Appendix D.2

Wetland Delineations

Delineation of Potentially Jurisdictional Wetlands and Waters

for

South Chandler Ranch

Paso Robles, San Luis Obispo County



Prepared for

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Cover Page: Potential wetland within Study Area. May 4, 2017

Synopsis

- This wetland delineation examines a 116.42-acre Study Area located in the City of Paso Robles, California (Section 1.2).
- Based on the results of the formal field delineation following regulatory protocol, we conclude that there are 0.08 acres of potentially jurisdictional isolated wetlands under jurisdiction of the Regional Water Quality Control Board and California Department of Fish and Wildlife (Section 4.1).
- An additional 591 linear feet of non-wetland waters within the Study Area are jurisdictional per standards set forth by the United States Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife (Section 4.2).

List of Acronyms and Abbreviations

CDFW California Department of Fish and Wildlife

CFR Code of Federal Regulations

CWA Clean Water Act

EPA Environmental Protection Agency

FEMA-FIRM Federal Emergency Management Agency Flood Insurance Rate Map

GPS Global Positioning System
HUC Hydrologic Unit Code

NAIP National Agriculture Imagery Program
NRCS Natural Resource Conservation Service

NTCHS National Technical Committee for Hydric Soils

OHWM Ordinary High Water Mark

RWQCBRegional Water Quality Control BoardSSURGOSoil Survey Geographic DatabaseSWRCBState Water Resources Control Board

TNW Traditional Navigable Water

TOB Top of Bank U.S. United States

USACE
U.S. Army Corps of Engineers
USDA
U.S. Department of Agriculture
USFWS
U.S. Fish and Wildlife Service

USGS U.S. Geological Survey

WETS Climate Analysis for Wetlands Tables

Definitions of Wetland Indicators

	Wetland Plant Indicator Status Ratings In Order of Wetland Affinity						
OBL	Obligate	Hydrophyte, almost always occur in wetland.					
		Estimated probability >99 percent to occur in wetlands under natural conditions.					
FACW	Facultative Wetland	Hydrophyte, usually occur in wetland, but may occur in non-wetland.					
		Estimated probability >67% to 99% to occur in wetlands under natural conditions.					
FAC	Facultative	Equally likely to occur in wetland and non-wetland.					
		Estimated probability 33% to 67% to occur in wetlands under natural conditions.					
FACU	Facultative Upland	Non-hydrophyte, usually occurs in non-wetland, but may occur in wetland.					
		Estimated probability 1% to <33% to occur in wetlands under natural conditions.					
UPL	Upland	Almost never occur in wetland.					
		Estimated probability <1% to occur in wetlands under natural conditions.					
NL	No Listed	Species not included in the federal list of wetland indicator plants.					
		Assumed upland for purposes of wetland analysis.					

1.0 Introduction

1.1 Purpose

This report provides a delineation of potentially jurisdictional wetlands and non-wetland waters on the 116-acre South Chandler Ranch (Study Area), located in the City of Paso Robles in San Luis Obispo County, California. The purpose of this report is to describe potentially jurisdictional waters and wetlands according to the Clean Water Act (CWA) Section 404, the Porter-Cologne Water Quality Act (State Water Code), and Fish and Game Code Section 1600. This document presents a comprehensive inventory and mapping effort of wetland and non-wetland aquatic resources within the Study Area and provides information for owners, the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), California Department of Fish and Wildlife (CDFW), and the Lead Agency in decisions regarding activities in the Study Area. Section 2.0 provides more detail on the regulatory framework and scope of this jurisdictional delineation.

TABLE 1. RESPONSIBLE PARTIES.

Owner/Applicant	Project Planner	Biological Consultant
	Larry Werner	Althouse and Meade, Inc.
Ayres Group	Land Development Specialist	1602 Spring Street
355 Bristol Street, Suite A,	725 Creston Road, Suite B	Paso Robles, CA 93446
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·	(805) 239-3127 x207	Contact: Jacqueline Tilligkeit

1.2 Study Area Location and Extent

The Study Area is 116.42 acres located within the city limits at the eastern edge of Paso Robles. It is bounded by Fontana Road to the west, Linne Road to the south, a vineyard to the east, and additional Chandler Ranch property to the north (Figure 1). Along Fontana and Linne Roads are industrial and business properties as well as residential subdivisions. Approximate coordinates for the center of the Study Area are 35.616° N / 120.645° W (WGS84) in the Templeton United States Geological Survey (USGS) 7.5-minute topographic quadrangle (Figure 2). Elevation ranges from approximately 810 to 940 feet above mean sea level. The Study Area is composed of 62 parcels; the Assessor's Parcel Numbers are provided in Appendix A.

1.3 Current Conditions

The large majority of the Study Area is fallow cropland turned grassland. It has rolling hills and gently sloping plains with more than 100 feet in elevation change from the north to south. The Study Area was first farmed prior to 1949 and has laid fallow since around 2006 except for being occasionally grazed.

In the southeastern portion of the Study Area, 15 acres was subdivided into 54 lots in the 1960's to develop the subdivision Our Town (Dirkx 2017; Figure 3). The project ceased after 13 lots

were developed on one of the six cul-de-sacs originating from the constructed Aaroe Road. Currently, some of the homes are inhabited, some dilapidated, and the remaining cul-de-sacs are paved and unmaintained, surrounded by weedy grassland.

1.3.1 Hydrology

The Study Area is only a few hundred feet from the highest point of the Mustard Creek – Salinas River (12-digit Hydrologic Unit Code) watershed within the larger Salinas watershed (8-digit HUC) which is formed by the Coastal Range (Figure 4). Less than 2 miles to the west is the Salinas River, a TNW. Highest elevations onsite occur in the northeast corner and the lowest occur in the southwest. Water onsite flows southwest to culverts at the corner of Fontana Road and Linne Road and at the intersection of Linne Road and Airport Road.

Water from adjacent vineyards enters the site at the eastern boundary and is diverted around rolling hills into shallow valleys across the Study Area. Otherwise, the main water source for the site is direct precipitation. Figure 5 shows the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) and indicates that the Study Area is well within the minimal flood hazard zone (FEMA 2017). In addition, neither the National Hydrography Dataset nor the National Wetlands Inventory have indicated wetland features within the Study Area (Figure 6 and 7).

A drainage ditch that bisects the southeastern portion of the Study Area was created in the 1960's to divert water from Our Town (Figure 3). It begins at a culvert underneath Aaroe Road and continues to 120 feet northeast of the intersection of Linne Road and Airport Road. This ditch does not appear to be maintained.

1.3.2 Vegetation and Habitats

Annual grassland is the predominant habitat within the Study Area, covering approximately 108 acres of the site. Most of the grassland has been disturbed by past farming and ranching operations, leaving much of the area to be comprised of non-native grasses and forbs. The landscape composition includes typical non-native grassland habitat, with dominant species including wild oats (*Avena barbata* and *Avena fatua*), annual bromes (*Bromus diandrus, Bromus hordeaceus*, and *Bromus madritensis* subsp. *rubens*), filaree (*Erodium* ssp.), and mustards (*Brassica nigra* and *Hirschfeldia incana*).

1.3.3 Soils

Four individual soil map units from the Natural Resource Conservation Service (NRCS) Soil Survey Geographic Database (SSURGO) overlap the Study Area: Arbuckle-Positas complex, Nacimiento-Los Osos complex, Rincon clay loam, and San Ysidro loam (Soil Survey Staff 2017).

A custom soil report for the Study Area is provided as Appendix B.

1.3.4 Climate

The Climate Analysis for Wetlands Tables (WETS) for Paso Robles Municipal Airport (Station ID 046742, 3.5 miles north of Project site) indicates that average 30-year rainfall is 13.08 inches

(Table 2). The 2016-2017¹ rainfall year was above average particularly in January with the annual precipitation totaling 16.14 inches (NOAA 2017). Rainfall was above the WETS range in the majority of the wet months (Chart 1). Soil pits were investigated in May 2017.

TABLE 2. PRECIPITATION (INCHES) BY MONTH.

Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1971-2000	0.01	0.06	0.36	0.51	1.12	1.73	2.83	2.87	2.65	0.68	0.23	0.02
2016-2017	0	0	0	1.39	1.26	1.03	6.91	3.89	0.53	0.95	0.18	0

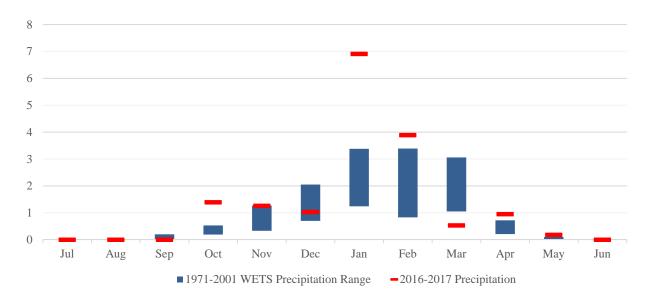


CHART 1. WETS² PRECIPITATION AND 2016-2017 RAINFALL YEAR (INCHES).

² WETS tables display the average range of precipitation by month by providing a probability analysis.

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¹ Rainfall years range from July to June.

2.0 Regulatory Framework

2.1 United States Army Corps of Engineers

Section 404 of the CWA authorizes the USACE to regulate activities that discharge dredged or fill material to wetlands and other waters of the United States. The term "waters of the United States" encompasses resources described by the Environmental Protection Agency (EPA) and the Corps regulations, 40 CFR (Code of Federal Regulations) § 230.3(s) and 33 CFR § 328.3(a). The geographic limits of relevant federal jurisdiction for non-tidal waters of the U.S. are defined at 33 CFR § 328.4(c).

The Corps of Engineers Wetlands Delineation Manual (hereafter "1987 Manual"; Environmental Laboratory 1987) defines wetlands (Environmental Protection Agency regulations at 40 CFR § 230.3(t); USACE regulations at 33 CFR § 328.3(b)). Wetlands are considered "special aquatic sites" under the USACE definition. Special aquatic sites are afforded protection under the CWA (Sections 401 and 404). The 1987 Manual and various regional supplements describe the criteria that must be met to determine the presence of a wetland, the methods used to determine whether they are met, and the geographic extent of wetland areas identified in the field.

The USACE takes jurisdiction over wetlands that exhibit hydrology, hydric soil, and hydrophytic vegetation (three parameters) by the standard set forth in the Arid West Regional Supplement. For non-wetland water features, USACE jurisdiction is limited to the Ordinary High Water Mark (OHWM). Both wetlands and non-wetland waters (drainages) must exhibit a significant nexus to a Traditionally Navigable Water (TNW).

2.2 Regional Water Quality Control Board

Waters are defined in California Water Code section 13050(e) as "any surface water or groundwater, including saline waters, within the boundaries of the state." However, July 2017 guidance from the RWQCB indicates that they have adopted the USACE policy of a "three-parameter wetland" (SWRCB 2017). They will also take jurisdiction over a non-wetland water to the OHWM. In contrast to the USACE, however, the RWQCB will take jurisdiction over isolated wetland features that do not have significant nexus to a TNW. Therefore, all USACE features are RWQCB jurisdiction but not all RWQCB features are USACE jurisdiction.

2.3 California Department of Fish and Wildlife

CDFW found the U.S. Fish and Wildlife Service (USFWS) wetland definition and classification system based on the 1979 Cowardin definition to be the most biologically valid (Cowardin et al. 1979). In general, CDFW will take jurisdiction over drainage or lake features with a bed and bank and will limit their jurisdiction to the top of bank (TOB), and may include adjacent wetland or riparian areas on a case by case basis.

The RWQCB and CDFW (hence forward may be referred to as "state" or "state of California") receive regulatory authority over wetlands and waters within California as specified in Section 401 of the Clean Water Act (CWA), the Porter-Cologne Water Quality Act (California Water Code), the California Coastal Act of 1975 (CCA), and Fish and Game Code Section 1600.

3.0 Delineation Methods

3.1 Overview of Sampling Methodology

Jurisdictional wetlands and other waters were identified using methods and guidelines described in the 1987 Manual, the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (hereafter "2008 Supplement"; USACE 2008b), and *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (hereafter "OHWM Manual"; USACE 2008a). Site visits were made in May 2017 by Wetland Scientist Jacqueline Tilligkeit and Botanist Jason Dart (Table 3). Table 3 summarizes dates of field work and personnel attending each site visit.

TABLE 3. FIELD WORK LOG.

Survey Date	Activities	Personnel
May 3, 2017	Site survey and sample sites	Jacqueline Tilligkeit Jason Dart
May 4, 2017	Sample sites	Jacqueline Tilligkeit
November 10, 2017	Current conditions and observational soil pit	Jacqueline Tilligkeit Ken McCarron

3.1.1 Wetlands

Soil pits were dug by hand at three sampling sites based on low relief and investigation of aerial photographs. Locations of sampling sites were recorded on the Delineation of Jurisdictional Areas Map (Exhibit A) and USACE Arid West Region Wetland Determination Data Forms (Exhibit B). Photos of each site are included in Section 8.0.

Wetland Hydrology

The presence or absence of wetland hydrology field indicators was assessed following methodology presented in the 1987 Manual and the 2008 Supplement. Wetland indicators used to determine if wetland hydrology features are present include, but are not limited to, high water table, site topography, drift lines, drainage patterns, sediment deposits, inundation, observation of wet conditions during the growing season, and saturation of soils.

Wetland Soils

Soils were examined according to methodology presented in the 2008 Supplement and 1987 Manual. The presence or absence of hydric soil indicators was determined by soil characteristics outlined within the USDA-NRCS publication, *Field Indicators of Hydric Soils in the United States* (version 7.0; USDA-NRCS 2010) and the National Technical Committee for Hydric Soils (NTCHS) definition of hydric soils.

Wetland Vegetation

To determine if wetland species were present, vegetation in each stratum was identified to the species level and confirmed using the *National Wetland Plant List* (Lichvar et al. 2016). If wetland

species were found, species dominance was recorded for each stratum using the "50/20 Rule," as per the 2008 Supplement. Dominance test was calculated for all samples and prevalence index was calculated if samples had a presence of hydric soil and hydrology but did not pass the dominance test.

3.1.2 Non-Wetland Waters

Potential non-wetland waters occur when drainages display evidence of hydrology but do not contain vegetation suggestive of wetlands. Evidence of OHWM is used to determine extent of Corps jurisdiction over non-wetland waters of the U.S. The OHWM Manual lists and describes indicators associated with areas that become flooded or ponded, but are not dominated by wetland vegetation and the duration of flooding, ponding, and/or near-surface soil saturation (less than or equal to 12 inches) is not sufficient to cause hydric soils to form or wetland hydrology conditions to occur. OHWM, if present, was identified and noted according to guidance provided in the OHWM Manual. Wetland Determination Data Forms (USACE 2010) were used to determine OHWM for non-wetland waters and are included under Exhibit C.

3.1.3 Waters Connectivity/Adjacency

Connectivity to Traditional Navigable Waters and their tributaries is established via field work where accessible, as well through analysis of aerial photographs, USGS topographic map, and the USGS National Hydrography Dataset. This connectivity determines whether the feature has "significant nexus" (i.e., it significantly affects the chemical, biological, or physical integrity of a Traditionally Navigable Water).

3.2 Mapping Methodology

Mapping efforts utilized Samsung Galaxy Tab A tablets equipped with Garmin GLO Global Positioning System (GPS) Receivers. Delineation boundaries were drawn using aerial photography and field notes. Existing datasets such as the National Hydrography Dataset and the USGS topographic maps were considered during mapping. Our results vary somewhat from these existing publications due to the finer scale and on-the-ground data collection techniques used in our work. GPS data, digitized notes, and photos were imported into Esri ArcGIS, a Geographic Information Systems software suite, and interpreted into maps. Maps were produced at a minimum scale of 1 map inch to 400 feet on the ground using field data, and presented over a 2016 National Agriculture Imagery Program (NAIP) Aerial Photograph.

4.0 Technical Findings

Wetland habitats in the Study Area meet state definitions and drainage features meet federal and state definitions. Our 2017 field work resulted in the delineation of 0.08 acre state jurisdictional wetlands and 591 linear feet of federal non-wetland waters within the Study Area.

4.1 State Wetlands

Two State wetland patches were mapped within the Study Area, one in a bowl on the east side and one in a swale feature on the west (Exhibit A). These wetland features are isolated palustrine persistent emergent (Cowardin et al. 1979) wetlands dominated by native and non-native herbs and grasses. Table 4 summarizes Determination Data Form findings.

4.1.1 Bowl Wetland

The Bowl Wetland is a low spot 250 feet north of Our Town. It was likely created during the construction of Our Town when a pile of asphalt was left in the field. Plowing around the asphalt may have left the area lower and undisturbed, collecting water and creating a 0.01 acre (602 square feet) isolated wetland.

Hydrology

Water enters Bowl Wetland through precipitation and surface runoff. Water cannot exit the pool except through percolation into the soil therefore there is no connectivity to a TNW and this feature is considered isolated. Standing water was not present during an early May site visit but biotic crust and oxidized rhizospheres indicate hydrology.

Hydric Soils

Within the top eight inches of soil, the black silty clay (10YR 2/1) matrix contains dark grayish brown (10YR 4/2) depletions and dark yellowish brown (10YR 3/6) redoximorphic concentrations in the pore linings. The percentages and color distinction were sufficient to mark depleted matrix, redox dark surface, and redox depressions as hydric soil indicators.

Hydrophytic Vegetation

Dominant plant species within the wetland are seaside barley (*Hordeum marinum*, FAC) and curly dock (*Rumex crispus*, FAC) with a presence of other hydrophytes such as toad rush (*Juncus bufonius*, FACW) and slender woolly marbles (*Psilocarphus tenellus*, OBL). The wetland feature passes the dominance text and also contains two percent biotic crust.

4.1.2 Swale Wetland

The Swale Wetland lays in a swale feature in the northwest portion of the property and is 0.07 acre (2999 square feet). Water is concentrated in a small drainage that supports hydrophytic vegetation. There is no clear flow path or connection from the wetland to a TNW. Downslope of the wetland, water likely sheet or subsurface flows to the street or a culvert at the corner of Fontana Road and Linne Road. It is unclear where the culvert would connect to a storm ditch or creek.

Hydrology

Water originating from surface or subsurface runoff from hills onsite is concentrated in a small swale in the Study Area. Biotic crust was present during the field investigations. The narrow swale continues for less than 300 feet before the topography flattens into a gentle southwest sloping hillside with no sign of hydrology.

Hydric Soils

Five percent dark yellowish brown redoximorphic features were present at three inches within the very dark brown (10YR 2/2) sandy clay loam matrix. The prominence, depth, and quantity of the redox features qualified as a redox dark surface and redox depressions indicator.

Hydrophytic Vegetation

Italian ryegrass (*Festuca perennis*, FAC) and seaside barley are dominant within the sample site with a presence of toad rush and slender woolly marbles. The sample site passes the dominance test and presented ten percent biotic crust. Adjacent upland areas and downslope of the wetland feature was dominated strongly (95 percent cover) by rattail sixweeks grass (*Festuca myuros*, FACU).

4.1.3 Additional Areas Investigated

Two swale features on the eastern edge of the Study Area were investigated during site visits due to greener vegetation in aerial imagery and suggestive topography.

In the northern feature, Italian ryegrass (FAC) was the only dominant species in this location with the second highest percent absolute coverage from ripgut brome (UPL). A soil pit was dug to 16 inches. It displayed a very dark brown silty clay matrix with no sign of redoximorphic features nor a restrictive layer. Hydrology indicators were also absent within the feature. This location was not mapped as a wetland because it only displayed one parameter: the dominance of a plant species that is equally likely to occur in a wetland and upland.

The southern feature was hardly identifiable in the field. It did not have distinct vegetation communities compared to adjacent upland areas. Italian ryegrass (FAC), rattail sixweeks grass (FACU), and wild oats (NL) are dominants within the swale with no clear change in vegetation percent coverage nor species dominance to demarcate an OHWM. An observational soil pit revealed less than one percent redoximorphic features in a very dark brown matrix. Additionally, the topography undulates from historic plowing and burrowing mammal activity without a clear path for the water to flow and no bed and bank.

TABLE 4. WETLAND CHARACTERISTICS.

Feature	Sample Site	Dominant Species	Wetland Vegetation?	Soil Indicator	Wetland Soil?	Hydrology Indicator		Connection	Jurisdiction	Wetland Type
n/a	1	FAC	Yes	None	No	None	No	No	None	n/a
Bowl Wetland	2	FAC, FAC	Yes	F3, F6, F8	Yes	B12, C3	Yes	No	State Only	Palustrine Persistent Emergent
Swale Wetland	4	FAC, FAC	Yes	F6, F8	Yes	B12	Yes	No	State Only	Palustrine Persistent Emergent
		FAC: 34-	-66% in wetlands	F3: F6: F8:	Depleted M Redox Dar Redox Dep	rk Surface	B12: Biotic Cr C3: Oxidized		ong Living Roots	

9

4.2 Federal Non-Wetland Waters

One potential federal non-wetland water was delineated within the Study Area (Our Town Drainage). The artificial unconsolidated bottom palustrine feature contains less than five percent vegetation at the bottom of the ditch. The general flow path begins in the property to the east in a vineyard where it is fed by runoff from precipitation and irrigation and ends northeast of the intersection of Linne Road and Airport Road. An aerial photograph from 1949 reveals a clear flow path in this corner of the property prior to the installation of the neighboring vineyard (Figure 3). In this photo, the drainage continues across Linne and flows for 1300 feet before converging with an unnamed creek. A 1962 aerial photo shows that the drainage downslope of Our Town within the Study Area was channelized during the construction of the partial development (Figure 3). Currently the channel ends just short of a culvert that carries the water across Linne and into a storm ditch. The storm ditch zigs and zags through developed land before meeting up with the same unnamed creek near the intersection of Commerce Way and Scott Street. The creek ends at the Salinas River, a TNW.

As discussed in paragraph three of Section 4.1.3, there is no evidence of an OHWM north of Our Town. The artificial channel and jurisdictional feature begins at the road and continues to approximately 60 feet from Linne Road where it sheet flows to the culverts. The end of the drainage has become more poorly defined since the 1962 aerial, likely due to transportation of sediment down the ditch and deposition during sheet flow when the water velocity slows.

The channel is lined with coyote bush (*Baccharis pilularis*), wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), and soft brome. The bottom of the channel contains less than five percent vegetation and more than 50 percent biotic crust coverage in some locations. Hydrology indicators include biotic crust and drift deposit. The OHWM is approximately 2.5 feet wide and is demarcated by a change in vegetation percentage, break in bank slope, and presence/absence of hydrology. The TOB is 5 feet wide on average.

5.0 Jurisdictional Delineation

The Study Area does not contain habitat that meets the definition of wetland by the USACE. Approximately 0.08 acre (3601 square feet) of isolated wetland habitat was delineated as state jurisdiction (Table 5). Despite displaying hydrology, hydric soil, and hydrophytic vegetation, both wetland features are only considered state jurisdictional due to the lack of connectivity to a TNW.

