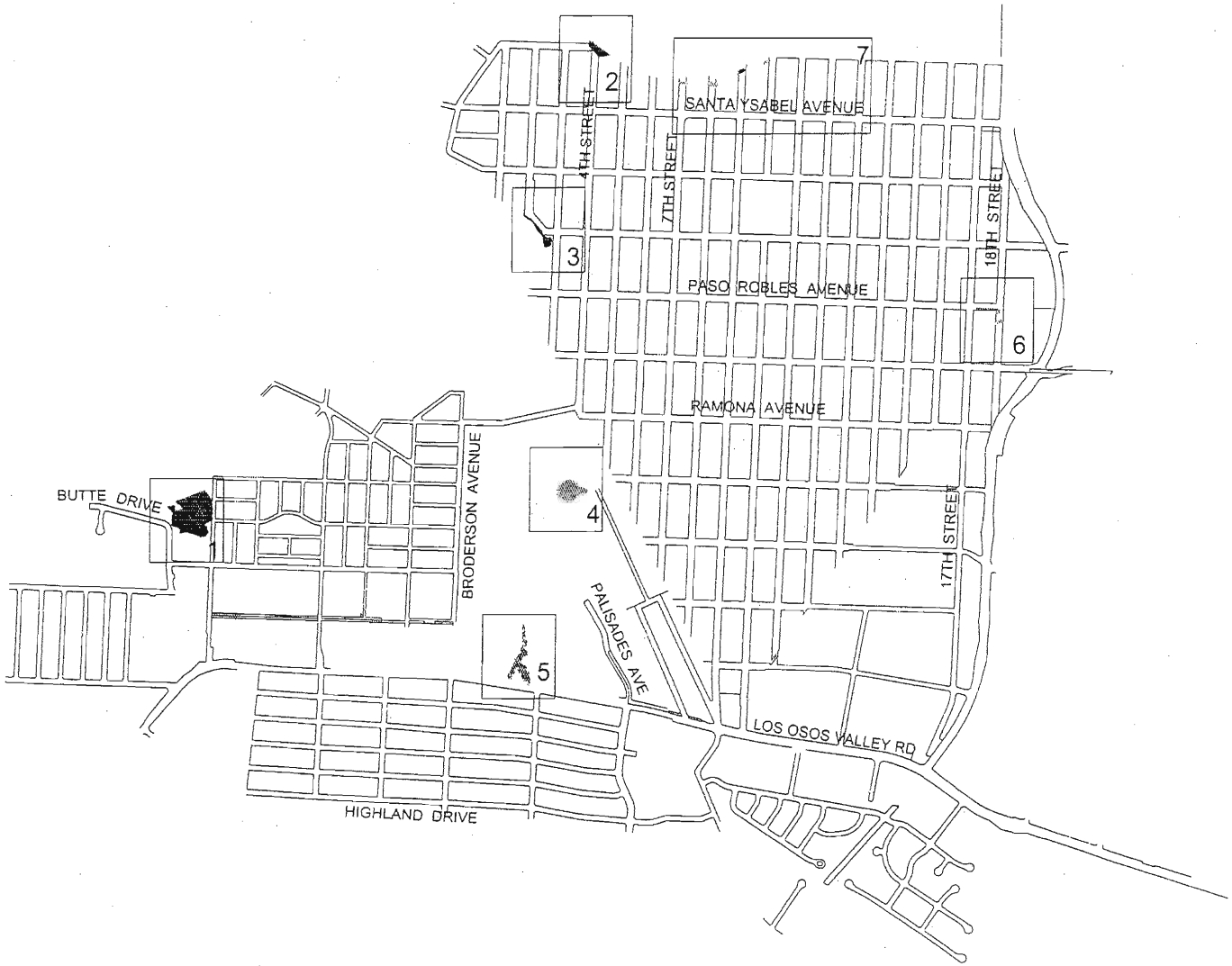
Rev: 12/1/00

ATTACHMENT B

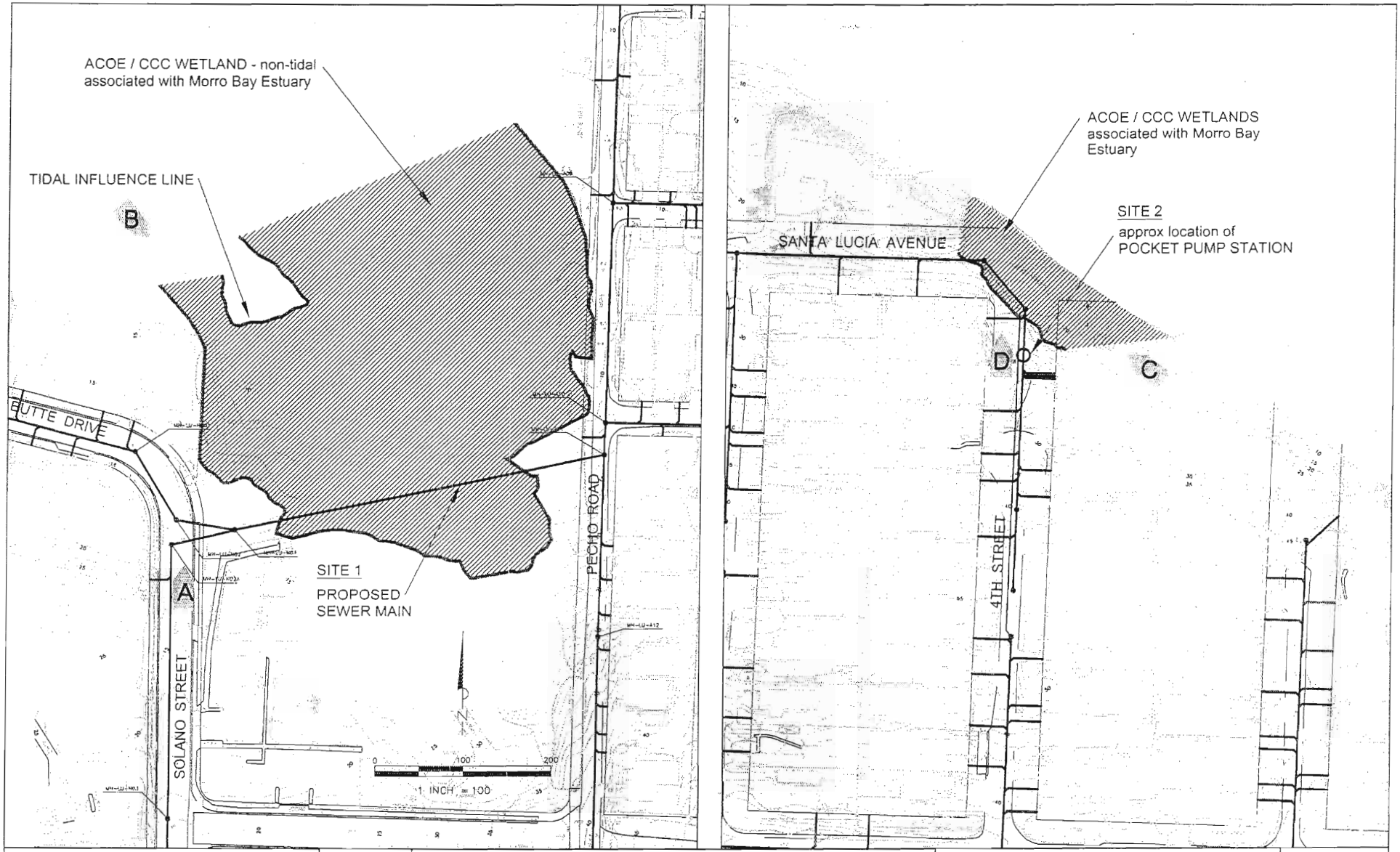
- Photo Documentation



SHEET: 1 OF 1 SCALE: 1" = 60'	MORRO GROUP, INC. Environmental Services	WETLAND DELINEATION REPORT Lupine Street Pump Station - Los Osos, California	JURISDICTIONAL WETLAND AREAS / FIGURE 6
CADD FILE: 03-205 LOCSD\acad-lupine\GPS-wetdel.dwg			
DATE: 6-9-04 BY: dh REV. 0			

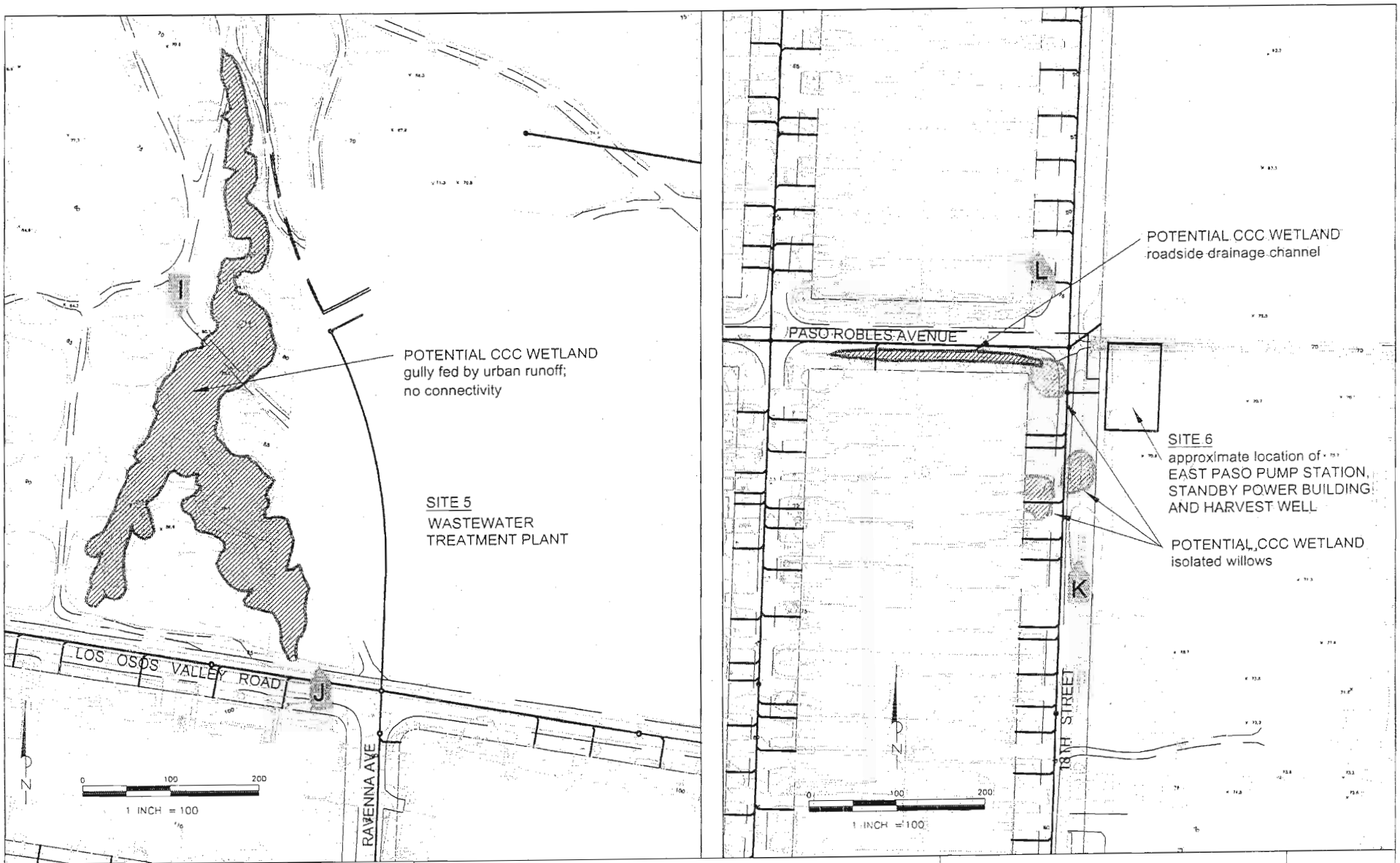


SHEET: 1 OF 4 SCALE: 1" = 1200'	MORRO GROUP, INC. Environmental Services	POTENTIAL WETLAND CONSTRAINTS LOCSD Wastewater Facilities Project - Los Osos, California	KEY MAP
CADD FILE: 03-205 LOCSD Waterwater\wetdet 6-23-04.dwg/key			FIGURE 1
DATE: 06-30-04 BY: dh REV.			

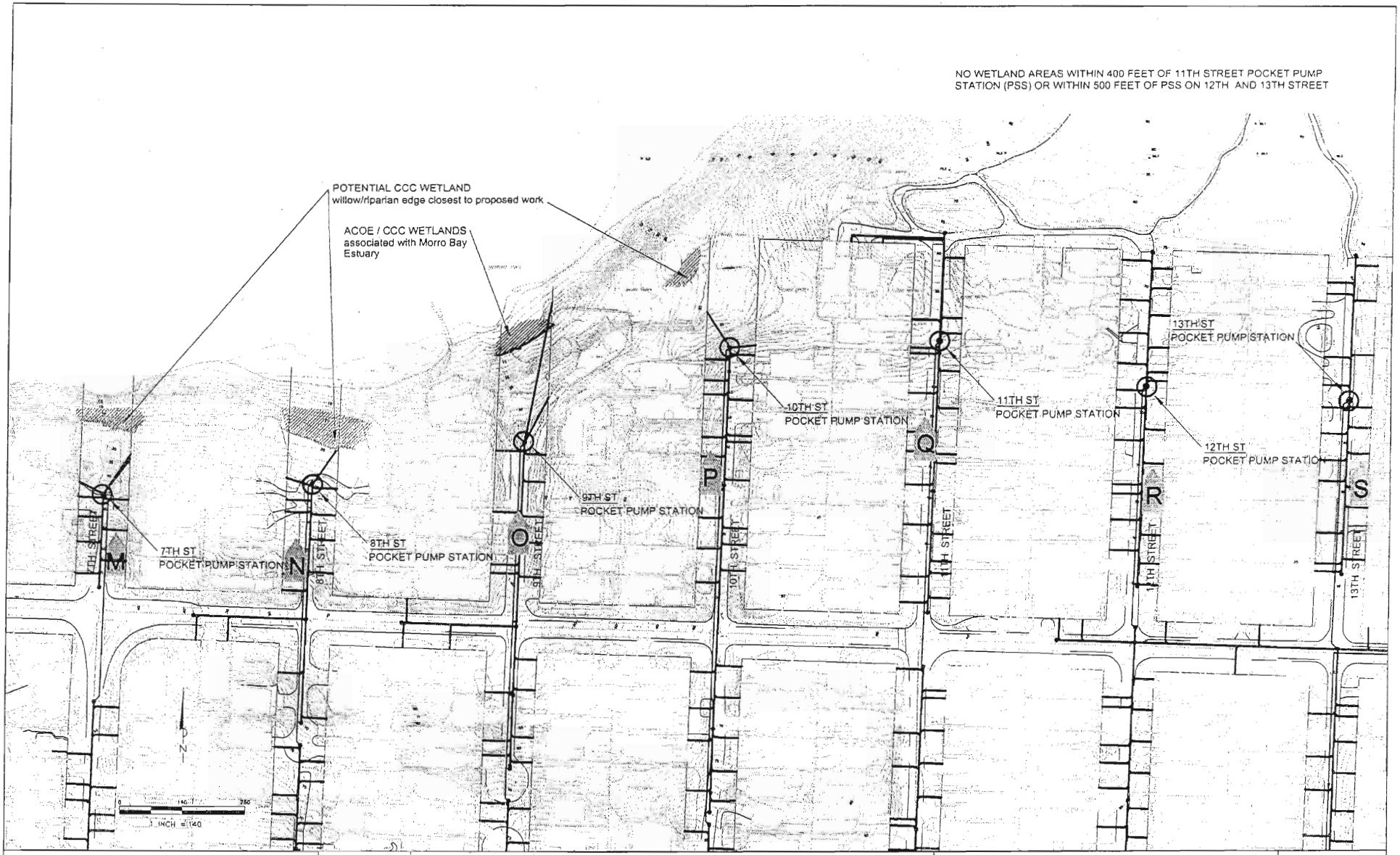


SHEET: 2 OF 4 SCALE: 1" = 100'	MORRO GROUP, INC. Environmental Services	POTENTIAL WETLAND CONSTRAINTS LOCSD Wastewater Facilities Project - Los Osos, California	POTENTIAL WETLAND AREAS - SITES 1 & 2
CADD FILE: 03-205 LOCSD Wastewater\wetdel 6-23-04.dwg/site1-2			FIGURE 2
DATE: 06-24-04; 07-15-04 dh REV. 1-site2PS			

SHEET: 3 OF 4 SCALE: 1" = 100' CADD FILE: 03-205 LOCSD Wastewater\watdel 6-23-04.dwg/site 3-4 DATE: 06-24-04 BY: dh REV.	MORRO GROUP, INC.	POTENTIAL WETLAND CONSTRAINTS LOCSD Wastewater Facilities Project - Los Osos, California	POTENTIAL WETLAND AREAS - SITES 3 & 4	FIGURE 3



SHEET: 4 OF 4 SCALE: 1" = 100' CADD FILE: 03-205 LOCSD Wastewater\wetdel 6-23-04.dwg/site5-6 DATE: 06-24-04 BY: dh REV.	MORRO GROUP, INC.	POTENTIAL WETLAND CONSTRAINTS LOCSD Wastewater Facilities Project - Los Osos, California	POTENTIAL WETLAND AREAS - SITES 5 & 6	FIGURE 4



SHEET: 2 OF 4 SCALE: 1" = 140' CADD FILE: 03-205 LOCSD Wastewater\weldai 6-23-04.dwg/site7 DATE: 06-30-04 BY: dh REV.	MORRO GROUP, INC. Environmental Services	POTENTIAL WETLAND CONSTRAINTS LOCSD Wastewater Facilities Project - Los Osos, California	POTENTIAL WETLAND AREAS - SITE 7	FIGURE 5

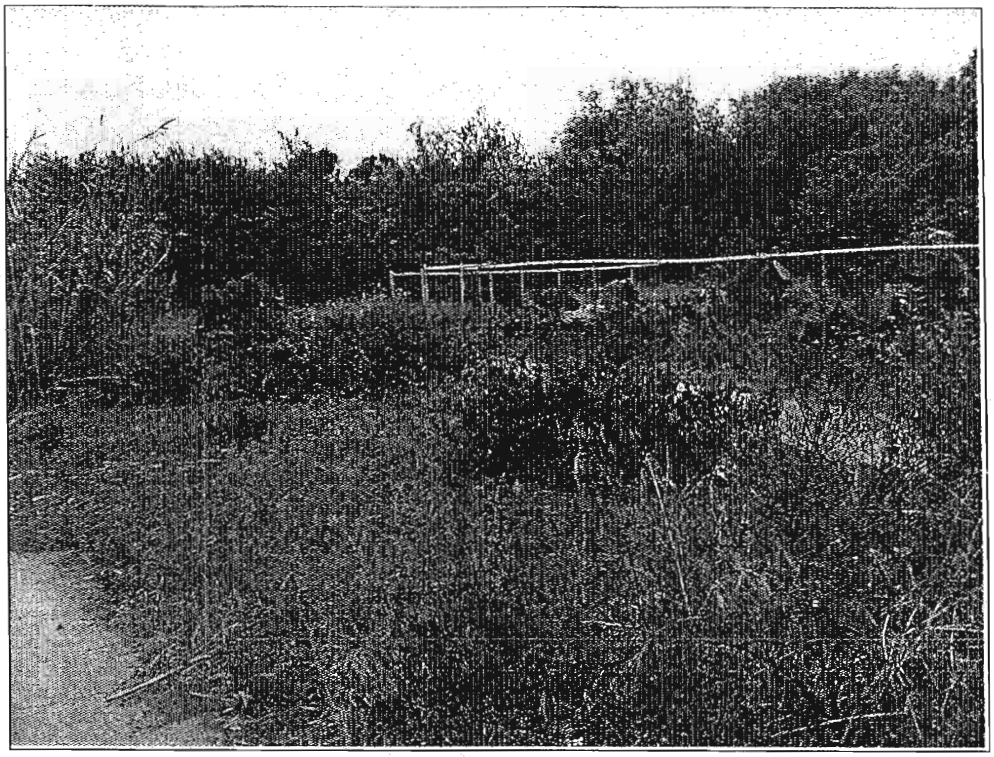


Photo A:

Looking north along Solano Street toward Butte Drive wetland area. Note dense willow canopy in depressional area adjacent to Sea Pines Golf Course fenceline. Proposed sewer pipeline would cross southern portion of the willow canopy in the general area shown in the picture.

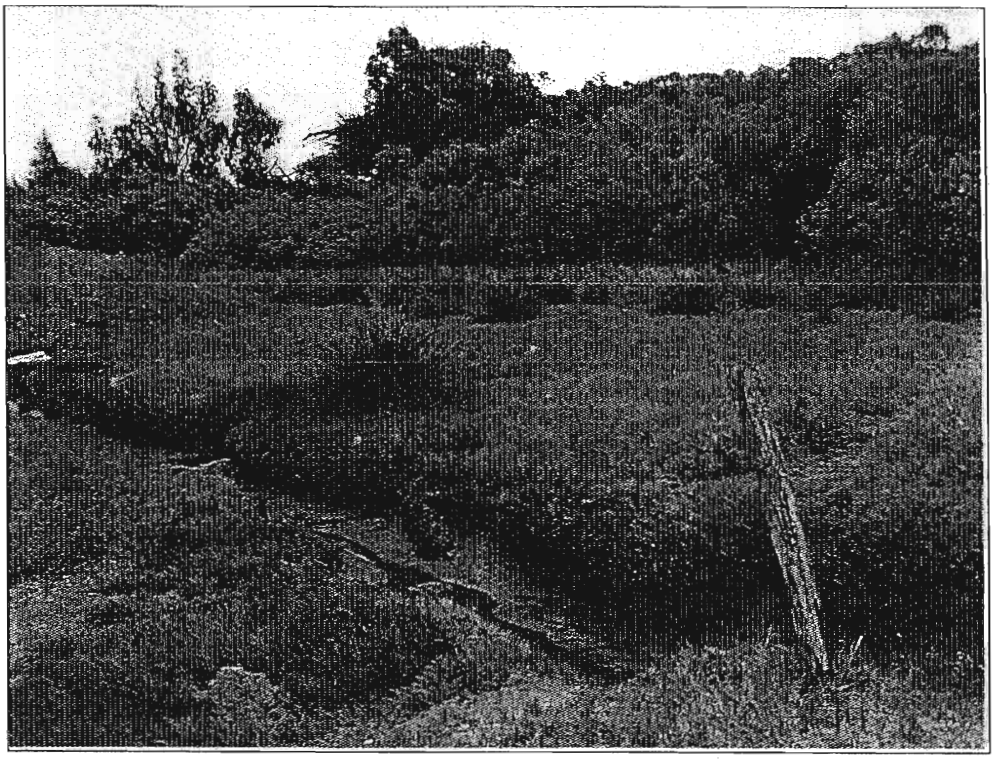


Photo B:

Looking south from tidally influenced area of Morro Bay toward the Butte Drive willow canopy. Note tidal channel and adjacent salt marsh areas. No tidal influence was observed within the willow canopy area.

