

Wetland Delineation

For the proposed
Righetti Agricultural Cluster Development
APN 044-051-028
San Luis Obispo County
California



Prepared for

The Righetti Family
4780 Righetti Road
San Luis Obispo, CA 93401

by

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Introduction

Purpose

This report provides a delineation of potential jurisdictional wetlands and waters as defined by federal and state standards on an 85-acre portion of an approximately 200-acre property. The property is the site of a proposed agricultural cluster development. This wetland delineation provides information to aid project planners, the United States Army Corps of Engineers, the California Department of Fish and Game, and the County of San Luis Obispo in decisions regarding the project.

Minor revisions to the wetland delineation map were made in December 2008 to correct an error in the mapped extent of federal wetlands.

Project location and description

The study area is an 85-acre project site located north of Orcutt Road in San Luis Obispo County, California (Figure 1). The project site is approximately 85 acres of a 200 acre property (APN 044-051-028). The approximate coordinates for the center of the property are N35° 14' 482" W120° 36' 14", in the Lopez Mountain and Arroyo Grande USGS 7.5 minute quadrangles (Figure 2).

The proposed project is an agricultural cluster residential development. Project plans were not yet available.

Althouse and Meade, Inc. created the Wetland Delineation Map by overlaying jurisdictional areas on a topographic map of the site provided by Wallace Group (Exhibit A). Locations are based on our estimates in the field and have not been verified by a licensed surveyor.

Responsible parties

Property Owner Righetti Family 4780 Righetti Road San Luis Obispo, CA 93401	Project Planner/Engineer Wallace Group 4115 Broad Street, Suite B-5 San Luis Obispo, CA 93401 805-544-4011
Biological Consultant Daniel E. Meade, Ph.D. Althouse and Meade, Inc. 1875 Wellsona Road Paso Robles, CA 93446 805-467-1041	Lead Agency County of San Luis Obispo Department of Planning and Building Environmental Division County Government Center, Room 310 San Luis Obispo, CA 93408