TABLE 5. STATE JURISDICTIONAL WETLAND MEASUREMENTS.

Feature	Area (ac)	Area (sq ft)
Bowl Wetland	0.01	602
Swale Wetland	0.07	2999
Total	0.08	3601

Our Town Drainage (591 feet) meets the definition of an USACE non-wetland water within the Study Area. It is federally jurisdictional due to the presence of an OHWM as well as its proximity to a culvert that carries water along a clear path to the Salinas River. The state (RWQCB and CDFW) would also take jurisdiction over this potentially federal feature.

Jurisdictional area calculations are included in Table 6.

TABLE 6. FEDERAL JURISDICTIONAL NON-WETLAND WATER MEASUREMENTS.

	OHWM Width	TOB Width	Length
Feature	(ft)	(ft)	(ft)
Our Town Drainage	2.5	5	591

This report is subject to verification by the USACE, RWQCB, and CDFW.

6.0 Photographs



Bowl Wetland

Low lying area likely created by leaving a mound of asphalt during Our Town construction. View west.

May 3, 2017



Bowl Wetland Dominated by seaside barley and curly dock. May 3, 2017.



Swale Wetland
View looking downslope.
Dominated by Italian rye
grass and seaside barley.

May 4, 2017

View west.



Upslope from Swale Wetland

Dominated by rattail sixweeks grass.

May 4, 2017.



Our Town Drainage Coyote bush lines drainage to Our Town. May 3, 2017



Our Town Drainage
The downstream end of the drainage dissipates and sheet flows.
May 3, 2017

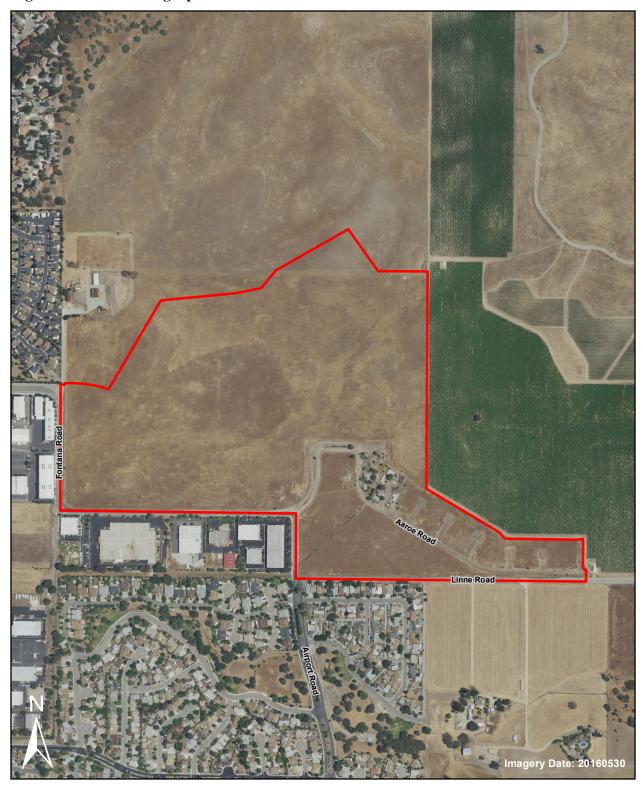


Our Town Drainage
The substrate of the drainage presents hydrology indicators and minimal vegetation.
May 3, 2017

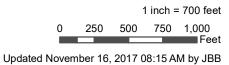
7.0 Figures

- Figure 1. Aerial Photograph
- Figure 2. United States Geological Survey Topographic Map
- Figure 3. Aerial Imagery History
- Figure 4. Hydrologic Unit Codes
- Figure 5. Federal Emergency Management Agency Flood Insurance Rate Map
- Figure 6. National Wetlands Inventory
- Figure 7. National Hydrography Dataset

Figure 1. Aerial Photograph







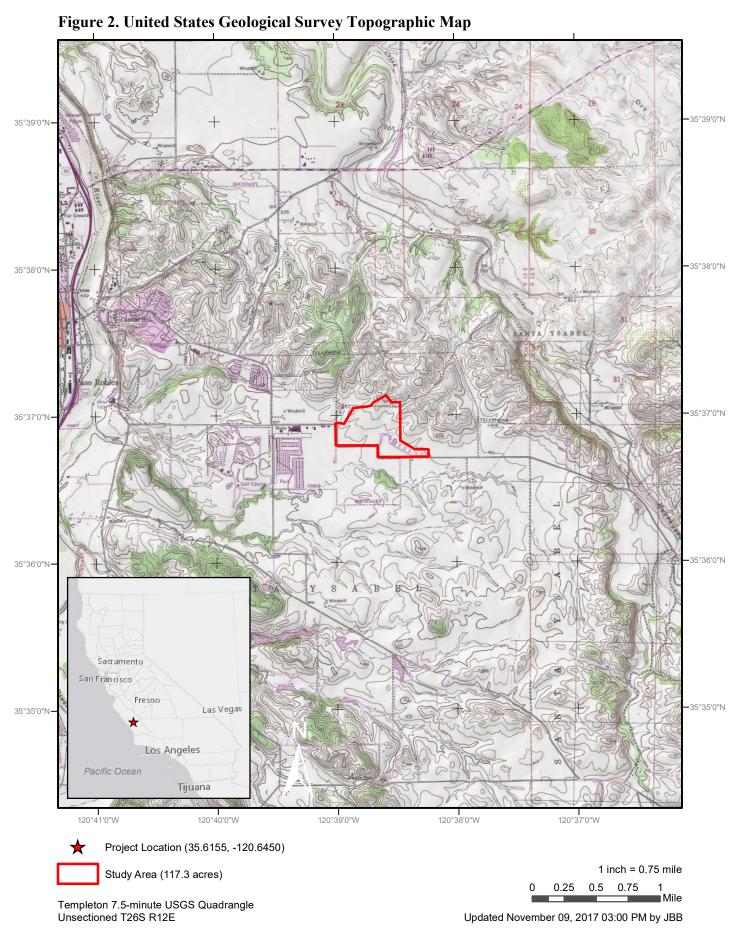


Figure 3. Aerial Imagery History

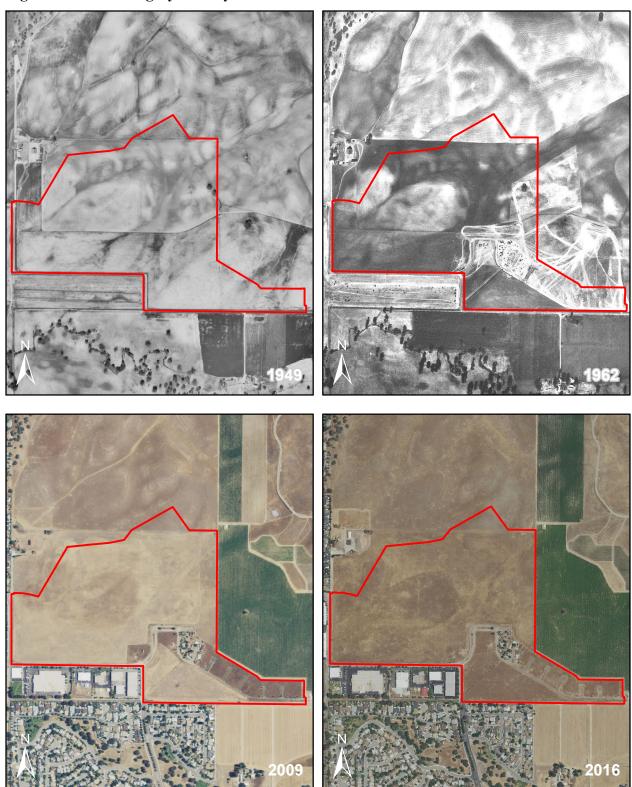






Figure 4. Hydrologic Unit Codes

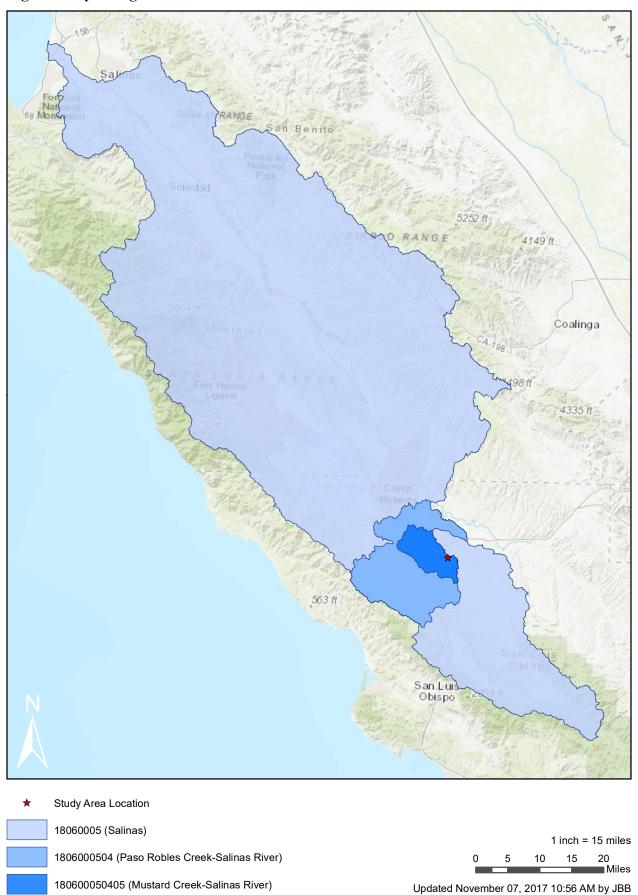


Figure 5. Federal Emergency Management Agency Flood Insurance Rate Map



FEMA/FIRM Zone Classification

Moderate to Low Risk Areas						
Zone	Description					
B and X (shaded)	Area of moderate flood hazard, usually the area between the limits of the 100- year and 500-year floods. B Zones are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than 1 square mile.					
C and X (unshaded)	Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level. Zone C may have ponding and local drainage problems that don't warrant a detailed study or designation as base floodplain. Zone X is the area determined to be outside the 500-year flood and protected by levee from 100- year flood.					

High Risk Areas

High Risk Areas					
Zone	Description				
A	Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.				
AE	The base floodplain where base flood elevations are provided. AE Zones are now used on new format FIRMs instead of A1-A30 Zones.				
A1-A30	These are known as numbered A Zones (e.g., A7 or A14). This is the base floodplain where the FIRM shows a BFE (old format).				
AH	Areas with a 1% annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.				
AO	River or stream flood hazard areas, and areas with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown within these zones.				
AR	Areas with a temporarily increased flood risk due to the building or restoration of a flood control system (such as a levee or a dam). Mandatory flood insurance purchase requirements will apply, but rates will not exceed the rates for unnumbered A zones if the structure is built or restored in compliance with Zone AR floodplain management regulations.				
A99	Areas with a 1% annual chance of flooding that will be protected by a Federal flood control system where construction has reached specified legal requirements. No depths or base flood elevations are shown within these zones.				
V	Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. No base flood elevations are shown within these zones.				
VE, V1-30	Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.				

Figure 6. National Wetlands Inventory

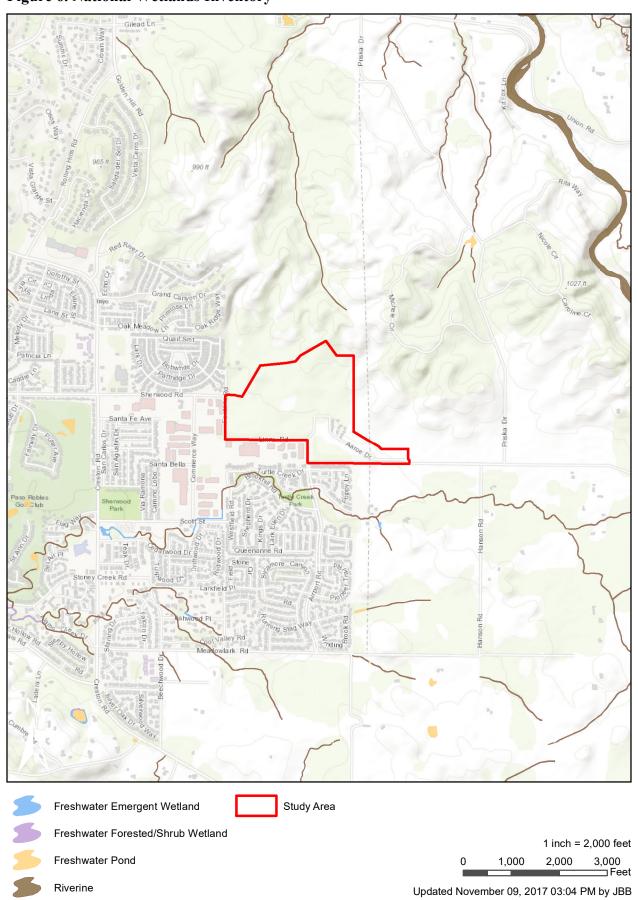
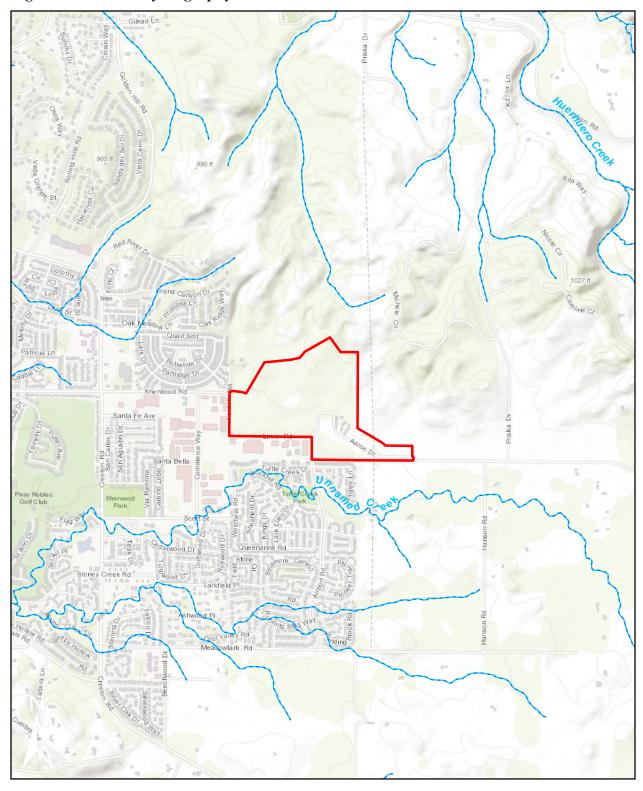


Figure 7. National Hydrography Dataset





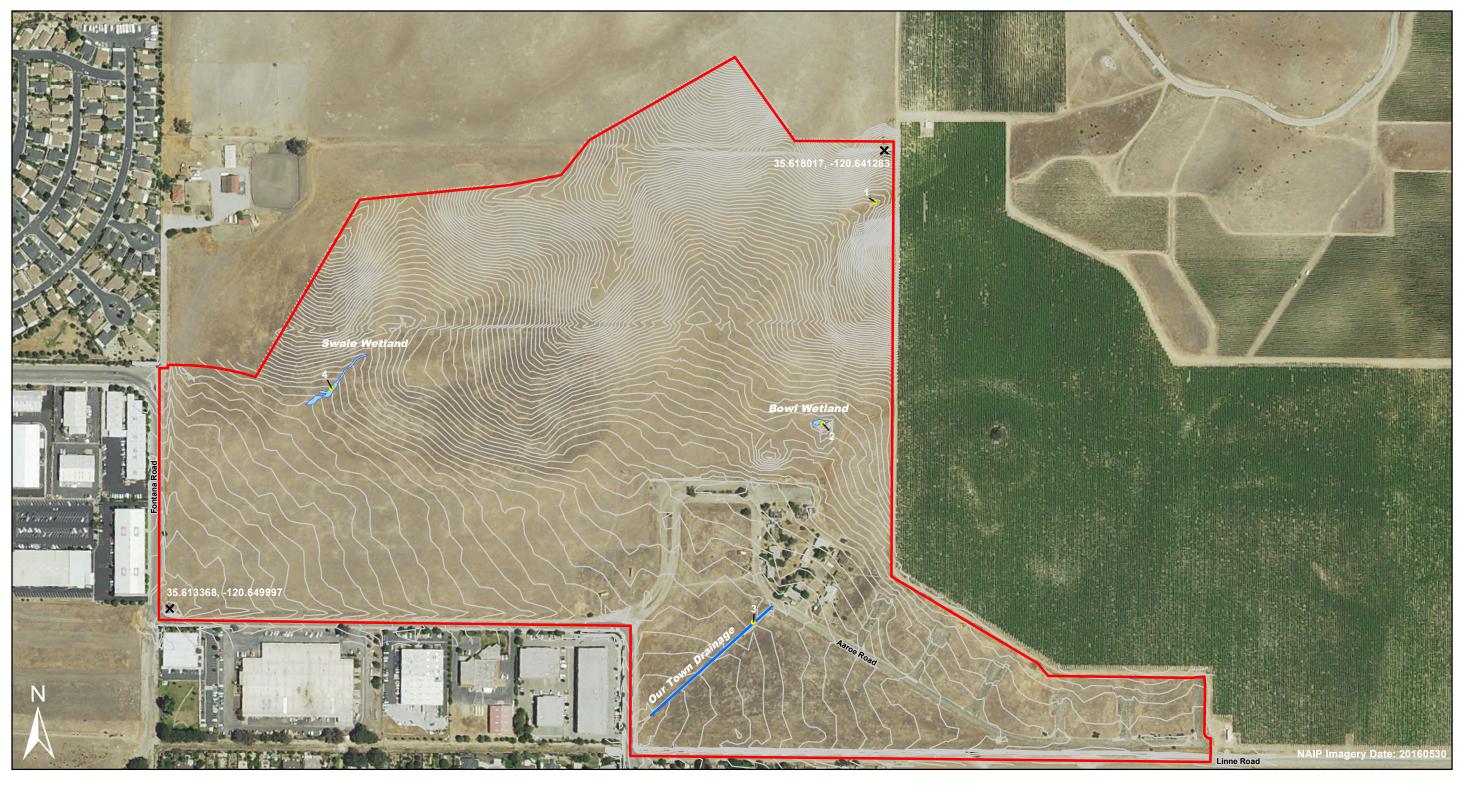
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Exhibit A – Delineation of Jurisdictional Areas

Exhibit A. Delineation of Jurisdictional Areas



Sample Sites

X Map Reference Point

State Wetlands (0.08 acre)

Study Area (117.3 acres)

Non-Wetland Waters of the U.S. (591 feet)

Site Name: Chandler Ranch Investigators: Jacqueline Tilligkeit, Jason Dart

Site Topography (1-Foot Countour Interval)

Map Updated November 16, 2017 08:14 AM by JBB

0 100 200 300 400 500 600

1 inch = 350 Feet

Exhibit B – Wetland Determination Data Forms

A United States Army Corps of Engineers, Wetland Determination Data Form (2008 Arid West Supplement Version 2.0) was completed in the field for two sampling sites. The forms included here are copies of forms written in the field. The original forms are on file in the Althouse and Meade, Inc. office.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Chardler Pranch	City/C	County: Pase	o Robles Sampling Date: 5-3-17
1/			State:A Sampling Point: /
Investigator(s): J. Tilliq Keit			
			convex, none): COACAVE Slope (%): 3
			Long: -120,641363 Datum: LUG84
			NWI classification:
Are climatic / hydrologic conditions on the site typical for		/ /	
Are Vegetation, Soil, or Hydrology			"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology			eeded, explain any answers in Remarks.)
			ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes	7	Is the Sampled	
	No	within a Wetlar	nd? Yes No
Remarks:			
VECETATION . Use a significance of m			
VEGETATION – Use scientific names of pl			I Daniel Tark
Tree Stratum (Plot size:)	Absolute Don <u>% Cover</u> Spe	ninant Indicator cies? Status	Dominance Test worksheet: Number of Dominant Species
1,			That Are OBL, FACW, or FAC:(A)
2.			Total Number of Dominant
3.			Species Across All Strata: (B)
4			Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: _ ハムハー)	= To	tal Cover	That Are OBL, FACW, or FAC: (A/B)
1			Prevalence Index worksheet:
2			Total % Cover of: Multiply by:
3			OBL species x1 =
4			FACW species x 2 =
5			FAC species x 3 =
Herb Stratum (Plot size: 3×3)	= To	tal Cover	FACU species x 4 =
1. Festuca nevenne	25 ·	FAC	UPL species x 5 = Column Totals: (A) (B)
2. Bromus diandres	10	N OPL	Column rotals (A) (B)
3. Bromus hordeacus	<u></u>	N FACO	Prevalence Index = B/A =
4. Hordeum murinum		V FAC	Hydrophytic Vegetation Indicators:
5			∑ Dominance Test is >50%
6			Prevalence Index is ≤3.0¹
7			Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
8		tal Cover	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)	<u> 100</u> = 10	tai Cover	
1			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2			
	= To	tal Cover	Hydrophytic Vegetation
% Bare Ground in Herb Stratum % Co	over of Biotic Crust _	_ <i>O</i>	Present? Yes No
Remarks:			
			•
· ·			