PHOTO DOCUMENTATION – SITE 1

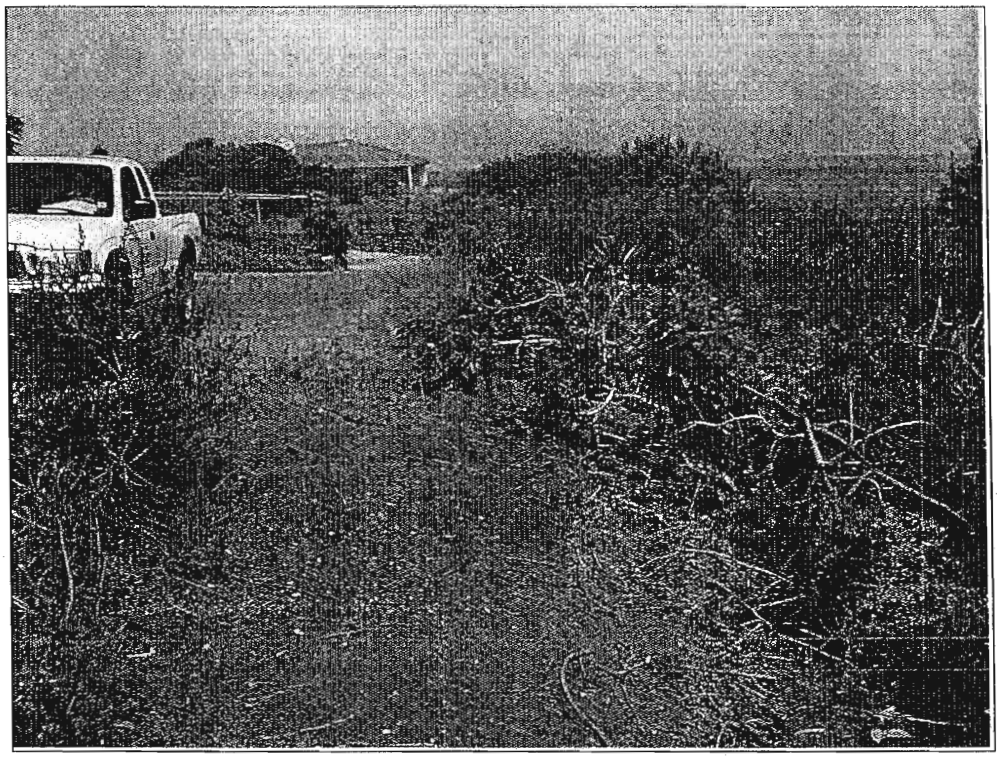


Photo C:

Viewing west along edge of vegetation at end of 4th Street / Santa Lucia Avenue. Note poplar, blackberry, and willow along bank leading down to the Bay.

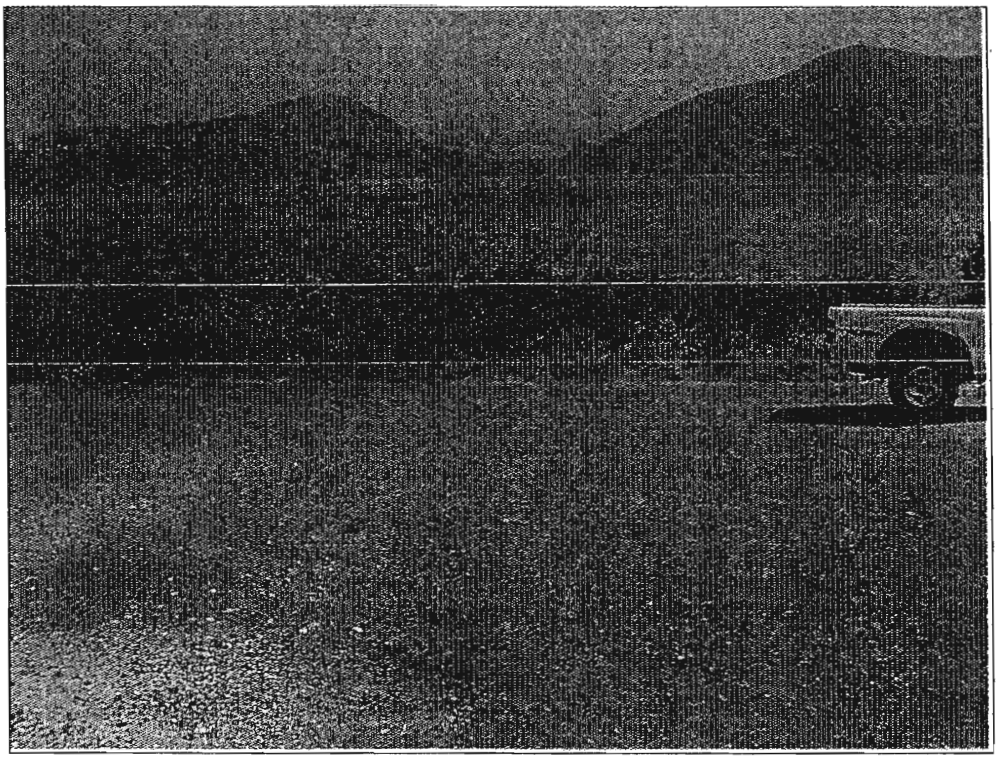


Photo D:

View north over the proposed pump station location at the end of 4th Street. Note willow fringe along edge of the Bay.

PHOTO DOCUMENTATION – SITE 2

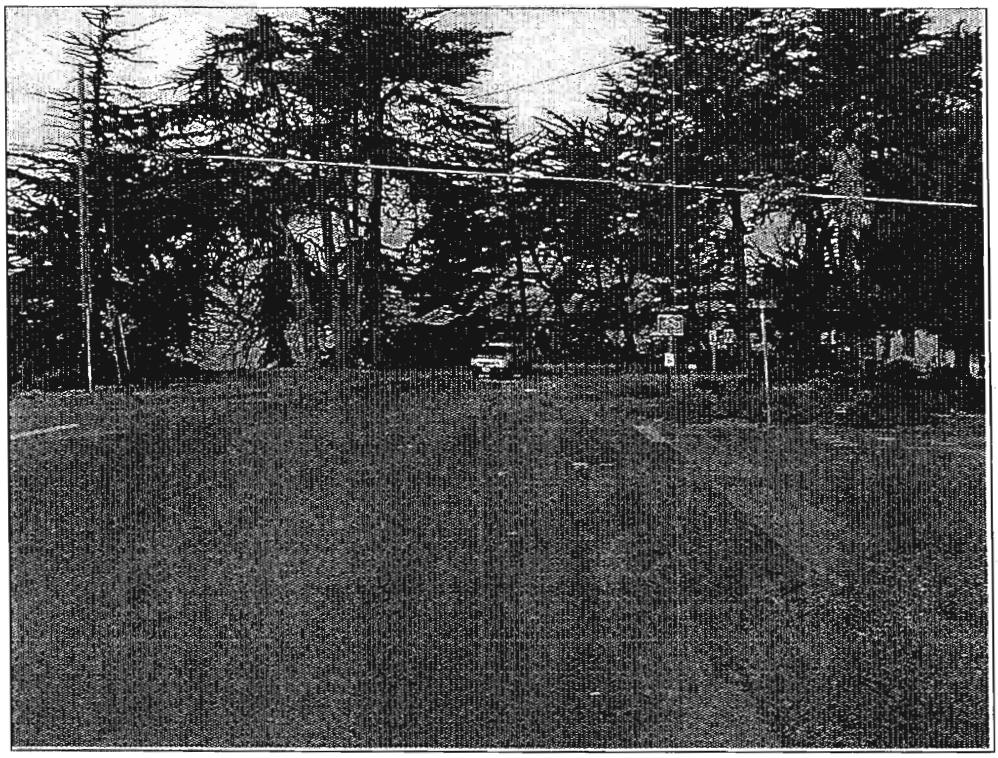


Photo E:

Viewing west along El Moro Avenue toward the 3rd Street intersection. Cypress trees mark the edge of the Bay.

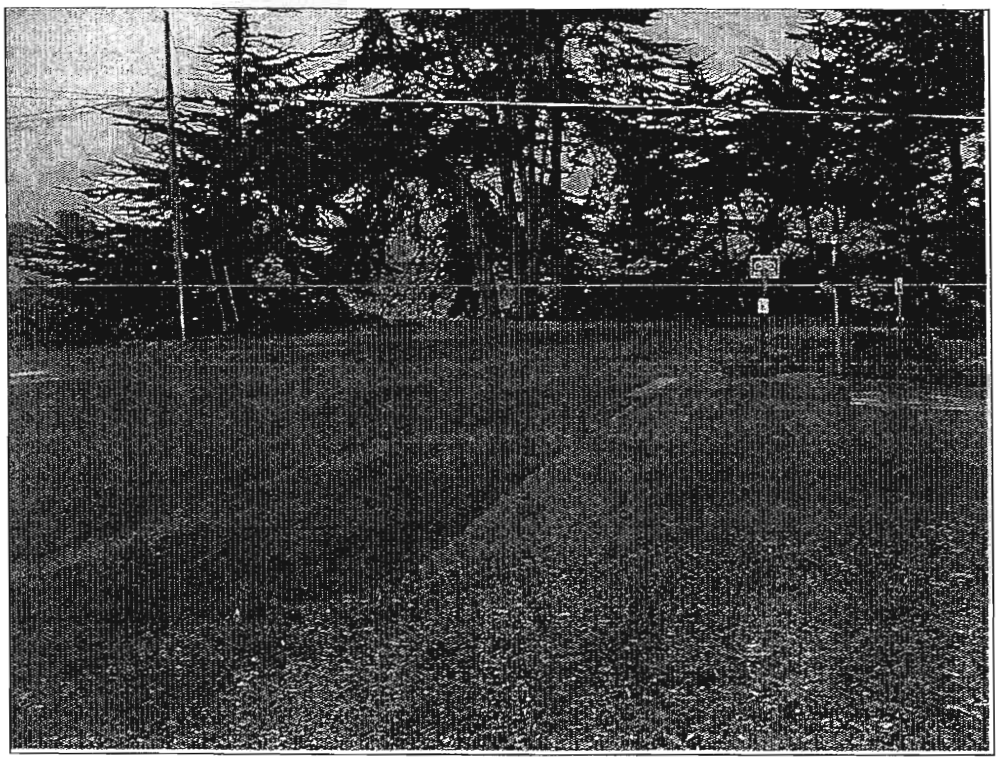


Photo F:

Viewing west over the El Moro Avenue / 3rd Street intersection.

PHOTO DOCUMENTATION – SITE 3

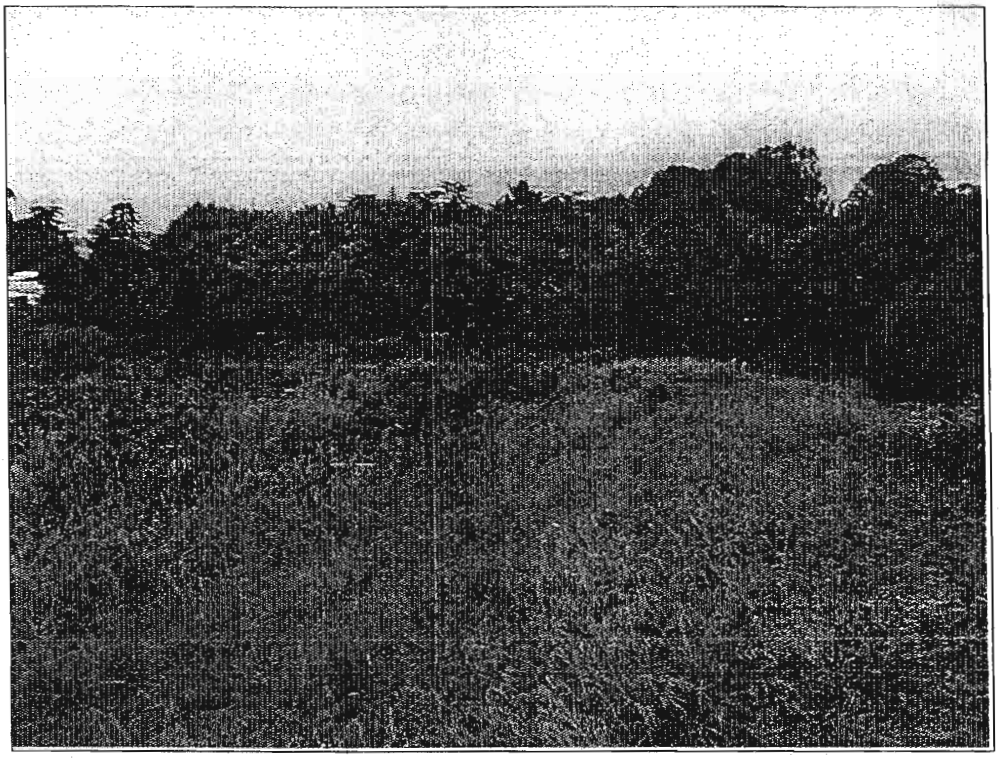


Photo G:

View of the willow spring area looking north. Note coastal dune scrub in foreground, and oak trees at right side of picture.

Photo H:

Looking south toward the willow spring area. Note mowed area in foreground. Sweet Springs Trailer park is located to the right of the picture.

PHOTO DOCUMENTATION – SITE 4

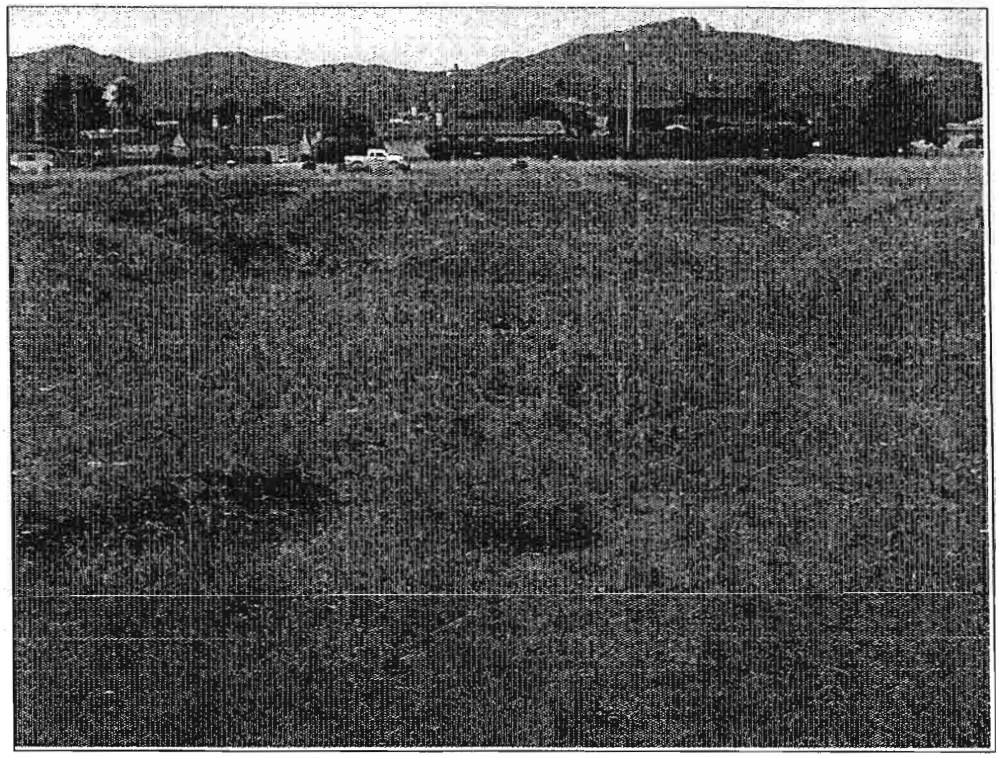


Photo I:

View of the erosional gully looking south toward Los Osos Valley Road. The gully channels stormwater runoff from Los Osos Valley Road, but does not connect with another stream channel or water body.

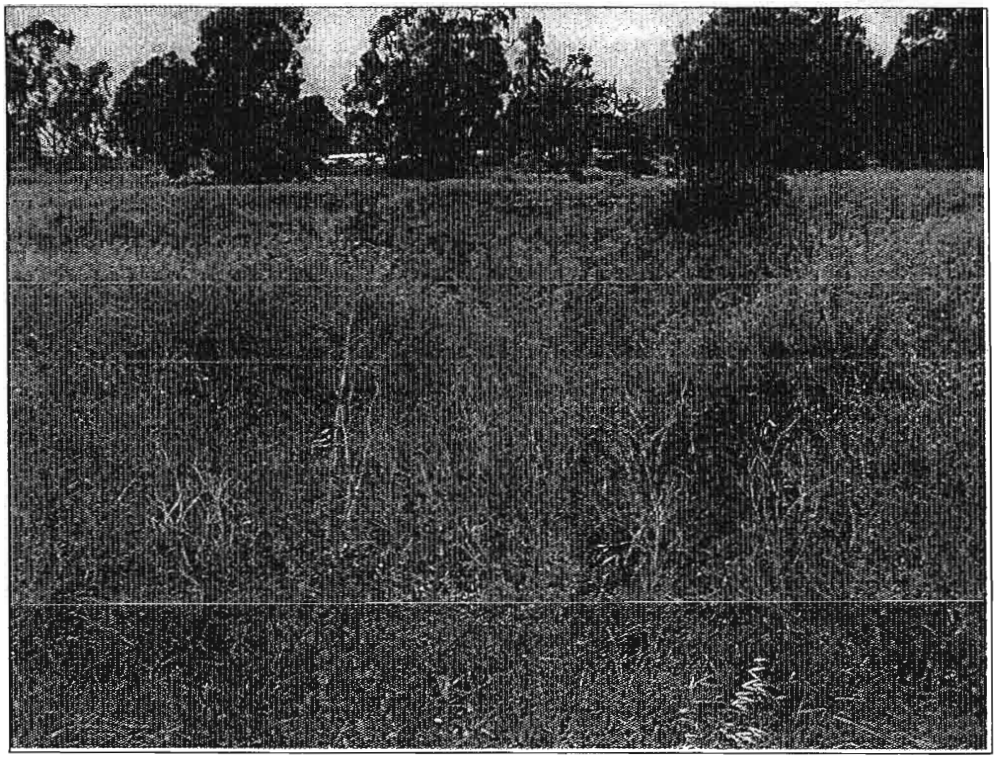


Photo J:

View of the erosional gully looking north from Los Osos Valley Road, at the culvert outlet location. No wetland vegetation is present in the gully.

PHOTO DOCUMENTATION – SITE 5

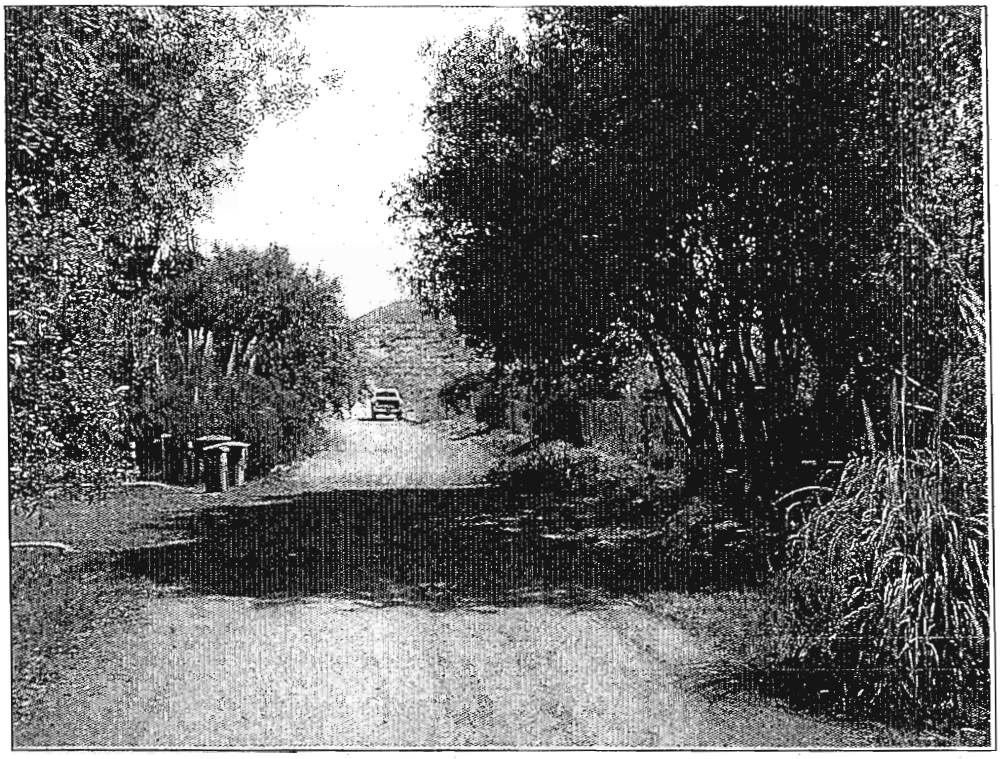


Photo K:

View along 18th Street looking north toward Paso Robles Avenue. Note willow canopy along both sides of the road.

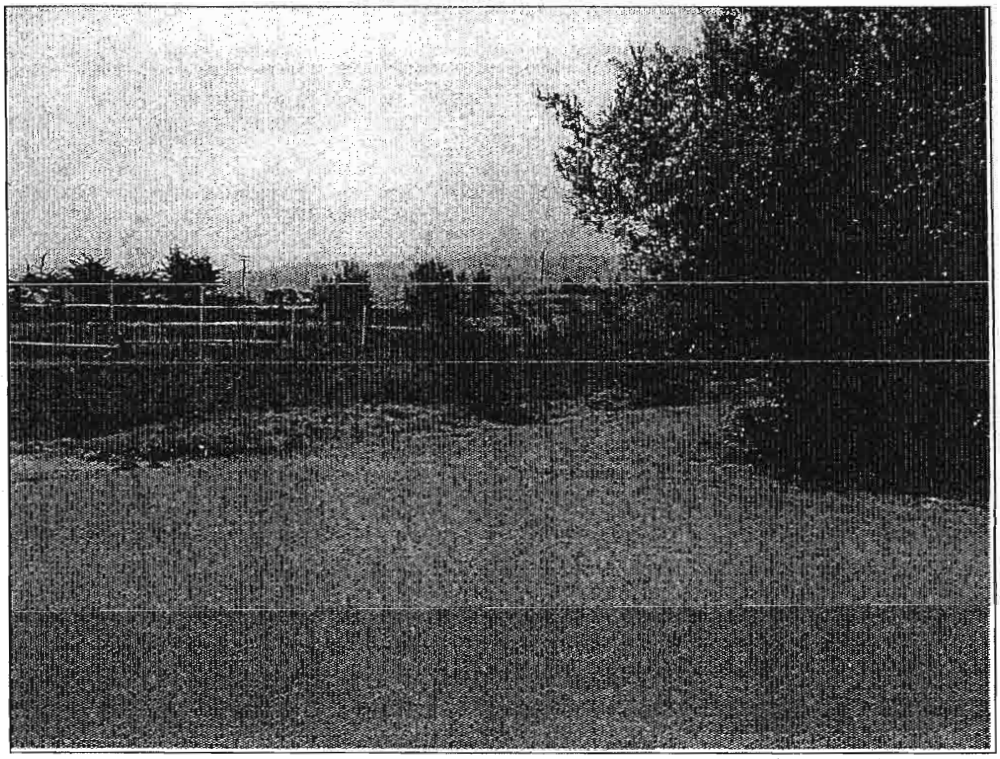


Photo L:

View of the intersection of 18th Street and Paso Robles Avenue, looking southeast. The proposed pump station would be located in the field at left of picture. Willows at right mark location of culvert that channels roadside runoff under 18th Street and into a concrete v-ditch.

PHOTO DOCUMENTATION – SITE 6

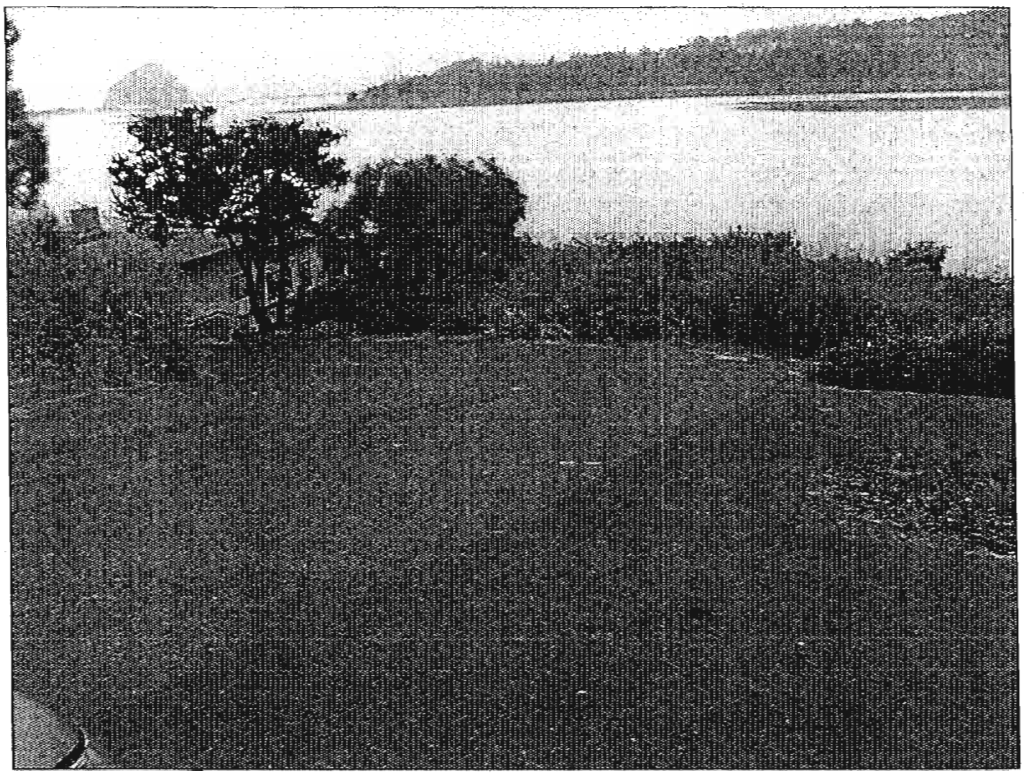


Photo M:

Viewing north toward the end of 7th Street. Pump station location is at end of pavement approximately 100 feet from willow canopy along edge of Bay.