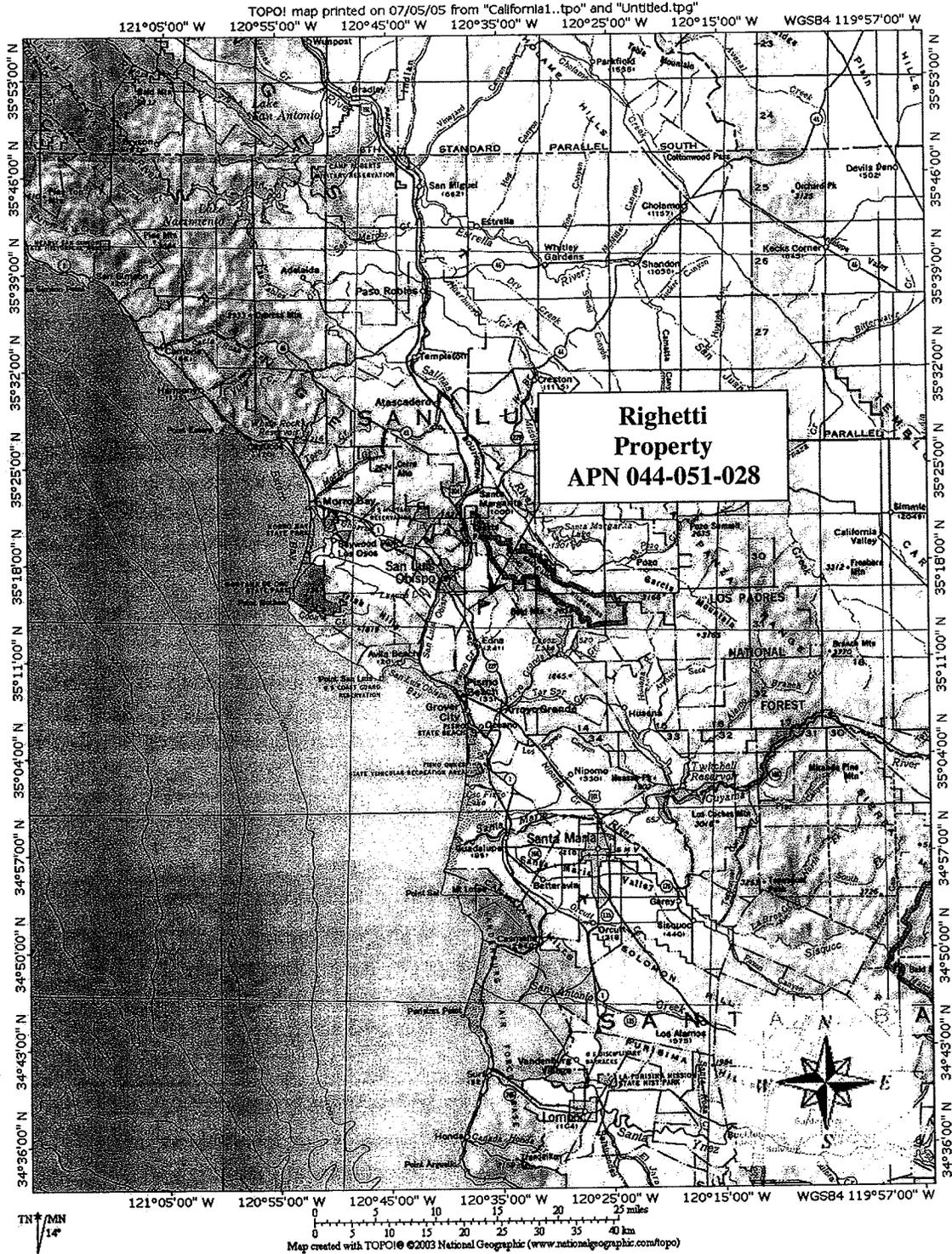


FIGURE 1. The project site is located in the foothills of the Santa Lucia Mountains in Edna Valley, east of the City of San Luis Obispo. The site is in the Lopez Mountain and Arroyo Grande NE USGS 7.5 minute quadrangles, San Luis Obispo County, California.

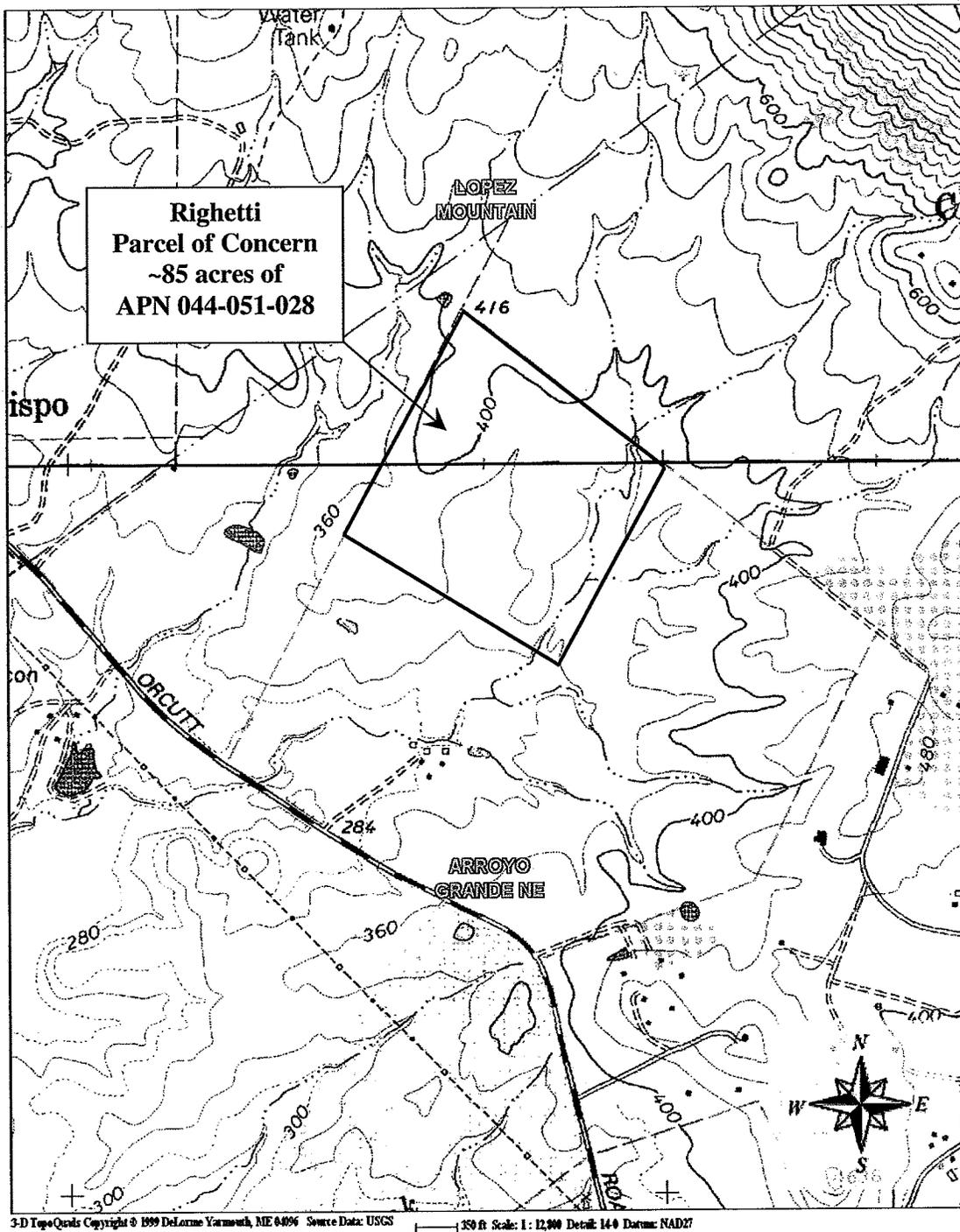


FIGURE 2. The 85-acre project site is located northeast of Orcutt Road. The approximate project boundaries are shown in black. The property is in the Lopez Mountain and Arroyo Grande NE USGS 7.5 minute quadrangles. The existing and proposed access roads are indicated by the dotted lines.