						Sampling Poir	II
Profile Des	cription: (Describe to	o the depth	needed to document the in	dicator or conf	irm the absence of	indicators.)	
Depth	Matrix		Redox Features	1 , 2			
(inches)	Color (moist)		Color (moist) %	Type ¹ Loc ²		Remarks	3
0-16	104R 2/2	100			_ <u>_ SFC_</u> _		
	,		······································				
						· · · · · · · · · · · · · · · · · · ·	
							
			duced Matrix, CS=Covered			on: PL=Pore Lining,	
-		nie to all LR	Rs, unless otherwise noted	1.)		r Problematic Hydri	c Solis":
Histosol	(A1) pipedon (A2)		Sandy Redox (S5) Stripped Matrix (S6)			ck (A9) (LRR C) ck (A10) (LRR B)	
	istic (A3)		Loamy Mucky Mineral	(F1)		Vertic (F18)	
	en Sulfide (A4)		Loamy Gleyed Matrix (nt Material (TF2)	
	d Layers (A5) (LRR C))	Depleted Matrix (F3)		Other (Ex	rplain in Remarks)	
	ick (A9) (LRR D)	(0.4.4)	Redox Dark Surface (F	•			
	d Below Dark Surface ark Surface (A12)	(A11)	Depleted Dark SurfaceRedox Depressions (F8)		3Indicators of	hydrophytic vegetatio	n and
	Aucky Mineral (S1)		Vernal Pools (F9)	D)		drology must be pres	
	Gleyed Matrix (S4)		Volliari oolo (i o)		•	urbed or problematic.	Ont,
	Layer (if present):					· · · · · · · · · · · · · · · · · · ·	
Type:	rone		_				
					Usedala Osti Ba	esent? Yes	No 1
Depth (in	ches): <i>> 1 &</i> _				Hydric Soil Pr	636Ht: 163	_ 140
Depth (in Remarks:	ches):>16				Hydric Soil Pr	esent: 165	NO
	ches):				Hydric Soil Pr	esent: 165	
	ches): <i>> 1 G</i>		rene		Hydric Soil Pr		
	ches):>16		real		Hydric Soil Pr		
Remarks:	· · · · · · · · · · · · · · · · · · ·				Hydric Soil Pr		
Remarks:	GY				Hydric Soil Pr		
Remarks: YDROLO Wetland Hy	GY drology Indicators:	e required: c	neck all that apply)				
Remarks: YDROLO Wetland Hy Primary India	GY drology Indicators: cators (minimum of on	e required; c			Seconda	ry Indicators (2 or mo	ore required)
YDROLO Wetland Hy Primary India Surface	GY drology Indicators: cators (minimum of on Water (A1)	e required; c	neck all that apply) Salt Crust (B11) Biotic Crust (B12)		Seconda Wat	ry Indicators (2 or mo er Marks (B1) (Riveri	ore required)
YDROLO Wetland Hy Primary India Surface	GY drology Indicators: cators (minimum of on Water (A1) ater Table (A2)	e required; c	Salt Crust (B11)	(B13)	<u>Seconda</u> Wat Sed	ry Indicators (2 or mo	ore required) ine) Riverine)
YDROLO Wetland Hy Primary India Surface High Wa Saturati	GY drology Indicators: cators (minimum of on Water (A1) ater Table (A2)	,	Salt Crust (B11) Biotic Crust (B12)	• •	<u>Seconda</u> Wat Sed Drift	ry Indicators (2 or mo er Marks (B1) (Riveri iment Deposits (B2) (ore required) ine) Riverine)
YDROLO Wetland Hy Primary India Surface High Wa Saturati Water M	GY drology Indicators: cators (minimum of on Water (A1) ater Table (A2) on (A3)	ne)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates	or (C1)	Seconda Wat Sed Drift Drai	ry Indicators (2 or mo er Marks (B1) (Riveri iment Deposits (B2) (Deposits (B3) (River	ore required) ine) Riverine) 'ine)
YDROLO Wetland Hy Primary India Surface High Wa Saturati Water M Sedime	GY drology Indicators: cators (minimum of on Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriverin	ne) riverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Odd	or (C1) s along Living F	Seconda Wat Sed Drift Drai !	ry Indicators (2 or mo er Marks (B1) (River i iment Deposits (B2) (Deposits (B3) (Rive r nage Patterns (B10)	ore required) ine) Riverine) 'ine)
YDROLO Wetland Hy Primary India Surface High Wa Saturati Water M Sedimer Drift De Surface	GY drology Indicators: cators (minimum of on- Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriverin nt Deposits (B2) (Nonri cosits (B3) (Nonriverin Soil Cracks (B6)	ne) riverine) ne)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reduction	or (C1) es along Living F Iron (C4) n in Tilled Soils (Seconda	ery Indicators (2 or mo er Marks (B1) (Riveri iment Deposits (B2) (Deposits (B3) (River nage Patterns (B10) Season Water Table rfish Burrows (C8) iration Visible on Aeri	ore required) ine) Riverine) rine)
YDROLO Wetland Hy Primary India Surface High Wa Saturati Water M Sedimel Drift Del Surface Inundati	GY drology Indicators: cators (minimum of one Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriverin nt Deposits (B2) (Nonriverin cosits (B3) (Nonriverin Soil Cracks (B6) on Visible on Aerial Im	ne) riverine) ne)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reductior Thin Muck Surface (C	or (C1) es along Living F Iron (C4) n in Tilled Soils (7)	Seconda	ery Indicators (2 or more er Marks (B1) (Riveri iment Deposits (B2) (Deposits (B3) (River nage Patterns (B10) Season Water Table rfish Burrows (C8) iration Visible on Aeri llow Aquitard (D3)	ore required) ine) Riverine) rine)
YDROLO Wetland Hy Primary India Surface High Wa Saturati Water N Sedimee Drift Dep Surface Inundati Water-S	GY drology Indicators: cators (minimum of on- Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriverin to Deposits (B2) (Nonriverin cosits (B3) (Nonriverin Soil Cracks (B6) on Visible on Aerial Im tained Leaves (B9)	ne) riverine) ne)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reduction	or (C1) es along Living F Iron (C4) n in Tilled Soils (7)	Seconda	ery Indicators (2 or mo er Marks (B1) (Riveri iment Deposits (B2) (Deposits (B3) (River nage Patterns (B10) Season Water Table rfish Burrows (C8) iration Visible on Aeri	ore required) ine) Riverine) rine)
YDROLO Wetland Hy Primary India Surface High Wa Saturati Water M Sedimer Drift De Surface Inundati Water-S Field Obser	GY drology Indicators: cators (minimum of on- Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriverin at Deposits (B2) (Nonriverin cosits (B3) (Nonriverin Soil Cracks (B6) on Visible on Aerial Im tained Leaves (B9) vations:	ne) riverine) ne) nagery (B7)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reduction Thin Muck Surface (C Other (Explain in Rem	or (C1) es along Living F Iron (C4) n in Tilled Soils (7)	Seconda	ery Indicators (2 or more er Marks (B1) (Riveri iment Deposits (B2) (Deposits (B3) (River nage Patterns (B10) Season Water Table rfish Burrows (C8) iration Visible on Aeri llow Aquitard (D3)	ore required) ine) Riverine) rine)
YDROLO Wetland Hy Primary India Surface High Wa Saturati Water M Sedimen Drift De Surface Inundati Water-S Field Obser	GY drology Indicators: cators (minimum of one Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriverin at Deposits (B2) (Nonriverin cosits (B3) (Nonriverin Soil Cracks (B6) on Visible on Aerial Im tained Leaves (B9) vations: er Present?	ne) riverine) ne) nagery (B7)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reductior Thin Muck Surface (C Other (Explain in Rem	or (C1) es along Living F Iron (C4) en in Tilled Soils (7) earks)	Seconda	ery Indicators (2 or more er Marks (B1) (Riveri iment Deposits (B2) (Deposits (B3) (River nage Patterns (B10) Season Water Table rfish Burrows (C8) iration Visible on Aeri llow Aquitard (D3)	ore required) ine) Riverine) rine)
YDROLO Wetland Hy Primary India Surface High Wa Saturati Water M Sedimer Drift De Surface Inundati Water-S Field Obser	GY drology Indicators: cators (minimum of on Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriverin the Deposits (B2) (Nonriverin Soil Cracks (B6) on Visible on Aerial Impariance Leaves (B9) vations: er Present? Yes	ne) riverine) ne) nagery (B7) s No . s No .	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reduction Thin Muck Surface (C Other (Explain in Rem	or (C1) es along Living F Iron (C4) en in Tilled Soils (7) earks)	Seconda Wat Sed Drift Drai Coots (C3) Dry- Cray C6) Satu Sha	ery Indicators (2 or more er Marks (B1) (Riveri iment Deposits (B2) (Deposits (B3) (River nage Patterns (B10) Season Water Table rfish Burrows (C8) iration Visible on Aeri llow Aquitard (D3)	ore required) ine) Riverine) rine) (C2)

US Army Corps of Engineers Arid West – Version 2.0

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Chardler Ranch	C	City/County: Pase	2 Rebles Sampling Date: 5-3-17			
			State: Sampling Point:			
Investigator(s): 1711; aki; t & Kalulerson Section, Township, Range: 1765 R12E						
Landform (hillslope, terrace, etc.): Atticsa (pool Local relief (concave, convex, none): Concave Slope (%):						
Subregion (LRR):						
Are climatic / hydrologic conditions on the site typical for this	Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No						
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.						
Hydrophytic Vegetation Present? Yes No	·	le the Campled	Avon			
Hydric Soil Present? Yes No		Is the Sampled within a Wetlan				
Wetland Hydrology Present? Yes No		within a wethan	10? Tes			
Remarks: Artificial pool with a mound display any sign of conne	l of c	splultin ty-isolate	the mildle, Does not			
VEGETATION – Use scientific names of plant		,				
Tree Charles (Diet eine ACA)	Absolute	Dominant Indicator	Dominance Test worksheet:			
Tree Stratum (Plot size: None)	<u>% Cover</u>	Species? Status	Number of Dominant Species That Are OBL FACW or FAC: (A)			
2			That Are OBL, FACW, or FAC: (A)			
3		·	Total Number of Dominant			
4			Species Across All Strata: (B)			
Sapling/Shrub Stratum (Plot size:)	0	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)			
1			Prevalence Index worksheet:			
2			Total % Cover of:Multiply by:			
3			OBL species x 1 =			
4			FACW species x 2 =			
5			FAC species x 3 =			
Herb Stratum (Plot size: 5'x 10')	_0_	= Total Cover	FACU species x 4 =			
1. Hordeum marinum	40	FAC 1	UPL species x 5 =			
2. Runex Crispus		FACT	Column Totals: (A) (B)			
3. Juncus bulonius	10	FACW N	Prevalence Index = B/A =			
4. Flatuca perennis	-13	FAC N	Hydrophytic Vegetation Indicators:			
5. Asclepia Prosicularis	3	FAC N	∑ Dominance Test is >50%			
6. Bromus hordeaux	1	FACO N	Prevalence Index is ≤3.0 ¹			
7. Psilocalphus tenellus	1	OBL N	Morphological Adaptations ¹ (Provide supporting			
8	10	\mathcal{N}	data in Remarks or on a separate sheet)			
	83:	= Total Cover	Problematic Hydrophytic Vegetation ¹ (Explain)			
Woody Vine Stratum (Plot size: Nonl)			The Bank of the Asset of the As			
1			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
2		T-1-1-0				
		= Total Cover	Hydrophytic Vegetation			
% Bare Ground in Herb Stratum % Cover	of Biotic Cru	ıst	Present? Yes No			
Remarks:						
, and the second						

Histosol (A1) Sandy Redox (S5) 1 Histic Epipedon (A2) Stripped Matrix (S6) 2 Black Histic (A3) Loamy Mucky Mineral (F1) R Hydrogen Sulfide (A4) Loamy Mucky Mineral (F2) R Stratified Layers (A5) (LRR C) Depleted Matrix (F2) R Stratified Layers (A5) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Indications (Mineral (S1) Sandy Mucky Mineral (S1) Vernal Pools (F9) Wetter Sandy Gleyed Matrix (S4) Unlee Restrictive Layer (if present): Type: Depth (inches): Remarks: WPDROLOGY Wetland Hydrology Indicators:	Sampling Point:
Color (moist) % Color (moist) % Type' Loc' Texture Color (moist) % Type' Loc' PL Color (moist) % Type' Loc	ence of indicators.)
Type: C=Concentration, D=Depletion, RM-Reduced Matrix, CS=Covered or Coated Sand Grains. Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (Art) Sandy Redox (S5) 1 Histo Epipedon (A2) Stripped Matrix (S6) 2 Black Histic (A3) Loamy Mucky Mineral (F1) R Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) R Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) R Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) R Hydric Below Dark Surface (A11) Depleted Matrix (F2) R Redox Dark Surface (F6) Depleted Dark Surface (F7) Thick Dark Surface (A11) Redox Depressions (F8) Indicators (F8)	D 1
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators: (Applicabl	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Wetland Hydrology Indicators: Primary Indicators (minimum of one required: check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B2) (Nonriverine) Surface Soll Cracks (B8) Inundation Visible on Aerial Imagery (B7) Water Stained Leaves (B9) Other (Explain in Remarks) Field Observationes: Surface Water Present? Yes No Depth (inches): Wetland Hydroles) Wetland Hydroles): Wetland Hydroles): Wetland Hydroles): Wetland Hydroles): Wetland Hydroles): Wetland Hydroles): Wetland Hydroles Saluration (C4) Saluration Present? Yes No Depth (inches): Wetland Hydroles Saluration (Pain America (P7) Wetland Hydroles (P3) Wetland Hydroles (P4) Wetland Hydr	<u>C</u>
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	
Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	
Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	
Histosol (A1) Sandy Redox (S5)	
Histosol (A1) Sandy Redox (S5)	
Histosol (A1)	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	² Location: PL=Pore Lining, M=Matrix.
Histosol (A1) Sandy Redox (S5) 1 Histic Epipedon (A2) Stripped Matrix (S6) 2 Black Histic (A3) Loamy Mucky Mineral (F1) Re Hydrogen Sulfide (A4) Depleted Matrix (F2) Re Stratified Layers (A5) (LRR C) Depleted Matrix (F3) O 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Redox Depressions (F8) Wetland Hydrology Matrix (S4) Unle Sandy Mucky Mineral (S1) Vernal Pools (F9) Wetl Sandy Gleyed Matrix (S4) Unle Sestrictive Layer (if present): Type: Depth (inches): Sermary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Roots (C3) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Water-Stalined Leaves (B9) Opepth (inches): Surface Water Present? Yes No Depth (inches): Surface Vater Present? Yes No Depth (inches):	ators for Problematic Hydric Soils ³ :
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 (F1) Thick Dark Surface (A12) Sandy Mucky Mineral (F3) Depleted Dark Surface (F6) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Seatly Mucky Mineral (S1) Seatly Mucky Mineral (S1) Sandy Mucky Mineral (S1) Seatly Mucky Mineral (S1) Seatly Mucky Mineral (S1) Seatly Mucky Mineral (S1) Seatly Mucky Mineral (F1) Redox Dark Surface (F6) Depleted Dark Surface (F7) Thick Dark Surface (F8) Wetland Hydrology (F8) Wetland Hydrology (F8) Wetland Hydrology (F8) Wetland Hydrology Indicators: Depth (inches): Seatly Mucky Mineral (F1) Redox Matrix (F2) Redox Dark Surface (F6) Depleted Dark Surface (F6) Depleted Dark Surface (F6) Depleted Dark Surface (F8) Wetland Hydrology (F8) Saluration (F1) Redox Dark Surface (F8) Seatly Matrix (F2) Redox Depleted Matrix (F2) Redox Depleted Dark Surface (F8) Saluration (F1) Redox Matrix (F2) Redox Depleted Dark Surface (F8) Saluration (F1) Redox Matrix (F2) Redox Depleted Matrix (F2) Redox Depleted Dark Surface (F8) Saluration (F1) Redox Depleted Matrix (F2) Redox Depleted Matrix (F2) Redox Depleted Matrix (F2) Redox Depleted Dark Surface (F8) Saluration (F1) Redox Depleted Dark Surface (F8) Saluration (F1) Redox Dark Surface (F8) Saluration (F1) Redox Depleted Matrix (F2) Redox Depleted Dark Surface (F8) Saluration (F8) Saluration (F8) Saluration (F8) Saluration (F1) Redox Dark Surface (F8) Saluration (F1) Saluration (F1) Redox Dark Surface (F8) Saluration (F8) Saluration (F1) Redox Dark Surface (F8) Saluration (F1) Redox Dark Sur	cm Muck (A9) (LRR C)
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Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Lestrictive Layer (if present): Type:	
Sandy Mucky Mineral (S1)	ators of hydrophytic vegetation and
Sandy Gleyed Matrix (S4) Cestrictive Layer (if present): Type:	land hydrology must be present,
Type:	ess disturbed or problematic.
Depth (inches):	
Popth (inches):	
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Driff Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Other (Explain in Remarks) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Other (Explain in Remarks) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Depth (inches): Depth (inches): Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Depth (inches): Depth (inches): Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Depth (inches): Depth (inches): Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Depth (inches): Presence of Reduced Iron (C4) Depth (inches): Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Depth (inches): Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Depth (inches): Presence of Reduced Iron (C4) Presence of Reduced	Drainage Patterns (B10)
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Water-Stained Leaves (B9) Other (Explain in Remarks) Field Observations: Surface Water Present? Ves No Depth (inches): Staturation Present? Ves No Depth (inches): Depth (inches): Depth (inches): Depth (inches): Wetland Hydro	Saturation Visible on Aerial Imagery (C9
Relation Present? Yes No Depth (inches): Wetland Hydro	_ Shallow Aquitard (D3)
Surface Water Present? Yes No Depth (inches):	_ FAC-Neutral Test (D5)
Vater Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydro	
Saturation Present? Yes No Depth (inches): Wetland Hydro	
Saturation Present? Yes No Depth (inches): 8 Wetland Hydro	
	Nogy Propert? Von Ale
pescribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available	9:
. , , , , , , , , , , , , , , , , , , ,	
Remarks:	
Water ends at pool - 'solated feature,	

WETLAND DETERMINATION DATA FORM -- Arid West Region

Project/Site: Chardler Basch	City/0	Sounty Pasi	DROBLES Sampling Date: 5-4-17		
Applicant/Owner: A/Pas (1/04)	Oity/	·	State: CA Sampling Point: 4		
Investigator(s): JoTilliglee, F. Section, Township, Range: T265 R12E					
Landform (hillslope, terrace, etc.): \underline{SUall} Local relief (concave, convex, none): $\underline{COCCavl}$ Slope (%): \underline{S} Subregion (LRR): \underline{LRRC} Lat: $\underline{356615593}$ Long: $\underline{-120648051}$ Datum: $\underline{W(458651)}$					
<i>1 1</i>					
Soil Map Unit Name: <u>Arbockle - Pos</u> , fo	is comp	(ex	NWI classification: NO LE		
Are climatic / hydrologic conditions on the site typical for this	s time of year? `	/es <u>/</u> No _	(If no, explain in Remarks.)		
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS - Attach site map	showing sar	npling point l	ocations, transects, important features, etc.		
Hydrophytic Vegetation Present? Yes N	o	la tha Camania	I Aven		
	o	Is the Sampled within a Wetlan	/		
Wetland Hydrology Present? Yes N	o	within a wellar	id: ies		
Remarks: Wetlandinswale feature flow path to TNW	with.	clear be	oundary. No clear		
VEGETATION – Use scientific names of plan	ts.				
7 0 1 17 1 1 1 1 1 1		ninant Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: _NONC_) 1	% Cover Spe	ecles? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)		
2.			Total Number of Dominant		
3			Species Across All Strata: (B)		
4.	·		Percent of Dominant Species		
Sapling/Shrub Stratum (Plot size:)	= To	otal Cover	That Are OBL, FACW, or FAC: (A/B)		
1			Prevalence Index worksheet:		
2			Total % Cover of: Multiply by:		
3			OBL species x 1 =		
4			FACW species x 2 =		
5.	· — —		FAC species x 3 =		
Herb Stratum (Plot size:)	= To	otal Cover	FACU species x 4 =		
1. Festucu perennis	30	Y FAC	UPL species x 5 =		
2. Hordevan marinum	30	Y FAC	Column Totals: (A) (B)		
3. Bromus hordeaceus	:5]	U FACO	Prevalence Index = B/A =		
4. Jences bufonius	10/	N FACW	Hydrophytic Vegetation Indicators:		
5. Flatuca myuros	. <u>_5</u>	UPL	∑ Dominance Test is >50%		
6. Psi ocarphus tenellus	10 1	<u> 08L</u>	Prevalence Index is ≤3.0¹		
7			Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)		
8			Problematic Hydrophytic Vegetation ¹ (Explain)		
Woody Vine Stratum (Plot size: None)	<u>90</u> = To	tal Cover	1 Toblematic Hydrophytic vegetation (Explain)		
vvoody vine Stratum (Plot size:			¹ Indicators of hydric soil and wetland hydrology must		
2			be present, unless disturbed or problematic.		
2	= To	tal Cover	Hydrophytic		
% Bare Ground in Herb Stratum % Cover	of Biotic Crust _	. 6	Vegetation Present? Yes No		
Remarks:					

US Army Corps of Engineers

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	AF 1988	Section 1

Sampling Point:

Composition Continuing Co	ure Remarks
y pe: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. y drife Soil indicators: (Applicable to all LRRs, unless otherwise noted.) Histosoi (A1) Histosoi (A1) Sandy Redox (S5) Black Histic (A3) Loamy Mucky Mineral (F1) Stratified Layers (A5) (LRR C) 1 cm Muck (A9) (LRR D) Depleted Matrix (F2) 1 cm Muck (A9) (LRR D) Depleted Dark Surface (F6) Depleted Dark Surface (F7) Thick Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Destrictive Layer (if present): Type: LOCE Depth (inches): 9 Popth (inches): 9 Hydrige Table (A2) Saluration (A3) Vater Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Drift Deposits (B3) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil racks (B6) Inundation Visible on Aerial Imagery (B7) Vater-Stained Leaves (B9) Jeth (inches): 9 Wetland Hydroles): 9 Wetland Hydroles): 9 Wetland Hydroles): 9 Wetland Hydroles): 9 Wetland Hydroles (C7) Water-Stained Leaves (B9) Jepth (inches): 9 Wetland Hydroles): 9 Wetland Hydroles (C7) Water-Stained Leaves (B9) Jepth (inches): 9 Wetland Hydroles capillary fringe) Depth (inches): 9 Wetland Hydroles capillary fringe) Depth (inches): 9 Wetland Hydroles capillary fringe) Depth (inches): 9 Wetland Hydroles capillary fringe) Wetland Hydroles capillary fringe) Depth (inches): 9 Wetland Hydroles capillary fringe) Wetland Hydroles capillary fringe) Wetland Hydroles capillary fringe)	L Very rocky
y pe: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. y ciric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Sandy Redox (S5) Jahrian (S6) Black Histic (A3) Loamy Mucky Mineral (F1) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR C) Joepleted Matrix (F2) Joepleted Matrix (F2) Joepleted Below Dark Surface (A11) Depleted Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Setrictive Layer (if present): Type: Level Depth (inches): Jahrian (Jahrian (
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aturation Present? Yes No Depth (inches): Wetland Hydro	
cludes capillary fringe)	
escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available	
2 3 7	ology Present? Yes No
emarks:	
on the second se	