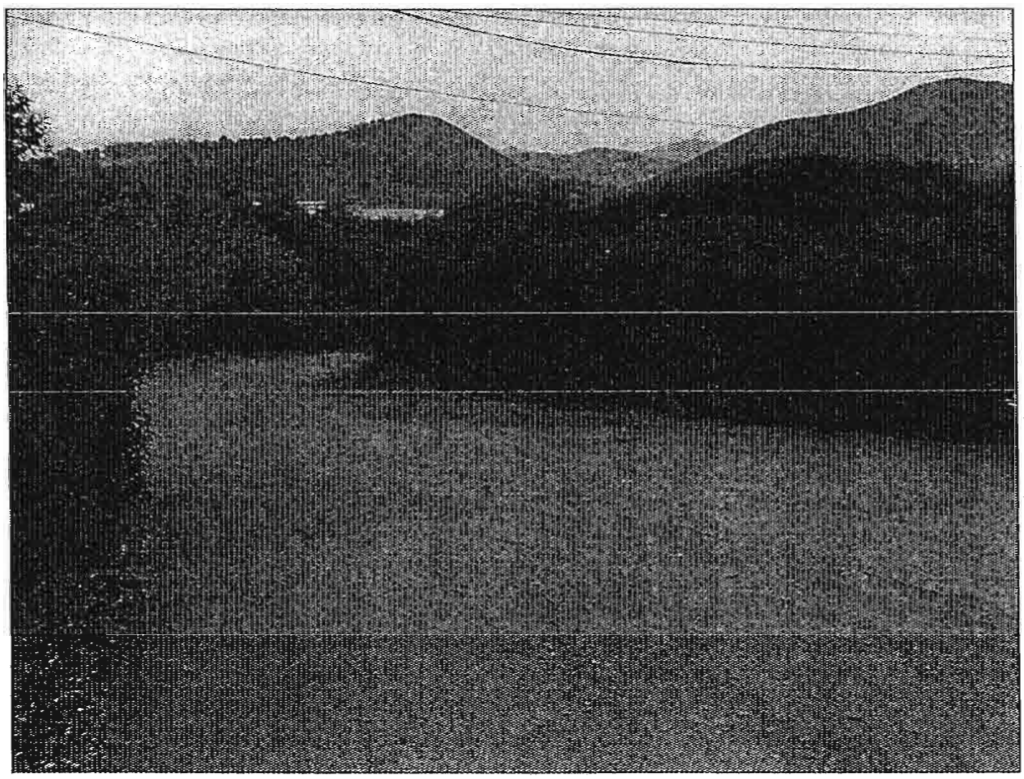


Photo N:

Viewing north toward the end of 8h Street. Pump station location is in oak area in foreground, approximately 65 feet from willow canopy along edge of Bay.

PHOTO DOCUMENTATION – SITE 7

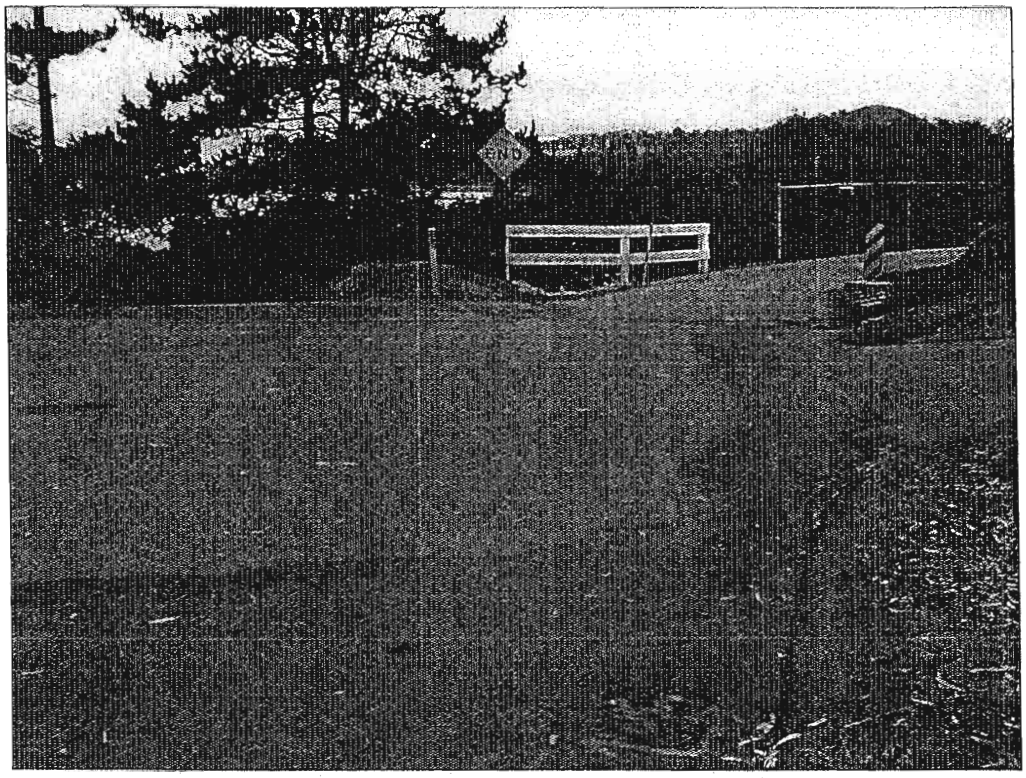


Photo O:

Viewing north toward end of 9th Street. Pump station to be located behind white fence, approximately 145 feet from emergent wetland areas associated with Morro Bay.

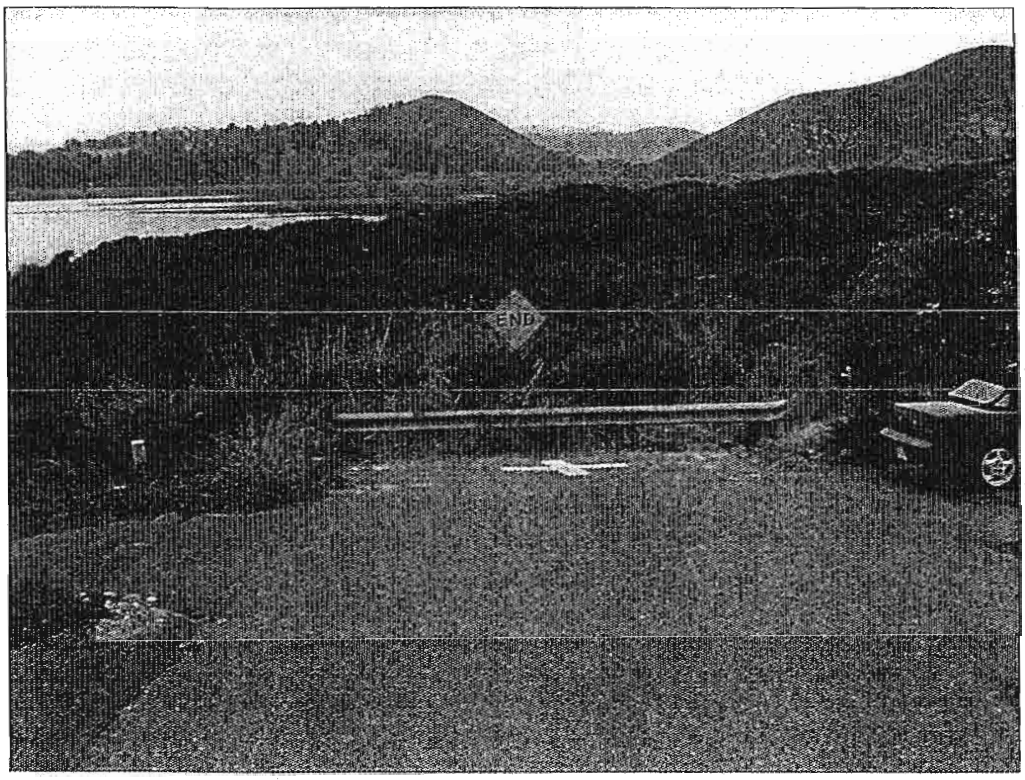


Photo P:

Viewing north toward end of 10th Street. Pump station to be located behind white fence, approximately 120 feet from willow canopy associated with Morro Bay.

PHOTO DOCUMENTATION – SITE 7

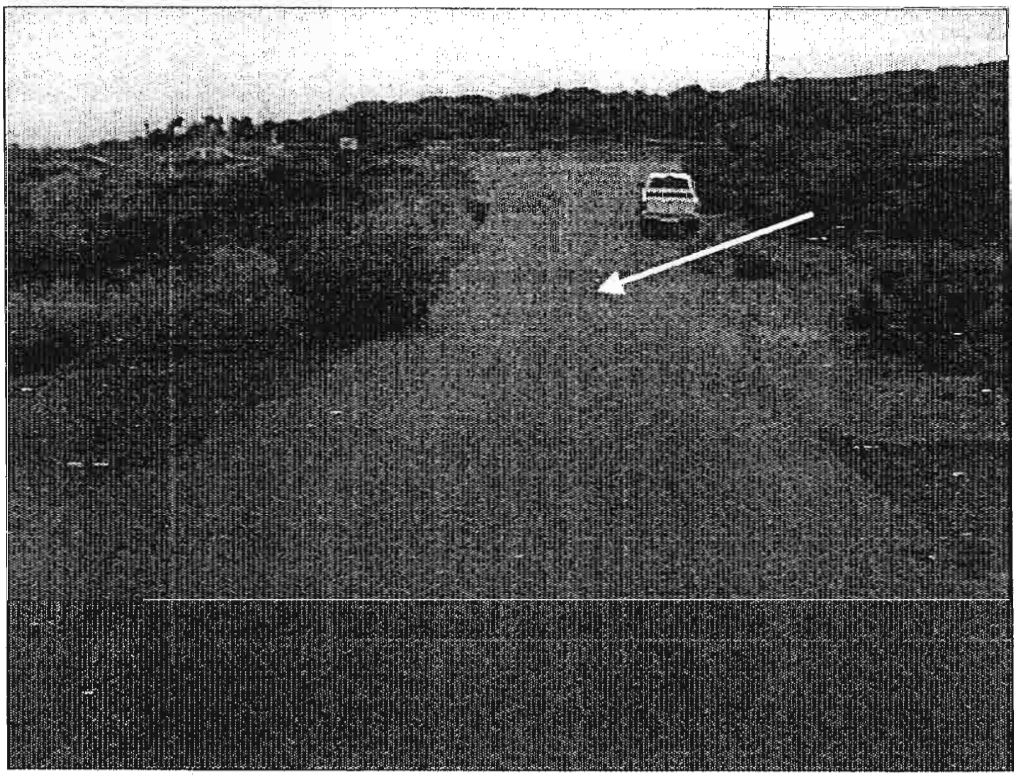


Photo Q:

Viewing north toward the end of 11th Street. Pump station location is in pavement at low point indicated by arrow. The site is over 365 feet from willow canopy along edge of the Bay.

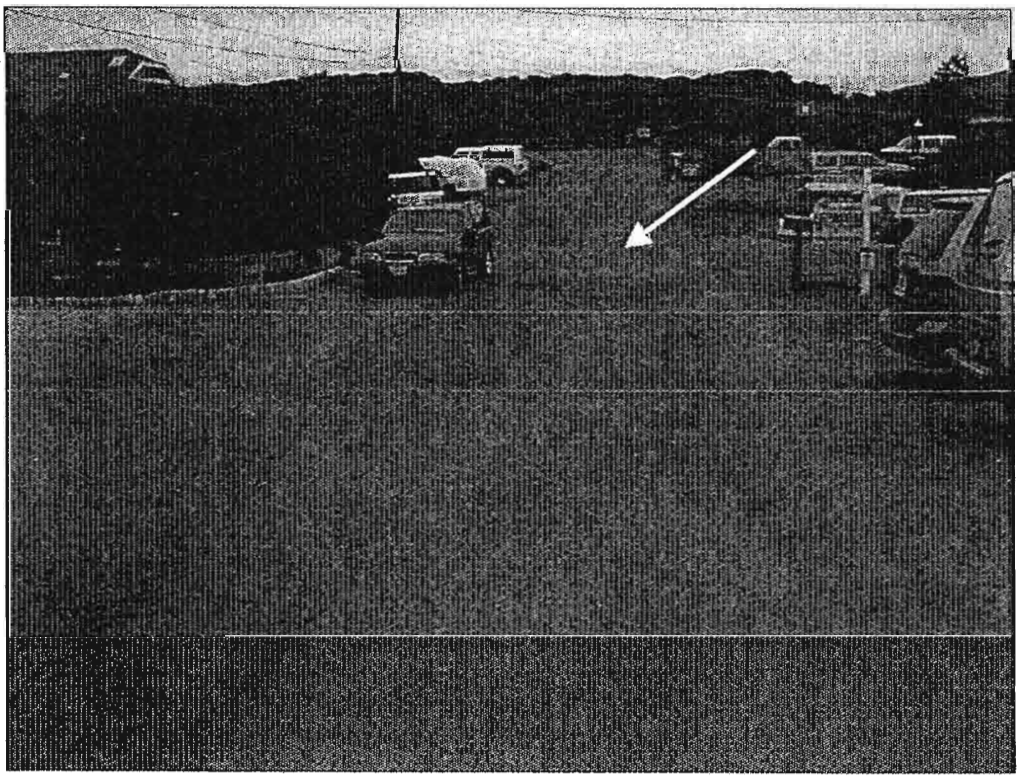


Photo R:

Viewing north toward the end of 12th Street. Pump station location is in pavement at low point indicated by arrow. The site is over 400 feet from willow canopy along edge of the Bay.

PHOTO DOCUMENTATION – SITE 7

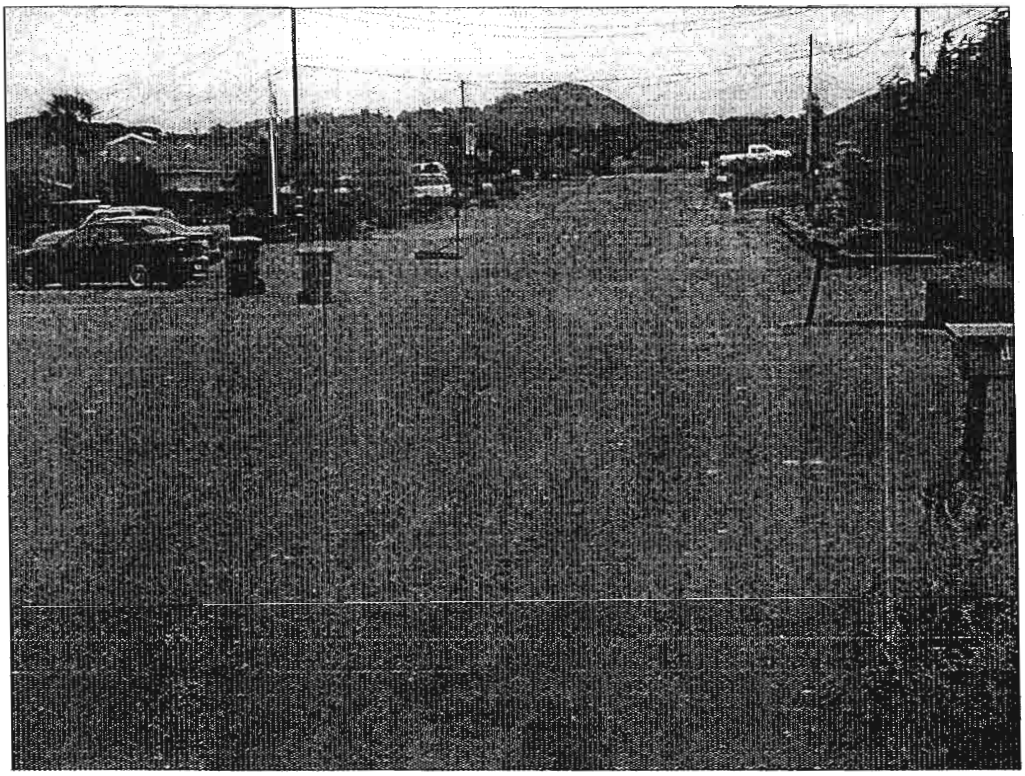


Photo S:

Viewing north toward the end of 13th Street. Pump station location is in pavement approximately 230 feet from the end of the road. The site is over 500 feet from willow canopy along edge of the Bay.

PHOTO DOCUMENTATION – SITE 7

Los Osos Wastewater Disposal Project
Treatment Plant Area
Los Osos, California

WETLAND DELINEATION REPORT

Prepared for:

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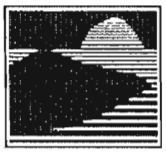
Prepared by:



MORRO GROUP, INC.
Environmental Services

August 9, 2004

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Attachment A. Field Data Sheets
Attachment B. Photo Documentation

1.0 INTRODUCTION

1.1 SCOPE

This Wetland Delineation Report summarizes existing soil, hydrology and vegetative conditions found within and adjacent to an erosional gully located to the west of the proposed Wastewater Treatment Plant (WWTP) site in Los Osos, San Luis Obispo County, California (refer to Figures 1 through 4). Morro Group, Inc. has prepared this report at the request of Crawford, Multari & Clark Associates, and it is intended for use by the Los Osos Community Services District (LOCSD), and regulatory agencies. This report examines potential waters of the United States, as defined by the U.S. Army Corps of Engineers (ACOE) and the California Coastal Commission (CCC), found in the gully near the proposed WWTP site. Findings reported herein are based on information gathered in the field at the time of investigation, an on-site meeting with ACOE staff, and on Morro Group's understanding of the ACOE 1987 Wetlands Delineation Manual, and federal, state, and local guidelines for identification of wetland areas.

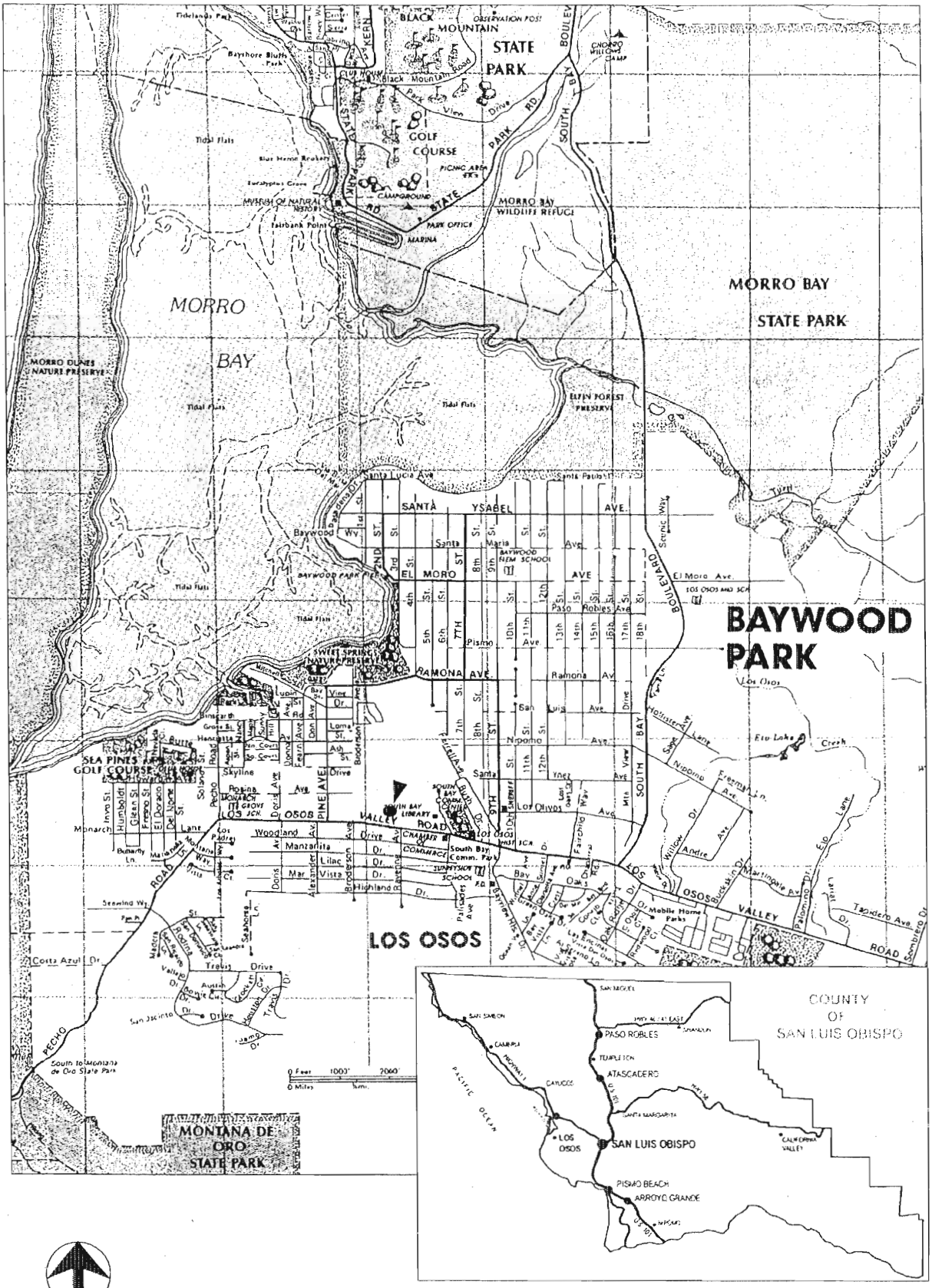
1.2 PROJECT BACKGROUND

The WWTP site is located in the central portion of the community of Los Osos, on the north side of Los Osos Valley Road (LOVR) between Palisades Avenue and a proposed extension of Ravenna Avenue (refer to Figures 1 and 2). The gully examined in this report is located west of the WWTP site. A Soil Conservation Service (SCS) soil survey map of the area is included as Figure 3, and soil pit locations and the resulting delineation of jurisdictional areas are shown on Figure 4. Figure 5 provides an aerial view of the area. The proposed WWTP site is located in the Coastal Zone, and the CCC has requested additional information about the gully in an effort to determine whether setbacks from wetland areas will be required for the project.