Existing Conditions

The property included in this wetland delineation is located in a rural portion of San Luis Obispo County, southeast of the City of San Luis Obispo. The 85-acre project site is an annual grassland habitat with two drainages, wetlands, and rock outcrops. Grasslands comprise more than 90 percent of the project site. Rangeland conditions are poor with noxious weeds such as medusahead (*Taeniatherum caput-medusae*) and few native forbs. Topography of the project site is characterized by mildly rolling hills with meandering drainageways. Elevations range from about 320 feet to 440 feet.

A riparian corridor along the southeastern edge of the project site is dominated by a tall canopy of mature Western sycamore (*Platanus racemosa*) trees. The corridor supports seasonal surface flows that typically dry up in early summer. Bedrock outcrops are dispersed throughout the drainage, creating pool habitat suitable for amphibians and fish in years with above average rainfall such as 2005.

Southwest of the main drainage, in the center of the project site, is a secondary drainage that conveys storm run-off through the property. The drainage is not a riparian corridor. Several small willow shrubs mark the location where ground water nears the surface in the middle of the drainage. Wetland conditions begin at these willows and continue intermittently to the southern project boundary. Above the willows the drainage consists of a narrow erosion channel with no riparian or wetland characteristics.

Rock outcrops are exposed on hilltops within the project site. The largest outcrop is located on top of the tallest hill at the western end of the property. Two rare plants were observed in grassland habitat near rock outcrops: Cambria morning glory and Obispo Indian paintbrush. Cambria morning glory is often present in soils of serpentine origin. Serpentine rock is a dominant feature of the hillsides north of the project site. The outcrops on the property may have some serpentinite characteristics, although no true serpentine endemic plants were present.

Soils

The U.S. Department of Agriculture map in the Soil Survey of San Luis Obispo County, California, Coastal Part (USDA, 1984), maps two soil types in the project site: Los Osos-Diablo complex, 5 to 9 percent slopes (162) and Salinas silty clay loam, 0 to 2 percent slopes (197).

The majority of the property consists of Los Osos-Diablo complex, with five to nine percent slopes (162). This soil type is found in the northern portion of the property. The complex consists of approximately 35 percent Los Osos soil and 30 percent Diablo soil. The Diablo soil differs from the Los Osos soil by being deep and having a clay texture throughout. Thirty-five percent of this complex includes areas of soils that are similar to Los Osos soils but are deeper or are underlain by harder rock. The Los Osos soil is moderately deep and well drained. Permeability of the Los Osos soil is slow, and the available water capacity is low or moderate. Surface runoff is medium, and the hazard of water erosion is moderate. The Diablo soil is deep and well drained. Permeability of the Diablo soil is slow and the available water capacity is moderate to very high. Surface

runoff is medium and the hazard of water erosion is slight. Both the Los Osos and Diablo soils in this complex are in capability units IIIe-3 (15), irrigated and non-irrigated.

Salinas silty clay loam, with zero to two percent slopes (197) is present in the southern end of the project site, encompassing the riparian corridor. This soil is very deep and well drained, with a moderately slow permeability and high or very high available water capacity. Salinas silty clay loam is well suited to farming and has no limitations or hazards.

The proposed southern access road crosses five soil types: Diablo clay, five to nine percent slopes (129), Los Osos-Diablo complex, five to nine percent slopes (162, described above), Los-Osos-Diablo complex, nine to 15 percent slopes (163), Los Osos-Diablo complex, 15 to 30 percent slopes (164) and Salinas silty clay loam, with zero to two percent slopes (197, described above).

Diablo clay, five to nine percent slopes (129), is a deep, well drained soil on low lying foothills. Permeability in the Diablo soil is slow and the available water capacity is moderate to very high. Surface run-off is medium and the hazard of water erosion is slight or moderate. This soil is in capability units IIe-5 (15), irrigated, and IIIe-5 (15), non-irrigated.

Los Osos-Diablo complex, nine to fifteen percent slopes (163) is very similar to the Los Osos-Diablo complex, five to nine percent slopes (162). However, the Diablo soil in this map unit has a moderate hazard of water erosion due to the steeper slopes (as compared to a slight hazard in map unit 162).

Los Osos-Diablo complex, with fifteen to thirty percent slopes (164) are moderately steep soils on foothills and mountains. Included in is complex are small areas of Rock outcrop, Cibo clay, Gazos and Lodo clay loams, and Lompico and McMullin loams. The Los Osos and Diablo soils in this complex are in capability unit IVE-1 (15), non-irrigated. Land capability IVE soils have "very severe" limitations on the type of agricultural crops grown there, due to the risk of erosion. These soils are not suited for most row crops and other forms of intensive agriculture.

Methods

Wetlands were identified using the 1987 Army Corps of Engineers wetland determination methods. An area five feet in diameter must be dominated by wetland plants (obligate or facultative wetland species), have hydrologic conditions that allow water to saturate the soil for several weeks per year, and contain hydric soils.

The State of California uses a broader definition of wetlands. In conjunction with adopting a wetlands policy on March 9, 1987 the California Fish and Game Commission assigned the Department of Fish and Game (CDFG) the task of recommending a wetlands definition. The CDFG found the U.S. Fish and Wildlife Service (USFWS) wetland definition and classification system based on the Cowardin definition to be the most biologically valid. The CDFG staff use this definition as a guide in identifying wetlands while conducting on-site inspections for the implementation of its Commission's wetlands policy. Like the Army Corps of Engineers (USACE or COE)

definition, the USFWS definition (Cowardin, et al., 1979) of a wetland incorporates the three key parameters of hydrophytic vegetation, hydric soils, and hydrology:

Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For the purpose of this classification, wetlands must have one or more of the following attributes: (1) at least periodically, the land supports predominantly hydrophytes; (2) the substrate is predominantly undrained hydric soil; (3) the substrate is nonsoil and is saturated or covered with shallow water at some time during the growing season of each year (Cowardin et al. 1979:3).