Exhibit C – Wetland Determination Data Form to Determine OHWM

A United States Army Corps of Engineers, Wetland Determination Data Form was completed in the field for one drainage feature. The datasheet included here is a copy of the datasheet written in the field. The original is on file in the Althouse and Meade, Inc. office.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Chardler Pranch	City/Cour	nty: Pas	o Roble	Samplin	ng Date: 5-	3-17
Applicant/Owner: Aug (5/5/5/00)			State:	A Samplin	ng Point: 3	
Investigator(s): Sotilligkeit to the Anders.	Section,	Гownship, Ra	nge: <u>7265</u>	RIZE		
Landform (hillslope, terrace, etc.):			convex, none): <u></u>			
Subregion (LRR): <u>LRRC</u> Lat: <u>36,6/34/</u> Long: <u>-120,69785</u> Datum:						
Soil Map Unit Name: Sun Ysidro loan						
Are climatic / hydrologic conditions on the site typical for this time of ye			(If no, expla			
Are Vegetation, Soil, or Hydrology significantly	_		'Normal Circumstar			n
Are Vegetation, Soil, or Hydrology naturally pro			eded, explain any	•		<u></u>
SUMMARY OF FINDINGS – Attach site map showing			•		•	s, etc.
Hydrophytic Vegetation Present? Yes No						
Hydric Soil Present? Yes No		the Sampled				
Wetland Hydrology Present? Yes No	WI	thin a Wetlar	1d? Yes	No		l
Remarks: Sheet being used to determine	040	Mof	an other	(non-w	etland)	
waters						
VEGETATION – Use scientific names of plants.						
Absolute Tree Stratum (Plot size:) % Cover		nt Indicator ? Status	Dominance Test			
1	эроспос	· Otatao	Number of Domir That Are OBL, FA			(A)
2.			Total Number of	•		,
3			Species Across A			(B)
4			Percent of Domir	ant Species		
Sapling/Shrub Stratum (Plot size: 5.4e)	= Total C	Cover	That Are OBL, F			(A/B)
1. Baccharis o'lularis			Prevalence Inde	x worksheet:		
2					Multiply by:	
3.			OBL species _			_
4			FACW species _	x	2 =	_
5			FAC species _			- 1
Herb Stratum (Plot size: Sife)	= Total C	Cover	FACU species _			
1. Alla G tatura			UPL species _			
2. Bromus d'agolices			Column Totals: _	(A	.)	_ (B)
3. Bronus horeleaceus	-		Prevalence	Index = B/A =		_
4. Trifalium Sa			Hydrophytic Ve	getation Indica	tors:	
5. Hirschfoldic spo			Dominance	Test is >50%		
6			Prevalence I			
7			Morphologica	al Adaptations ¹	(Provide support separate sheet)	ing
8			Problematic			n)
Woody Vine Stratum (Plot size:)	= Total C	Cover		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	gotation (Explain	
1			¹ Indicators of hyd	lric soil and wet	land hydrology m	nust
2.			be present, unles			
	= Total C	cover	Hydrophytic			
% Bare Ground in Herb Stratum % Cover of Biotic C	rust		Vegetation Present?	Yes	No V	
Remarks:			I			
Less than 5% roverage of.	botta	2004	draina9	o Bunk	45	
USS than 5% coverage of bottom of drainage, Banks dominated by upland species listed above.						
y your after	ر ب					
						ı

SOIL Sampling Point: _ Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features (irnches) Color (moist) __Texture ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: ___ Sandy Redox (S5) Histosol (A1) 1 cm Muck (A9) (LRR C) Histic Epipedon (A2) Stripped Matrix (S6) 2 cm Muck (A10) (LRR B) Black Histic (A3) Loamy Mucky Mineral (F1) Reduced Vertic (F18) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Red Parent Material (TF2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) Other (Explain in Remarks) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) 3Indicators of hydrophytic vegetation and Sandy Mucky Mineral (S1) Vernal Pools (F9) wetland hydrology must be present. Sandy Gleyed Matrix (S4) unless disturbed or problematic. Restrictive Layer (if present): Type: Depth (inches): Hydric Soil Present? Yes No Remarks: Nopit HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Salt Crust (B11) Water Marks (B1) (Riverine) High Water Table (A2) ∠ Biotic Crust (B12) Sediment Deposits (B2) (Riverine) Saturation (A3) Aquatic Invertebrates (B13) _ Drift Deposits (B3) (Riverine) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) ___ Drainage Patterns (B10) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Roots (C3) ___ Dry-Season Water Table (C2) X Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) ✓ Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) __ Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) _ Shallow Aquitard (D3) Water-Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5) Field Observations: Surface Water Present? _ Depth (inches): No V Depth (inches): Water Table Present? Saturation Present? __ No ____ Depth (inches): _ Wetland Hydrology Present? Yes _____ No _ (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Change in Vegetation % to indicate OHWM. Width is approx 205 feet, Also break in bank and the above listed hydrology

US Army Corps of Engineers

indicators whin OHWM.

Appendix A – Assessor Parcel Numbers within Study Area

APN	A orog	APN	A area
	Acres	020-331-001	Acres
020-211-006	1.21		0.16
020-211-009	0.89	020-331-002	0.14
020-211-010	0.10	020-331-003	0.12
020-211-012	10.63	020-331-004	0.19
020-321-001	1.11	020-331-005	0.19
020-321-002	0.25	020-331-006	0.12
020-322-001	0.17	020-331-007	0.14
020-322-002	0.15	020-331-008	0.16
020-322-003	0.11	020-332-001	0.20
020-322-004	0.18	020-332-002	0.17
020-322-005	0.16	020-332-003	0.16
020-322-006	0.16	020-332-004	0.19
020-322-007	0.17	020-332-005	0.19
020-322-008	0.17	020-332-006	0.12
020-322-009	0.17	020-332-007	0.15
020-323-001	0.16	020-332-008	0.16
020-323-002	0.14	020-333-001	0.17
020-323-003	0.12	020-333-002	0.16
020-323-004	0.19	020-333-003	0.15
020-323-005	0.20	020-333-004	0.15
020-323-006	0.12	020-333-005	0.16
020-323-007	0.17	020-333-006	0.17
020-323-008	0.19	020-334-001	0.18
020-324-001	0.16	020-334-002	0.24
020-324-002	0.14	020-334-003	0.19
020-324-003	0.12	020-334-004	0.15
020-324-004	0.19	020-334-005	0.16
020-324-005	0.19	020-334-006	0.17
020-324-006	0.12	025-362-037	0.76
020-324-007	0.14	025-381-001	4.45
020-324-008	0.16	025-381-005	83.46
-			

Appendix B – Custom USDA Soil Report



VRCS

Natural Resources Conservation Service A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for San Luis Obispo County, California, Paso Robles Area

Chandler Ranch Wetland Delineation



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



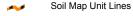
MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons



Soil Map Unit Points

Special Point Features

Blowout ဖ

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area Stony Spot



Very Stony Spot



Wet Spot Other



Special Line Features

Water Features

Streams and Canals

Transportation

Rails ---

Interstate Highways





Local Roads

Background

00

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24.000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Luis Obispo County, California, Paso

Robles Area

Survey Area Data: Version 10, Sep 28, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 16, 2016—Feb 23, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

San Luis Obispo County, California, Paso Robles Area (CA665)				
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI	
102	Arbuckle-Positas complex, 9 to 15 percent slopes	51.3	44.1%	
179	Nacimiento-Los Osos complex, 9 to 30 percent slopes	10.1	8.7%	
188	Rincon clay loam, 2 to 9 percent slopes, MLRA 14	0.0	0.0%	
197	San Ysidro loam, 0 to 2 percent slopes, MLRA 14	54.9	47.2%	
Totals for Area of Interest	,	116.4	100.0%	

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An association is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

San Luis Obispo County, California, Paso Robles Area

102—Arbuckle-Positas complex, 9 to 15 percent slopes

Map Unit Setting

National map unit symbol: hbrk Elevation: 600 to 1,500 feet

Mean annual precipitation: 12 to 20 inches Mean annual air temperature: 60 to 61 degrees F

Frost-free period: 200 days

Farmland classification: Not prime farmland

Map Unit Composition

Arbuckle and similar soils: 40 percent Positas and similar soils: 30 percent Minor components: 30 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arbuckle

Setting

Landform: Terraces

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Alluvium from mixed rock sources

Typical profile

H1 - 0 to 29 inches: fine sandy loam H2 - 29 to 53 inches: sandy clay loam

H3 - 53 to 62 inches: stratified sandy loam to very gravelly sandy clay loam

Properties and qualities

Slope: 9 to 15 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20

to 0.57 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Available water storage in profile: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): 4e Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C

Ecological site: COARSE LOAMY (R014XE003CA)

Hydric soil rating: No

Description of Positas

Setting

Landform: Terraces

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Alluvium from mixed rock sources

Typical profile

H1 - 0 to 10 inches: coarse sandy loam

H2 - 10 to 28 inches: clay

H3 - 28 to 40 inches: sandy clay loam

H4 - 40 to 60 inches: stratified sandy loam to gravelly clay loam

Properties and qualities

Slope: 9 to 15 percent

Depth to restrictive feature: 9 to 20 inches to abrupt textural change

Natural drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately

low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Calcium carbonate, maximum in profile: 5 percent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0

mmhos/cm)

Available water storage in profile: Very low (about 1.2 inches)

Interpretive groups

Land capability classification (irrigated): 4e Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: D

Ecological site: COARSE LOAMY CLAYPAN (R014XE005CA)

Hydric soil rating: No

Minor Components

Greenfield, fine sandy loam

Percent of map unit: 10 percent

Hydric soil rating: No

Positas

Percent of map unit: 10 percent

Hydric soil rating: No

Cropley

Percent of map unit: 4 percent

Hydric soil rating: No

Hanford, fine sandy loam

Percent of map unit: 3 percent

Hydric soil rating: No

Unnamed, areas of 15 to 30 percent slope

Percent of map unit: 1 percent

Hydric soil rating: No

Unnamed, areas of 15 to 30 percent slope

Percent of map unit: 1 percent

Hydric soil rating: No

Unnamed, areas with cobbles on the surface

Percent of map unit: 1 percent

Hydric soil rating: No

179—Nacimiento-Los Osos complex, 9 to 30 percent slopes

Map Unit Setting

National map unit symbol: hbv1 Elevation: 600 to 1,500 feet

Mean annual precipitation: 12 to 20 inches Mean annual air temperature: 60 degrees F

Frost-free period: 200 days

Farmland classification: Not prime farmland

Map Unit Composition

Nacimiento and similar soils: 30 percent Los osos and similar soils: 20 percent

Minor components: 50 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nacimiento

Setting

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Convex

Parent material: Residuum weathered from calcareous shale and/or sandstone

Typical profile

H1 - 0 to 18 inches: silty clay loam
H2 - 18 to 28 inches: silty clay loam
H3 - 28 to 32 inches: weathered bedrock

Properties and qualities

Slope: 9 to 30 percent

Depth to restrictive feature: 20 to 40 inches to paralithic bedrock

Natural drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20

to 0.57 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Calcium carbonate, maximum in profile: 10 percent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0

mmhos/cm)

Available water storage in profile: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): 4e Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C

Ecological site: Fine Loamy 9-13 (R015XE020CA)

Hydric soil rating: No

Description of Los Osos

Setting

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Convex

Parent material: Residuum weathered from shale and/or sandstone

Typical profile

H1 - 0 to 14 inches: clay loam H2 - 14 to 24 inches: clay

H3 - 24 to 59 inches: weathered bedrock

Properties and qualities

Slope: 9 to 30 percent

Depth to restrictive feature: 20 to 40 inches to paralithic bedrock

Natural drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to

moderately high (0.06 to 0.20 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0

mmhos/cm)

Available water storage in profile: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): 4e Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: D

Ecological site: Fine Loamy 9-13 (R015XE020CA)

Hydric soil rating: No

Minor Components

Balcom, loam

Percent of map unit: 10 percent

Hydric soil rating: No

Positas, coarse sandly loam

Percent of map unit: 10 percent

Hydric soil rating: No

Unnamed, similar to los osos soil

Percent of map unit: 10 percent

Hydric soil rating: No

Ayar, silty clay

Percent of map unit: 5 percent

Hydric soil rating: No

Diablo, clay

Percent of map unit: 5 percent

Hydric soil rating: No

Shimmon, loam

Percent of map unit: 5 percent

Hydric soil rating: No

Arbuckle, fine sandy loam

Percent of map unit: 1 percent

Hydric soil rating: No

Greenfield, fine sandy loam

Percent of map unit: 1 percent

Hydric soil rating: No

Rincon, clay loam

Percent of map unit: 1 percent

Hydric soil rating: No

Unnamed, gr/cb surfaces

Percent of map unit: 1 percent

Hydric soil rating: No

Unnamed, slopes of 30 to 50 percent

Percent of map unit: 1 percent

Hydric soil rating: No

188—Rincon clay loam, 2 to 9 percent slopes, MLRA 14

Map Unit Setting

National map unit symbol: 2tb8p

Elevation: 10 to 3,110 feet

Mean annual precipitation: 11 to 33 inches

Mean annual air temperature: 56 to 62 degrees F

Frost-free period: 250 to 320 days

Farmland classification: Prime farmland if irrigated

Map Unit Composition

Rincon and similar soils: 90 percent Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rincon

Setting

Landform: Alluvial fans, terraces

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Clayey alluvium derived from sedimentary rock

Typical profile

A - 0 to 6 inches: clay loam Ap - 6 to 18 inches: clay loam Bt - 18 to 52 inches: clay Btk - 52 to 64 inches: clay loam

Properties and qualities

Slope: 2 to 9 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to

moderately high (0.06 to 0.20 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Calcium carbonate, maximum in profile: 5 percent Available water storage in profile: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): 2e Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C

Ecological site: FINE LOAMY BOTTOM (R014XE025CA)

Minor Components

Arbuckle

Percent of map unit: 2 percent Hydric soil rating: No

Cropley

Percent of map unit: 2 percent Hydric soil rating: No

Lockwood

Percent of map unit: 2 percent Hydric soil rating: No

Capay

Percent of map unit: 2 percent Hydric soil rating: No

Brentwood

Percent of map unit: 1 percent Hydric soil rating: No

Antioch

Percent of map unit: 1 percent

Hydric soil rating: No

197—San Ysidro loam, 0 to 2 percent slopes, MLRA 14

Map Unit Setting

National map unit symbol: 2tyys Elevation: 70 to 1,990 feet

Mean annual precipitation: 13 to 22 inches Mean annual air temperature: 59 to 61 degrees F

Frost-free period: 300 to 360 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

San ysidro and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of San Ysidro

Setting

Landform: Alluvial fans, terraces, valley floors

Landform position (two-dimensional): Footslope, toeslope

Landform position (three-dimensional): Tread, talf

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Alluvium derived from sedimentary rock

Typical profile

A - 0 to 23 inches: loam B1 - 23 to 38 inches: clay loam Bt2 - 38 to 64 inches: loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: 16 to 24 inches to abrupt textural change

Natural drainage class: Moderately well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to

moderately high (0.06 to 0.20 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0

mmhos/cm)

Available water storage in profile: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): 3e Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C

Ecological site: LOAMY CLAYPAN (R014XE029CA)

Hydric soil rating: No

Minor Components

Arbuckle

Percent of map unit: 6 percent Hydric soil rating: No

Rincon

Percent of map unit: 2 percent Hydric soil rating: No

Pleasanton, loam

Percent of map unit: 2 percent Hydric soil rating: No

Solano

Percent of map unit: 2 percent Hydric soil rating: No

Cropley, clay

Percent of map unit: 1 percent Hydric soil rating: No

Pescadero

Percent of map unit: 1 percent

Landform: Basin floors

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Talf

Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: Yes

Palexeralfs

Percent of map unit: 1 percent Landform: Depressions Hydric soil rating: Yes

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Delineation of Potentially Jurisdictional Wetlands and Waters

for

Olsen Ranch

Paso Robles, San Luis Obispo County



Prepared for

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APPENDIX B. WETLAND DETERMINATION DATA FORMS

Cover Page: Mouth of pond with common spikerush. March 26, 2019.

Definitions of Wetland Indicators

Wetland Plant Indicator Status Ratings in Order of Wetland Affinity		
OBL	Obligate	Hydrophyte, almost always occur in wetland. Estimated probability >99 percent to occur in wetlands under natural conditions.
FACW	Facultative Wetland	Hydrophyte, usually occur in wetland, but may occur in non-wetland.
		Estimated probability >67% to 99% to occur in wetlands under natural conditions.
FAC	Facultative	Equally likely to occur in wetland and non-wetland.
		Estimated probability 33% to 67% to occur in wetlands under natural conditions.
FACU	Facultative Upland	Non-hydrophyte, usually occurs in non-wetland, but may occur in wetland.
		Estimated probability 1% to <33% to occur in wetlands under natural conditions.
UPL	Upland	Almost never occur in wetland.
		Estimated probability <1% to occur in wetlands under natural conditions.
NL	Not Listed	Species not included in federal list of wetland indicator plants.
		Assumed upland for purposes of wetland analysis.

1 INTRODUCTION

1.1 Purpose

This report provides a delineation of potential jurisdictional wetland and non-wetland waters according to federal standards on the Olsen Ranch Property (Study Area), located in the City of Paso Robles in San Luis Obispo County, California. Olsen Ranch 212, LLC requested this delineation from Althouse and Meade, Inc. Its purpose is to describe potentially jurisdictional waters and wetlands according to the Clean Water Act (CWA) Section 404, the Porter-Cologne Water Quality Act (State Water Code), and Fish and Game Code Section 1600. This document presents a comprehensive inventory and mapping effort of wetland and non-wetland aquatic resources within the Study Area and provides information for owners, the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), California Department of Fish and Wildlife (CDFW), and the Lead Agency in decisions regarding activities in the Study Area. Section 2.0 provides more detail on the regulatory framework and scope of this jurisdictional delineation.

1.2 Study Area Location and Extent

Approximate coordinates for the center of the Study Area are 35.606° N / 120.637° W (WGS84) in the Templeton United States Geological Survey (USGS) 7.5-minute topographic quadrangle (Figure 1). Elevation ranges from approximately 815 to 1000 feet above mean sea level. The Study Area is 254.1 acres bounded by Linne Road to the north, Hanson Road to the east, Meadowlark Road to the south, and a subdivision to the west (Figure 2).

1.3 Current Conditions

The Study Area covers approximately 248 acres of rolling hills, seasonal drainages, and agricultural land. *Quercus douglasii* (blue oaks) dot the landscape in the grasslands, and *Populus fremontii* (Fremont cottonwoods), *Salix laevigata* (red willows), and *Quercus lobata* (valley oaks) are associated with wet areas in the northernmost seasonal drainage. An ephemeral pond, created by a man-made dam, occurs on the property in a natural drainageway near the center of the property discussed in Section 1.3.2.

Three residential lots are currently on the property, with barns, irrigated and non-irrigated pastures, and other facilities associated with a livestock operation on the ranch. Debris piles consisting of old irrigation pipes, fence posts, and assorted farm equipment are on the property. The entire property has been historically grazed, and most of it has been farmed, except the steepest slopes in the southwest and northeast corners. The most recent farming has occurred in the northwest and eastern-center of the Study Area. The long history of intensive grazing and dry farming has left the landscape dominated by non-native plants, with few trees or shrubs outside of the riparian area. Blue oaks are scattered throughout the Study Area but are concentrated in the riparian habitat in the northern portion.

1.3.1 Vegetation and Habitats

Habitats in the Study Area are generally moderately disturbed and modified through land management practices such as disking and livestock range but are otherwise undeveloped except for a few rural houses and associated dirt roads which support non-native, herbaceous, forbs and grasses dominated by weedy species such as the invasive yellow star-thistle (*Centaurea solstitialis*) and Russian thistle (*Salsola tragus*).

The previously farmed and grazed land is dominated by wild oats (*Avena barbata* and *A. fatua*), barley (*Hordeum murinum*), annual bromes (*Bromus diandrus*, *B. hordeaceus*, and *B. madritensis* subsp. *rubens*), and mustards (*Brassica nigra* and *Hirschfeldia incana*) in high abundance with other occasional grasses and forbs. Large patches of dense yellow star-thistle occur in the northern pastures and the invasive annual grass medusahead (*Elymus caput-medusae*) is common in the southern portion.

The California annual grassland is composed primarily of non-native grasses and forbs. Dominant species include wild oats, annual bromes, filaree (*Erodium* ssp.), and mustards. Both early and late season wildflowers occur regularly in low abundance. Early season wildflowers include fiddlenecks (*Amsinckia* ssp.), blow wives (*Achyrachaena mollis*), valley tassels (*Castilleja attenuata*), lupines (*Lupinus* ssp.), and valley popcornflower (*Plagiobothrys canescens* var. *canescens*). Late-season wildflowers include spikeweed (*Centromadia fitchii*), clarkias (*Clarkia* ssp.), annual fireweed (*Epilobium brachycarpum*), and navarretia (*Navarretia* ssp.). Native perennial herbs such as milkweeds (*Asclepias* ssp.) and dwarf brodiaea (*Brodiaea terrestris*) are also found in low abundance.

1.3.2 Hydrology

Water enters the property from the east in two locations: one to the north and one near the center. The northern ephemeral drainage conveys water from east to west in a sinuous swale feature. Valley oak trees dominate the canopy with riparian trees such as Fremont cottonwood, red willow, and blue oak occurring occasionally. The understory is dominated by ripgut brome (*Bromus diandrus*) with occasional patches of a native perennial grass, creeping wild rye (*Elymus triticoides*). Other occasional species include the native narrowleaf milkweed (*Asclepias fascicularis*), non-native milk thistle (*Silybum marinum*), seaside barley (*Hordeum marinum*), and yellow star-thistle. The drainage supports seasonal pools.

The central drainage originates in the fallow fields on the property to the east which collects sheet flow from offsite. This small drainage, dominated by seaside barley, medusahead, and patches of Mexican rush (*Juncus mexicanus*), gathers water from plowed fields and carries water in a small channel for approximately 600 feet. Water in this drainage then enters a man-made stock pond. The stock pond supports a few red willow trees along its perimeter with the pool size variable throughout the wet season depending on precipitation and surface flow. Lotus sweetjuice (*Glinus lotoides*), hyssop loosestrife (*Lythrum hyssopifolia*), toad rush (*Juncus bufonius*), seaside barley, seaside heliotrope (*Heliotropium curassavicum* var. *oculatum*), common spikerush (*Eleocharis macrostachya*), and Bermuda grass (*Cynodon dactylon*) are found within and near the stock pond. Overflow from this stock pond is channeled to a subterranean drainage system that carries water under the adjacent housing development to the west.

Both the northern and central drainage are recorded in the National Hydrography Dataset (NHD). In this dataset, the central drainage is delineated as extending close to the eastern boundary of the Study Area and the northern drainage has a quarter mile long spur to the south (Figure 3). The National Wetlands Inventory (NWI) has a similar extent but a shorter spur and shorter central drainage. The spur on the northern drainage and the extension of the central drainage likely existed

at one time but have been altered through ranching practices such as plowing and road development. The stock pond is labeled as a Freshwater Pond wetland type in the NWI and the drainages are Riverine (Figure 4).