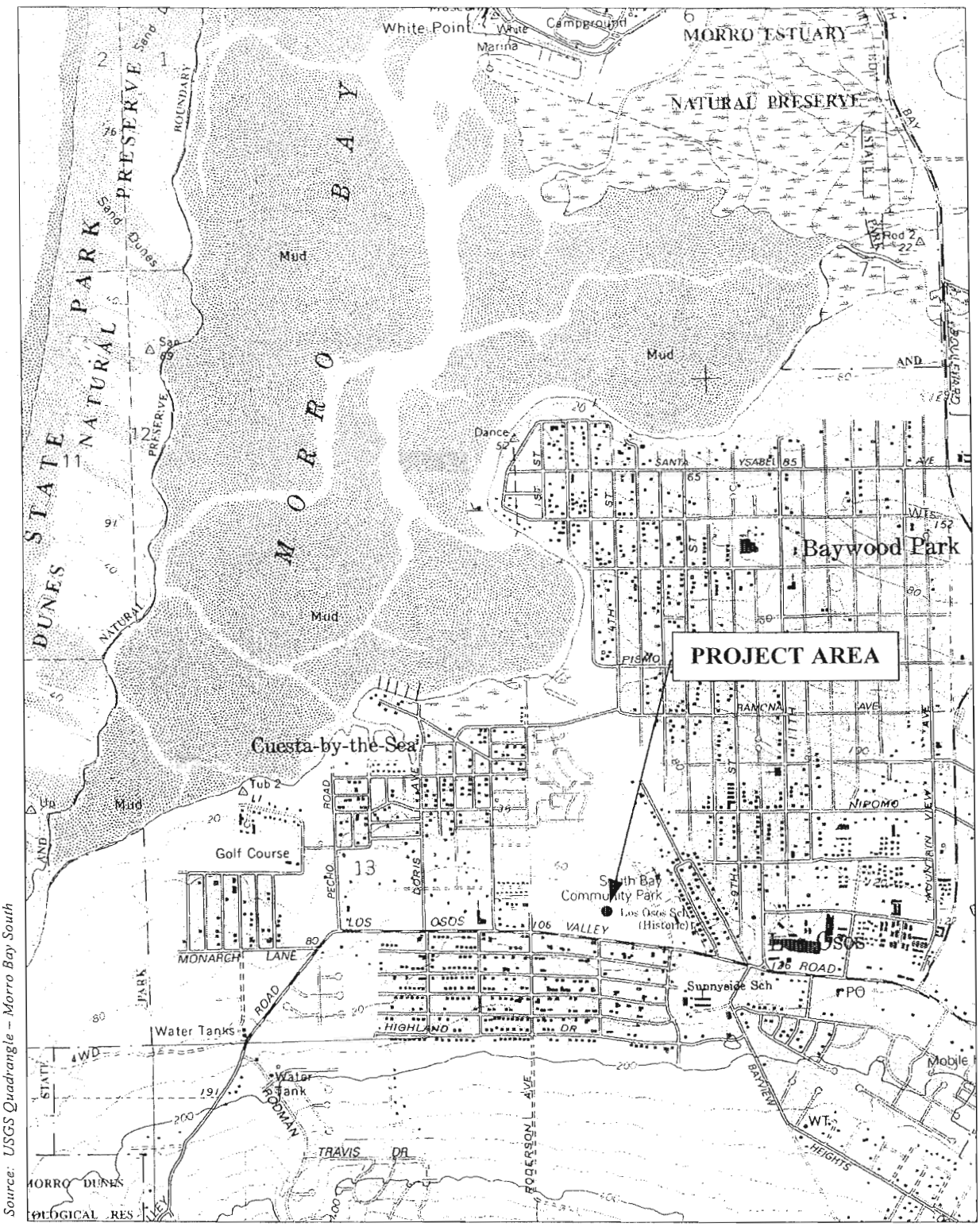
The proposed WWTP is a major part of the Los Osos Wastewater Disposal Project. The plant will cover a small portion of the approximately 11-acre site between Ravenna Avenue and Palisades Avenue. Underground sewer lines following existing road rights of way will connect the plant to other components of the sewer project.

1.3 SITE DESCRIPTION

The WWTP site consists of gently sloping sandy soils dominated by coastal scrub, non-native grasses, and eucalyptus trees on the northern side of LOVR (refer to Figures 4 and 5). The gully examined in this report originates approximately 100 feet west of the proposed extension of Ravenna Avenue, at a 20 inch corrugated metal culvert on the northern side of LOVR. A finger of the gully extends toward LOVR to the west, and joins with the main gully approximately 200 feet to the north. The gully is approximately 110 feet wide and 10 to 12 feet deep at its widest point near LOVR, and decreases in width and depth as it proceeds north. Scoured areas and water-washed trash and debris are present within the lower portion of the gully. Sides and bank of the gully are vegetated with annual grasses and forbs, with no hydrophytic plant species present. The gully travels in a northerly direction along the western boundary of the proposed Ravenna Avenue extension for a distance of approximately 720 feet before it ends in a sandy roadway disturbed by off-road vehicle travel. No bed, bank, or channel is visible past the northern terminus of the gully, and undisturbed adjacent areas contain coastal scrub vegetation, non-native grasses, and a stand of large eucalyptus trees.



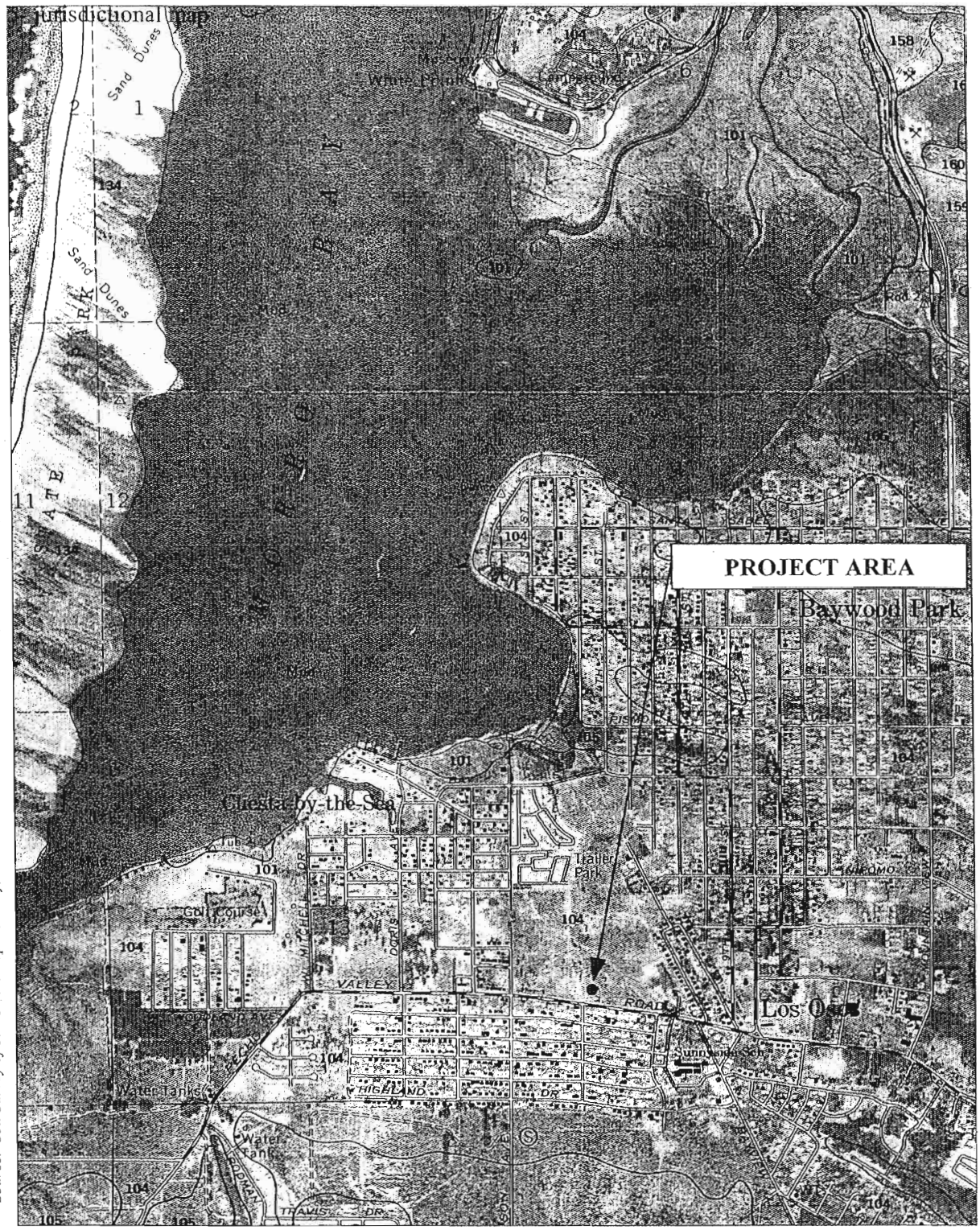
VICINITY MAP
FIGURE 1



Source: USGS Quadrangle – Morro Bay South

NORTH
Not to Scale

PROJECT LOCATION MAP
FIGURE 2



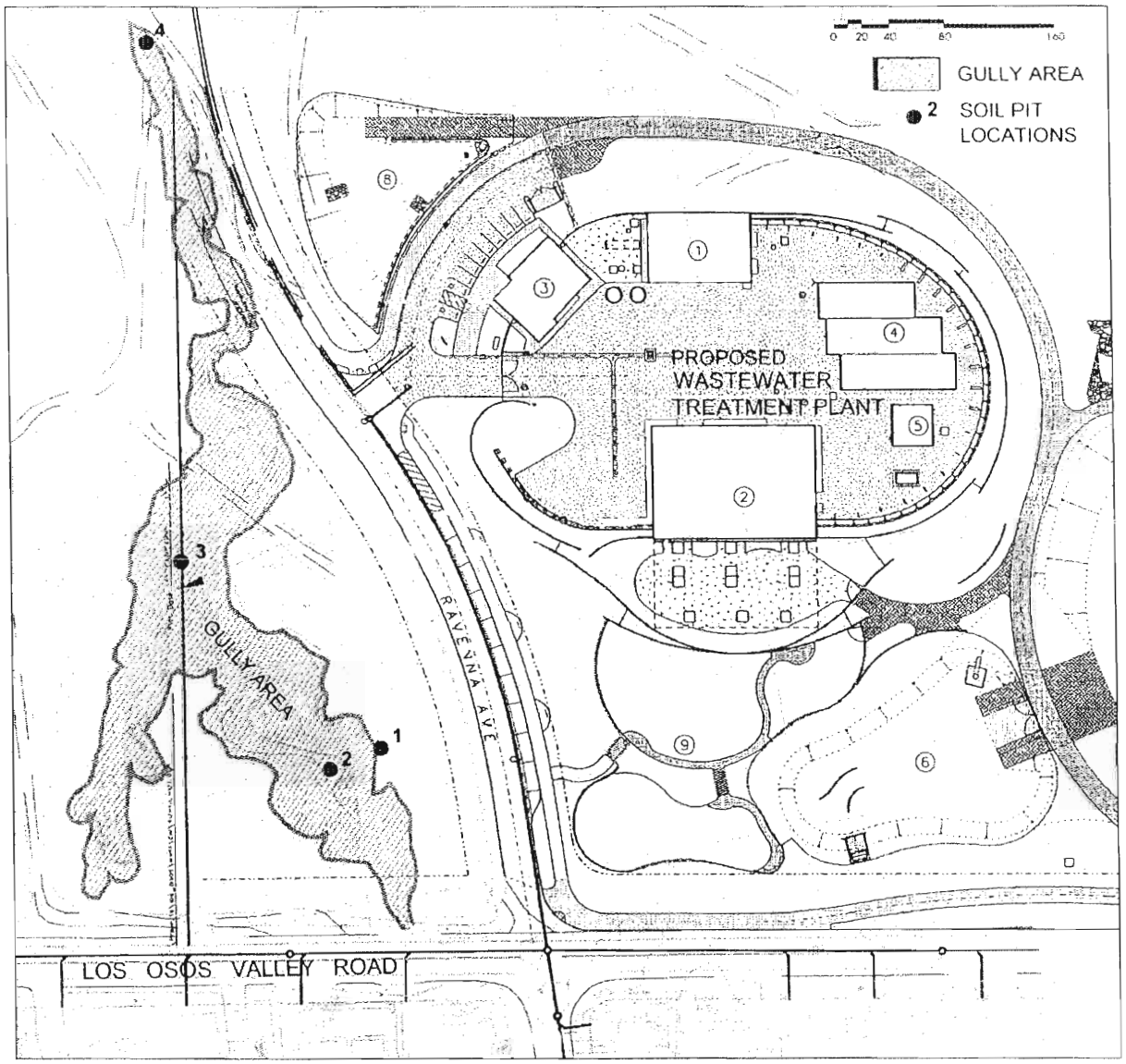
Source: Soil Survey of San Luis Obispo County, Coastal Part – Sheet 8

SOIL KEY

104 Baywood fine sand, 2-9% slopes

NORTH
Not to Scale

SOIL SURVEY MAP
FIGURE 3



NORTH
Not to Scale

POTENTIALLY JURISDICTIONAL AREAS MAP
FIGURE 4

2.0 METHODOLOGY

The primary literature reviewed and referenced as part of this wetland determination included SCS (1983, 1992), USGS (1979), Cowardin et al. (1979), Hickman (1993), Hoover (1970), Holland (1986), and Reed (1988, 1996). Specific references not listed above are cited in text.

2.1 DELINEATION PROCEDURE

Examination of the gully near the WWTP site was based on review of pertinent literature and a thorough on-site investigation conducted on August 6, 2004, by Bob Sloan of Morro Group, Inc. The routine wetland determination methodology, as described in the 1987 ACOE Wetlands Delineation Manual (Environmental Laboratory 1987), was utilized throughout the delineation. Potential wetland areas were also evaluated using the CCC single parameter wetland definition in addition to the ACOE three-parameter methodology. Representative soil pits and surrounding vegetation were evaluated to investigate the presence of hydric soils, hydrophytic vegetation, and wetland hydrology. The gully boundaries identified during the delineation followed the observed topographic relief, and were mapped using a Trimble Pathfinder GPS unit capable of accuracy to approximately 10 centimeters.

2.2 FUNCTION AND VALUE ASSESSMENT

The functions and values of the gully near the WWTP site were evaluated according to ACOE protocol (Adamus et al. 1987). Table 1 is a synthesis of methodologies used to evaluate the functions and values of wetland habitats. Rating criteria were derived from Adamus et al. (1987), Adamus and Stockwell (1983), and Reppert et al. (1979).

TABLE 1
Wetland Function and Value Rating Criteria

Function / Value	Rating		
	Low	Moderate	High
Water Quality Improvement	<5 acres in size; <50% vegetation density; no proximity to pollutants.	5-10 acres in size; 50-80% vegetation density; adjacent to non-point pollutants.	>10 acres in size; >80% vegetation density; downstream from point discharges.
Storm- and Floodwater Storage	<5 acres in size; <10% woody cover; permanently flooded; unconstrained outlet.	5-10 acres in size; 10-30% woody cover.	>10 acres in size; urban and developable areas; >30% woody cover; seasonal hydroperiod; constrained outlet.
Groundwater Discharge	Isolated depression; temporarily saturated or inundated.	Open drainage system; seasonally flooded.	Open tidal systems; permanent saturation or inundation.
Groundwater Recharge	<5 acres in size; isolated depression; temporarily saturated or inundated; impermeable substrate.	5-10 acres in size; seasonally flooded.	>10 acres in size; permanent inundation; several feet deep; permeable substrate.
Natural Biological Support	Small size; low species diversity; one vegetation layer; no sensitive or water-dependent species.	Medium size; moderate species diversity; several vegetation layers; water-dependent species; no sensitive species.	Large size; high species diversity; water-dependent and sensitive species; many vegetation layers.

fig 5 aerial

back of fig 5

3.0 RESULTS

3.1 SOIL CONDITIONS

The Soil Conservation Service (1983) mapped one soil series within the project site: Baywood fine sand, 2 to 9 percent slopes (refer to Figure 3).

Baywood fine sand (moist) consists of a very dark grayish brown (10YR 2/2 moist) fine sand about 36 inches thick, above dark grayish brown (10YR 5/3) mottled (5YR 3/2) fine sand to a depth of 60 inches or more. Permeability of Baywood fine sand soil is rapid, and the available water capacity is low. Baywood fine sand is not listed as a hydric soil in the SCS Comprehensive Hydric Soils List for San Luis Obispo County (SCS 1992).

3.1.1 Soil Test Pits

Four soil test pits were excavated during the delineation: one on level soil near the upper edge of the gully, and three within the bottom of the gully (refer to Figure 4 for pit locations). The investigation found dry sand soils in all pits. The dry sand soil observed in pits #1 and #4 exhibited dark brown (10YR3/3 moist) colors, and matched the Baywood fine sand description. The dry sand soils in pits #2 and #3 exhibited a very dark gray (10YR 3/1 moist) upper layer approximately 4 inches thick, underlain by dark brown (10YR3/3 moist) sand. No evidence of mottling or redoxomorphic features were observed within any of the pits.

3.2 HYDROLOGIC CONDITIONS

The WWTP site is an upland area with no hydrologic features present. The gully described in this report receives runoff from residential areas to the east, west, and south through a culvert under LOVR, and, during high rainfall periods, from flooded portions of LOVR. The gully has no connection to any natural water source. The bottom and sides of the gully are dominated by non-native grass species similar to conditions observed on the treatment plant site and surrounding areas, and did not contain any hydrophytic plant species. No flowing or ponded water was observed in the gully during the delineation, although areas of linear scour, and deposits of water-washed trash and debris were observed.

3.3 VEGETATIVE CONDITIONS

The WWTP site and the gully are dominated by non-native grasses and weeds, including veldt grass (*Ehrharta calycina*), ripgut brome (*Bromus diandrus*), wild radish (*Raphanus sativus*), sea fig (*Carpobrotus edulis*), and telegraph weed (*Heterotheca grandiflora*). A stand of large blue gum (*Eucalyptus globulus*) is also present in the area. Native plants present include California croton (*Croton californicus*), buckbrush (*Ceanothus cuneatus*), and mock heather (*Ericameria ericoides*).

The erosional gully area delineated in this report contained no wetland or riparian plant species. Vegetation within the gully consisted of the non-native grasses and forbs listed above, with scattered occurrences of sweet fennel (*Foeniculum vulgare*), soft chess brome (*Bromus mollis*), and coyote brush (*Baccharis pilularis*).

3.4 JURISDICTIONAL DETERMINATION

No areas that exhibited hydric soil or vegetative indicators per ACOE guidelines were observed, and hydrologic criteria per ACOE guidelines was not present due to the lack of any connection between the gully and a natural water source or wetland area (refer to Figures 4 and 5). The gully was created by flowing water, and exhibits evidence of scour and debris deposition, and therefore does contain one wetland parameter per CCC guidelines, although the gully contains no wetland vegetation and provides none of the biological functions and values typically associated with wetlands or riparian areas. Gully boundaries identified during the delineation followed topographic relief on the site. The gully area as mapped for this report covered a total of 45,634 square feet (1.05 acres) as shown on Figure 4. Table 2 summarizes the results of the wetland assessment by soil pit sample plot (refer to Figure 4 for soil pit locations).

Table 2

Jurisdictional Determination Summary

Soil Pit/Sample Plot Area	Hydrophytic Vegetation	Hydric Soils	Wetland Hydrology	Determination	
				Corps	CCC
1	No	No	No	Non-Wetland	Non-Wetland
2	No	No	No	Non-Wetland	Non-Wetland
3	No	No	No	Non-Wetland	Non-Wetland
4	No	No	No	Non-Wetland	Non-Wetland

3.5 FUNCTIONS AND VALUES OF IDENTIFIED JURISDICTIONAL AREAS

Using the rating criteria from Table 1 (refer to Section 2.2), the identified gully area ranks low in function and value, being limited primarily by lack of connection with a natural water source, limited vegetative diversity, and highly erodible soils (refer to following Table 3).

Table 3

Function and Value Ratings of Identified Wetland Areas

Resource	Size	Water Quality	Storage	Discharge	Recharge	Biological Support
Erosional Gully	45,634 ft2 1.05 acres	None	None	Low	Low	None

4.0 DISCUSSION

The erosional gully identified in this report consists of a sandy wash fed by stormwater runoff from residential areas, with no connection to natural water sources. The gully is dominated with

non-native upland grass species, and consists of highly erodible sandy soils. No areas that exhibited hydric soil, vegetation, or hydrology indicators per ACOE guidelines were observed. No significant biological functions and values typically associated with wetland or riparian areas were identified within the gully area. The observed conditions indicate that the gully does not qualify as a wetland under ACOE or CCC definitions.

Prior to the examination, Lisa Mangione (ACOE), Nicole Carter (Crawford, Multari & Clark), and Bob Sloan (Morro Group) met at the site on August 4, 2004 to discuss potential ACOE jurisdiction. At that meeting, Ms. Mangione noted that the gully did not exhibit any change in vegetation type, and that based on a brief inspection the gully did not appear to meet ACOE wetland criteria.

5.0 REGULATORY IMPLICATIONS

5.1 U.S. ARMY CORPS OF ENGINEERS

Section 404 of the Clean Water Act (CWA) regulates activities that result in the discharge of dredge or fill materials into Waters of the United States, including wetlands. The ACOE is charged with administering and regulating various sections of the CWA. Wetlands are defined in the ACOE Wetlands Delineation Manual (Environmental Laboratory, 1987) 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."*

No areas were identified that fall under ACOE jurisdiction.

5.2 CALIFORNIA DEPARTMENT OF FISH AND GAME

Sections 1600 through 1607 of the California Fish and Game (CDFG) Code regulate activities that would alter the flow, bed, channel, or bank of streams and lakes. CDFG jurisdiction typically extends to the top of the creek bank or the outside edge of riparian vegetation. No areas were identified that fall under CDFG jurisdiction.

5.3 REGIONAL WATER QUALITY CONTROL BOARD

Section 401 of the Clean Water Act regulates activities that have the potential to cause water quality impacts to Waters of the United States, including wetlands, as defined by the ACOE. No areas were identified that fall under Regional Water Quality Control Board jurisdiction.

5.4 CALIFORNIA COASTAL COMMISSION

The California Coastal Act was enacted in 1976 to provide long-term protection of California's coastal resources. The Act's coastal resources management policies are based on recommendations contained in the California Coastal Plan. One such policy includes

> *"Protection, enhancement and restoration of environmentally sensitive habitats, including intertidal and nearshore waters, wetlands, bays and estuaries, riparian habitat, certain wood and grasslands, streams, lakes, and habitat for rare or endangered plants or animals."*

The California Coastal Commission regulates wetland areas within the coastal zone as defined under Coastal Act Section 30121. The Coastal Act defines a wetland as:

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

The erosional gully contains no wetland vegetation and does not provide any biological functions and values typically associated with wetland areas.

6.0 REFERENCES

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ATTACHMENT A

- Field Data Sheets

Routine Wetland Determination Form

Applicant: Crawford Multari Clark Assoc. **Project:** Los Osos Sewer **Date:** 8/6/04

State: CA **County:** SLO **Transect/Pit No.:** 2

Investigators: Sloan **Transect/Pit Area:** Bottom of gully at south (uphill) end

Vegetation Community (Cowardin Classification): Upland annual grassland

VEGETATION

Dominant Plant Species	Habit	Indicator	Percent Cover	Dominant Plant Species	Habit	Indicator	Percent Cover
Lolium multiflorum	Grass	none	5				
Bromus diandrus	Grass	none	5				
Ehrhrarta calycina	Grass	none	80				
Raphanus sativus	Forb	none	5				

Percent of Dominant Species that are OBL, FACW, or FAC: 0% **Taxonomic Reference:** Hickman/Reed

SOIL

Map Unit: Baywood fine sand, 2-9 percent slopes

Profile Description:

0-4 dry sand, 10YR3/1
4-16 dry sand, 10YR3/3

Hydric Soil List?	☐ Yes	☒ No
Mottles?	☐ Yes	☒ No
Gleyed?	☐ Yes	☒ No
NRCS Match?	☒ Yes	☐ No

Other Indicators: none

HYDROLOGY

Inundated?	☐ Yes	☒ No	**Saturated Soil?**	☐ Yes	☒ No	**Depth:**	
Sediment Deposits?	☐ Yes	☒ No	**Drift Lines?**	☐ Yes	☒ No		
Depth of Surface Water:	none		**Water Marks?**	☐ Yes	☒ No		
Depth of Free Water in Pit:	none		**Oxidized Rhizospheres?**	☐ Yes	☒ No	**Color:**	

Other Indicators: Gully created by residential stormwater runoff with no connection to a natural water source.

WETLAND DETERMINATION

Vegetation Criterion Met?	☐ Yes	☒ No	**Normal Circumstances?**	☒ Yes	☐ No
Hydric Soil Criterion Met?	☐ Yes	☒ No			
Hydrology Criterion Met?	☐ Yes	☒ No	**Is this Plot within a Wetland?**	☐ Yes	☒ No

Comments: Gully contains no soil or vegetative wetland indicators, and no natural hydrology.