The key difference in the federal and state definitions is that for state wetlands, under some circumstances, only one of the three criteria need be met.

In order to establish the approximate location of hydric soils, four soil-sampling sites were selected on the basis of vegetation and hydrology. The sites were located to investigate soils within the drainages, and to identify the limits of wetland seeps in upland areas. Sampling site locations are recorded on the Wetland Delineation Map (Exhibit A).

Hand-dug soil pits were excavated to a minimum of 18 inches or until standing water was reached. If hydric indicators were strong at this depth, investigations into deeper horizons were not required. Soil samples were examined in the field with a hand lens and, if necessary, in the laboratory under a microscope. Sites were described for selected soil morphological characteristics such as texture, color and horizonation. Topographic and hydrologic features, including aspect and drainage patterns, were noted at each site. Each site evaluation was recorded on a 1987 COE Routine Wetland Determination Data Form. Hydric soil indicators were recognized on the basis of soil characteristics verified in the USDA-NRCS publication, Field Indicators of Hydric Soils in the United States (1998), and in the North Carolina State University publication, Redoximorphic Features for Identifying Aquic Conditions (1992). The indicator status of plants was confirmed by referring to the National List of Plant Species that Occur in Wetlands: 1988 National Summary. The Corps of Engineers Wetlands Delineation Manual (Y-87-1 version), provided guidelines and methods.

Field work was conducted on August 1, 2005 by Daniel E. Meade and Jason Dart. Plant material on the site was identifiable to species.

Results

Wetland Sample Sites

The locations of four sample sites are indicated on the Wetland Delineation Map presented as Exhibit A. The Routine Wetland Determination Data Forms used for each sample site are presented as Exhibit B. Photographs of the sites are in Exhibit C.

Wetlands are considered "special aquatic sites" under the United States Army Corps of Engineers definition. Special aquatic sites are afforded protection under the Clean Water Act (§401 and §404) and by the California Department of Fish and Game Code (§1603). The wetland areas on site provide breeding habitat for reptiles, amphibians, fish, and invertebrates.

Site 1. Seep, northwestern corner

This sample site was located in the northwestern portion of the property in an area of hydrophytic vegetation within a grassland dominated by medusahead (*Taeniatherum caput-medusae*). The dominant plant species recorded at this site were: *Juncus phaeocephalus* (FACW¹), *Hordeum marinum* (FAC+²), *Rumex pulcher* (FAC+), and *Lolium perenne* (FAC*). Hydrophytic vegetation covered 95% of the area around the pit. The soil was a sandy loam. Manganese concretions and redoximorphic features were present. The site is a seep with no indication of surface flow off-site. There is no channel, drift lines, or other indication of direct hydrologic connectivity with the western drainage. **This site does not meet the criteria for federal wetland because the site does not satisfy the criteria for wetland hydrology. This site meets the criteria for state wetland.**

Site 2. Northwest of Site 1

This sample site was located 87 feet NW of Site 1. The dominant plant species recorded at this site was *Taeniatherum caput-medusae* (not listed), with 90% cover. Additional species recorded were *Lolium perenne* (FAC*), with 10% cover. The soil in the upper horizon (0-17 inches) was sandy loam. Soil deeper than 17 inches transitioned from a sandy loam to a clay sand. Some redoximorphic features appeared in the upper inch of the clay layer. No wetland hydrology was present. Strong hydric soil indicators were present only below seventeen inches. Hydrophytic vegetation was not present. **This site does not meet the criteria for federal or state wetland.**

¹ FACW = Facultative Wetland Plants. 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. This category is further subdivided by + or - (see description below in definition of FAC plants).

² FAC = Facultative Plants. Plants with a similar likelihood (estimated probability 33 percent to 67 percent) of occurring both in wetlands and non-wetlands. This category is subdivided by + or -. FAC+ species are considered to be wetter (i.e. have a greater probability of occurring in wetlands) than FAC species. FAC- species are considered to be drier.

An asterisk (*) indicates tentative assignment based on limited information from which to determine the indicator status.