The USGS and United States Department of Agriculture (USDA)-Natural Resource Conservation Service (NRCS) developed nationally consistent watershed boundaries which range from a two digit code as the first level of classification (Hydrologic Unit Code [HUC] 2) to a 12 digit code for the most detailed watershed delineation (HUC12). The Study Area is in the Salinas watershed (HUC8) which is formed by Santa Lucia and Diablo ranges (Figure 5). The Salinas River flows north-northwest originating in the Los Padres National Forest and ending in Monterey Bay at the Pacific Ocean. The Study Area is approximately 2.75 miles east of the Salinas River. When water exits the Study Area in the northern drainage, it flows through housing developments as an open space, stormwater ditches, and underground sewer systems before reaching the Salinas. Figure 6 shows that the Study Area is dominated by an area of minimal flood hazard map unit in the National Flood Hazard Layer (FEMA 2019). A small section in the northwest portion of the Study Area, the western end of the northern drainage, is categorized as Zone A which is a one percent annual chance of flood hazard.

1.3.3 Soils

Six individual soil map units from the NRCS Soil Survey Geographic Database (SSURGO) overlap the Study Area: Arbuckle-Positas complex, Arbuckle-San Ysidiro complex, Cropley clay, Nacimiento-Los Osos complex, Rincon clay loam, and San Ysidro loam (USDA and NRCS 2019). These soil types are typically found on terraces and have alluvium parent material derived from calcareous or sedimentary rock. Slopes range from flat to 15 percent and the drainage class is well drained to moderately well drained. Soil pits were investigated in March and April 2019.

A custom soil report for the Study Area can be found as Appendix A.

1.3.4 Climate

The Climate Analysis for Wetlands Tables (WETS) for Paso Robles (Station ID 046730, 3 miles west of Study Area) indicates that average 30-year rainfall is 14.97 inches with maximum precipitation typically from January through March (Table 1).

TABLE 1. PRECIPITATION BY MONTH.

Data are provided in inches for the current rain year as well as the historical average.

Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1971-2000	0.02	0.05	0.33	0.58	1.35	1.95	3.34	3.39	2.9	0.79	0.23	0.03
2018-2019	0	0	0	0.28	3.23	1.12	5.3	6.72	3.01^{1}	-	-	-

Rainfall was above the WETS range in November 2018, January 2019, and February 2019 (NOAA 2019). Chart 1 shows the precipitation range minimum calculated at 70 percent probability the

¹ Value from the City of Paso Robles website, NOAA had not reported March totals when this report was written.

total will be higher than than the monthly average between 1971 and 2000. The precipitation range maximum probability is calculated at 30 percent chance the total will be higher than the monthly average. This results in a range of expected precipitation for each month where the total precipitation is likely to fall in any given year.

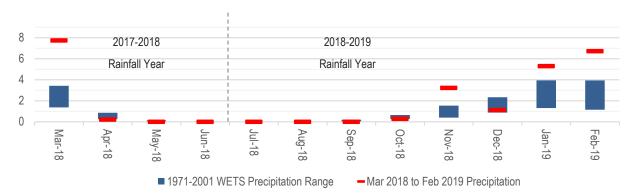


CHART 1. WETS PRECIPITATION AND RECENT 2018-2019 RAINFALL (INCHES)

WETS average range of precipitation from a probability analysis of 1971 to 2001 data compared to March 2018 to February 2019 precipitation. Data were retrieved from NOAA Regional Climate Centers in Paso Robles, CA (NOAA 2019).

2 REGULATORY FRAMEWORK

2.1 United States Army Corps of Engineers

Section 404 of the CWA authorizes the USACE to regulate activities that discharge dredged or fill material to wetlands and other waters of the United States. The term "waters of the United States" encompasses resources described by the Environmental Protection Agency (EPA) and the Corps regulations, 40 CFR (Code of Federal Regulations) § 230.3(s) and 33 CFR § 328.3(a). The geographic limits of relevant federal jurisdiction for non-tidal waters of the U.S. are defined at 33 CFR § 328.4(c). Terms within 40 CFR, such as "adjacency" and "tributary" are defined by the 2015 Clean Water Rule currently followed by USACE branches in California, and 22 other states.

The Corps of Engineers Wetlands Delineation Manual (hereafter "1987 Manual"; Environmental Laboratory 1987) defines wetlands (EPA regulations at 40 CFR § 230.3(t); USACE regulations at 33 CFR § 328.3(b)). Wetlands are considered "special aquatic sites" under the USACE definition. Special aquatic sites are afforded protection under the CWA (Sections 401 and 404). The 1987 Manual and various regional supplements describe the criteria that must be met to determine the presence of a wetland, the methods used to determine whether they are met, and the geographic extent of wetland areas identified in the field.

The USACE takes jurisdiction over wetlands that exhibit hydrology, hydric soil, and hydrophytic vegetation (three parameters) by the standard set forth in the Arid West Regional Supplement. These areas must also exhibit a significant nexus to a Traditionally Navigable Water (TNW). For non-wetland water features, USACE jurisdiction is limited to the Ordinary High Water Mark (OHWM).

2.2 Regional Water Quality Control Board

Recent March 2019 guidance from the RWQCB indicates that they have adopted the USACE policy of a "three-parameter wetland" but will also consider saturated, anaerobic features that lack vegetation, wetlands (SWRCB 2019).

An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

They will also take jurisdiction over a non-wetland water to the OHWM. In contrast to the USACE, however, the RWQCB will take jurisdiction over isolated wetland features that do not have significant nexus to a TNW. In some cases, the RWQCB will take jurisdiction to the edge of riparian habitat surrounding the water or wetland, as CDFW takes jurisdiction over trees, shrubs, and grasslands associated with the wetted channel (the edge of riparian canopy).

2.3 California Department of Fish and Wildlife

CDFW found the USFWS wetland definition and classification system based on the 1979 Cowardin definition to be the most biologically valid (Cowardin et al. 1979). In general, CDFW will take jurisdiction over drainage or lake features with a bed and bank and will limit their

jurisdiction to the top of bank and may include adjacent wetland or riparian areas on a case by case basis.

3 **DELINEATION METHODS**

Overview of Sampling Methodology

Jurisdictional wetlands and other waters were identified using methods and guidelines described in the 1987 Manual, the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (hereafter "2008 Supplement"; USACE 2008b), and A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008a). Site visits were made in the spring of 2019. Planned open spaces are mapped as jurisdictional waters without detailed delineation of wetland features. Proposed impacts to the northern drainage within proposed open space would require focused delineation of wetland inclusions. Focused delineation of wetland features in the vicinity of proposed road crossings was implemented for the purpose of future permitting efforts. This methodology is described in more detail in Section 4.1. Table 2 summarizes dates of field work and personnel attending each site visit.

TABLE 2. FIELD WORK LOG

Wetland delineation survey dates, action taken, and field personnel are provided.

Survey Date	Activities	Personnel
March 12, 2019	Reconnaissance survey	Jason Dart
		Jacqueline Tilligkeit
March 18, 2019	Aerial photography at northern drainage	Kyle Nessen
		Jessica Boone
March 26, 2019	Sample sites	Kristen Andersen
		Jacqueline Tilligkeit
April 4, 2019	OHWM assessments	Jacqueline Tilligkeit
April 16, 2019	Focused delineation	Jacqueline Tilligkeit
		LynneDee Althouse

3.1.1 Wetlands

Soil pits were dug by hand at twelve sampling sites based on the presence of hydrophytic vegetation, wetland hydrology, or low relief indicated potential wetland. For each wetland site an adjacent upland observational pit was dug to compare upland soil and vegetation features. Locations of all twelve sampling sites were recorded on the Jurisdictional Delineation Map (Figure 7) and USACE Arid West Region Wetland Determination Data Forms (Appendix B; updated sheet from 2010).

3.1.1.1 Wetland Hydrology

The presence or absence of wetland hydrology field indicators was assessed following methodology presented in the 1987 Manual and the 2008 Supplement. Wetland indicators included, but were not limited to, high water table, site topography, drift lines, drainage patterns, sediment deposits, inundation, observation of wet conditions during the growing season, and saturation of soils.

3.1.1.2 Wetland Soils

Soils were examined according to methodology presented in the 2008 Arid West Supplement and 1987 Manual. Hydric soil indicators were recognized by soil characteristics from the USDA-NRCS publication, *Field Indicators of Hydric Soils in the United States* (version 7.0; USDA-NRCS 2010) and the National Technical Committee for Hydric Soils (NTCHS) definition of hydric soils.

3.1.1.3 Wetland Vegetation

Vegetation in each stratum was identified to species and recorded. The indicator status of plants was confirmed by referring to the *National Wetland Plant List* (Lichvar *et al.* 2016). Species dominance was noted for each stratum using the "50/20 Rule." Dominance test was calculated for all samples.

3.1.1.4 Wetland Connectivity/Adjacency

Connectivity to Traditional Navigable Waters and their tributaries is established via field work where accessible, as well through analysis of aerial photographs, USGS topographic map, USGS National Hydrography Dataset, and site-specific topographic survey.

3.1.2 Non-Wetland Waters

Drainages were identified onsite as features that display evidence of hydrology but do not contain vegetation suggestive of wetlands. Evidence of OHWM was used to determine extent of Corps jurisdiction over these non-wetland waters of the U.S. The OHWM Manual (USACE 2010) lists and describes indicators associated with areas that become flooded or ponded but are not dominated by wetland vegetation and the duration of flooding, ponding, and/or near-surface soil saturation (less than or equal to 12 inches) is not sufficient to cause hydric soils to form or wetland hydrology conditions to occur. Ordinary High Water Mark was identified and noted according to guidance provided in the OHWM Manual.

3.1.2.1 OHWM Assessments

OHWM assessments were completed along each jurisdictional drainage in representative locations where there was a substantial change in either OHWM or TOB width. For each area, photographs were taken to document current conditions and hydrology and OHWM indicators were recorded and described based on the Arid West OHWM Manual and Datasheets. OHWM width and depth was also recorded. Photos are in Section 4 and locations of OHWM Assessments are shown on Figure 7.

3.1.2.2 Waters Connectivity/Adjacency

Connectivity to Traditional Navigable Waters and their tributaries is established via field work where accessible, as well through analysis of aerial photographs, United States Geographic Service (USGS) topographic map, USGS National Hydrography Dataset, and site-specific topographic survey. This connectivity determines whether the feature has "significant nexus" (i.e. it significantly affects the chemical, biological, or physical integrity of a Traditional Navigable Water).

3.2 Mapping Methodology

Airborne digital photographs of the Study Area were acquired on March 18, 2019 using a commercially available sUAV by Part 107 certified pilot and visual spotter. A georeferenced RGB orthomosaic image of the Study Area was generated from the acquired aerial images for baseline review. All flight operations were conducted within visual line of sight and below a maximum altitude of 200 feet above-ground level. The study area occurs in class E2 airspace and ATC authorization was acquired through the FAA UAS Data Exchange (confirmation number: ARMZZ116XR) prior to flying. Permission from the property owner was granted before flight.

Mapping efforts also utilized Samsung Galaxy Tab 4 tablets equipped with Garmin GLO GPS Receivers. Delineation boundaries were drawn using the AmigoCollect mapping application, aerial photography, site specific topography, and field notes. Existing datasets such as the National Hydrography Dataset and the USGS topographic maps were considered during mapping. Our results vary from these existing publications due to the finer scale and on-the-ground data collection techniques used in our work. GPS data, digitized notes, and photos were imported into Esri ArcGIS, a Geographic Information Systems software suite, and interpreted into maps. Maps were produced at a minimum scale of one map inch to 400 feet on the ground using field data and presented over the existing conditions CAD file from Wallace Group.

These delineation shapes are for planning purposes only. Wetland boundaries proximal to proposed improvements should be marked in the field by an environmental scientist and surveyed by a professional land surveyor with submeter accuracy.

4 TECHNICAL FINDINGS

The Study Area contains 0.24 acre of habitat that meets the definition of wetland by the USACE and RWQCB. An additional 4,594 feet and 1.26 acres of drainages that meets the definition of non-wetland waters also exists within the Study Area. Approximately 0.68 of the 1.26 acres has the potential to support non-persistent emergent wetlands. These wetlands may occupy less than 25 percent of the 0.68 acre. Approximately 0.02 acre of the 1.26 acres may be considered a wetland by RWQCB standards but not USACE. The following narrative description provides details of each feature's wetland vegetation, soil, and hydrology.

4.1 Northern Drainage

The northern drainage enters the Study Area at the eastern border under Hanson Road and flows west creating a braided stream across the northern half the Study Area. This drainage occasionally has multiple flow paths and has also been manipulated in areas where ranching or farming activities have occurred. Water enters the Study Area on the eastern property boundary, flows through oak riparian habitat dominated by oats, barley, bromes, mustard, and thistle, for approximately 2,230 feet before it enters a farmed field and then several sheep pastures. There are two crossings proposed in the Northern Drainage, therefore it was revisited after the water receded to identify any non-persistent emergent wetlands that may be present within the channel near the proposed crossing locations. These areas are referred to as the Focused Study Areas henceforth.

In the oak riparian habitat section of drainage, hydrology indicators include standing water, drift deposits, ripples, presence of bed and bank, and a strong presence of algal mats (Table 3, OHWM assessments A - G on Figure 7). The OHWM indicator was clear due to a change in average sediment texture, vegetation species, vegetation cover, as well as a break in bank slope.

4.1.1 Eastern Focused Study Area

The eastern Focused Study Area exists approximately 720 feet from the eastern boundary of the Study Area in the oak riparian habitat. It encompasses two drainage paths, one to the south that is straight and likely was ditched. Upland grasses such as ripgut brome, vetch, and yellow star-thistle are dominant in the southern drainage path. It has an OHWM width of approximately one to two feet wide and six inches to one foot deep. The berm is several feet taller on the north side of the drainage than on the south side.

The northern drainage path is a curved, oxbow section that has been partially bypassed by the creation of the southern ditch. In a portion of this drainage path there is a strong presence of hydrophytic species such as Italian rye grass (*Festuca perennis*, FAC) and common spikerush. Sample site 8 demonstrated sandy depletions below a dark clay surface horizon. As the vegetation changes to more upland grasses and bare ground downstream, the channel widens to almost 30 feet wide in some areas and was covered in dried algal mats during April site visits. After the confluence of the oxbow and the southern drainage path, the drainage narrows but continues to be bare ground and incised with a presence of bed and bank until another wetland inclusion where the population of Italian rye grass and common spikerush has increased.

In this Focused Study Area, 0.05 acre of wetlands, jurisdictional to the USACE and RWQCB were delineated in the northern oxbow area based on the presence of hydrophytic vegetation, hydrology,

and hydric soils. The remaining 0.10 acre of drainage in this Focused Study Area are non-wetland waters jurisdictional to the USACE and RWQCB.



Photo 1. View of soil pit at Sample Site 8 that showed evidence of depletions and redoximorphic concentrations. 04/16/2019



Photo 2. Dominant common spikerush in the oxbow wetland area. 04/16/2019

After the oak riparian, surface water flows through a barbed wire and hog fence that has gathered debris (Photo 3) and floods a recently plowed and planted farm field (Photo 4). The channel is widest and most shallow through the farm field that is routinely plowed (Table 3, OHWM assessments H and I).



Photo 3. Barbed wire and hog fence full of debris, farm field to the left in the picture and oak riprian to the right. View north. 03/12/2019.



Photo 4. Drainage through farm field from southern fence. View northeast. 03/12/2019.

4.1.2 Western Focused Study Area

Another crossing is proposed near the existing ranch road, therefore this area is described in detail and was visited later in the growing season to identify non-persistent emergent wetlands. The fence south of the plowed field splits the flow path before it enters a pasture. After the drainage is bisected by the fence, it is mostly unvegetated or supports upland grasses. The southern path through the pasture travels about 100 feet before there is a pile of riprap and rubble that slows the flow of water. This allows for the growth of hydrophytic vegetation such as hyssop loosestrife,

cudweed, (Gnaphalium sp.), knotweed (Polygonum aviculare ssp. depressum), and toad rush downstream and along the fringe of the pool. The northern flowpath, also supportive of upland grasses or unvegetated, travels along the fenceline for 170 feet before eroding under the fence and allowing water to enter the pool from the north. The center of the pond is inundated and anaerobic for prolonged periods and does not support vegetative growth. Aquatic invertebrates and their remains are prominent in and around the pool.

After pooling, a damaged pipe culvert, more than a foot higher than the pool elevation, conveys water under the western ranch access road to another sheep pasture. This area is dominated by seaside barley within the channel and foxtail barley along the banks, showing a clear change in vegetation species as the OHWM indicator.

In this Focused Study Area, 0.09 acre of wetlands, jurisdictional to the USACE and RWQCB were delineated around the fringe and at the mouth of the pool as well as through the western pasture where the drainage was dominated by seaside barley. The pool itself was unvegetated and may be considered a wetland by the RWQCB definition but would be a non-wetland water per USACE. The remaining 0.05 acre of drainage in this Focused Study Area are non-wetland waters jurisdictional to the USACE and RWQCB.



Photo 5. Fringe of pool with aquatic invertebrate remains and hydrophytes, 04/16/2019.



Photo 6. Soils in Sample Site 11 showed evidence of stratified layers, 04/18/2019.



Photo 7. Eastern sheep pasture and pool, view south from the ranch road, 03/26/2019.



Photo 8. View west towards culverts from southern flow path. Hydrophytes, algal mats, aquatic invertebrate remains, and salt crust present outside of standing water, 04/04/2019.



Photo 9. Western sheep pasture and drainage, view from culvert looking west, 03/26/2019.



Photo 10. Culverts underneath ranch road, view from western sheep pasture looking east, 03/26/2019.

The drainage continues westward where it passes under another ranch road via a small six inch culvert. During high flow periods, the water flows through the small culvert and over the ranch road before entering an incised channel through oak riparian habitat where it continues inside the Study Area for 828 feet. This reach is surrounded by upland grasses and the bed contained mudcracks and algae as a hydrology indicator in April 2019 (OHWM assessments K and L). The OHWM indicator is a change in vegetation cover and sediment texture and in some areas a break in bank slope.



Photo 11. Small culvert underneath ranch road on western side of western sheep pasture, road to the right of the photo, 03/26/2019.



Photo 12. View from the western edge of the western sheep pasture looking west across ranch road that shows evidence of flow and ponding, 03/26/2019.

For the purpose of this study, the entire drainage was mapped as a non-wetland water with wetland inclusions. Wetlands and non-wetlands were mapped in detail in the Focused Study Area. The total approximate distance of the Northern Drainage is 4,122 feet and the total area of the drainage is approximately 0.99 acre.

TABLE 3. NORTHERN DRAINAGE OHWM ASSESSMENTS

Location	OHWM Width (ft)	OHWM Depth (ft)	Hydrology Indicator	OHWM Indicator	Photograph
A	15	4	 Water stained leaves Mudcracks	 Change in sediment texture Change in vegetation cover Break in bank slope 	04/04/2019
В	10	1.5	 Algal mats Debris/drifts Mudcracks	 Change in sediment texture Change in vegetation cover Change in vegetation species 	04/04/2019

Location	OHWM Width (ft)	OHWM Depth (ft)	Hydrology Indicator	OHWM Indicator	Photograph
C	8	0.5	 Algal mats Debris/drifts Mudcracks	 Change in sediment texture Change in vegetation cover Change in vegetation species 	04/04/2019
D	2	1	 Algal mats Debris/drifts Mudcracks Bed/bank 	 Change in sediment texture Change in vegetation cover Change in vegetation species Break in bank slope 	04/04/2019

Location	OHWM Width (ft)	OHWM Depth (ft)	Hydrology Indicator	OHWM Indicator	Photograph
E	10	0.5	 Algal mats Debris/drifts Mudcracks	 Change in sediment texture Change in vegetation cover Change in vegetation species 	04/04/2019
F	2	1	 Algal mats Debris/drifts Mudcracks Bed/bank 	 Change in sediment texture Change in vegetation cover Change in vegetation species Break in bank slope 	04/04/2019

Location	OHWM Width (ft)	OHWM Depth (ft)	Hydrology Indicator	OHWM Indicator	Photograph
G	6	2	 Standing water Algal mats Debris/drifts Mudcracks Bed/bank 	 Change in sediment texture Change in vegetation cover Change in vegetation species Break in bank slope 	03/12/2019
Н	25	1	Standing waterAlgal matsMudcracks	 Change in vegetation cover 	03/12/2019

Location	OHWM Width (ft)	OHWM Depth (ft)	Hydrology Indicator	OHWM Indicator	Photograph
I	30	<0.5	Standing waterAlgal matsMudcracks	o Change in vegetation cover	03/12/2019
J	15	0.5	 Algal mats Debris/drifts Mudcracks Ripples 	 Change in sediment texture Change in vegetation cover Change in vegetation species 	04/04/2019

Location	OHWM Width (ft)	OHWM Depth (ft)	Hydrology Indicator	OHWM Indicator	Photograph
K	4	0.5	MudcracksAlgal mats	 Change in sediment texture Change in vegetation cover Break in bank slope 	04/04/2019
L	4	0.5	MudcracksAlgal mats	 Change in sediment texture Break in bank slope	04/04/2019

4.2 Central Drainage and Pond

The Central Drainage begins at the north-south ranch road and flows west with a clear bed and bank. There was no sign of concentrated flow on the east side of the road and fence. Adjacent to the incised channel, there was a strong presence of medusahead and other upland grasses as well as Mexican rush. Sample Site 1, where Mexican rush and upland grasses were both dominant, was adjacent to the drainage and had no sign of hydric soils or hydrology.



Photo 13. View from the head of the Central Drainage looking west, 03/12/2019.



Photo 14. View north from the Central Drainage in the Sample Site 1 area; the darker grass is Mexican rush, 03/12/2019.

Downstream from Site 1, the convex part of the drainage supports mostly upland grasses with patches of Mexican rush. The OHWM width varied between one and a half to three feet in width and was demarcated by a presence of water, drift deposits, algal mats, or drainage patterns. Sample Site 5 was dug in the drainage within a patch of Mexican rush that contained hydrophytic vegetation dominance and hydrology in the form of saturation. However, this sample area and in observational soil pits nearby within the drainage, did not display evidence of hydric soil. The drainage feature appeared to not saturate for sufficient duration to produce anaerobic conditions in a typical year due to the sandy soil and sloping ground which conveys water from the drainage to the pond. The drainage prior to entering the pond is approximately 795 feet long and 0.13 acre.



Photo 15. View down into Central Drainage where Mexican rush is a dominant species, 03/26/2019.



Photo 16. View of sandy soil with no redoximorphic features in sample site within drainage where Mexican rush is dominant, 03/26/2019.

Prior to surface flow to the pond, velocity slows and water pools up to a foot deep, supporting large patches of common spikerush in the drainage, as it widens to a "V" shape at the mouth of the pond. This area contained various aquatic insects and tadpoles. Sample Site 3 revealed depletions and a reduced matrix in clay soil. Additionally, there is a fringe of common spikerush approximately three feet wide around most of the pond, though the middle (55 feet wide, 288 feet long, 0.28 acre) is unvegetated and several feet deep. The vegetated wetland portion of the pond makes up 0.04 acre and would be considered palustrine persistent emergent in the Cowardin classification.