Morro Group Determination by: _____
Signature

Routine Wetland Determination Form

Applicant: Crawford Multari Clark Assoc. **Project:** Los Osos Sewer **Date:** 8/6/04

State: CA **County:** SLO **Transect/Pit No.:** 3

Investigators: Sloan **Transect/Pit Area:** Bottom of gully at confluence (middle portion)

Vegetation Community (Cowardin Classification): Upland annual grassland

VEGETATION

Dominant Plant Species	Habit	Indicator	Percent Cover	Dominant Plant Species	Habit	Indicator	Percent Cover
Ehrhrarta calycina	Grass	none	15				
Heterotheca grandiflora	Forb	none	1				

Percent of Dominant Species that are OBL, FACW, or FAC: 0% **Taxonomic Reference:** Hickman/Reed

SOIL

Map Unit: Baywood fine sand, 2-9 percent slopes

Profile Description:

0-4 dry sand, 10YR3/1
4-16 dry sand, 10YR3/3

Hydric Soil List?	☐ Yes	☒ No
Mottles?	☐ Yes	☒ No
Gleyed?	☐ Yes	☒ No
NRCS Match?	☒ Yes	☐ No

Other Indicators: none

HYDROLOGY

Inundated?	☐ Yes	☒ No	**Saturated Soil?**	☐ Yes	☒ No	**Depth:**
Sediment Deposits?	☐ Yes	☒ No	**Drift Lines?**	☐ Yes	☒ No	
Depth of Surface Water:	none		**Water Marks?**	☐ Yes	☒ No	
Depth of Free Water in Pit:	none		**Oxidized Rhizospheres?**	☐ Yes	☒ No	**Color:**

Other Indicators: Scoured central channel visible in lowest portion of gully.

WETLAND DETERMINATION

Vegetation Criterion Met?	☐ Yes	☒ No	**Normal Circumstances?**	☒ Yes	☐ No
Hydric Soil Criterion Met?	☐ Yes	☒ No			
Hydrology Criterion Met?	☐ Yes	☒ No	**Is this Plot within a Wetland?**	☐ Yes	☒ No

Comments: Gully contains no soil or vegetative wetland indicators, and no natural hydrology.

Morro Group Determination by: _____
Signature

Rev: 12/1/00

ATTACHMENT B

- Photo Documentation

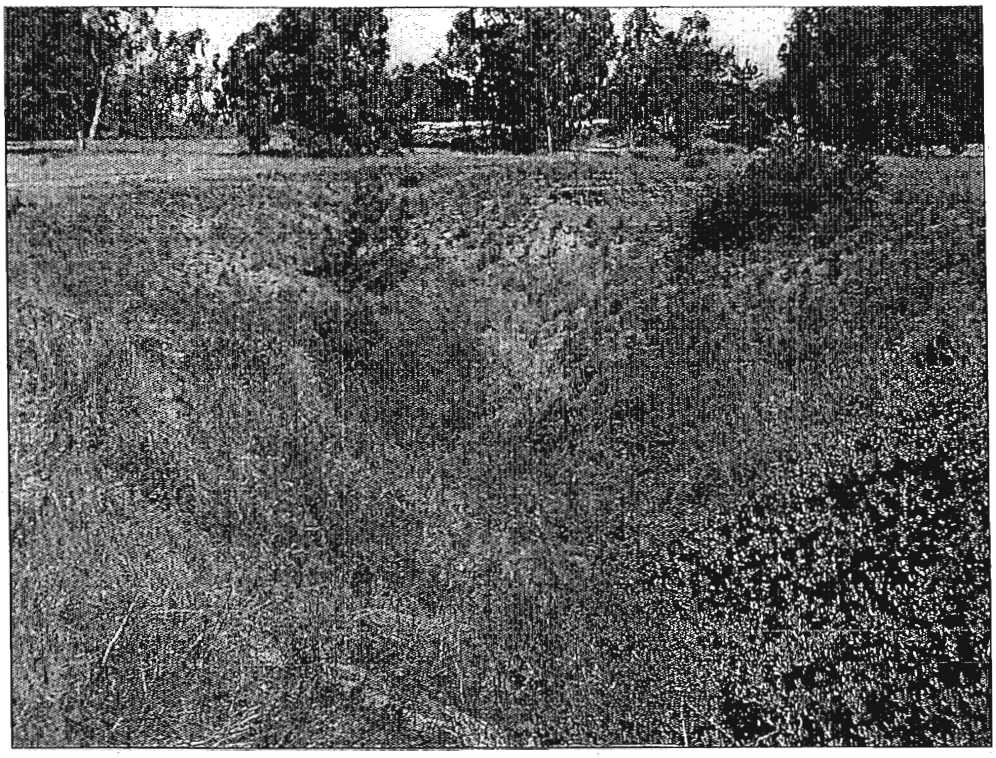

Photo 1:

Viewing north over the upper end of the gully from Los Osos Valley Road. Note ice plant and grass cover on banks and in bottom of gully. Photo taken August 6, 2004.

Photo 2:

View of Soil Test Pit #1 located on the right side of the gully, looking north. Note eroded edge of gully at left of shovel, and dominant grassland vegetation. Photo taken August 6, 2004.

PHOTO DOCUMENTATION

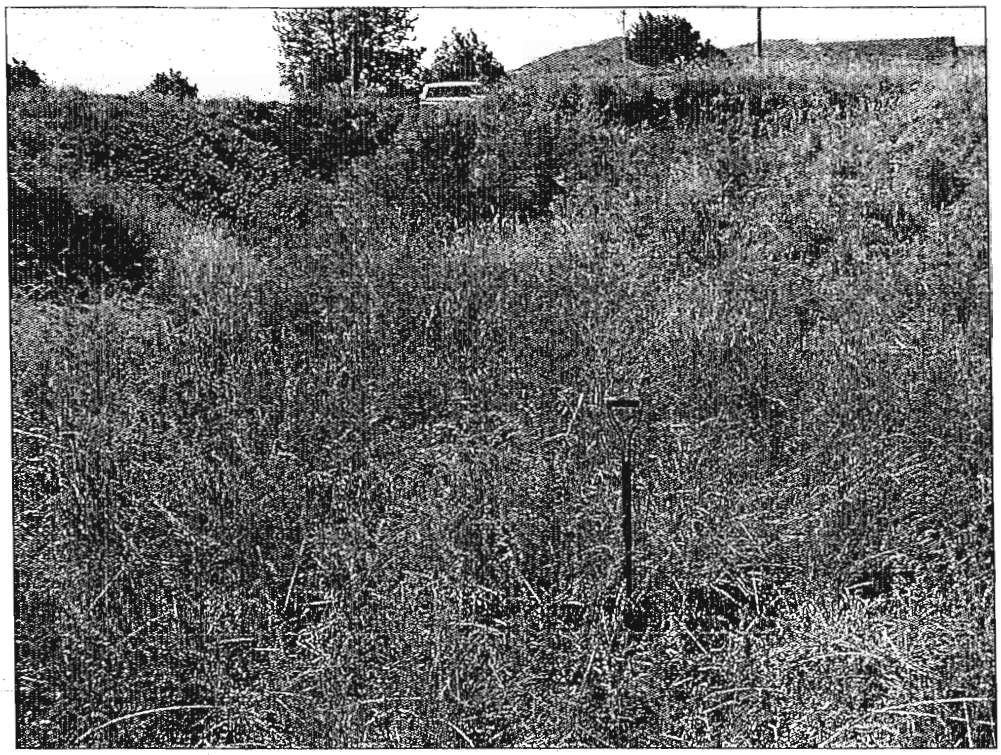

Photo 3:

View of Soil Test Pit #2 located in bottom of gully, looking south toward Los Osos Valley Road. Note annual grasses in bottom of gully, and white car on Los Osos Valley Road at head of gully. Photo taken August 6, 2004.

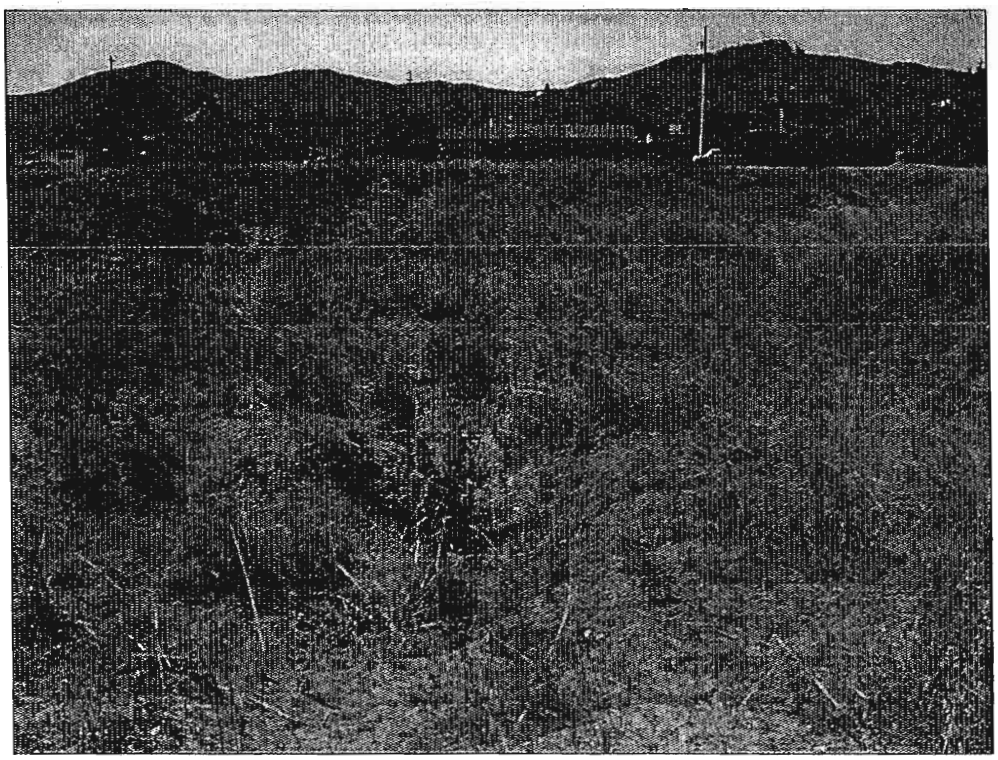

Photo 4:

View of Soil Test Pit #3 looking north toward Los Osos Valley Road. Note scoured lower channel area below gully confluence. Larger gully arm at left leads to culvert under Los Osos Valley Road, while the smaller right hand arm receives stormwater from over the road flooding. Photo taken August 6, 2004.

PHOTO DOCUMENTATION

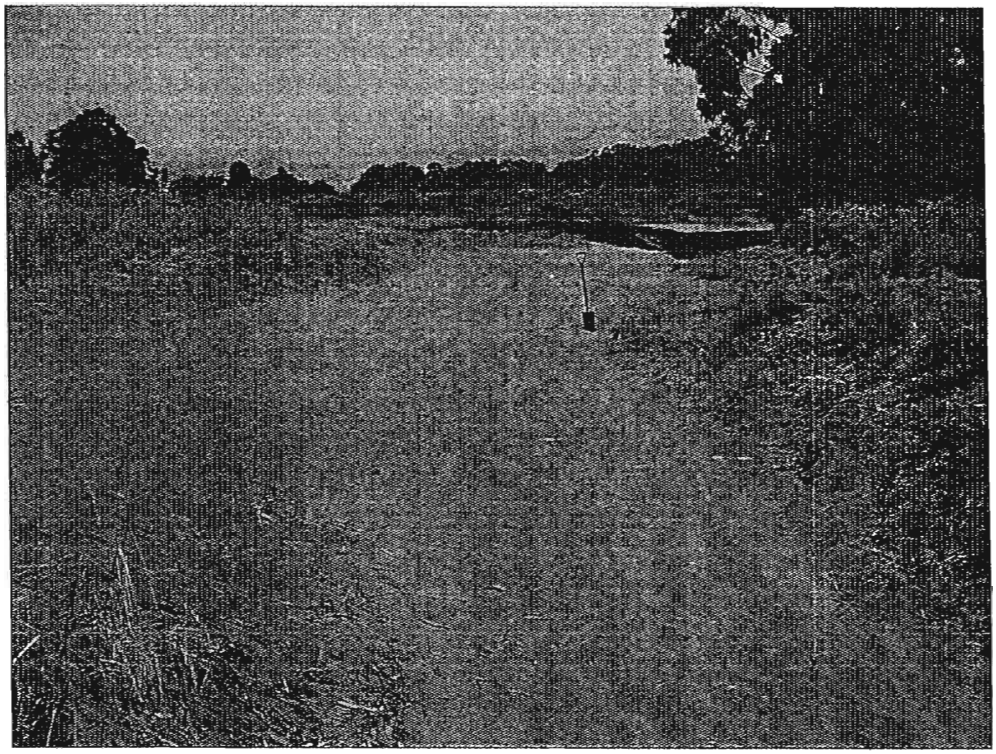

Photo 5:

View of Soil Test Pit #4, looking north at lower end of gully. Note deep sand and bare roadways created by off road vehicle use. No bed, bank, debris, or evidence of flowing water was observed past this point. Photo taken August 6, 2004.

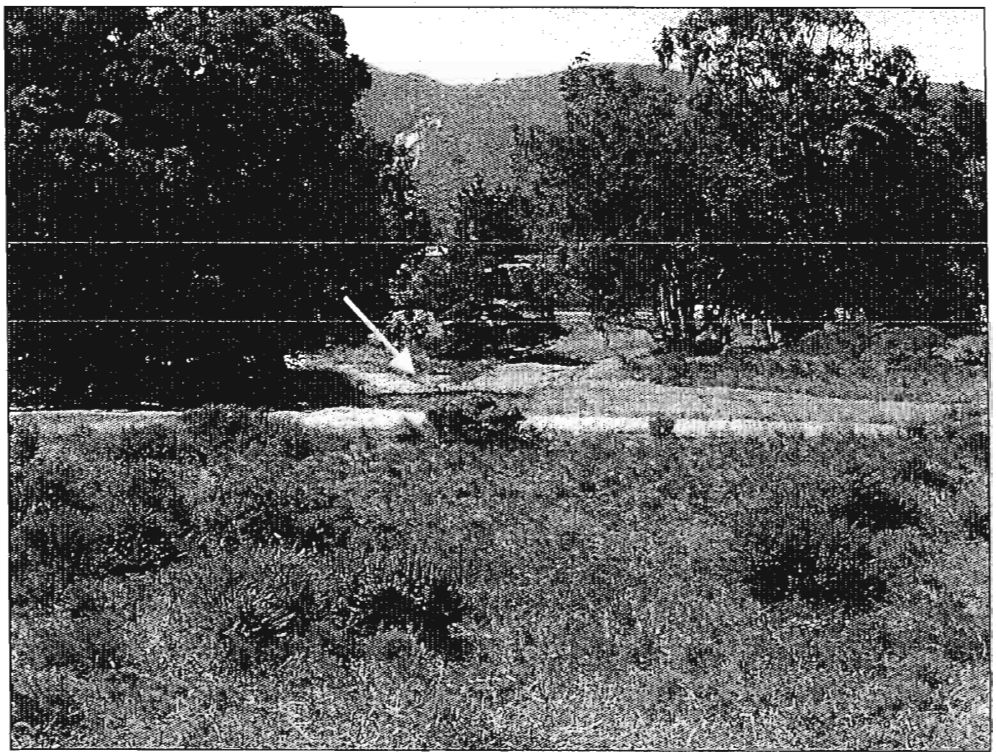

Photo 6:

View of lower end of gully looking south toward Los Osos Valley Road. White arrow marks location of Pit #4. Note off-road vehicle trails and lack of bed or bank past Pit #4 location. Photo taken August 6, 2004.

Routine Wetland Determination Form

Applicant: Crawford Multari Clark Assoc. **Project:** Los Osos Sewer **Date:** 8/6/04

State: CA **County:** SLO **Transect/Pit No.:** 4

Investigators: Sloan **Transect/Pit Area:** Bottom of gully at northern (lower) end

Vegetation Community (Cowardin Classification): Upland annual grassland

VEGETATION

Dominant Plant Species	Habit	Indicator	Percent Cover	Dominant Plant Species	Habit	Indicator	Percent Cover
Ehrhrarta calycina	Grass	none	15				

Percent of Dominant Species that are OBL, FACW, or FAC: 0% **Taxonomic Reference:** Hickman/Reed

SOIL

Map Unit: Baywood fine sand, 2-9 percent slopes

Profile Description:

0-4 dry sand, 10YR3/3
4-16 dry compacted sand, 10YR3/3

Hydric Soil List?	☐ Yes	☒ No
Mottles?	☐ Yes	☒ No
Gleyed?	☐ Yes	☒ No
NRCS Match?	☒ Yes	☐ No

Other Indicators: none

HYDROLOGY

Inundated?	☐ Yes	☒ No	**Saturated Soil?**	☐ Yes	☒ No	**Depth:**
Sediment Deposits?	☐ Yes	☒ No	**Drift Lines?**	☐ Yes	☒ No	
Depth of Surface Water:	none		**Water Marks?**	☐ Yes	☒ No	
Depth of Free Water in Pit:	none		**Oxidized Rhizospheres?**	☐ Yes	☒ No	**Color:**

Other Indicators: None. Gully ends in level bare sand area crossed by offroad vehicle trails surrounded by coastal scrub.

WETLAND DETERMINATION

Vegetation Criterion Met?	☐ Yes	☒ No	**Normal Circumstances?**	☒ Yes	☐ No
Hydric Soil Criterion Met?	☐ Yes	☒ No			
Hydrology Criterion Met?	☐ Yes	☒ No	**Is this Plot within a Wetland?**	☐ Yes	☒ No

Comments: Gully contains no soil or vegetative wetland indicators, and no natural hydrology.

Morro Group Determination by: _____
Signature

Rev: 12/1/00

NORTH
Not to Scale

Aerial Source: Tri-W project aerial

PROJECT LOCATION AERIAL
FIGURE 5

Routine Wetland Determination Form

Applicant: Crawford Multari Clark Assoc. **Project:** Los Osos Sewer **Date:** 8/6/04

State: CA **County:** SLO **Transect/Pit No.:** 1

Investigators: Sloan **Transect/Pit Area:** Top of right bank above erosional gully

Vegetation Community (Cowardin Classification): Upland annual grassland

VEGETATION

Dominant Plant Species	Habit	Indicator	Percent Cover	Dominant Plant Species	Habit	Indicator	Percent Cover
Heterotheca grandiflora	Forb	none	5				
Bromus diandrus	Grass	none	5				
Ehrhrarta calycina	Grass	none	60				

Percent of Dominant Species that are OBL, FACW, or FAC: 0% **Taxonomic Reference:** Hickman/Reed

SOIL

Map Unit: Baywood fine sand, 2-9 percent slopes

Profile Description: 0-16 dry sand, 10YR3/3

Hydric Soil List?	☐ Yes	☒ No
Mottles?	☐ Yes	☒ No
Gleyed?	☐ Yes	☒ No
NRCS Match?	☒ Yes	☐ No

Other Indicators: none

HYDROLOGY

Inundated?	☐ Yes	☒ No	**Saturated Soil?**	☐ Yes	☒ No	**Depth:**	
Sediment Deposits?	☐ Yes	☒ No	**Drift Lines?**	☐ Yes	☒ No		
Depth of Surface Water:	none		**Water Marks?**	☐ Yes	☒ No		
Depth of Free Water in Pit:	none		**Oxidized Rhizospheres?**	☐ Yes	☒ No	**Color:**	

Other Indicators: none

WETLAND DETERMINATION

Vegetation Criterion Met?	☐ Yes	☒ No	**Normal Circumstances?**	☒ Yes	☐ No
Hydric Soil Criterion Met?	☐ Yes	☒ No			
Hydrology Criterion Met?	☐ Yes	☒ No	**Is this Plot within a Wetland?**	☐ Yes	☒ No

Comments: Site consists of annual grassland on uplands adjacent to a large erosional gully

Morro Group Determination by: _____

Signature

Rev: 12/1/00

Los Osos Wastewater Disposal Project
4th Street at Pismo Avenue Area
Los Osos, California

WETLAND DELINEATION REPORT

Prepared for:

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Crawford, Multari & Clark Associates
641 Higuera Street, Suite 302
San Luis Obispo, CA 93401

Prepared by:

MORRO GROUP, INC.
Environmental Services

June 7, 2005

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Attachment A. Field Data Sheets
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1.0 INTRODUCTION

1.1 SCOPE

This Wetland Delineation Report summarizes existing soil, hydrology and vegetative conditions found within and adjacent to the Pismo Avenue right-of-way between 3rd Street and 5th Street in Los Osos, San Luis Obispo County, California (refer to Figures 1 through 4). Morro Group, Inc. has prepared this report at the request of Crawford, Multari & Clark Associates, and it is intended for use by the Los Osos Community Services District (LOCSD), and regulatory agencies. This report examines potential waters of the United States, as defined by the U.S. Army Corps of Engineers (ACOE) and the California Coastal Commission (CCC) (1994), found within and adjacent to the roadway. Findings reported herein are based on information gathered in the field at the time of investigation and on Morro Group's understanding of the ACOE 1987 Wetlands Delineation Manual, and federal, state, and local guidelines for identification of wetland areas.

1.2 PROJECT BACKGROUND

The delineated area of Pismo Avenue is located in the western portion of the community of Los Osos, between 3rd Street and 5th Street (refer to Figures 1 and 2). Pismo Avenue begins at its intersection with 3rd Street, and runs east and uphill away from the Morro Bay Estuary. Construction of the Los Osos Wastewater Disposal Project will require trenching through pavement and underground boring through unpaved right-of-way in this area for sewer line installation. The areas examined for ACOE and CCC jurisdictional wetlands in this report are located on the south side of the paved portion of Pismo Avenue between 3rd Street and 4th Street, and within the unpaved, densely vegetated Pismo Avenue right-of-way between 4th Street and 5th Street. A Soil Conservation Service (SCS) soil survey map of the area (SCS, 1984) is included as Figure 3, and soil pit locations and the resulting delineation of jurisdictional areas are shown on Figure 4. The site is located in the Coastal Zone.

1.3 SITE DESCRIPTION

The Pismo Avenue right-of-way between 3rd Street and 4th Street consists of a well-traveled paved roadway bordered by residential development to the north, and by a vegetated roadside swale to the south. The vegetated swale contains a mixture of willows, emergent vegetation, and common weedy species along the length of the block, but has no direct connection (i.e. a culvert or channel) with willows and other wetland vegetation present in the unpaved portion of the road between 4th Street and 5th Street discussed below. The swale area between 3rd Street and 4th Street appears to be spring fed, and has a rock or riprap bottom 6 to 12 inches below the soil surface that limited soil examination efforts. The swale continues to the west of the Pismo Avenue/3rd Street intersection in a natural channel configuration, and ends at the edge of the Morro Bay Estuary. Swale areas near the intersection of Pismo Avenue and 3rd Street and extending to the west contain seasonally ponded water and dense emergent vegetation. Proposed pipeline installation in this area will occur within the paved roadways of 3rd Street and Pismo Avenue.

The Pismo Avenue right-of-way between 4th Street and 5th Street is an approximately 340-foot unpaved road section impassable by vehicles due to presence of dense vegetation and eroded

soils. Underground gas and water utility lines are present within the unpaved right-of-way. The western portion of the right-of-way beginning at 4th Street and extending approximately 55 feet to the east contains two mature arroyo willow trees with an understory of California blackberry and annual grasses. East of the willows and extending approximately 100 feet east, the tree canopy consists of coast live oak with an understory of blackberry and annual grasses and forbs. The remaining eastern portion of the right-of-way extending to 5th Street contains annual grasses and weeds, with several coast live oak trees present. A pedestrian/bike trail averaging 5-8 feet wide extends along the right-of-way between 4th and 5th Streets. The trail shows evidence of water erosion in the lower portion near 3rd Street. Proposed pipeline installation in this area will occur within the unpaved right-of-way of Pismo Avenue.

The northwest corner of the Pismo Avenue intersection at 4th Street contains a small, curved roadside drainage ditch that receives road runoff from uphill portions of 4th Street to the north. This small ditch is approximately 50 feet in length, and contains ornamental and weedy species, with occurrences of horsetail (a wetland indicator species), also present. This area is regularly disturbed by road maintenance activities, and does not meet ACOE wetland criteria for dominant hydric vegetation or hydrology. The presence of some hydric vegetation and seasonal inundation by road runoff indicates that the area has potential to be considered a CCC wetland.