Site 3. Channel bottom, western drainage

This sample site was located in the channel bottom of the western drainage in an area of hydrophytic vegetation. The three dominant plant species recorded at this site were: *Eleocharis macrostachya* (OBL³), *Salix lasiolepis* (FACW), and *Rumex pulcher* (FAC+). Hydric soil indicators observed at this site included gleyed soil and an aquic moisture regime. Redoximorphic features were present. Wetland hydrology was observed (drift lines). **This site meets the criteria for federal and state wetland.**

Site 4. Upper bank, east side of willows in western drainage

This sample site was located on the east side of the western drainage, outside the top of bank in an area of upland vegetation adjacent to the willow patch. The three dominant plant species recorded at this site were: *Lolium multiflorum* (not listed), *Hemizonia congesta* ssp. *luzulifolia* (not listed), and *Taeniatherum caput-medusae* (not listed). These species do not qualify as hydrophytic vegetation. Soils at this site were massive clay. No wetland hydrology was present. No redoximorphic features were observed. While low-chroma colors were observed, hydric soil was not present at this site. **This site does not meet the criteria for federal or state wetland.**

Jurisdictional Delineation

Methodology

The USACE routine onsite method of wetland delineation was used. This includes locating data points within different topographic zones and species associations present on the site representing wetlands and uplands, with the majority of the data points located within the potential wetland boundary. A soil pit 16 to 18 inches deep was dug at each data point, and field indicators for the three USACE parameters (hydrophytic vegetation, hydric soils, and wetland hydrology) were investigated. According to the routine method, hydrophytic vegetation is indicated when more than 50 percent of the dominant species at the data point are obligate, facultative wetland, or facultative species. Additionally, the 50/20 rule was used for selecting dominant vegetation, that is, species were considered dominant if they exceeded 50% of the total cover plus any additional species comprising 20% or more of the total dominance. Dominant vegetation in each stratum was identified and recorded.

Testing for hydric soils was performed by looking for one or more of the field indicators, which include chroma, mottling, gleying, concretions, or sulfidic odor. If hydric conditions were found only in sandy soils, high organic content, sulfidic odor, aquic moisture regime, and organic streaking (listed on the 1987 COE form) were the primary indicators used to identify hydric soil conditions. Additional indicators for sandy soils

³ OBL = Obligate Wetland Plants. Plants that occur almost always (estimated probability >99 percent) in wetlands under natural conditions, but which also may occur rarely (estimated probability <1 percent) in non-wetlands.

are listed in the USDA-NRCS publication, Field Indicators of Hydric Soils in the United States (1998).

The soil series and mapping units were noted from United States Department of Agriculture soils maps.

In California, wetland hydrology may be indicated when soils are inundated or saturated within 12 inches of the surface for at least 3 weeks during the growing season. Hydrology indicators included topography, drift lines, drainage patterns, sediment deposits, inundation, and saturation of soils.

Jurisdictional area

The jurisdictional areas (Table 1) are based on the mapped location of wetlands as determined by our field work. Wetland boundaries were marked on a topographic map of the site by Althouse and Meade, Inc. (Exhibit A). Jurisdictional length of waters and areas of wetlands were estimated.

TABLE 1. Estimated jurisdictional wetland areas are given for the 85 acres of the property proposed for development. Impacts will be calculated upon completion of a final site plan.

Potential Jurisdiction	Location	Jurisdictional wetland area sq. feet and (acres)	Area of proposed impact sq. feet and (acres)
Federal Wetland	Main riparian drainage	~11,050 sq. ft. (0.25 acres)	TBD
Federal Wetland	Western drainage	~4230 sq. ft. (0.1 acres)	TBD
Federal Waters	Western drainage	~500 linear feet	TBD
Federal Waters	Proposed eastern access road crossing	~200 linear feet	TBD
State Wetland	Head of western drainage	~1385 sq. ft	TBD

These areas are subject to verification by a licensed surveyor.

This report is subject to verification by the United States Army Corps of Engineers.

References

- Althouse and Meade, Inc. July 2005. Biological Report for the Proposed Righetti Agricultural Cluster Development, APN 044-051-028, San Luis Obispo County, California. Prepared for the Righetti Family.
- Kruckeberg, Arthur R. 1984. California Serpentine: Flora, Vegetation, Geology, Soils and Management Problems. University of California Press, Berkeley.
- United States Department of Agriculture, National Cooperative Soil Survey. 1983. Soil Survey of San Luis Obispo County, California, Coastal Part.
- United States Department of Agriculture, Natural Resources Conservation Service, Wetland Science Institute and Soil Survey Division. 1998. Field Indicators of Hydric Soils in the United States.
- United States Department of Agriculture, Natural Resources Conservation Service. 1998. Keys to Soil Taxonomy, 8th ed.
- United States Fish and Wildlife Service. 1988. National List of Plant Species that Occur in Wetlands: 1988 National Summary. U.S. Department of the Interior publication, Biological Report 88(24).
- Vepraskas, Michael J. 1992. Redoximorphic Features for Identifying Aquic Conditions. Technical Bulletin 301. Department of Agricultural Communications, North Carolina State University.

Exhibit A – Wetland Delineation Map

INSERT WETLAND DELINEATION MAP

Exhibit B – Routine Wetland Determination Data Forms

A United States Army Corps of Engineers, Routine Wetland Determination data form was completed in the field for each sampling site. The forms included here are copies of forms written in the field. The original forms are on file in our office.

**B2 DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)**

Site: 1

Project/Site: Righetti Applicant/Owner: Investigator(s): Meade, Dart	Date: 8-1-05 County: SLO State: CA
Do Normal Circumstances exist on the site? yes Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? (If needed, explain on reverse.)	Community ID: Transect ID: Plot ID: 1

VEGETATION

	Dominant Plant Species	Stratum	Indicator
1.	Juncus phaeocephalus	Herb	FACW
2.	Hordeum marinum	Grass	FAC+
3.	Calamagrostis perenne	Grass	FAC+
4.	Rumex crispus	Herb	FAC+
5.			
6.			
Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).		95%	
Remarks: Distinct Juncus patch in medusahead grassland.			