Photo 17. View from the drainage looking west into the pond mouth with bunches of common spikerush, 03/26/2019.



Photo 18. Depleted clay soil at mouth of the pond with common spikerush, Sample Site 3, 03/26/2019.



Photo 19. Entrance of the pond with common spikerush on banks, view southwest, 03/26/2019.



Photo 20. View from south bank of the pond, fringe of common spikerush on banks, view northeast, 03/26/2019.

Additionally, on the northern side of the pond, Mexican rush dominated a small portion of the northern aspect of the berm. This hydrophyte is likely supported by water from the pond seeping through the berm. Sample Site 2 did not reveal hydrology nor hydric soil so the area was not delineated as wetland.

At the western end of the pond, there was an overflow drainage with flowing water on March 12, 2019 but not during subsequent site visits. During peak flows, surface water flows 107 feet west and south from the pond before exiting the Study Area through a storm drain drop inlet.



Photo 21. Overflow path out of western edge of pond, view west, 03/12/2019.



Photo 22. Overflow path into sewer inlet, view west, 03/12/2019.

TABLE 4. CENTRAL DRAINAGE OHWM ASSESSMENTS

Area	OHWM Width (ft)	OHWM Depth (ft)	Hydrology Indicator	OHWM Indicator	Photograph
M	1.5	1	 Water present Algal mats Debris/drifts Mudcracks 	 Change in sediment texture Change in vegetation cover Change in vegetation species Break in bank slope 	03/12/2019
N	2	1.5	 Water present Algal mats Debris/drifts Mudcracks 	 Change in sediment texture Change in vegetation cover Change in vegetation species Break in bank slope 	03/12/2019

4.3 Southern Corner Wetland

At the southwest corner of the Study Area there is a poor quality, weedy wetland supported by surface sheetflow and subsurface lateral return flow from the hills directly east. The elevation of the wetland is one to three feet lower than the adjacent Meadowlark Road and neighboring subdivision. Stormwater from surrounding, higher elevations flow to this corner where it is trapped and pools in the Study Area. The wetland showed evidence of hydrology in the form of biotic crust (up to 40 percent coverage in some areas), dominance of hydrophytic vegetation (toad rush and annual bluegrass, as well as a presence of an obligate species, hyssop loosestrife, and redox features within the top twelve inches.



Photo 23. High percentage of redoximorphic features in sandy clay loam soil in Sample Site 6, 03/26/2019.



Photo 24. Dominance of hydrophytic vegetation in Southern Corner Wetland, view west, 03/26/2019.

5 JURISDICTIONAL DELINEATION

The Study Area contains 0.24 acre of habitat that meets the definition of wetland by the USACE and RWQCB. An additional 4,594 feet and 1.26 acres of drainages that meets the definition of non-wetland waters also exists within the Study Area. Approximately 0.68 of the 1.26 acres has the potential to support non-persistent emergent wetlands. These wetlands may occupy less than 25 percent of the 0.68 acre. Approximately 0.02 acre of the 1.26 acres may be considered a wetland by RWQCB standards but not USACE.

The Northern Drainage flows from the eastern to the western boundary of the Study Area, has approximately 4,122 feet of streambed, covers 0.99 acre, and has the potential to support non-persistent emergent wetlands within the stream channel. Two Focused Study Areas were investigated later in the growing season after the waters had receded. Approximately 0.13 acre of non-persistent emergent wetlands (federal and state), 0.14 acre of non-wetland streambed (federal and state), and 0.02 acre of unvegetated pooling habitat that would be considered non-wetland by USACE standards but may be a wetland per RWQCB, were identified within the Focused Study Areas. OHWM indicators include changes in sediment texture, vegetation species and cover, and a break in bank slope. The adjacent upland area supports weedy non-hydrophytes. The remaining 0.68 acre of the Northern Drainage was delineated as non-wetland waters of the U.S. and state with less than 25 percent wetland inclusions.

The Central Drainage, including the overflow path out of the pond, is a 815 foot long (average OHWM width of 2 feet, 0.14 acre total area) non-wetland water that carries water to the Central Pond (0.28 acre) and associated persistent emergent wetland feature on the banks and mouth of the pond (0.06 acre). OHWM indicators include changes in sediment texture, vegetation species and cover, and a break in bank slope. The 2015 Clean Water Rule and the 2019 State Wetland Definition lists artificial, stock watering ponds as non-jurisdictional but since the pond has a jurisdictional drainage flowing to it and the pond will be converted as part of a large development project, it is considered jurisdictional for the purpose of this delineation.

Water pools in the southwestern corner of the property in the area delineated as the Southern Corner Wetland (0.05 acre). This area demonstrated hydrology, hydric soil, and a dominance of hydrophytic vegetation and would be classified as a persistent emergent palustrine wetland.

Aquatic feature jurisdictional area calculations are included in Table 5.

TABLE 5. JURISDICTIONAL AQUATIC FEATURE CHARACTERISTICS.

Feature	Feature Type	State	Federal	
Northern Drainage	Stream with riparian and possible non-persistent emergent or unvegetated state wetlands	Jurisdictional Non-Wetland with Wetland Inclusions	Jurisdictional Non-Wetland with Wetland Inclusions	
Eastern Focused Study Area				
Northern Wetland	Non-persistent emergent wetland	Jurisdictional Wetland	Jurisdictional Wetland	
Northern Non-Wetland	Stream	Jurisdictional Non-Wetland	Jurisdictional Non-Wetland	
Ditch Non-Wetland	Stream	Jurisdictional Non-Wetland	Jurisdictional Non-Wetland	
Western Focused Study Area				
Fence Drainage	Stream	Jurisdictional Non-Wetland	Jurisdictional Non-Wetland	
Pasture Drainage	Stream	Jurisdictional Non-Wetland	Jurisdictional Non-Wetland	
Pool Fringe and Mouth	Non-persistent emergent wetland	Jurisdictional Wetland	Jurisdictional Wetland	
Unvegetated Pool	Unvegetated wetland	Jurisdictional Wetland	Jurisdictional Non-Wetland	
Seaside Barley Drainage	Non-persistent emergent wetland	Jurisdictional Wetland	Jurisdictional Wetland	
Central Drainage	Stream	Jurisdictional Non-Wetland	Jurisdictional Non-Wetland	
Central Pond Fringe	Persistent emergent wetland	Jurisdictional Wetland	Jurisdictional Wetland	
Central Pond (Unvegetated)	Unvegetated stock pond with possible non-persistent emergent wetland	Jurisdictional Non-Wetland	Jurisdictional Non-Wetland	
Southern Corner Wetland	Persistent emergent wetland	Jurisdictional Wetland	Jurisdictional Wetland	

TABLE 6. JURISDICTIONAL AQUATIC FEATURE MEASUREMENTS.

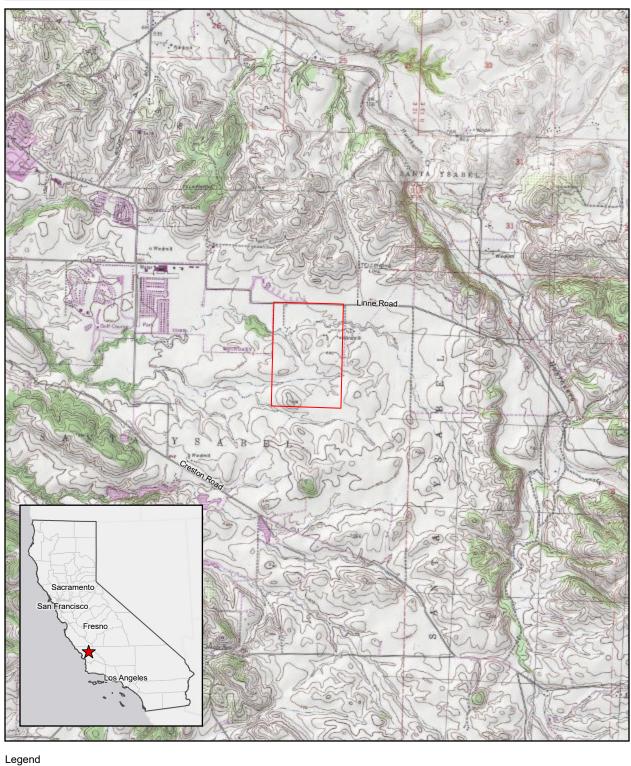
Feature	Avg Appx OHWM Width (ft)	Avg Appx OHWM Depth (ft)	Length (ft)	Area (ac)	Area (sq ft)
Northern Drainage	Varies 2 to 30	Varies 0.5 to 4.5	4,122	0.99	43,012
Eastern Focused Study Area					
Northern Wetland	6	0.5 to 1	308	0.05	1974
Northern Non-Wetland	Varies 5 to 30	<0.5 to 1	81	0.07	3,107
Ditch Non-Wetland	2	1	259	0.03	1,108
Western Focused Study Area					
Fence Drainage	8	< 0.5	189	0.03	1,517
Pasture Drainage	11	0.5	31	0.01	524
Pond Fringe and Mouth	13	0.5 to 1	117	0.05	2,347
Unvegetated Pool	15	1	47	0.02	738
Seaside Barley Drainage	9.5	1	152	0.03	1,449
Central Drainage	2	1	815	0.14	5,989
Central Pond Fringe	n/a	n/a	74	0.06	2,728
Central Pond (Unvegetated)	n/a	n/a	280	0.28	12,187
Southern Corner Wetland	n/a	n/a	119	0.05	2,075

This report is subject to verification by the USACE and RWQCB.

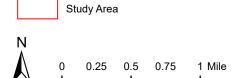
6 FIGURES

- Figure 1. United States Geological Survey Topographic Map
- Figure 2. Aerial Imagery History
- Figure 3. National Hydrography Dataset
- Figure 4. National Wetlands Inventory
- Figure 5. Hydrologic Unit Codes
- Figure 6. Federal Emergency Management Agency Flood Insurance Rate Map
- Figure 7. Potentially Jurisdictional Aquatic Features

Figure 1. United States Geological Survey Topographic Map





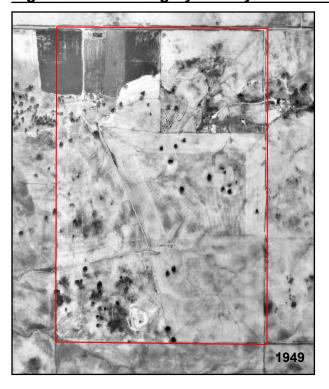


Olsen Ranch Map Center: 120.63535°W 35.60441°N Paso Robles, San Luis Obispo County

USGS Quadrangle: Templeton



Figure 2. Aerial Imagery History











Study Area

N N

0 0.25 0.5 Miles

Olsen Ranch Map Center: 120°38'12"W 35°36'22"N Paso Robles, San Luis Obispo County

Data Source: USDA NAIP, UCSB MIL, Google Earth



Figure 3. National Hydrography Dataset

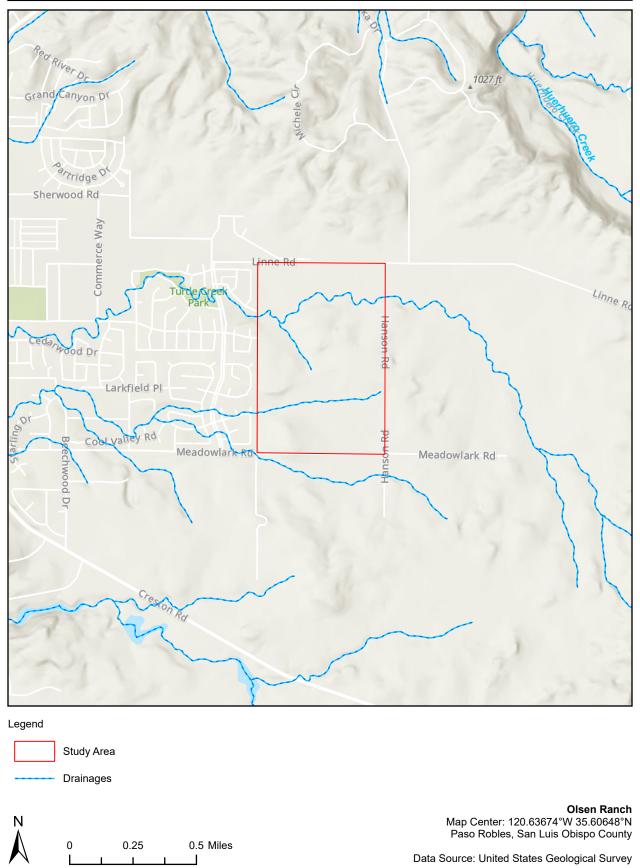




Figure 4. National Wetland Inventory

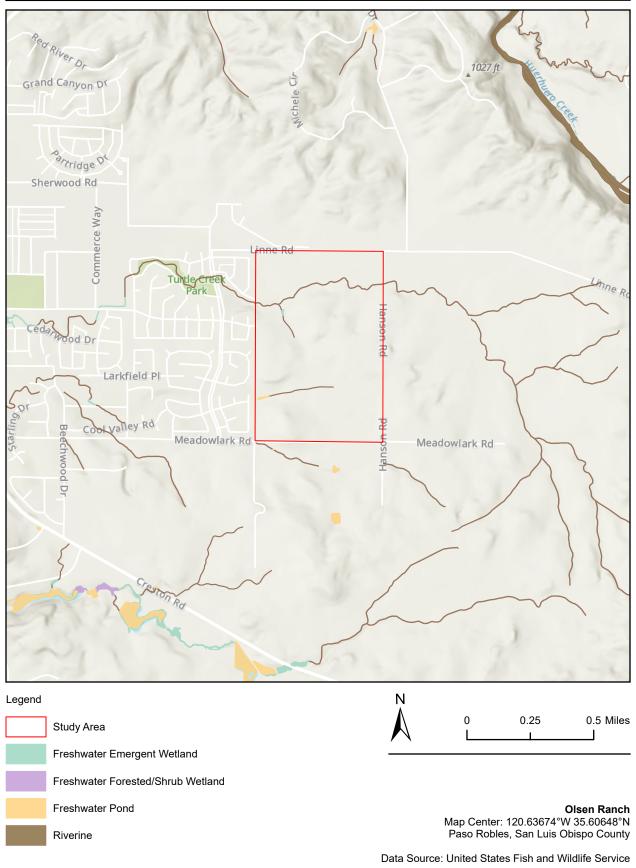
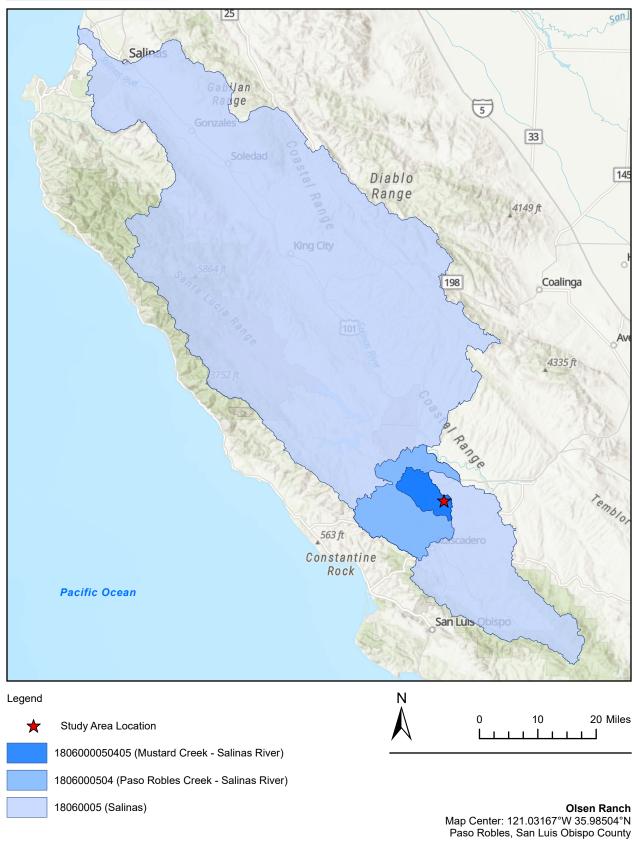




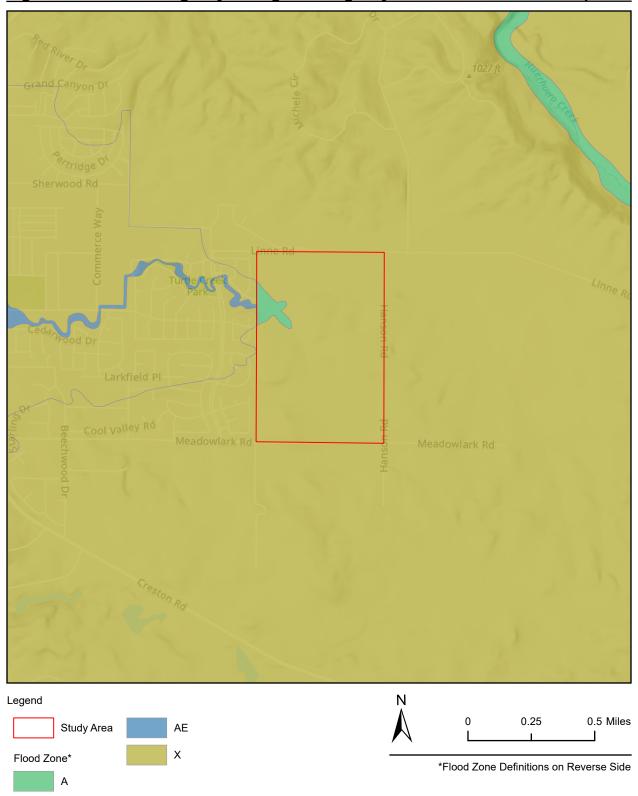
Figure 5. Hydrologic Unit Codes



Data Source: United States Geological Survey



Figure 6. Federal Emergency Management Agency Flood Insurance Rate Map



Olsen Ranch Map Center: 120.63674°W 35.60648°N Paso Robles, San Luis Obispo County

Data Source: United States Geological Survey



FEMA/FIRM ZONE CLASSIFICATION

Moderate to	Moderate to Low Risk Areas				
Zone	Description				
B and X (shaded)	Area of moderate flood hazard, usually the area between the limits of the 100- year and 500-year floods. B Zones are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than 1 square mile.				
C and X (unshaded)	Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level. Zone C may have ponding and local drainage problems that don't warrant a detailed study or designation as base floodplain. Zone X is the area determined to be outside the 500-year flood and protected by levee from 100- year flood.				

High Risk Areas

Zone	Description
A	Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.
AE	The base floodplain where base flood elevations are provided. AE Zones are now used on new format FIRMs instead of A1-A30 Zones.
A1-A30	These are known as numbered A Zones (e.g., A7 or A14). This is the base floodplain where the FIRM shows a BFE (old format).
АН	Areas with a 1% annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
AO	River or stream flood hazard areas, and areas with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown within these zones.
AR	Areas with a temporarily increased flood risk due to the building or restoration of a flood control system (such as a levee or a dam). Mandatory flood insurance purchase requirements will apply, but rates will not exceed the rates for unnumbered A zones if the structure is built or restored in compliance with Zone AR floodplain management regulations.
A99	Areas with a 1% annual chance of flooding that will be protected by a Federal flood control system where construction has reached specified legal requirements. No depths or base flood elevations are shown within these zones.
V	Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. No base flood elevations are shown within these zones.
VE, V1-30	Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.

Figure 7. Potentially Jurisdictional Aquatic Features

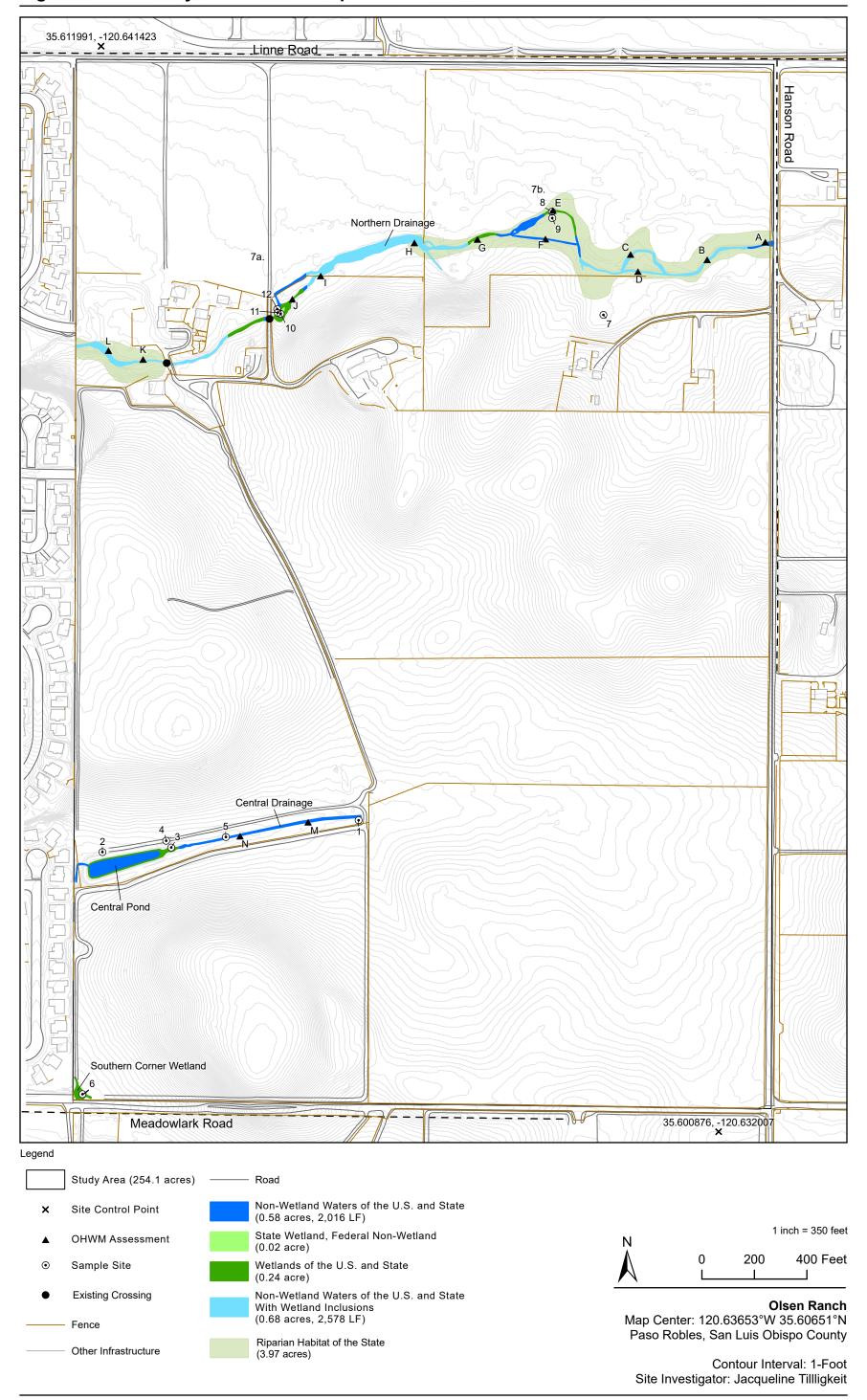




Figure 7a. Potentially Jurisdictional Aquatic Features



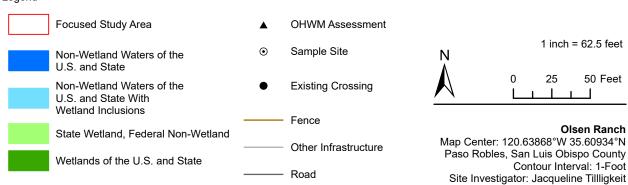
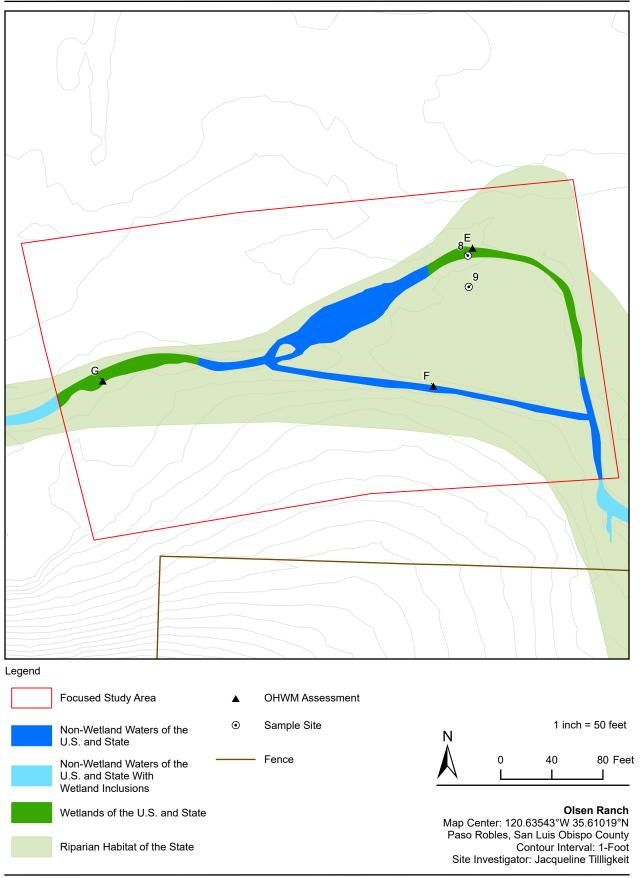