2.0 METHODOLOGY

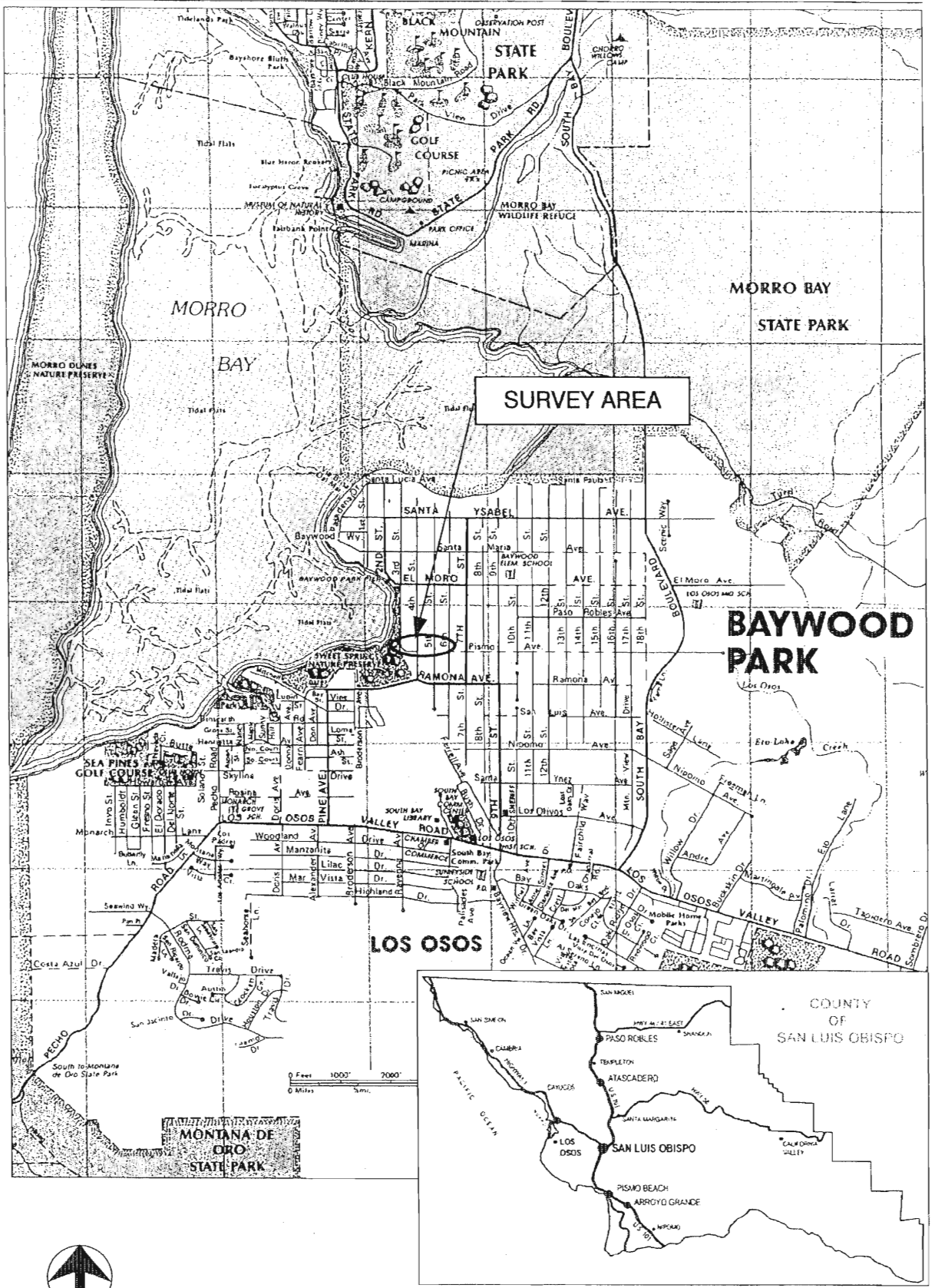
The primary literature reviewed and referenced as part of this wetland determination included SCS (1983, 1992), USGS (1979), Cowardin et al. (1979), Hickman (1993), Hoover (1970), Holland (1986), and Reed (1988, 1996). Specific references not listed above are cited in text.

2.1 DELINEATION PROCEDURE

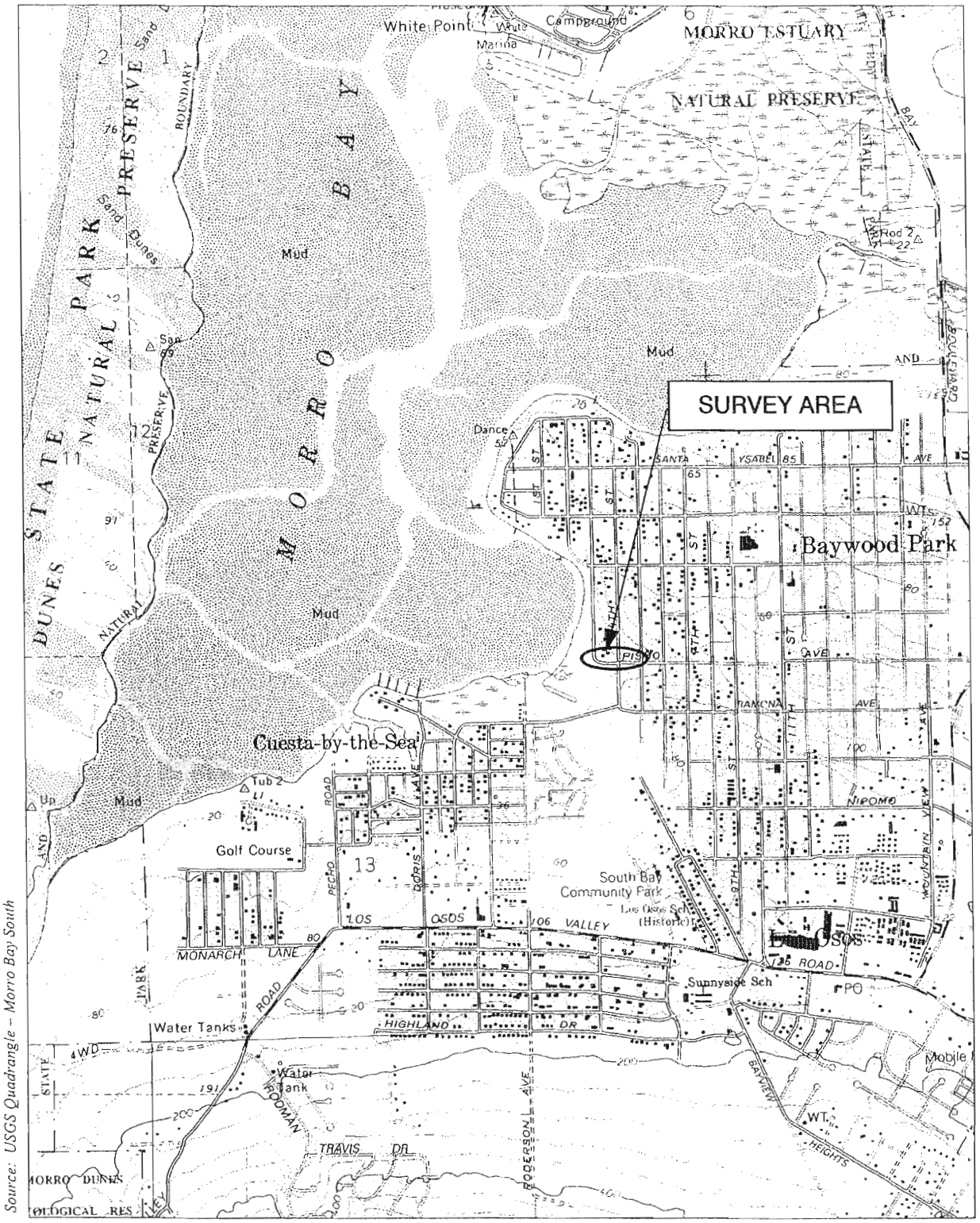
Examination of the 4th Street and Pismo Avenue area was based on review of pertinent literature and a thorough on-site investigation conducted on May 26, 2005 by Morro Group, Inc. biologists Bob Sloan and Geoff Hoetker. The routine wetland determination methodology, as described in the 1987 ACOE Wetlands Delineation Manual (Environmental Laboratory, 1987), was utilized throughout the delineation. Potential wetland areas were also evaluated using the CCC single parameter wetland definition in addition to the ACOE three-parameter methodology. Representative soil pits and surrounding vegetation were evaluated to investigate the presence of hydric soils, hydrophytic vegetation, and wetland hydrology. The jurisdictional boundaries identified during the delineation followed vegetative boundaries and observed topographic features, and were mapped using a Trimble Pathfinder GPS unit capable of positional accuracy to approximately 10 centimeters.

2.2 FUNCTION AND VALUE ASSESSMENT

The functions and values of the jurisdictional areas observed at the 4th Street and Pismo Avenue site were evaluated according to ACOE protocol (Adamus et al., 1987). Table 1 is a synthesis of methodologies used to evaluate the functions and values of wetland habitats. Rating criteria were derived from Adamus et al. (1987), Adamus and Stockwell (1983), and Reppert et al. (1979).



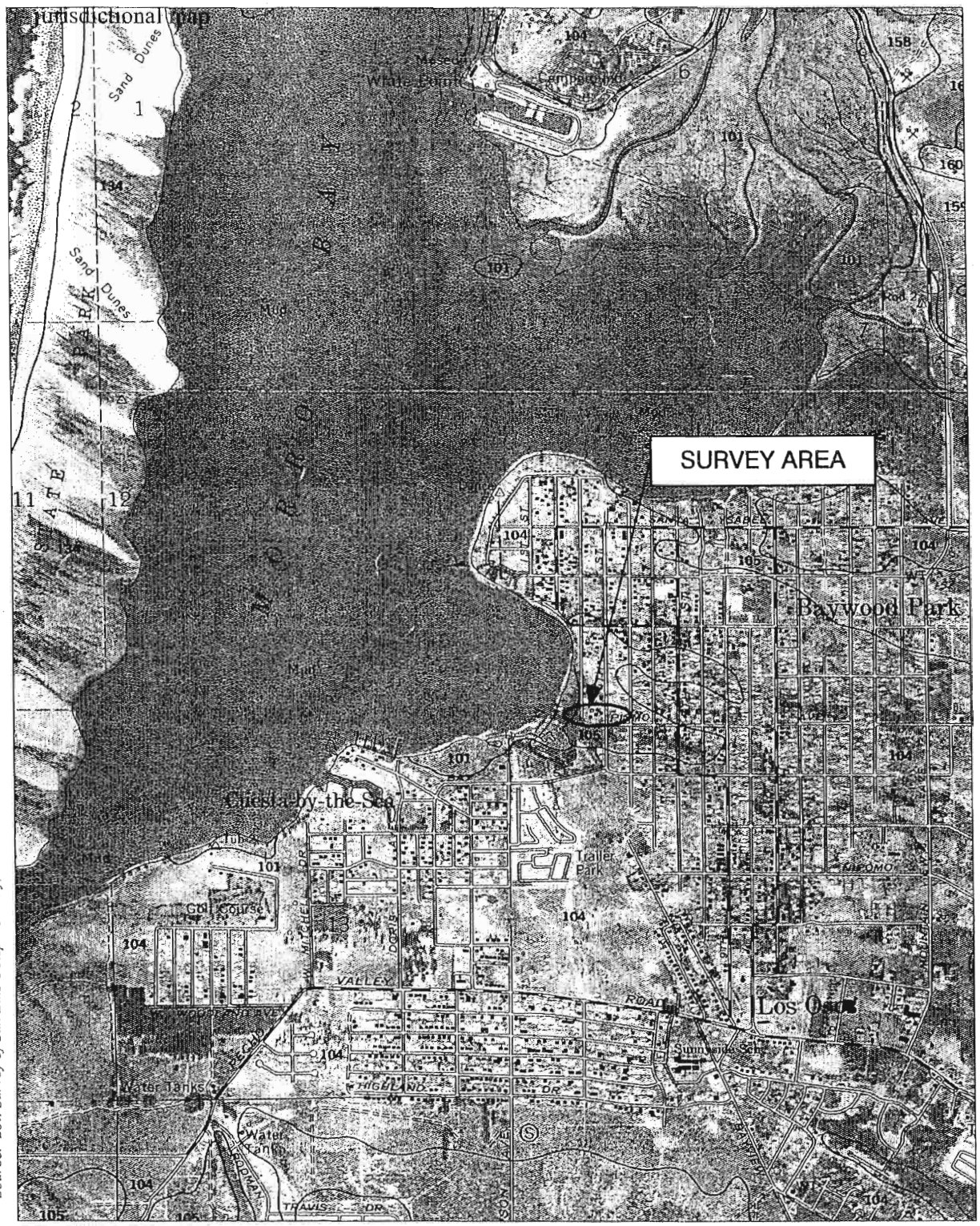
VICINITY MAP
FIGURE 1



Source: USGS Quadrangle – Morro Bay South

NORTH
Not to Scale

PROJECT LOCATION MAP
FIGURE 2



Source: Soil Survey of San Luis Obispo County, Coastal Part – Sheet 8

SOIL KEY

105 Baywood fine sand, 9-15% slopes

NORTH
Not to Scale

SOIL SURVEY MAP
FIGURE 3

TABLE 1
Wetland Function and Value Rating Criteria

Function / Value	Rating		
	Low	Moderate	High
Water Quality Improvement	<5 acres in size; <50% vegetation density; no proximity to pollutants.	5-10 acres in size; 50-80% vegetation density; adjacent to non-point pollutants.	>10 acres in size; >80% vegetation density; downstream from point discharges.
Storm- and Floodwater Storage	<5 acres in size; <10% woody cover; permanently flooded; unconstrained outlet.	5-10 acres in size; 10-30% woody cover.	>10 acres in size; urban and developable areas; >30% woody cover; seasonal hydroperiod; constrained outlet.
Groundwater Discharge	Isolated depression; temporarily saturated or inundated.	Open drainage system; seasonally flooded.	Open tidal systems; permanent saturation or inundation.
Groundwater Recharge	<5 acres in size; isolated depression; temporarily saturated or inundated; impermeable substrate.	5-10 acres in size; seasonally flooded.	>10 acres in size; permanent inundation; several feet deep; permeable substrate.
Natural Biological Support	Small size; low species diversity; one vegetation layer; no sensitive or water-dependent species.	Medium size; moderate species diversity; several vegetation layers; water-dependent species; no sensitive species.	Large size; high species diversity; water-dependent and sensitive species; many vegetation layers.

3.0 RESULTS

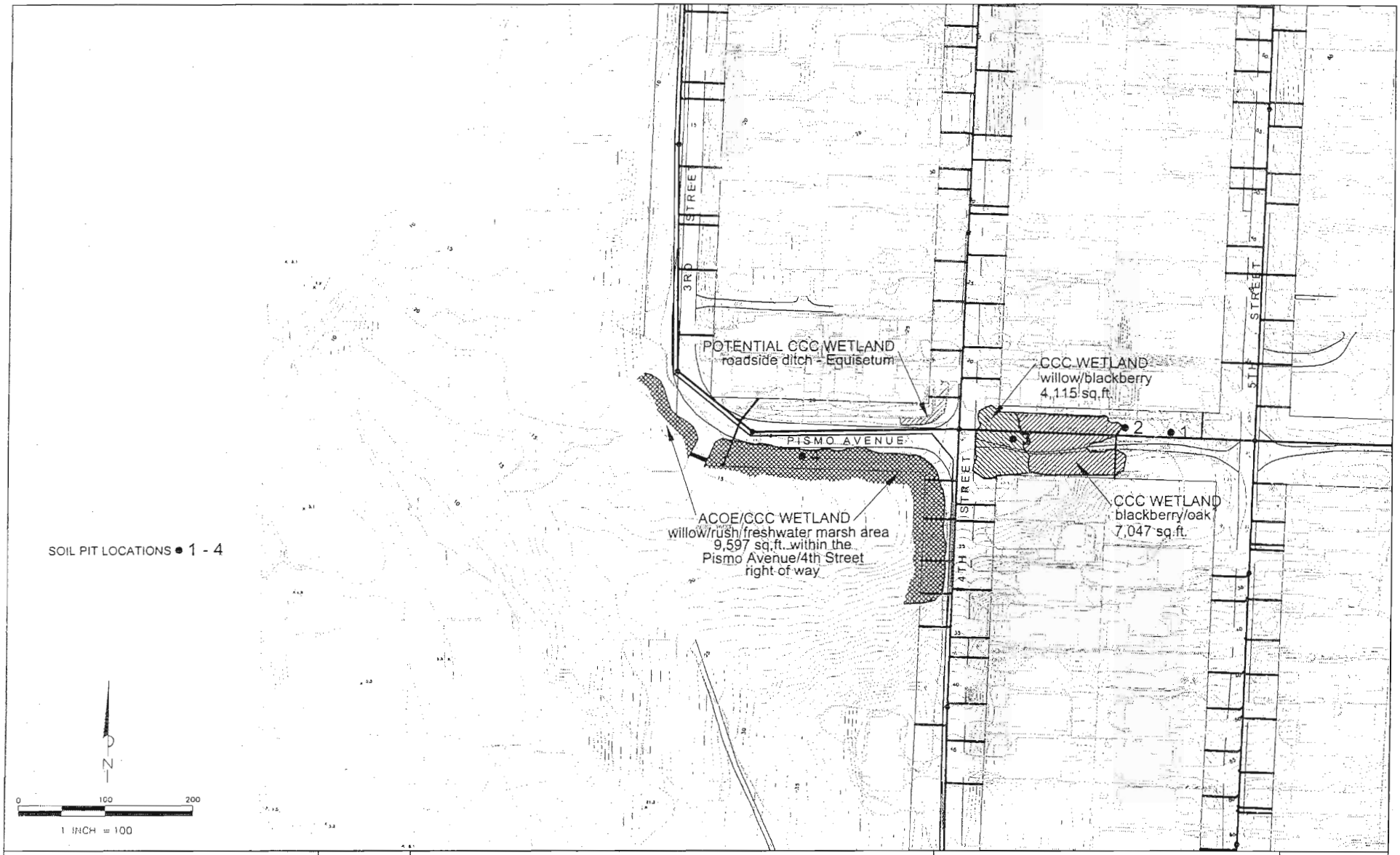
3.1 SOIL CONDITIONS

The Soil Conservation Service (1983) mapped one soil series within the project site: Baywood fine sand, 9 to 15 percent slopes (refer to Figure 3).

Baywood fine sand (moist) consists of a very dark grayish brown (10YR 2/2 moist) fine sand about 36 inches thick, above dark grayish brown (10YR 5/3) mottled (5YR 3/2) fine sand to a depth of 60 inches or more. Permeability of Baywood fine sand soil is rapid, and the available water capacity is low. Baywood fine sand is not listed as a hydric soil in the SCS Comprehensive Hydric Soils List for San Luis Obispo County (SCS, 1992).

3.1.1 Soil Test Pits

Four soil test pits were excavated during the delineation: three within the unpaved Pismo Avenue right-of-way between 4th Street and 5th Street, and one in the middle of the roadside swale along the west side of Pismo Avenue between 3rd Street and 4th Street (refer to Figure 4 for pit locations). The investigation found dry sand soils in test pits #1 and #2, slightly moist soil in test pit #3, and moist to saturated soil in test pit #4. The dry sand soil observed in test pits #1 and #2 exhibited dark brown (10YR 3/3 moist) colors to the bottom of each test pit (0-16 inches), and generally matched the Baywood fine sand description. The slightly moist soils observed in test pit #3 exhibited the same dark brown (10YR 3/3 moist) color throughout as observed in pits 1 and 2. No evidence of mottling or redoxomorphic features were observed within these three pits. Test pit #4 contained moist to saturated soils, with a surface layer of dark brown (10YR 3/3



SHEET: 1 OF 1 SCALE: 1" = 100'	MORRO GROUP, INC.	PISMO AVENUE WETLAND DELINEATION	FIGURE 4
CADD FILE: 03-205 LOCSD Wastewater\4th-Pismo-wetdel.dwg/fig 4		LOCSD Wastewater Facilities Project - Los Osos, California	JURISDICTIONAL WETLAND AREAS
DATE: 6-2-05 BY: pm REV.			

Back of Figure 4.

moist) sand underlain by saturated black (10YR2/1) sand to a depth of 10 inches. Rock riprap present at about 10 inches prevented further excavation. After approximately 10 minutes pit #4 contained standing water at a level 6 inches below the ground surface.

3.2 HYDROLOGIC CONDITIONS

The intersection of Pismo Avenue and 4th Street is the focal point for road and residential runoff from surrounding higher elevation areas to the north, east, and south, and can experience flooding during substantial rain events. Runoff entering the intersection from the unpaved portion of Pismo Avenue to the north, and from paved areas of 4th Street to the north and south is directed into the roadside swale between 3rd Street and 4th Street.

The eastern, upper portion of the unpaved Pismo Avenue right-of-way between 4th Street and 5th Street contains a sloping, bare sand pathway that shows evidence of erosional activity during winter months, but has no connection with any seasonal or permanent surface water source other than rainfall runoff. The lower, level portion of the right-of-way swale adjacent to 4th Street appears to maintain moist soils due to high groundwater levels and concentrated runoff received from surrounding hills. No ponded or flowing water was present within this area during the delineation.

The roadside swale along the south side of Pismo Avenue between 3rd Street and 4th Street is lined with rock riprap, and contained saturated soils and standing water 1 to 4 inches deep during the investigation. This swale appears to receive perennial water from adjacent wetland seeps or springs located on private property to the south of Pismo Avenue, and flows to the northwest before reaching the Morro Bay estuary. A small culvert conducts the swale under a private driveway located at the intersection of 3rd Street and Pismo Avenue. The roadside portion of the swale is approximately 6 to 10 feet wide and approximately 1 to 1.5 feet lower than the adjacent pavement. No ordinary high water mark (OHWM) or defined channel banks are present in the roadside portion of the swale.

3.3 VEGETATIVE CONDITIONS

The eastern, upper portion of the unpaved Pismo Avenue right-of-way between 4th Street and 5th Street is dominated by non-native grasses and weedy forbs, with scattered coast live oak (*Quercus agrifolia*) trees also present. Dominant vegetation consisted of veldt grass (*Ehrharta calycina*), ripgut brome (*Bromus diandrus*), fennel (*Foeniculum vulgare*), and wild radish (*Raphanus sativus*). This area contained no wetland or riparian plant species.

The lower, level portion of the right-of-way swale adjacent to 4th Street is dominated by coast live oak, arroyo willow (*Salix lasiolepis*), and California blackberry (*Rubus ursinus*), with small occurrences of California brome (*Bromus carinatus*), wild oat (*Avena fatua*), and garden nasturtium (*Tropaeolum majus*) also present.

The roadside swale along the south side of Pismo Avenue between 3rd Street and 4th Street contains a mixture of emergent wetland plants and weedy species. Dominant wetland species included arroyo willow, small-headed bulrush (*Scirpus microcarpus*), water parsley (*Oenanthe sarmentosa*), bur-reed (*Sparganium eurycarpum*), and dock (*Rumex conglomeratus*).

These species are listed as hydrophytic plants (Reed, 1988; 1996). Other species present included pampas grass (*Cortaderia jubata*), bristly ox-tongue (*Picris echioides*), and common vetch (*Vicia* sp.). Areas on private property to the south of the roadside swale are densely vegetated with the emergent species listed above. The north side of Pismo Avenue contains mowed grass areas and ornamental species.

3.4 JURISDICTIONAL DETERMINATION

No areas that exhibited hydric soil or hydrologic indicators per ACOE guidelines were observed within the Pismo Avenue right-of-way between 4th Street and 5th Street during the assessment (refer to Figure 4). The lower portion of this area does meet CCC and ACOE vegetative criteria, and is mapped as CCC wetland on Figure 4. The small roadside drainage ditch at the northwest corner of the Pismo Avenue intersection at 4th Street contains does not meet ACOE wetland criteria for dominant hydric vegetation or hydrology, however, due to the presence of some hydric vegetation and seasonal inundation by road runoff the area was mapped as CCC wetland on Figure 4.

The roadside swale and adjacent private property areas along the south side of Pismo Avenue between 3rd Street and 4th Street meet all three ACOE wetland criteria, and are mapped as ACOE/CCC wetlands on Figure 4. Roadside swale boundaries identified during the delineation followed the edge of dominant wetland vegetation along the public right-of-way. Boundaries of adjacent wetland areas extending to the south on private property were not mapped. The swale area within the public right-of-way as mapped for this report covered a total of 9,597 square feet (0.22 acres) as shown on Figure 4. Table 2 summarizes the results of the wetland assessment by soil pit sample plot (refer to Figure 4 for soil pit locations).