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available Field Observations: Depth of Surface Water: NA Depth to Free Water in Pit: NA Depth to Saturated Soil: NA	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines (few, not recent) <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Hydrology Remarks: Seep, no indication of flow offsite on surface	

#1

SOILS

Map Unit Name (Series and Phase): _____ Drainage Class: _____

Taxonomy (Subgroup): _____ Field Observations Confirm Mapped Type? _____

Profile Description:

Depth (inches)	Horizon	Matrix Colors (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions Structure, etc
0-5	A1	10YR 3/2	7.5YR 4/6	Many / med / good	Sandy loam, sub ang.
5-18	A2	10YR 4/2	7.5YR 4/6 + 10YR 5/4	Few / small	Sandy loam ^{slightly} damp

Hydric Soil Indicators:

<input type="checkbox"/> Histosol	<input type="checkbox"/> Oxidized rhizospheres
<input type="checkbox"/> Histic Epipedon	<input checked="" type="checkbox"/> Concretions <i>many</i>
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils
<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Organic Streaking in Sandy Soils
<input checked="" type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on Local Hydric Soils List
<input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Listed on National Hydric Soils List
	<input type="checkbox"/> Other (Explain in Remarks)

Remarks: _____

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <i>Yes</i>	Is this Sampling Point Within a Wetland? <i>State Yes</i>
Wetland Hydrology Present? <i>No</i>	
Hydric Soils Present? <i>Yes</i>	
Remarks: <i>Federal No.</i>	

**B2 DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)**

Site: 2, ~90' WNW of #1

Project/Site: Righetti, Orcutt Rd. Applicant/Owner: Investigator(s): Meade, Dart	Date: 8-1-05 County: SLO State: CA
Do Normal Circumstances exist on the site? <i>yes</i> Is the site significantly disturbed (Atypical Situation)? <i>no</i> Is the area a potential Problem Area? (If needed, explain on reverse.)	Community ID: Transect ID: Plot ID: <i>2</i>

VEGETATION		Stratum	Indicator
	Dominant Plant Species		
1.	<i>Taeniatherum caput-medusae</i>	grass	
2.	<i>Lolium multiflorum</i>	grass	
3.			
4.			
5.			
6.			
Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).		<i>0%</i>	
Remarks: <i>90% medusaehead</i>			

HYDROLOGY	
<p>Recorded Data (Describe in Remarks):</p> <p><input type="checkbox"/> Stream, Lake, or Tide Gauge</p> <p><input type="checkbox"/> Aerial Photographs</p> <p><input type="checkbox"/> Other</p> <p><input type="checkbox"/> No Recorded Data Available</p> <p>Field Observations:</p> <p>Depth of Surface Water: <i>NA</i></p> <p>Depth to Free Water in Pit: <i>NA</i></p> <p>Depth to Saturated Soil: <i>NA</i></p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input type="checkbox"/> Inundated</p> <p><input type="checkbox"/> Saturated in Upper 12 Inches</p> <p><input type="checkbox"/> Water Marks</p> <p><input type="checkbox"/> Drift Lines (few, not recent)</p> <p><input type="checkbox"/> Sediment Deposits</p> <p><input type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches</p> <p><input type="checkbox"/> Water-Stained Leaves</p> <p><input type="checkbox"/> Local Soil Survey Data</p> <p><input type="checkbox"/> FAC-Neutral Test</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
Hydrology Remarks: <i>Sloping ground, no indicators</i>	

#2

SOILS

Map Unit Name (Series and Phase): _____ Drainage Class: _____

Taxonomy (Subgroup): _____ Field Observations Confirm Mapped Type? _____

Profile Description:

Depth (inches)	Horizon	Matrix Colors (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions Structure, etc
0-17	A1	10YR 3/2	10YR 4/6	very few / fine /	Sandy loam
17-18	A2	10YR 4/4	5YR 5/6 + 10YR 3/2	Common / large /	loamy sand → clay sand

Hydric Soil Indicators:

<input type="checkbox"/> Histosol	<input type="checkbox"/> Oxidized rhizospheres
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> Concretions
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils
<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Organic Streaking in Sandy Soils
<input checked="" type="checkbox"/> Reducing Conditions 18" →	<input type="checkbox"/> Listed on Local Hydric Soils List
<input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Listed on National Hydric Soils List
	<input type="checkbox"/> Other (Explain in Remarks)

Remarks: Redox appears above & in upper inch of clay layer

WETLAND DETERMINATION

Hydrophytic Vegetation Present? No.	Is this Sampling Point Within a Wetland? No.
Wetland Hydrology Present? No	
Hydric Soils Present? Yes (deep)	
Remarks:	

**B2 DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)**

Site: 3, Swale bottom

Project/Site: Righetti Applicant/Owner: Investigator(s): Meade, Dant	Date: 8-1-05 County: SLO State: CA
Do Normal Circumstances exist on the site? Yes Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? (If needed, explain on reverse.)	Community ID: Transect ID: Plot ID:

VEGETATION

	Dominant Plant Species	Stratum	Indicator
1.	Elychnis	Herb	OBL
2.	Salix lasiolepis	Canopy	FACW
3.	Rumex pulcher	Herb	FAC+
4.			
5.			
6.			