Figure 7b. Potentially Jurisdictional Aquatic Features



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8 APPENDICES

- Appendix A. USDA Custom Soils Report
- Appendix B. Wetland Determination Data Forms

APPENDIX A. USDA CUSTOM SOILS REPORT



Natural Resources Conservation

Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for San Luis Obispo County, California, Paso Robles Area

Olsen Ranch



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2 053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

Blowout ဖ

Borrow Pit

Clay Spot

Gravel Pit

Closed Depression

Gravelly Spot

Landfill Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Sodic Spot

Slide or Slip

Spoil Area



Stony Spot



Very Stony Spot



Wet Spot Other



Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes



Major Roads



Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24.000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Luis Obispo County, California, Paso

Robles Area

Survey Area Data: Version 12, Sep 14, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 17, 2016—Oct 1, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
102	Arbuckle-Positas complex, 9 to 15 percent slopes	101.7	41.9%
106	Arbuckle-San Ysidro complex, 2 to 9 percent slopes	80.6	33.3%
133	Cropley clay, 2 to 9 percent slopes, MLRA 14	2.5	1.0%
187	Rincon clay loam, 0 to 2 percent slopes	18.7	7.7%
197	San Ysidro loam, 0 to 2 percent slopes, MLRA 14	38.9	16.1%
Totals for Area of Interest		242.3	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An association is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

San Luis Obispo County, California, Paso Robles Area

102—Arbuckle-Positas complex, 9 to 15 percent slopes

Map Unit Setting

National map unit symbol: hbrk Elevation: 600 to 1,500 feet

Mean annual precipitation: 12 to 20 inches Mean annual air temperature: 60 to 61 degrees F

Frost-free period: 200 days

Farmland classification: Not prime farmland

Map Unit Composition

Arbuckle and similar soils: 40 percent Positas and similar soils: 30 percent Minor components: 30 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arbuckle

Setting

Landform: Terraces

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Alluvium from mixed rock sources

Typical profile

H1 - 0 to 29 inches: fine sandy loam H2 - 29 to 53 inches: sandy clay loam

H3 - 53 to 62 inches: stratified sandy loam to very gravelly sandy clay loam

Properties and qualities

Slope: 9 to 15 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20

to 0.57 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Available water storage in profile: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): 4e Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C

Ecological site: COARSE LOAMY (R014XE003CA)

Hydric soil rating: No

Description of Positas

Setting

Landform: Terraces

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Alluvium from mixed rock sources

Typical profile

H1 - 0 to 10 inches: coarse sandy loam

H2 - 10 to 28 inches: clay

H3 - 28 to 40 inches: sandy clay loam

H4 - 40 to 60 inches: stratified sandy loam to gravelly clay loam

Properties and qualities

Slope: 9 to 15 percent

Depth to restrictive feature: 9 to 20 inches to abrupt textural change

Natural drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately

low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Calcium carbonate, maximum in profile: 5 percent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0

mmhos/cm)

Available water storage in profile: Very low (about 1.2 inches)

Interpretive groups

Land capability classification (irrigated): 4e Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: D

Ecological site: COARSE LOAMY CLAYPAN (R014XE005CA)

Hydric soil rating: No

Minor Components

Greenfield, fine sandy loam

Percent of map unit: 10 percent

Hydric soil rating: No

Positas

Percent of map unit: 10 percent

Hydric soil rating: No

Cropley

Percent of map unit: 4 percent

Hydric soil rating: No

Hanford, fine sandy loam

Percent of map unit: 3 percent

Hydric soil rating: No

Unnamed, areas of 15 to 30 percent slope

Percent of map unit: 1 percent

Hydric soil rating: No

Unnamed, areas of 15 to 30 percent slope

Percent of map unit: 1 percent

Hydric soil rating: No

Unnamed, areas with cobbles on the surface

Percent of map unit: 1 percent

Hydric soil rating: No

106—Arbuckle-San Ysidro complex, 2 to 9 percent slopes

Map Unit Setting

National map unit symbol: hbrp Elevation: 600 to 1,500 feet

Mean annual precipitation: 12 to 20 inches Mean annual air temperature: 60 to 61 degrees F

Frost-free period: 200 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Arbuckle and similar soils: 40 percent San ysidro and similar soils: 20 percent

Minor components: 39 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arbuckle

Setting

Landform: Terraces

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Alluvium from mixed rock sources

Typical profile

H1 - 0 to 29 inches: fine sandy loam H2 - 29 to 38 inches: sandy clay loam

H3 - 38 to 62 inches: stratified sandy loam to very gravelly sandy clay loam

Properties and qualities

Slope: 2 to 9 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20

to 0.57 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Available water storage in profile: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): 3e

Land capability classification (nonirrigated): 4e

Hvdrologic Soil Group: C

Ecological site: COARSE LOAMY (R014XE003CA)

Hydric soil rating: No

Description of San Ysidro

Setting

Landform: Terraces

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Alluvium derived from mixed rocks

Typical profile

H1 - 0 to 23 inches: loam H2 - 23 to 38 inches: clay loam H3 - 38 to 71 inches: sandy loam

Properties and qualities

Slope: 2 to 9 percent

Depth to restrictive feature: 20 to 37 inches to abrupt textural change

Natural drainage class: Moderately well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately

low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Available water storage in profile: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): 3e Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: D

Ecological site: LOAMY CLAYPAN (R014XE029CA)

Hydric soil rating: No

Minor Components

Greenfield, fine sandy loam

Percent of map unit: 14 percent

Hydric soil rating: No

Unnamed, similar to san ysidro soil

Percent of map unit: 10 percent

Hydric soil rating: No

Hanford, fine sandy loam

Percent of map unit: 5 percent

Hydric soil rating: No

Unnamed, simialr to arbuckle

Percent of map unit: 5 percent

Hydric soil rating: No

Cropley, clay

Percent of map unit: 2 percent

Hydric soil rating: No

Rincon, clay loam

Percent of map unit: 2 percent

Hydric soil rating: No

Unnamed

Percent of map unit: 1 percent Landform: Drainageways Hydric soil rating: Yes

133—Cropley clay, 2 to 9 percent slopes, MLRA 14

Map Unit Setting

National map unit symbol: 2tb9j Elevation: 0 to 2.340 feet

Mean annual precipitation: 12 to 28 inches Mean annual air temperature: 56 to 60 degrees F

Frost-free period: 270 to 365 days

Farmland classification: Prime farmland if irrigated

Map Unit Composition

Cropley and similar soils: 90 percent Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cropley

Setting

Landform: Alluvial fans, terraces

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Base slope, tread, talf

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Alluvium derived from calcareous shale

Typical profile

A1 - 0 to 11 inches: clay Bss1 - 11 to 51 inches: clay

BCk1 - 51 to 79 inches: sandy clay loam

Properties and qualities

Slope: 2 to 9 percent

Depth to restrictive feature: More than 80 inches Natural drainage class: Moderately well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to

moderately high (0.06 to 0.20 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 15 percent

Gypsum, maximum in profile: 2 percent

Salinity, maximum in profile: Nonsaline to very slightly saline (1.0 to 3.0

mmhos/cm)

Sodium adsorption ratio, maximum in profile: 5.0

Available water storage in profile: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): 2e Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C

Ecological site: CLAYEY (R014XD001CA)

Hydric soil rating: No

Minor Components

Salinas

Percent of map unit: 3 percent Landform: Terraces, alluvial fans

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Base slope, tread, talf

Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: No

Los osos

Percent of map unit: 3 percent Landform: Hillslopes, ridges

Landform position (two-dimensional): Backslope, shoulder, footslope, summit

Landform position (three-dimensional): Side slope

Down-slope shape: Convex, concave Across-slope shape: Convex, concave

Hydric soil rating: No

Clear lake

Percent of map unit: 2 percent

Landform: Basin floors

Landform position (three-dimensional): Dip

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil rating: Yes

Capay

Percent of map unit: 2 percent

Landform: Flood plains

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Base slope, dip

Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: No

187—Rincon clay loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: hbv9 Elevation: 600 to 1,500 feet

Mean annual precipitation: 12 to 20 inches Mean annual air temperature: 60 degrees F

Frost-free period: 200 days

Farmland classification: Prime farmland if irrigated

Map Unit Composition

Rincon and similar soils: 80 percent Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rincon

Setting

Landform: Alluvial fans

Landform position (two-dimensional): Footslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Alluvium derived from sedimentary rock

Typical profile

H1 - 0 to 18 inches: clay loam H2 - 18 to 64 inches: clay

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to

moderately high (0.06 to 0.20 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0

mmhos/cm)

Available water storage in profile: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): 2s Land capability classification (nonirrigated): 4s

Hydrologic Soil Group: C

Ecological site: FINE LOAMY BOTTOM (R014XE025CA)

Hydric soil rating: No

Minor Components

Unnamed

Percent of map unit: 10 percent

Hydric soil rating: No

San ysidro, loam

Percent of map unit: 5 percent

Hydric soil rating: No

Cropley, clay

Percent of map unit: 3 percent

Hydric soil rating: No

Lockwood, shaly loam

Percent of map unit: 2 percent

Hydric soil rating: No

197—San Ysidro Ioam, 0 to 2 percent slopes, MLRA 14

Map Unit Setting

National map unit symbol: 2tyys Elevation: 70 to 1,990 feet

Mean annual precipitation: 13 to 22 inches

Mean annual air temperature: 59 to 61 degrees F

Frost-free period: 300 to 360 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

San ysidro and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of San Ysidro

Setting

Landform: Alluvial fans, valley floors, terraces

Landform position (two-dimensional): Footslope, toeslope

Landform position (three-dimensional): Tread, talf

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Alluvium derived from sedimentary rock

Typical profile

A - 0 to 23 inches: loam
B1 - 23 to 38 inches: clay loam
Bt2 - 38 to 64 inches: loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: 16 to 24 inches to abrupt textural change

Natural drainage class: Moderately well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to

moderately high (0.06 to 0.20 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0

mmhos/cm)

Available water storage in profile: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): 3e Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C

Ecological site: LOAMY CLAYPAN (R014XE029CA)

Hydric soil rating: No

Minor Components

Arbuckle

Percent of map unit: 6 percent

Hydric soil rating: No

Rincon

Percent of map unit: 2 percent

Hydric soil rating: No

Solano

Percent of map unit: 2 percent

Hydric soil rating: No

Pleasanton, loam

Percent of map unit: 2 percent

Hydric soil rating: No

Pescadero

Percent of map unit: 1 percent

Landform: Basin floors

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Talf

Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: Yes

Cropley, clay

Percent of map unit: 1 percent

Hydric soil rating: No

Palexeralfs

Percent of map unit: 1 percent Landform: Depressions

Hydric soil rating: Yes

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APPENDIX B. WETLAND DETERMINATION DATA FORMS

Project/Site: 0/ser	City/County: Pas	o Robles e	Sampling Date: 3-17-
Applicant/Owner: USE		State: A	Complian Dalati
Investigator(s): Jo Tillight it to Jo Dort	Section Township R	ange 10 (5 2 (3	Ramping Form
Landform (hillslope, terrace, etc.): Valley	Local relief (concave	convex none): COACG	Vl Slone (01): 1
Subregion (LRR): 12RC Lat: 3	25,603992	Long: - 120,6379	Slope (%)
Soil M ap Unit Name: Abuckle - San Isslin con	viloz :	NM/ clossificati	ion: CMCC R
Are cli matic / hydrologic conditions on the site typical for this time of ye	ear? Yes No	X (If no complain in Den	on: 770cm
Are Vegetation, Soil, or Hydrology significantly			sent? Yes <u>× </u>
Are Vegetation, Soil, or Hydrology naturally pr		eeded, explain any answers	-
SUM MARY OF FINDINGS – Attach site map showing	•		•
Hydr Ophytic Vegetation Present? Yes No			
Hydric Soil Present? Yes No X	Is the Sample		V
Wetland Hydrology Present? Yes No _X	within a Wetla	nd? Yes	_ No <u>X</u>
Remarks:	1 / /	/ -	
May can rush a dominant speci	is likely	with opland o	rasses that
Mey can rush a dominant special ecoccent unidentificable. Nos	ign of hyd	10100y/hydis	soileven with
VEGETATION – Use scientific names of plants.	iddles eve	ywhere after	a wet month
Absolute Tree Stratum (Plot size: 1/a) % Cover	Dominant Indicator Species? Status	Dominance Test worksho	
1	Species! Status	Number of Dominant Spec	cies FAC: (A)
2.		Į	·
3		Total Number of Dominant Species Across All Strata:	
4			(-/
Sapling/Shrub Stratum (Plot size:A/a)	_= Total Cover	Percent of Dominant Spec That Are OBL, FACW, or F	ies FAC: (A/B)
1		Prevalence Index worksh	
2.		Total % Cover of:	
3		OBL species	
4		FACW species	
5		FAC species	
Herb Stratum (Plot size:)	= Total Cover	FACU species	
1. Juncus marcanus 7.0	Y FACW	UPL species	
2. Vaidentiliable granges 90+	Y	Column Totals:	(A) (B)
3.		Prevalence Index = E	3/A =
4		Hydrophytic Vegetation II	
5		Dominance Test is >50	
6		Prevalence Index is ≤3	I
7		Morphological Adaptati	ions ¹ (Provide supporting on a separate sheet)
8		Problematic Hydrophyt	
Woody Vine Stratum (Plot size: 1/6)	= Total Cover	, ,	*
1		¹ Indicators of hydric soil and	d wetland hydrology must
2		be present, unless disturbed	d or problematic.
	= Total Cover	Hydrophytic Vegetation	
% Bare Ground in Herb Stratum % Cover of Biotic Cr	ust <u> </u>		No
Remarks:			
adjacent last year growth in	dodas no	desalpered -	on a single contract of
adjarent last year growth in bartey , Dominance uncertain	- -	e de la companya del companya de la companya del companya de la co	
Survey a revision to Orice		,	

epth Matri	ine to the debili				or confirm	the absence of	indicators.)		
	X	Redox Color (moist)	<u>∢Features</u> ∞⁄	Typo	Loc ²	Texture	Remarks		
nches) Color (moist)						<u>rexture</u> _	Remarks		
2-12 10/2 2,	1-1 100 _								
								A-1	
ype: C=Concentration, D=I	Depletion, RM=Re	educed Matrix, CS	=Covered	or Coate	d Sand G		ion: PL=Pore Lining, M=N r Problematic Hydric So		
dric Soil Indicators: (Ap	plicable to all LR			ed.)			-	iis :	
_ Histosol (A1)		Sandy Redo					ck (A9) (LRR C) ck (A10) (LRR B)		
_ Histic Epipedon (A2) _ Black Histic (A3)		Stripped Ma Loamy Muck		(F1)		Reduced			
_ Hydrogen Sulfide (A4)		Loamy Gley					ent Material (TF2)		
_ Stratified Layers (A5) (LF	RR C)	Depleted Ma		` .		Other (E)	kplain in Remarks)		
1 cm Muck (A9) (LRR D)		Redox Dark		•					
 Depleted Below Dark Sur 		Depleted Da				3, ,, ,		- 4	
_ Thick Dark Surface (A12)		Redox Depr		-8)		³ Indicators of hydrophytic vegetation and wetland hydrology must be present,			
_ Sandy Mucky Mineral (S [^] _ Sandy Gleyed Matrix (S4		vemai Pook	s (F9)			unless disturbed or problematic.			
estrictive Layer (if present						T			
		•							
Type:/		_				Hydric Soil Pi	resent? Yes	No <u>X</u>	
						Hydric Soil P	resent? Yes	No <u>X</u>	
Depth (inches):>						Hydric Soil Pi	resent? Yes	No <u>X</u>	
Depth (inches):>						Hydric Soil Pi	resent? Yes	No <u>X</u>	
Depth (inches):>		_				Hydric Soil Pi	resent? Yes	No <u>X</u>	
Depth (inches):> emarks:						Hydric Soil Pr	resent? Yes	No <u>X</u>	
Depth (inches):> emarks: DROLOGY	17					Hydric Soil Pr	resent? Yes	No <u>X</u>	
Depth (inches):> emarks: DROLOGY etland Hydrology Indicato	ors:		Α.			1			
Depth (inches):> emarks: DROLOGY etland Hydrology Indicator imary Indicators (minimum	ors:	heck all that apply				Seconda	ary Indicators (2 or more r		
Depth (inches): emarks: **TDROLOGY** etland Hydrology Indicator timary Indicators (minimum _ Surface Water (A1)	ors:	heck all that apply	(B11)			Seconda Wal	ary Indicators (2 or more r ter Marks (B1) (Riverine)	equired)	
Depth (inches): emarks: **TDROLOGY **Total Control C	ors:	heck all that apply Salt Crust Biotic Crus	(B11) st (B12)	o /R13)		Seconda Wat Sec	ary Indicators (2 or more r ter Marks (B1) (Riverine) liment Deposits (B2) (Riv e	equired)	
Depth (inches): emarks: **TDROLOGY **Total Hydrology Indicator imary Indicators (minimum _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3)	ors: of one required; o	heck all that apply Salt Crust Biotic Crus Aquatic Inv	(B11) st (B12) vertebrates			Seconda Wal Sec Drif	ary Indicators (2 or more r ter Marks (B1) (Riverine) liment Deposits (B2) (Riv t Deposits (B3) (Riverine)	equired)	
Depth (inches): emarks: DROLOGY Total Hydrology Indicator imary Indicators (minimum _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) (Nonri	ors: of one required; of	heck all that apply Salt Crust Biotic Crus Aquatic Inv	(B11) st (B12) vertebrates Sulfide Od	lor (C1)	Living Ro	Seconds Wat Sec Drif Dra	ary Indicators (2 or more r ter Marks (B1) (Riverine) diment Deposits (B2) (Rive t Deposits (B3) (Riverine) inage Patterns (B10)	equired) erine)	
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Depth (inches): emarks: DROLOGY Vetland Hydrology Indicator imary Indicators (minimum _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) (Nonri _ Sediment Deposits (B2) (_ Drift Deposits (B3) (Nonri	ors: of one required; o	heck all that apply Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized R	(B11) st (B12) vertebrates Sulfide Od Rhizospher of Reduce	lor (C1) es along d Iron (C4	4)	Seconda Wai Sec Drif Dra ots (C3) Dry Cra	ary Indicators (2 or more reter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) to Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2 yfish Burrows (C8)	equired) erine)	
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Popth (inches):	ors: of one required; o	heck all that apply Salt Crust Biotic Crust Aquatic Int Hydrogen Oxidized R Presence of Recent Iro Thin Muck Other (Exp	(B11) st (B12) vertebrates Sulfide Od Rhizospher of Reduce n Reductic Surface (Golain in Re	for (C1) Tes along Id Iron (C4 Ion in Tille Ion (C7)	4)	Seconda	ary Indicators (2 or more reter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2 yfish Burrows (C8) uration Visible on Aerial In	equired) erine)	
Depth (inches):	ors: of one required; o	heck all that apply Salt Crust Biotic Crust Aquatic Int Hydrogen Oxidized R Presence of Recent Iro Thin Muck Other (Exp	(B11) st (B12) vertebrates Sulfide Od Rhizospher of Reduce n Reductio Surface (blain in Re	for (C1) Tes along Id Iron (C4 Ion in Tille Ion (C7)	4)	Seconda	ary Indicators (2 or more reter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2 yfish Burrows (C8) uration Visible on Aerial In	equired) erine)	
Depth (inches):	ors: of one required; o	heck all that apply Salt Crust Biotic Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iro Thin Muck Other (Exp	(B11) st (B12) vertebrates Sulfide Od Rhizospher of Reduce n Reductio Surface (olain in Red ches):	for (C1) res along d Iron (C4 on in Tille C7) marks)	4) d Soils (Co	Seconda	ary Indicators (2 or more reter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2 yfish Burrows (C8) uration Visible on Aerial In	equired) erine)) magery (

Project/Site: 0/5en	City/County:	asc Robles Sampling Date: 3-26-19
		State: A Sampling Point: 2
Investigator(s): Tilliament Andersen		
		ave, convex, none): COLVEX Slope (%): 30
Subregion (LRR): LBBC	Lat: 35 603695	Long: -120,690367 Datum: WGS8
Soil Map Unit Name: Arbukle-San Ysali	0	NWI classification:
Are climatic / hydrologic conditions on the site typical for this	time of year? Yes	No X (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology si		Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology na		(If needed, explain any answers in Remarks.)
		int locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		
Hydric Soil Present? Yes No		npled Area Vetland? Yes No
Wetland Hydrology Present? Yes No) Wittill a W	retiand? TesNo/
Remarks: On neithern aspect of noise		of Stockpordo
Higher than overage Pains		
VEGETATION – Use scientific names of plant		
Tree Stratum (Plot size: _ n/a)	Absolute Dominant Indica	10
1\to		I Number of Dominant Species
2		Total Number of Dominant
3		Species Across All Strata: (B)
4		Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: \(\sqrt{A} \)	= Total Cover	That Are OBL, FACW, or FAC: 33 (A/B)
1. -0-		Prevalence Index worksheet:
2,		Total % Cover of:Multiply by:
3		OBL species x 1 =
4		FACW species x 2 =
5		FAC species x 3 =
Herb Stratum (Plot size: 1m x 1 m)	= Total Cover	FACU species x 4 =
1. Jungus mexicanna	50 Y, FAC	UPL species x 5 =
2. Bromms diamdrus	30 VI	of column rotation (b)
3. Hordeum murinum	20 Y UP	Prevalence Index = B/A =/G
4. Evodium Se	3 N	Hydrophytic Vegetation Indicators:
5. Amsinckia sp.	2 /	Dominance Test is >50%
6		Prevalence Index is ≤3.0 ¹
7		Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
8	Total Cover	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)	100 = Total Cover	
1. - () 2		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	= Total Cover	Hydrophytic
% Bare Ground in Herb Stratum % Cover	of Biotic Crust	Vegetation Present? Yes No
Remarks:		110001111

C	\cap	П	
	w	ш	ь.