Table 2

Jurisdictional Determination Summary

Soil Test Pit Area	Hydrophytic Vegetation	Hydric Soils	Wetland Hydrology	Determination	
				Corps	CCC
1	No	No	No	Non-Wetland	Non-Wetland
2	No	No	No	Non-Wetland	**Wetland**
3	**Yes**	No	No	Non-Wetland	**Wetland**
4	**Yes**	**Yes**	**Yes**	**Wetland**	**Wetland**

3.5 FUNCTIONS AND VALUES OF IDENTIFIED JURISDICTIONAL AREAS

Using the rating criteria from Table 1 (refer to Section 2.2), the identified CCC wetland area on Pismo Avenue between 4th Street and 5th Street area ranks very low in function and value, being limited by lack of surface water or connection with a natural water source, limited vegetative diversity, and highly erodible soils (refer to following Table 3). The ACOE/CCC wetland area associated with the roadside swale along Pismo Avenue between 3rd Street and 4th Street ranks low in function and value due to its small size, but provides perennial saturated soil conditions and dense emergent vegetative cover for wildlife habitat, and is connected to a larger wetland habitat area.

Table 3

Function and Value Ratings of Mapped Areas

Resource	Size	Water Quality	Storage	Discharge	Recharge	Biological Support
CCC Wetland Areas	11,162 ft² 0.26 acres	None	None	None	None	Low
ACOE/CCC Wetland Area	9,597 ft² 0.22 acres	Low	Low	Low	Low	Moderate

4.0 DISCUSSION

The CCC wetland area identified within the Pismo Avenue right-of-way between 4th Street and 5th Street (refer to Figure 4) consists of willow and blackberry vegetation located at the bottom of a slope, with no connection to natural water sources. No hydric soil or hydrology indicators per ACOE guidelines were observed in this area, and no significant biological functions and values typically associated with wetland or riparian areas were identified. The observed conditions indicate that the area does not qualify as a wetland under ACOE guidelines. The small ditch at the northwest corner of 4th Street and Pismo Avenue contains some wetland vegetation, but does not meet the ACOE 50 percent criteria. This area is considered potential CCC wetland.

The ACOE/CCC wetland area identified along the south side of Pismo Avenue between 3rd Street and 4th Street (refer to Figure 4) contains freshwater marsh habitat conditions, is adjacent to larger freshwater marsh areas on adjacent private property to the south and west, and connects with tidal waters of Morro Bay. This area exhibits hydric soil, vegetation, and hydrology indicators per ACOE guidelines, and could provide significant biological functions and values typically associated with wetland or riparian areas.

Project activities have been designed to avoid encroachment into or impacts to all wetland areas identified in this report. Sewer line installation will be limited to trenching within paved road portions between 3rd Street and 4th Street along Pismo Avenue, and horizontal boring under unpaved portions of Pismo Avenue between 4th Street and 5th Street.

5.0 REGULATORY IMPLICATIONS

5.1 U.S. ARMY CORPS OF ENGINEERS

Section 404 of the Clean Water Act (CWA) regulates activities that result in the discharge of dredge or fill materials into Waters of the United States, including wetlands. The ACOE is charged with administering and regulating various sections of the CWA. Wetlands are defined in the ACOE Wetlands Delineation Manual (Environmental Laboratory, 1987) 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 0.22-acre wetland area identified along the south side of Pismo Avenue between 3rd Street and 4th Street (refer to Figure 4) falls under ACOE jurisdiction. No impacts are proposed to ACOE wetlands in this area.

5.2 CALIFORNIA DEPARTMENT OF FISH AND GAME

Sections 1600 through 1607 of the California Fish and Game (CDFG) Code regulate activities that would alter the flow, bed, channel, or bank of streams and lakes. CDFG jurisdiction typically extends to the top of the creek bank or the outside edge of riparian vegetation, whichever is more extensive. It is unlikely that the CCC wetland area between 4th and 5th Streets falls under CDFG jurisdiction, because it has no hydrologic connection to any streams or tributaries, and no bed or bank structure is present. The 0.22-acre ACOE/CCC wetland area between 3rd and 4th Streets falls under CDFG jurisdiction.

5.3 REGIONAL WATER QUALITY CONTROL BOARD

Section 401 of the Clean Water Act regulates activities that have the potential to cause water quality impacts to Waters of the United States, including wetlands, as defined by the ACOE. The 0.22-acre ACOE/CCC wetland area identified along the south side of Pismo Avenue between 3rd Street and 4th Street (refer to Figure 4) falls under Regional Water Quality Control Board jurisdiction.

5.4 CALIFORNIA COASTAL COMMISSION

The California Coastal Act was enacted in 1976 to provide long-term protection of California's coastal resources. The Act's coastal resources management policies are based on recommendations contained in the California Coastal Plan. One such policy includes:

> *"Protection, enhancement and restoration of environmentally sensitive habitats, including intertidal and nearshore waters, wetlands, bays and estuaries, riparian habitat, certain wood and grasslands, streams, lakes, and habitat for rare or endangered plants or animals."*

The California Coastal Commission regulates wetland areas within the coastal zone as defined under Coastal Act Section 30121. The Coastal Act defines a wetland as:

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

The 0.22-acre wetland areas identified on Pismo Avenue between 3rd Street and 4th Street, and the 0.26-acre wetland areas identified between 4th Street and 5th Street (refer to Figure 4) fall under CCC jurisdiction.

6.0 REFERENCES

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Soil Conservation Service (SCS). 1992. Comprehensive hydric soils list for San Luis Obispo County, California. United States Department of Agriculture, Washington, D.C.

United States Geological Service. 1994. 7.5 minute series quadrangle for Morro Bay South.

ATTACHMENT A

- Field Data Sheets

Routine Wetland Determination Form

Applicant: Crawford Multari Clark Assoc. **Project:** Los Osos Sewer **Date:** 5/26/05

State: CA **County:** SLO **Transect/Pit No.:** 1

Investigators: Sloan, Hoetker **Transect/Pit Area:** Pismo Avenue between 4th and 5th Streets

Cowardin Classification (Vegetation Community): Upland annual grassland

VEGETATION

Observed Plant Species	Habit	Indicator	Percent Cover	Observed Plant Species	Habit	Indicator	Percent Cover
Ehrhrarta calycina	grass	none	50				
Bromus diandrus	grass	none	30				
Hordeum jubatum	grass	none	10				
Foeniculum vulgare	forb	none	5				

Percent of Dominant Species that are OBL, FACW, or FAC: 0% **Taxonomic References:** Hickman/Reed

** Dominant Species (20% or greater cover observed)*

SOIL

Map Unit: Baywood fine sand, 2-9 percent slopes

Profile Description: 0-16 dry sand, 10YR3/3

Hydric Soil List?	☐ Yes	☒ No
Mottles?	☐ Yes	☒ No
Gleyed?	☐ Yes	☒ No
NRCS Match?	☒ Yes	☐ No

Other Indicators: none

HYDROLOGY

Inundated?	☐ Yes	☒ No	**Saturated Soil?**	☐ Yes	☒ No	**Depth to:**	
Sediment Deposits?	☐ Yes	☒ No	**Drift Lines?**	☐ Yes	☒ No		
Depth of Surface Water:	none		**Water Marks?**	☐ Yes	☒ No		
Depth to Free Water in Pit:	none		**Oxidized Rhizospheres?**	☐ Yes	☒ No	**Color:**	

Other Indicators: none

WETLAND DETERMINATION

Vegetation Criterion Met?	☐ Yes	☒ No	**Normal Circumstances?**	☒ Yes	☐ No
Hydric Soil Criterion Met?	☐ Yes	☒ No			
Hydrology Criterion Met?	☐ Yes	☒ No	**Is this Plot within a Wetland?**	☐ Yes	☒ No

Comments: Annual grassland along disturbed road right-of-way

Morro Group Determination by: _____

Signature

Rev: 1/27/05

Routine Wetland Determination Form

Applicant: Crawford Multari Clark Assoc. **Project:** Los Osos Sewer **Date:** 5/26/05

State: CA **County:** SLO **Transect/Pit No.:** 2

Investigators: Sloan, Hoetker **Transect/Pit Area:** Pismo Avenue between 4th and 5th Streets

Cowardin Classification (Vegetation Community): Upland oak woodland

VEGETATION

Observed Plant Species	Habit	Indicator	Percent Cover	Observed Plant Species	Habit	Indicator	Percent Cover
*Ehrhrarta calycina	grass	none	20				
Bromus diandrus	grass	none	15				
*Quercus agrifolia	tree	none	25				
*Rubus ursinus	forb	FACW	25				
Raphanus sativus	forb	none	5				

Percent of Dominant Species that are OBL, FACW, or FAC: 33% **Taxonomic References:** Hickman/Reed

** Dominant Species (20% or greater cover observed)*

SOIL

Map Unit: Baywood fine sand, 2-9 percent slopes

Profile Description: 0-16 dry sand, 10YR3/3

Hydric Soil List?	☐ Yes	☒ No
Mottles?	☐ Yes	☒ No
Gleyed?	☐ Yes	☒ No
NRCS Match?	☒ Yes	☐ No

Other Indicators: none

HYDROLOGY

Inundated?	☐ Yes	☒ No	**Saturated Soil?**	☐ Yes	☒ No	**Depth to:**	
Sediment Deposits?	☐ Yes	☒ No	**Drift Lines?**	☐ Yes	☒ No		
Depth of Surface Water:	none		**Water Marks?**	☐ Yes	☒ No		
Depth to Free Water in Pit:	none		**Oxidized Rhizospheres?**	☐ Yes	☒ No	**Color:**	

Other Indicators: none

WETLAND DETERMINATION

Vegetation Criterion Met?	☐ Yes	☒ No	**Normal Circumstances?**	☒ Yes	☐ No
Hydric Soil Criterion Met?	☐ Yes	☒ No			
Hydrology Criterion Met?	☐ Yes	☒ No	**Is this Plot within a Wetland?**	☐ Yes	☒ No

Comments: Oak woodland / grassland along disturbed road right-of-way may qualify as Coastal Commission wetland due to presence of blackberry as a dominant species.

Morro Group Determination by: _____

Signature

Rev: 1/27/05

Routine Wetland Determination Form

Applicant: Crawford Multari Clark Assoc. **Project:** Los Osos Sewer **Date:** 5/26/05

State: CA **County:** SLO **Transect/Pit No.:** 3

Investigators: Sloan, Hoetker **Transect/Pit Area:** Pismo Avenue near 4th Street

Cowardin Classification (Vegetation Community): Willow woodland

VEGETATION

Observed Plant Species	Habit	Indicator	Percent Cover	Observed Plant Species	Habit	Indicator	Percent Cover
*Salix lasiolepis	tree	FACW	80				
*Rubus ursinus	forb	FACW	60				
*Tropaeolum majus	forb	none	20				
Bromus carinatus	grass	none	5				
Oxalis pes-caprae	forb	none	5				

Percent of Dominant Species that are OBL, FACW, or FAC: 66% **Taxonomic References:** Hickman/Reed

** Dominant Species (20% or greater cover observed)*

SOIL

Map Unit: Baywood fine sand, 2-9 percent slopes

Profile Description: 0-16 moist sand, 10YR3/3

Hydric Soil List?	☐ Yes	☒ No
Mottles?	☐ Yes	☒ No
Gleyed?	☐ Yes	☒ No
NRCS Match?	☒ Yes	☒ No

Other Indicators: none

HYDROLOGY

Inundated?	☐ Yes	☒ No	**Saturated Soil?**	☐ Yes	☒ No	**Depth to:**
Sediment Deposits?	☐ Yes	☒ No	**Drift Lines?**	☐ Yes	☒ No	
Depth of Surface Water:	none		**Water Marks?**	☐ Yes	☒ No	
Depth to Free Water in Pit:	none		**Oxidized Rhizospheres?**	☐ Yes	☒ No	**Color:**

Other Indicators: some evidence of seasonal water erosion in pedestrian trail adjacent to pit, but no permanent channel/bank structure present

WETLAND DETERMINATION

Vegetation Criterion Met?	☒ Yes	☐ No	**Normal Circumstances?**	☒ Yes	☐ No
Hydric Soil Criterion Met?	☐ Yes	☒ No			
Hydrology Criterion Met?	☐ Yes	☒ No	**Is this Plot within a Wetland?**	☐ Yes	☒ No

Comments: Willow woodland along disturbed road right-of-way, may qualify as Coastal Commission wetland due to presence of willow and blackberry as dominant species.

Morro Group Determination by: _____

Signature

Rev: 1/27/05

Routine Wetland Determination Form

Applicant: Crawford Multari Clark Assoc. **Project:** Los Osos Sewer **Date:** 5/26/05

State: CA **County:** SLO **Transect/Pit No.:** 4

Investigators: Sloan, Hoetker **Transect/Pit Area:** South side Pismo Ave. between 3rd & 4th Streets

Cowardin Classification (Vegetation Community): Freshwater marsh

VEGETATION

Observed Plant Species	Habit	Indicator	Percent Cover	Observed Plant Species	Habit	Indicator	Percent Cover
*Salix lasiolepis	tree	FACW	25	Picris echioides	forb	FAC	5
*Scirpus microcarpus	forb	OBL	50	Vicia sativa	forb	none	5
Sparganium eurycarpum	forb	OBL	10				
*Oenanthe sarmentosa	forb	OBL	20				
Cortaderia jubata	forb	none	10				

Percent of Dominant Species that are OBL, FACW, or FAC: 66% **Taxonomic References:** Hickman/Reed

** Dominant Species (20% or greater cover observed)*

SOIL

Map Unit: Baywood fine sand, 2-9 percent slopes

Profile Description:

0-2 moist sand, 10YR3/3
2-10 saturated sand 10YR 2/1
10-16 rock riprap/standing water

Hydric Soil List?	☐ Yes	☒ No
Mottles?	☐ Yes	☒ No
Gleyed?	☐ Yes	☒ No
NRCS Match?	☐ Yes	☒ No

Other Indicators: low chroma, saturated soils

HYDROLOGY

Inundated?	☐ Yes	☒ No	**Saturated Soil?**	☒ Yes	☐ No	**Depth to:**	2 inches
Sediment Deposits?	☐ Yes	☒ No	**Drift Lines?**	☐ Yes	☒ No		
Depth of Surface Water:	none		**Water Marks?**	☐ Yes	☒ No		
Depth to Free Water in Pit:	6 inches		**Oxidized Rhizospheres?**	☐ Yes	☒ No	**Color:**	

Other Indicators: standing water present in western portion of swale near 3rd Street

WETLAND DETERMINATION

Vegetation Criterion Met?	☒ Yes	☐ No	**Normal Circumstances?**	☒ Yes	☐ No
Hydric Soil Criterion Met?	☒ Yes	☐ No			
Hydrology Criterion Met?	☒ Yes	☐ No	**Is this Plot within a Wetland?**	☒ Yes	☐ No

Comments: Roadside riprap lined swale connected to larger marsh area to the south meets ACOE/CCC criteria.

Morro Group Determination by: _____
Signature

ATTACHMENT B

- Photo Documentation

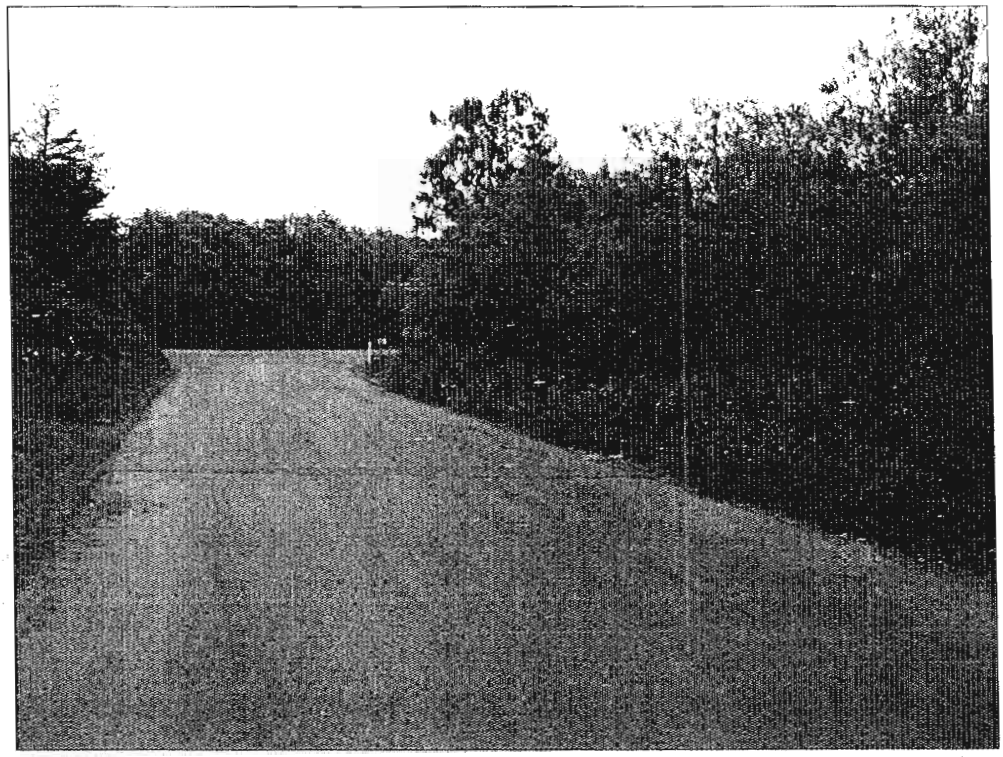


Photo 1:

View east along Pismo Avenue from 3rd Street. Note willows and dense vegetation in roadside swale along right side of picture, and willow canopy blocking the Pismo Avenue right-of-way at 4th Street in background. Picture taken on May 26, 2005.

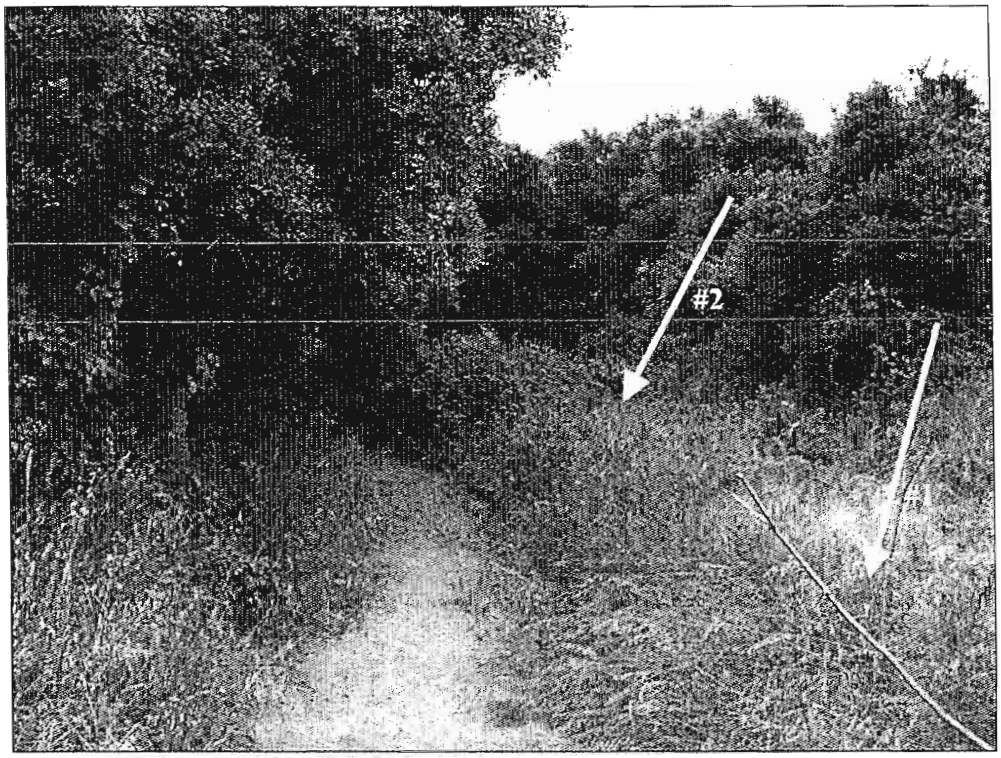


Photo 2:

View of the Pismo Avenue right-of-way between 4th Street and 5th Street, looking west. Note veldt grass in foreground, and blackberry growing around oak trees. Arrows mark the locations of test pits 1 and 2. Picture taken on May 26, 2005.

PHOTO DOCUMENTATION

Photo 3:

View of test pit 3, located just east of 4th Street in the Pismo Avenue right-of-way. Note willow canopy and blackberry understory. Soils were slightly moist in this area. Picture taken on May 26, 2005.

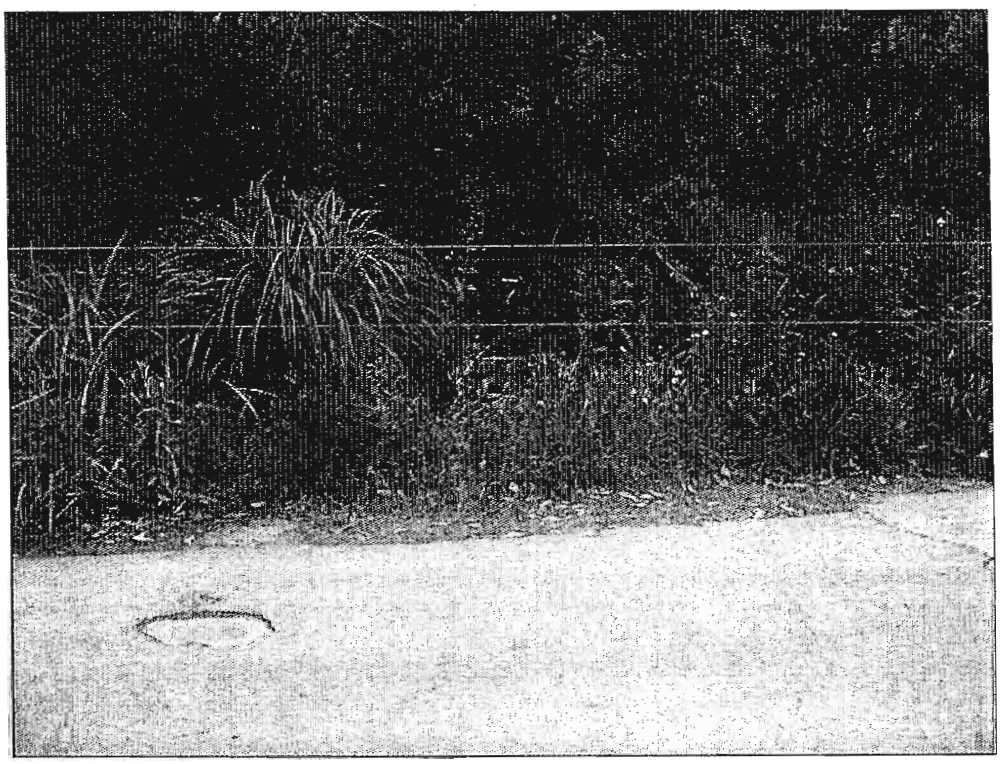


Photo 4:

View of pit 4, located on the south side of Pismo Avenue between 3rd Street and 4th Street. Note willow canopy, emergent vegetation in swale, and large pampas grass clump. Picture taken on May 26, 2005.

PHOTO DOCUMENTATION

8

MORRO GROUP, INC.
Environmental Services

Transmittal Letter

July 1, 2004

Mr. Dave Moran
Crawford Multari Clark Associates
641 Higuera Street, Suite 302
San Luis Obispo, CA 93401

SUBJECT: *7th Through 13th Streets Pump Station Wetland Boundary Determination*

Dave,

A hard copy and a CD of the 7th through 13th Streets Pump Station Wetland Boundary Determination are attached for your use. We have added the new information to the previously collected wetland data, using the same format. Please call me if you have any questions.

Sincerely,

MORRO GROUP, INC.