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p><input type="checkbox"/> Stream, Lake, or Tide Gauge</p> <p><input type="checkbox"/> Aerial Photographs</p> <p><input type="checkbox"/> Other</p> <p><input type="checkbox"/> No Recorded Data Available</p> <p>Field Observations:</p> <p>Depth of Surface Water: NA</p> <p>Depth to Free Water in Pit: NA</p> <p>Depth to Saturated Soil: NA</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input type="checkbox"/> Inundated</p> <p><input type="checkbox"/> Saturated in Upper 12 Inches</p> <p><input type="checkbox"/> Water Marks</p> <p><input checked="" type="checkbox"/> Drift Lines (few, not recent)</p> <p><input type="checkbox"/> Sediment Deposits</p> <p><input type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches</p> <p><input type="checkbox"/> Water-Stained Leaves</p> <p><input type="checkbox"/> Local Soil Survey Data</p> <p><input type="checkbox"/> FAC-Neutral Test</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
Hydrology Remarks: In channel bottom	

#3

SOILS

Map Unit Name (Series and Phase): _____ Drainage Class: _____

Taxonomy (Subgroup): _____ Field Observations Confirm Mapped Type? _____

Profile Description:

Depth (inches)	Horizon	Matrix Colors (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions Structure, etc
0-4		10YR 3/2	7.5YR 5/8	Many / small	Subangular, gravels 1/2 in., sand clay
4-10		10YR 2/1	7.5YR 5/8	Many / mod.	Sandy loam with some gravel

Hydric Soil Indicators:

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input checked="" type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Oxidized rhizospheres <input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)
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Remarks: _____

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <i>Yes</i> Wetland Hydrology Present? <i>Yes</i> Hydric Soils Present? <i>Yes</i>	Is this Sampling Point Within a Wetland? <i>Yes</i> <i>State and Federal.</i>
Remarks: _____	

**B2 DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)**

Site: 4

Project/Site: Righetti Applicant/Owner: Investigator(s): Meade, Dart	Date: 8-1-05 County: SLO State: CA
Do Normal Circumstances exist on the site? <i>yes</i> Is the site significantly disturbed (Atypical Situation)? <i>no</i> Is the area a potential Problem Area? (If needed, explain on reverse.)	Community ID: Transect ID: Plot ID: 4

VEGETATION

	Dominant Plant Species	Stratum	Indicator
1.	<i>Taeniatherum caput-medusae medusa head</i>	<i>Grass</i>	<i>—</i>
2.	<i>Polium multiflorum</i>	<i>Grass</i>	<i>—</i>
3.	<i>Hemizonia congesta</i>	<i>Herb</i>	<i>—</i>
4.			
5.			
6.			
Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).		<i>0%</i>	
Remarks:			

HYDROLOGY

<p><input type="checkbox"/> Recorded Data (Describe in Remarks):</p> <p><input type="checkbox"/> Stream, Lake, or Tide Gauge</p> <p><input type="checkbox"/> Aerial Photographs</p> <p><input type="checkbox"/> Other</p> <p><input type="checkbox"/> No Recorded Data Available</p> <p>Field Observations:</p> <p>Depth of Surface Water: <i>—</i></p> <p>Depth to Free Water in Pit: <i>—</i></p> <p>Depth to Saturated Soil: <i>—</i></p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input type="checkbox"/> Inundated</p> <p><input type="checkbox"/> Saturated in Upper 12 Inches</p> <p><input type="checkbox"/> Water Marks</p> <p><input type="checkbox"/> Drift Lines (few, not recent)</p> <p><input type="checkbox"/> Sediment Deposits</p> <p><input type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches</p> <p><input type="checkbox"/> Water-Stained Leaves</p> <p><input type="checkbox"/> Local Soil Survey Data</p> <p><input type="checkbox"/> FAC-Neutral Test</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
Hydrology Remarks: <i>On slope above drainage. No indicators.</i>	

SOILS

Map Unit Name (Series and Phase): _____ Drainage Class: _____

Taxonomy (Subgroup): _____ Field Observations Confirm Mapped Type? _____

Profile Description:

Depth (inches)	Horizon	Matrix Colors (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions Structure, etc
0-18	A	10YR 3/1	—		Massive Clay

Hydric Soil Indicators:

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma Colors
- Oxidized rhizospheres
- Concretions
- High Organic Content in Surface Layer in Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on Local Hydric Soils List
- Listed on National Hydric Soils List
- Other (Explain in Remarks)

Remarks: No redox. low chroma

WETLAND DETERMINATION

Hydrophytic Vegetation Present? No	Is this Sampling Point Within a Wetland? No.
Wetland Hydrology Present? No	
Hydric Soils Present? No	
Remarks:	