Robert Sloan
Resource Specialist

1 CD/Disk **Submitted for** Your Use

Pick Up

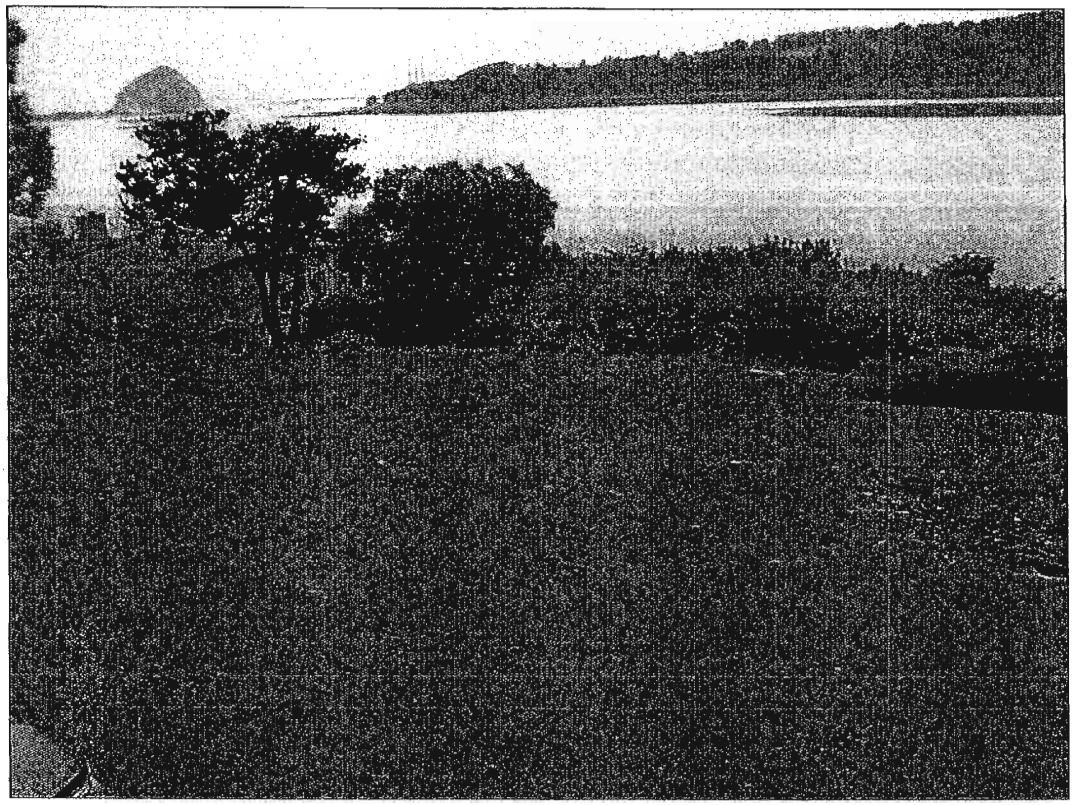


Photo M:

Viewing north toward the end of 7th Street. Pump station location is at end of pavement approximately 100 feet from willow canopy along edge of Bay.

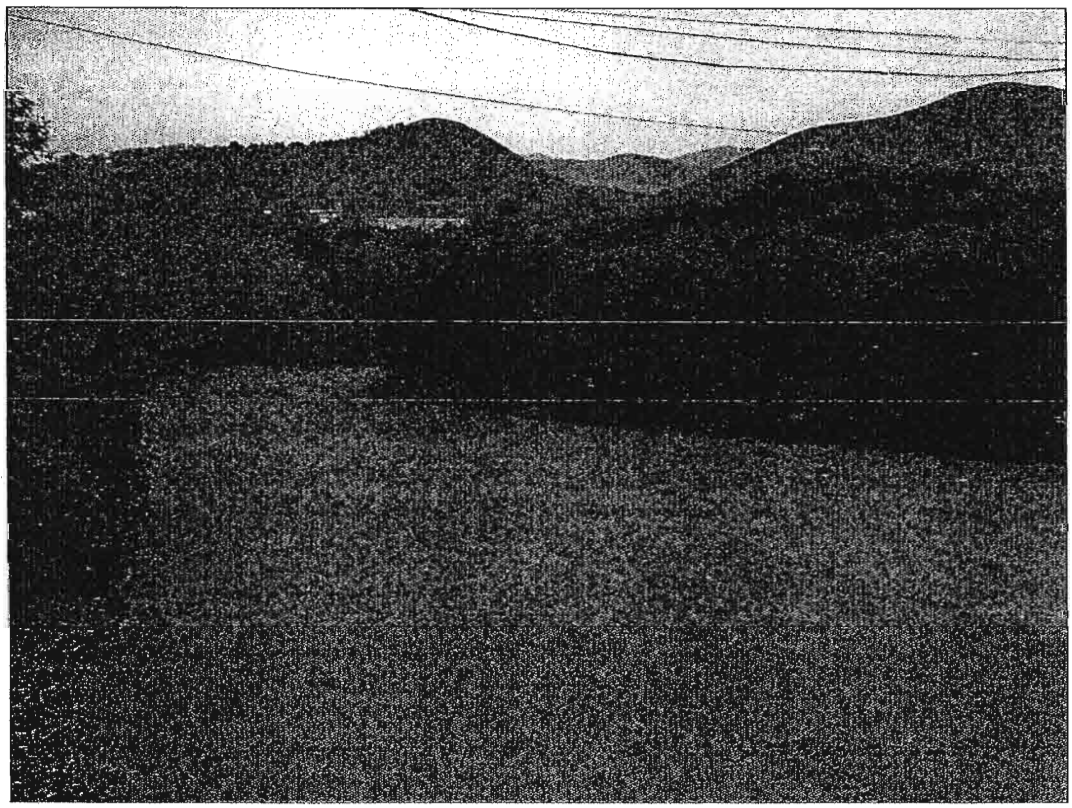


Photo N:

Viewing north toward the end of 8h Street. Pump station location is in oak area in foreground, approximately 65 feet from willow canopy along edge of Bay.

PHOTO DOCUMENTATION – SITE 7

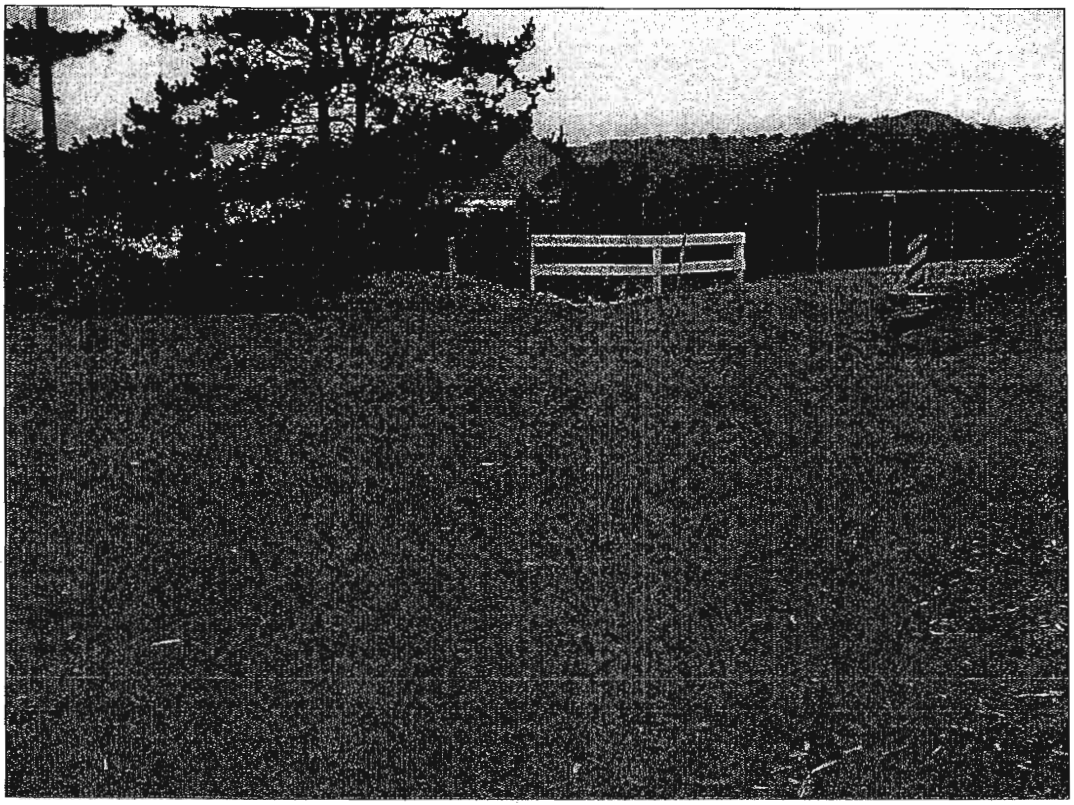


Photo O:

Viewing north toward end of 9th Street. Pump station to be located behind white fence, approximately 145 feet from emergent wetland areas associated with Morro Bay.

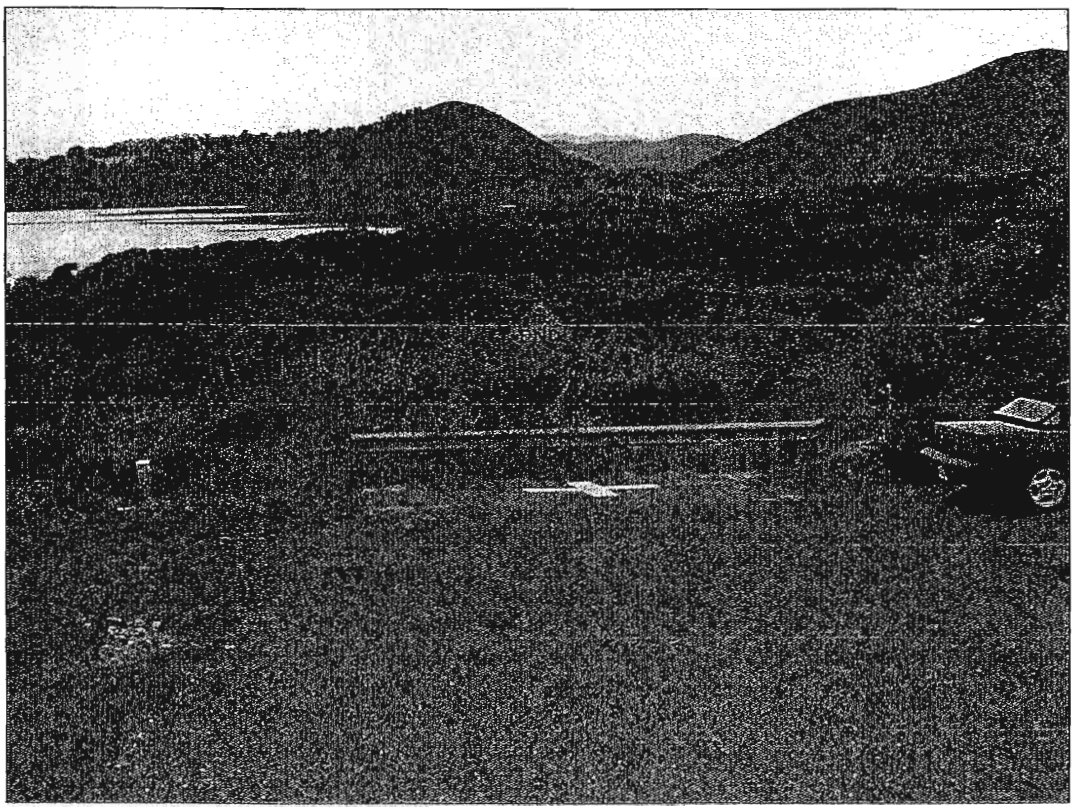


Photo P:

Viewing north toward end of 10th Street. Pump station to be located at street end, approximately 120 feet from willow canopy associated with Morro Bay.

PHOTO DOCUMENTATION – SITE 7

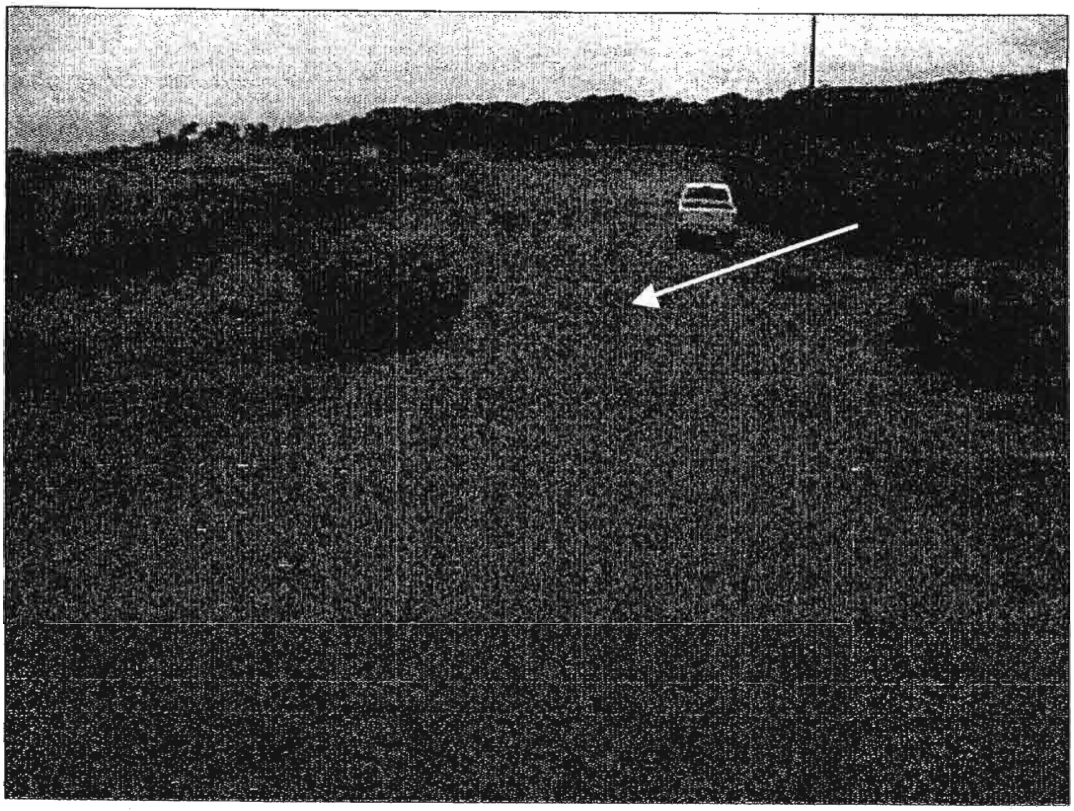


Photo Q:

Viewing north toward the end of 11th Street. Pump station location is in pavement at low point indicated by arrow. The site is over 365 feet from willow canopy along edge of the Bay.

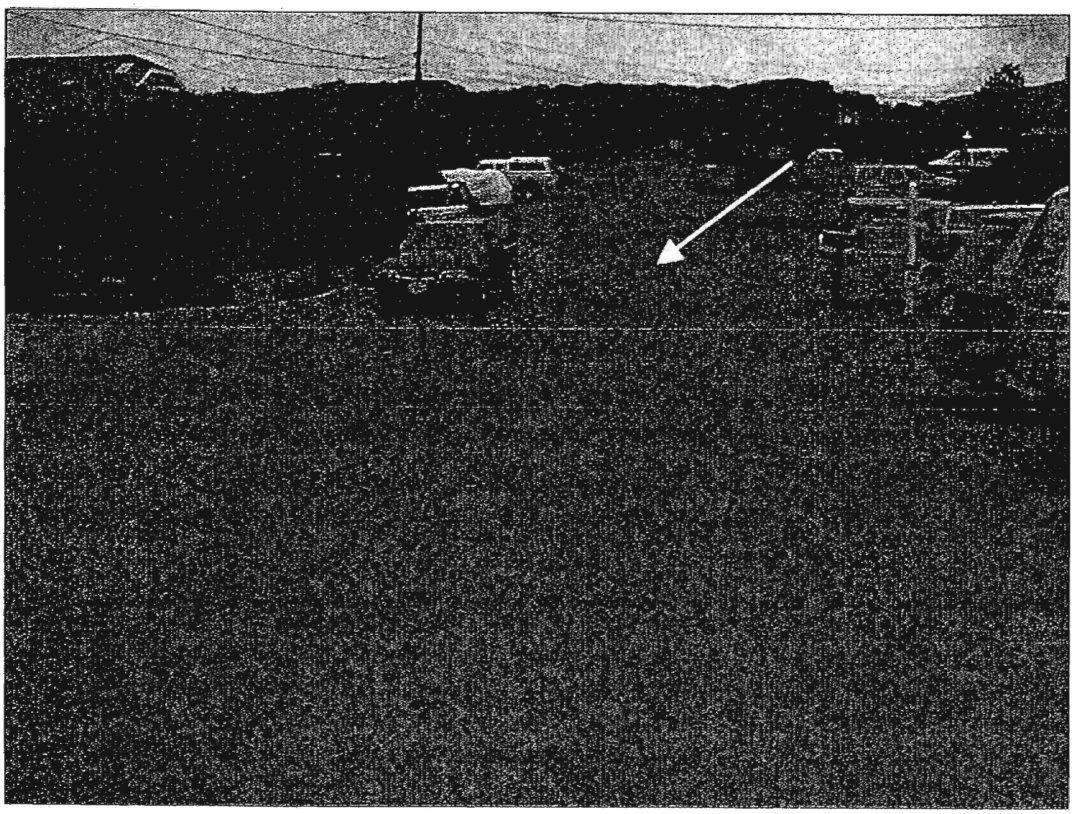


Photo R:

Viewing north toward the end of 12th Street. Pump station location is in pavement at low point indicated by arrow. The site is over 400 feet from willow canopy along edge of the Bay.

PHOTO DOCUMENTATION – SITE 7

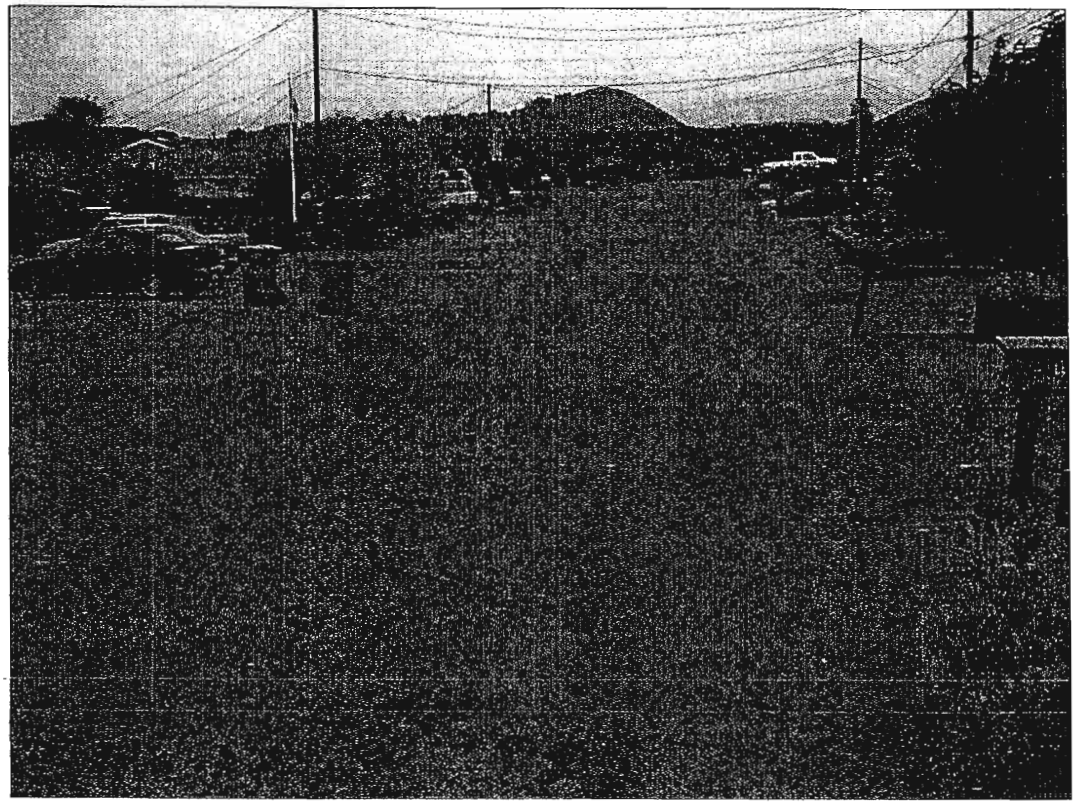
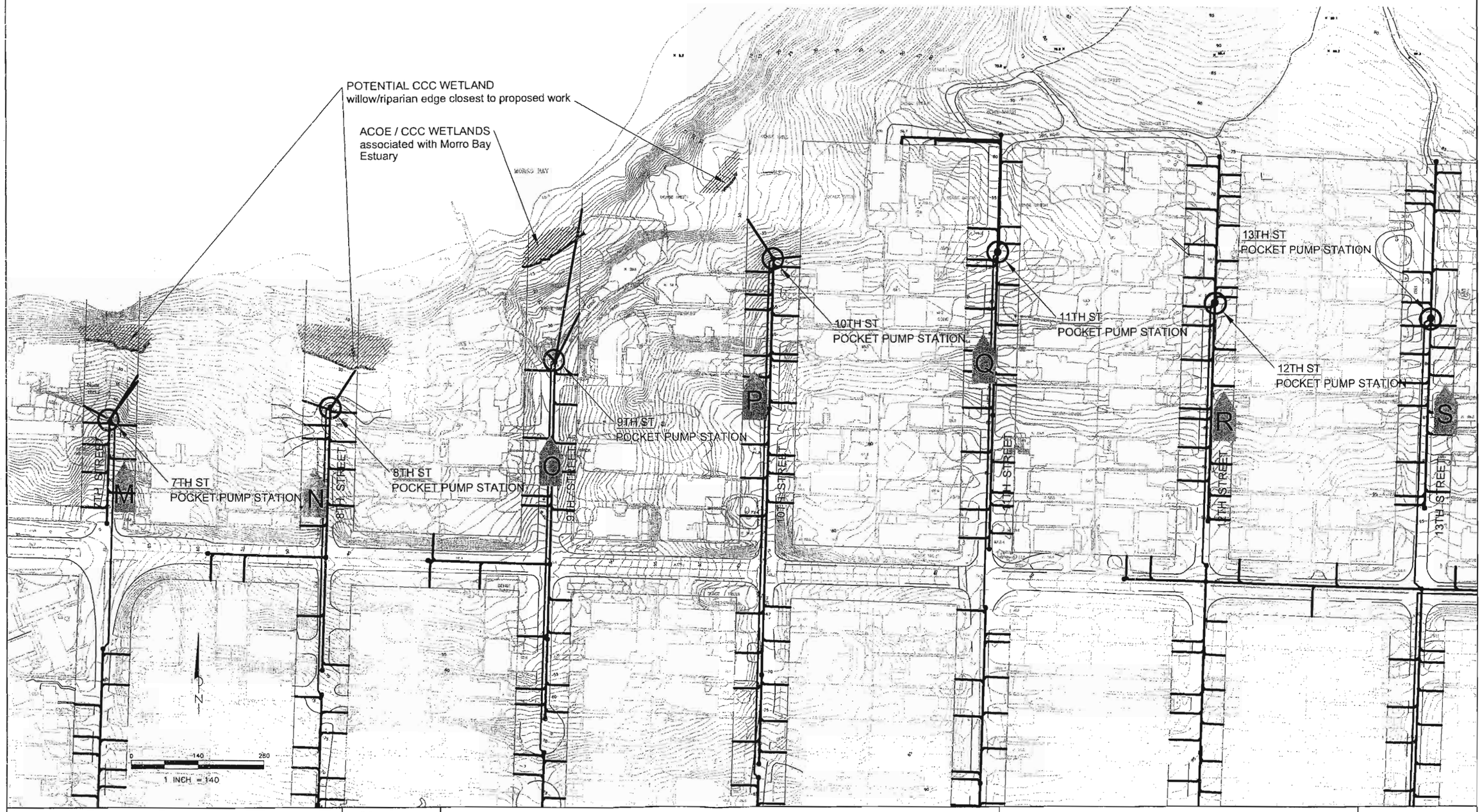


Photo S:

Viewing north toward the end of 13th Street. Pump station location is in pavement approximately 230 feet from the end of the road. The site is over 500 feet from willow canopy along edge of the Bay.

PHOTO DOCUMENTATION – SITE 7

NO WETLAND AREAS WITHIN 400 FEET OF 11TH STREET POCKET PUMP STATION (PSS) OR WITHIN 500 FEET OF PSS ON 12TH AND 13TH STREET



SHEET: 2 OF 4 SCALE: 1" = 140'	MORRO GROUP, INC. Environmental Services	POTENTIAL WETLAND CONSTRAINTS LOCSD Wastewater Facilities Project - Los Osos, California	POTENTIAL WETLAND AREAS - SITE 7
CADD FILE: 03-205 LOCSD Wastewater\wetdel 6-23-04.dwg/site7			FIGURE 5
DATE: 06-30-04 BY: dh REV.			