Exhibit C – Photographs

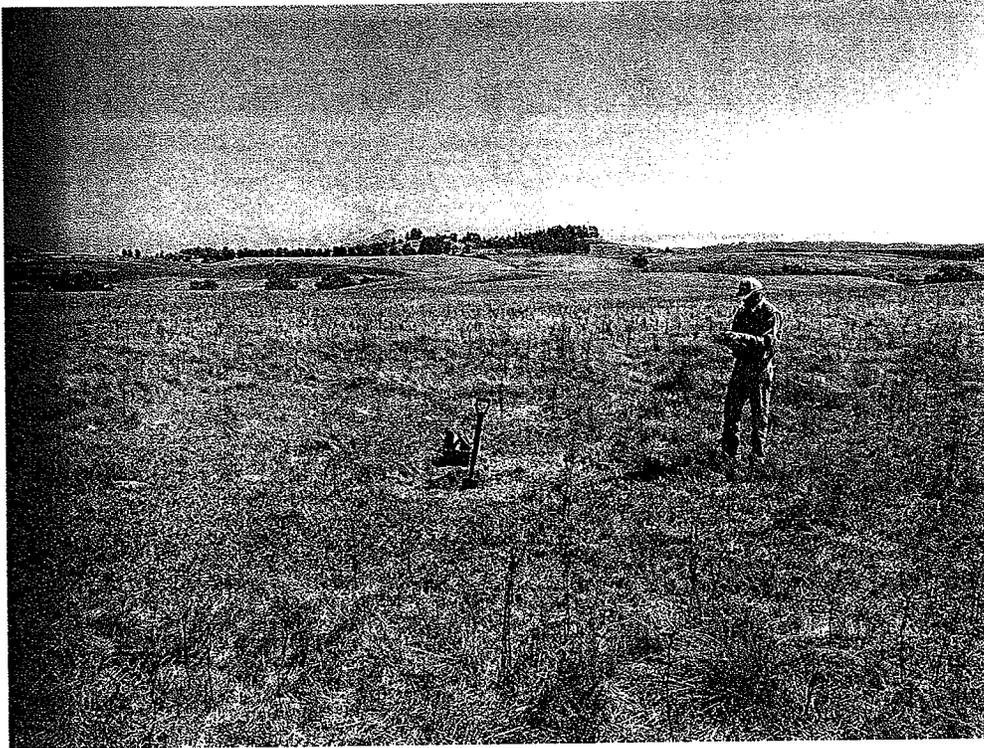


Photo 1. View southeast of sample site 1. This site qualifies as a state wetland, but does not meet the criteria for federal wetland.

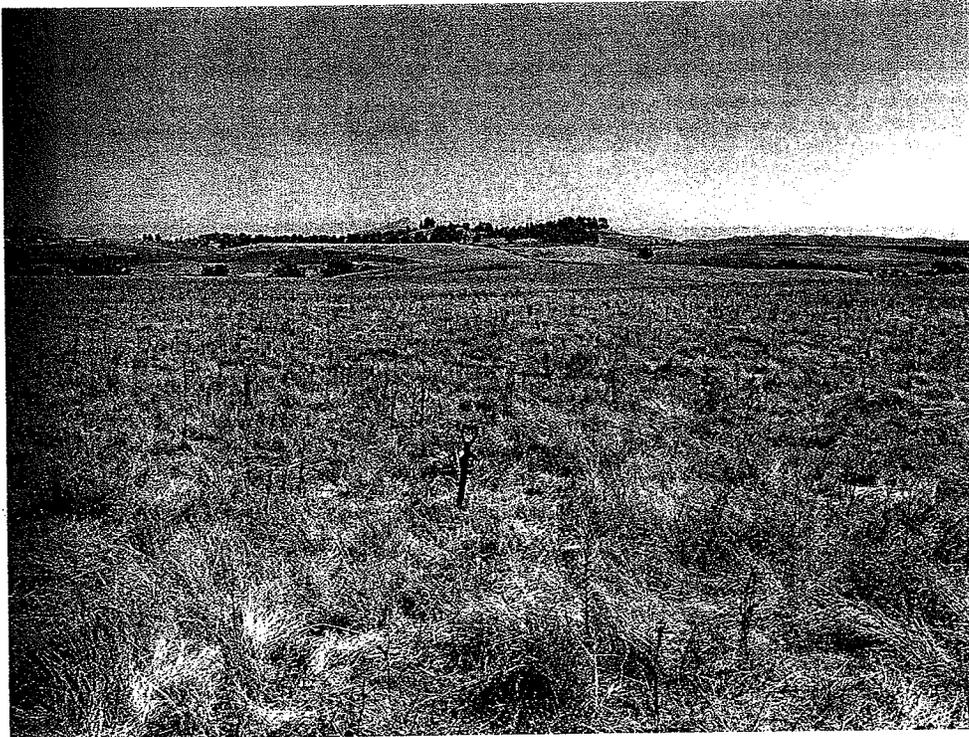


Photo 2. View southeast of sample site 2. The dominant vegetation is an exotic upland grass species called medusahead. This site is not a wetland.



Photo 3. View south of the western drainage (flow is to the south). The channel in the foreground qualifies as waters of the United States, with wetland conditions beginning at the willow patch in the background.



Photo 4. View north of sample site 3. Hydrophytic vegetation, hydric soils, and wetland hydrology were noted at this site.



Photo 5. View south of sample site 4. The dominant vegetation at this site consisted of upland species. This site does not qualify as a wetland. The wetland boundary is between this test pit and the willows.



Photo 6. The channel bottom of the main riparian drainage is wetland through-out its length on the property.