Sampling Point: 2

(inches)	Matrix			Features			
- 0	Color (moist)	%	Color (moist)	<u>%</u> Type ¹	_Loc ²	Texture	Remarks
0-1	10YR3/2	100				5	
2-12	1041312				$\underline{\mathcal{M}}$	<u>SC</u>	(not depleted)
			104R518	<u>5</u> <u>C</u>	PL		
				•			
	oncentration, D=Depl				ed Sand G		cation: PL=Pore Lining, M=Matrix.
-	Indicators: (Applica	able to all LR		· ·			for Problematic Hydric Soils ³ :
Histosol	, ,		Sandy Redox				Muck (A9) (LRR C)
	pipedon (A2)		Stripped Mat				Muck (A10) (LRR B)
	istic (A3) en Sulfide (A4)			y Mineral (F1) ed Matrix (F2)			ed Vertic (F18) arent Material (TF2)
	d Layers (A5) (LRR C	:)	Depleted Ma	, ,			(Explain in Remarks)
	uck (A9) (LRR D)	7	Redox Dark			0.1101	(—Aprila in Frontiero)
	d Below Dark Surface	e (A11)		rk Surface (F7)			
Thick Da	ark Surface (A12)		✓ Redox Depre	essions (F8)		³ Indicators	of hydrophytic vegetation and
	lucky Mineral (S1)		Vernal Pools	(F9)		wetland	hydrology must be present,
	Sleyed Matrix (S4)					unless d	listurbed or problematic.
	Layer (if present):						
	<u> </u>	-n 11	_				. /
Depth (in	ches):	<u>(</u>	_			Hydric Soil	Present? Yes No
VDBOLO	CV						
Wetland Hy	drology Indicators:	ne required:	hack all that apply			Sacar	odary Indicators (2 or more required)
Vetland Hye Primary Indic	drology Indicators: cators (minimum of or	ne required; c					ndary Indicators (2 or more required)
Vetland Hydrimary Indic Surface	drology Indicators: cators (minimum of or Water (A1)	ne required; c	Salt Crust (I	B11)		v	Vater Marks (B1) (Riverine)
Vetland Hyd <u>Primary Indic</u> Surface High Wa	drology Indicators: cators (minimum of or Water (A1) ater Table (A2)	ne required; c	Salt Crust (I Biotic Crust	B11) (B12)		v s	Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine)
Vetland Hyd Primary Indic Surface High Wa Saturatio	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3)		Salt Crust (I Biotic Crust Aquatic Inve	B11) (B12) ertebrates (B13)		V S D	Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine)
Vetland Hyd Primary Indic Surface High Wa Saturatic Water M	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriveria	ne)	Salt Crust (I Biotic Crust Aquatic Inve	B11) (B12) ertebrates (B13) sulfide Odor (C1)	Living Roc	V S D	Vater Marks (B1) (Riverine) lediment Deposits (B2) (Riverine) vrift Deposits (B3) (Riverine) vrainage Patterns (B10)
Vetland Hydrimary Indic Surface High Wa Saturatic Water M	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriverint Deposits (B2) (Non	ne) nriverine)	Salt Crust (I Biotic Crust Aquatic Inve	B11) (B12) ertebrates (B13) sulfide Odor (C1) nizospheres along		V S D ots (C3) D	Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) virit Deposits (B3) (Riverine) virainage Patterns (B10) viry-Season Water Table (C2)
Vetland Hydrimary Indice Surface High Wa Saturatice Water M Sedimer Drift Dep	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriverin ot Deposits (B2) (Noncosits (B3) (Nonriveri	ne) nriverine)	Salt Crust (I Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh	B11) (B12) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C	4)	V S D D ots (C3) D	Vater Marks (B1) (Riverine) rediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8)
Vetland Hydrimary India Surface High Wa Saturatia Water M Sedimer Drift Deg Surface	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriveriant Deposits (B2) (Noncosits (B3) (Nonriveriant (B3))	ne) iriverine) ine)	Salt Crust (I Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron	B11) (B12) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C- Reduction in Tille	4)	V S D ots (C3) D C	Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) vift Deposits (B3) (Riverine) virainage Patterns (B10) viry-Season Water Table (C2) virayfish Burrows (C8) aturation Visible on Aerial Imagery (C9)
Vetland Hydrimary India Surface High Wa Saturatia Water M Sedimer Drift Dep Surface	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriverin ot Deposits (B2) (Noncosits (B3) (Nonriveri	ne) iriverine) ine)	Salt Crust (I Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S	B11) (B12) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C	4)	V S D ots (C3) D C S) S	Vater Marks (B1) (Riverine) rediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8)
Vetland Hydrimary India Surface High Wa Saturatia Water M Sedimer Drift Dep Surface Inundatia Water-S	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriveriant Deposits (B2) (Non cosits (B3) (Nonriveriant (B3) (Nonriveriant (B3)) (Nonriveriant (B3)) (Nonriveriant (B3)) (Nonriveriant (B4))	ne) iriverine) ine)	Salt Crust (I Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S	B11) (B12) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C- Reduction in Tille Gurface (C7)	4)	V S D ots (C3) D C S) S	Vater Marks (B1) (Riverine) rediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rrayfish Burrows (C8) raturation Visible on Aerial Imagery (C9) rhallow Aquitard (D3)
Vetland Hydrimary India Surface High Wa Saturatio Water M Sedimer Drift Dep Surface Inundatio Water-S	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriverint Deposits (B2) (Nonrivering cosits (B3) (Nonrivering Soil Cracks (B6) on Visible on Aerial Intained Leaves (B9) vations:	ne) iriverine) ine) magery (B7)	Salt Crust (I Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Other (Expli	B11) (B12) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C- Reduction in Tille Surface (C7) ain in Remarks)	4)	V S D ots (C3) D C S) S	Vater Marks (B1) (Riverine) rediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rrayfish Burrows (C8) raturation Visible on Aerial Imagery (C9) rhallow Aquitard (D3)
Vetland Hydrimary India Surface High Wa Saturatia Water M Sedimer Drift Dep Surface Inundatia Water-S Field Obsers	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriverin th Deposits (B2) (Non cosits (B3) (Nonriverin Soil Cracks (B6) on Visible on Aerial In tained Leaves (B9) vations: er Present?	ne) iriverine) ine) magery (B7)	Salt Crust (I Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Other (Expla	B11) (B12) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C- Reduction in Tille Surface (C7) ain in Remarks)	4)	V S D ots (C3) D C S) S	Vater Marks (B1) (Riverine) rediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rrayfish Burrows (C8) raturation Visible on Aerial Imagery (C9) rhallow Aquitard (D3)
Primary Indice Surface High Wa Saturatice Water M Sedimer Drift Dep Surface Inundatice Water-S Field Observator Nater Table Saturation Princludes cap	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriverin the Deposits (B2) (Non cosits (B3) (Nonriverin Soil Cracks (B6) on Visible on Aerial In tained Leaves (B9) vations: er Present? Present? Ye resent?	ne) iriverine) ine) magery (B7) es No es No	Salt Crust (I Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Other (Expli	B11) (B12) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C Reduction in Tille Surface (C7) ain in Remarks) nes):	4) d Soils (C6	V S D ots (C3) D C S) S F	Vater Marks (B1) (Riverine) rediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rrayfish Burrows (C8) raturation Visible on Aerial Imagery (C9) rhallow Aquitard (D3)
Primary Indice Surface High Wa Saturatio Water M Sedimer Drift Dep Surface Inundatio Water-S Field Observ Surface Water Water Table Saturation Princludes cap	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriverin to Deposits (B2) (Non cosits (B3) (Nonriverin Soil Cracks (B6) on Visible on Aerial In tained Leaves (B9) vations: er Present? Present? Ye resent? Ye	ne) iriverine) ine) magery (B7) es No es No	Salt Crust (I Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Other (Expli	B11) (B12) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C Reduction in Tille Surface (C7) ain in Remarks) nes):	4) d Soils (C6	V S D ots (C3) D C S) S F	Vater Marks (B1) (Riverine) rediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) rry-Season Water Table (C2) rrayfish Burrows (C8) raturation Visible on Aerial Imagery (C9) hallow Aquitard (D3) AC-Neutral Test (D5)
Primary Indic Surface High Wa Saturatio Water M Sedimer Drift Dep Surface Inundatio Water-S Field Obser Surface Water Table Saturation Proposition of the composition of the compositio	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriverin to Deposits (B2) (Non cosits (B3) (Nonriverin Soil Cracks (B6) on Visible on Aerial In tained Leaves (B9) vations: er Present? Present? Ye resent? Ye resent? Ye corded Data (stream of	ne) iriverine) ine) magery (B7) es No es No es No gauge, monit	Salt Crust (I Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Other (Explain Depth (inch Depth (inch oring well, aerial ph	B11) (B12) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C Reduction in Tille Surface (C7) ain in Remarks) nes):	4) d Soils (C6	V S D D D S S F	Vater Marks (B1) (Riverine) lediment Deposits (B2) (Riverine) lediment Deposits (B3) (Riverine) lediment Deposits (B10) ledime
Primary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Surface Inundatic Water-S Field Obser Surface Water Table Saturation Princludes cap Describe Rec	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriverin to Deposits (B2) (Non cosits (B3) (Nonriverin Soil Cracks (B6) on Visible on Aerial In tained Leaves (B9) vations: er Present? Present? Ye resent? Ye resent? Ye corded Data (stream of	ne) iriverine) ine) magery (B7) es No es No es No gauge, monit	Salt Crust (I Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Other (Explain Depth (inch Depth (inch oring well, aerial ph	B11) (B12) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C Reduction in Tille Surface (C7) ain in Remarks) nes):	4) d Soils (C6	V S D D D S S F	Vater Marks (B1) (Riverine) rediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) rry-Season Water Table (C2) rrayfish Burrows (C8) raturation Visible on Aerial Imagery (C9) hallow Aquitard (D3) AC-Neutral Test (D5)

Project/Site: Olsea	City/C	ounty: <u>Pas</u>	o Robles	Sampling Date: 3-26-/9
				Sampling Point: 3
Investigator(s): Tilliakeit Andersen				
Landform (hillslope, terrace, etc.): <u>Slainage</u>				
Subregion (LRR): LRRC				
Soil Map Unit Name: Abechle - San YSI				
Are climatic / hydrologic conditions on the site typical for th				- 100ger
Are Vegetation, Soil, or Hydrology				present? Yes X No
Are Vegetation, Soil, or Hydrology	naturally problema	atic? (If ne	eded, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing san	pling point lo	ocations, transects	s, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes	lo	Is the Sampled within a Wetlan	. /	No
Remarks: Mouth of ag pords Abou	re adding	e Patafall		
VEGETATION – Use scientific names of plar	nts.			
/.		ninant Indicator	Dominance Test work	rsheet:
Tree Stratum (Plot size: //a) 1	<u>% Cover</u> <u>Spe</u>	cies? Status	Number of Dominant S That Are OBL, FACW,	
2. 3.			Total Number of Domir Species Across All Stra	/
4	= To	tal Cover	Percent of Dominant S That Are OBL, FACW.	pecies or FAC:(A/B)
Sapling/Shrub Stratum (Plot size: _n la)				
1			Prevalence Index wor	Multiply by:
2.				x 1 =
3. 4.			ĺ	x 2 =
4				x 3 =
J. /	= To	tal Cover		x 4 =
Herb Stratum (Plot size: Z'×Z')			UPL species	x 5 =
1. Elporharis macrostachya	100	Y SFMW	Column Totals:	(A) (B)
2			Danielan en Indo	D/A -
3				c = B/A =
4			Hydrophytic Vegetati Dominance Test is	
5			Prevalence Index	
6			 Morphological Ada	aptations ¹ (Provide supporting
8.	_			s or on a separate sheet) phytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size: N(a)	<u> 100</u> = To	tal Cover	Froblematic Hydro	phytic vegetation (Explain)
1	-		¹ Indicators of hydric so be present, unless dist	il and wetland hydrology must urbed or problematic.
2			,	
% Bare Ground in Herb Stratum % Cove		tal Cover	Hydrophytic Vegetation Present? Ye	es No
Remarks:			1	
- Upland adjacent traction	n, Med	lusahead		
. Eleocharis macrostachya ne	for 201	6 NWPL K	oul assumed	FACWORDBL

~	4		
·	,	18	

Sampling	Point:	
Sampling	COHIL.	

Profile Desc	cription: (Describe	to the dept	th needed to docu	ment the i	ndicator o	or confirm	the absence	e of indicators.)
Depth	Matrix			x Features				
(inches)	Color (moist)	%	Color (moist)	%	_Type ¹	_Loc ²	<u>Texture</u>	Remarks
0-12	10YR 1/1	85	10YR 916		<u> RY</u>	<u> PL</u>	C	depleted
								/
		· ———						The state of the s
ļ ——					-			
¹Type: C=C	oncontration D=Don	lotion DM-	Dodused Matrix Ct				-: 21 -	astions DI Dan Linius M. Matrix
	oncentration, D=Dep Indicators: (Applic					u Sanu Gr		cation: PL=Pore Lining, M=Matrix. s for Problematic Hydric Soils ³ :
Histosol		able to all i	Sandy Red					•
	oipedon (A2)		Stripped Ma					Muck (A9) (LRR C) Muck (A10) (LRR B)
Black Hi			Loamy Muc		(F1)			ced Vertic (F18)
	n Sulfide (A4)		Loamy Gley					Parent Material (TF2)
	d Layers (A5) (LRR (C)	✓ Depleted M		` ,			(Explain in Remarks)
1 cm Mu	ick (A9) (LRR D)		Redox Darl		F6)			,
1	d Below Dark Surfac	e (A11)	Depleted D					
	ark Surface (A12)		Redox Dep		⁻ 8)			of hydrophytic vegetation and
,	lucky Mineral (S1)		Vernal Pool	ls (F9)				hydrology must be present,
	Bleyed Matrix (S4)						unless o	disturbed or problematic.
	_ayer (if present): ハのへく							
Type:	```							
Depth (inc	ones):/						Hydric Soil	Present? Yes V No No
Remarks:								
HYDROLO	GY							
	drology Indicators:							
· ·	ators (minimum of o	ne required:	chack all that anni-	W			Soco	ndany Indicators (2 or more required)
X Surface		ne required			***************************************			ndary Indicators (2 or more required)
	ter Table (A2)		Salt Crust Biotic Crus					Vater Marks (B1) (Riverine)
Saturatio	, ,		Blotte Crus		(D40)			Sediment Deposits (B2) (Riverine)
í	arks (B1) (Nonriveri	no)	· ·		` '			Orift Deposits (B3) (Riverine)
	it Deposits (B2) (No r		Hydrogen			ivina Boot		Orainage Patterns (B10) Ory-Season Water Table (C2)
	osits (B3) (Nonriver		Presence					Crayfish Burrows (C8)
	Soil Cracks (B6)	1110)	Recent Iro		, ,			Saturation Visible on Aerial Imagery (C9)
1	on Visible on Aerial Ir	nagery (R7)				30113 (00)		Shallow Aquitard (D3)
	ained Leaves (B9)	nagery (Dr	Other (Exp					AC-Neutral Test (D5)
Field Observ	. ,		Office (EXP	nam m rec	naiko)			AC-Nedital Test (D5)
Surface Wate		ae X N	o Depth (inc	phoe): C	2.5			
Water Table						-		
			o Depth (inc					5 10 W
Saturation Pr (includes cap	esent? Ye illary fringe)	es N	o Depth (inc	cnes):		_ Wetla	nd Hydrolog	y Present? Yes V No No
	corded Data (stream	gauge, mor	nitoring well, aerial p	hotos, pre	vious insp	ections), i	f available:	
					·			
Remarks:								

Project/Site: 0/3em		City/Co	unty: Pase	Robles	_ Sampling Date: _	3-26-19
				State: <u>CA</u>		
Investigator(s): Anderson Tilliake:+						•
Landform (hillslope, terrace, etc.): +errace		Locali	elief (concave	convex none). Cert	16× Slon	e (%): /
Subregion (LRR): LRAC	Lat: 3:	5.60	23 767	Long: -170-63	9.9.5.1 Datum	1. W/258
Soil Map Unit Name: Arbuckle - San Ys;	_ Lat	2000	2-10/61	LongN	ination: 110	6
Are climatic / hydrologic conditions on the site typical for this	var s	0 V-	- VO 7 - X	INVVI CIASSIII	Dansaries)	<u>e</u>
						,
Are Vegetation, Soil, or Hydrology si						No
Are Vegetation, Soil, or Hydrology na				eeded, explain any answ		
SUMMARY OF FINDINGS – Attach site map s	showing	sam	oling point l	locations, transects	s, important fea	atures, etc.
Hydrophytic Vegetation Present? Yes No			Is the Sample	d Aron		
Hydric Soil Present? Yes No		- 1	•	nd? Yes	No.	
Wetland Hydrology Present? Yes No			***************************************	100 <u></u>		
Remarks: Uplanda Above a verage is	i in fa	((
,						
VEGETATION – Use scientific names of plant	s.					
Tree Stratum (Plot size: h/a)	Absolute % Cover		nant Indicator es? Status	Dominance Test work		
1				Number of Dominant S That Are OBL, FACW,		(A)
2		-		Total Number of Domi	nant ,	
3				Species Across All Str	ata: <i>l</i>	(B)
Sapling/Shrub Stratum (Plot size:)		= Tota		Percent of Dominant S That Are OBL, FACW,		(A/B)
Sapling/Shrub Stratum (Plot size:)						
1				Prevalence Index wo	rksneet: Multiply	by:
2				OBL species		l l
3				FACW species		
5				FAC species		I
		= Tota	I Cover	FACU species		
Herb Stratum (Plot size: \m \times \m \times \m \times	7.5		· /1 !	UPL species		I
1. Hordeum murnimum		\underline{I}	<u> </u>	Column Totals:	(A)	(B)
2. <u>Capsella bursa-pastoris</u>	5			Dravatanaa Inda	- D/A -	
3. Festuca myuns 4. Plagiobothnis camescens	-5	$\frac{N}{N}$		Hydrophytic Vegetati	x = B/A =	
5. Evalum Sp.	 5	<u>_/\/</u>		Dominance Test is		
6. Poa annua	5	1/		Prevalence Index		
7. Browner madritons is ssp. rubens		1		I —	aptations¹ (Provide s	supporting
8.					ks or on a separate s	
	100	= Tota	l Cover	Problematic Hydro	ophytic Vegetation¹ ((Explain)
Woody Vine Stratum (Plot size:)			00701			
1. <u>P</u>				¹ Indicators of hydric so be present, unless dist		
2				•		·
	-	•	I Cover	Hydrophytic Vegetation		/
% Bare Ground in Herb Stratum % Cover	of Biotic Cr	rust		Present? Ye	esNo_	
Remarks:						
,				•		

					Sampling Point:		
Profile Desc	cription: (Describe t	o the dep	th needed to document the indicator or conf	irm the absence o	f indicators.)		
Depth	Matrix		Redox Features	_			
(inches)	Color (moist)	%	Color (moist) % Type ¹ Loc ²		Remarks		
<u>0-6</u>	104B3/2			_ <u> </u>			
6-17	10/23/2	97	10493/6 3	_ <u>C</u> 6			
	HALLO.						
	B						
			,				
¹ Type: C=C	oncentration, D=Deple	etion. RM=	Reduced Matrix, CS=Covered or Coated Sand	Grains ² Loca	tion: PL=Pore Lining, M=Matrix.		
			LRRs, unless otherwise noted.)		or Problematic Hydric Soils ³ :		
Histosol			Sandy Redox (S5)		ck (A9) (LRR C)		
Histic Ep	pipedon (A2)		Stripped Matrix (S6)		ck (A10) (LRR B)		
Black Hi	istic (A3)		Loamy Mucky Mineral (F1)		Vertic (F18)		
	en Sulfide (A4)		Loamy Gleyed Matrix (F2)		ent Material (TF2)		
	d Layers (A5) (LRR C))	Depleted Matrix (F3)	Other (E	xplain in Remarks)		
	ıck (A9) (LRR D) d Below Dark Surface	(444)	Redox Dark Surface (F6)				
	ark Surface (A12)	(AT1)	Depleted Dark Surface (F7) Redox Depressions (F8)	3Indicators of	budrophytic vocatation and		
	Mucky Mineral (S1)		Vernal Pools (F9)		³ Indicators of hydrophytic vegetation and wetland hydrology must be present,		
	Bleyed Matrix (S4)			·	unless disturbed or problematic.		
	Layer (if present):				- F		
Type:	NONE						
Depth (inc	shoot \ 10 1			l l	1		
Pobul (IIII	ches)://		· · · · · · · · · · · · · · · · · · ·	Hydric Soil P	resent? Yes No [™]		
Remarks:	cnes):		·	Hydric Soil P	resent? Yes No		
	cnes):> //			Hydric Soil P	resent? Yes No		
	cnes):> (Z		 :	Hydric Soil P	resent? Yes No		
<u> </u>	cnes):		`	Hydric Soil P	resent? Yes No		
Remarks:	sites).		<u> </u>	Hydric Soil P	resent? Yes No		
Remarks:	GY			Hydric Soil P	resent? Yes No		
Remarks: IYDROLO Wetland Hyo	GY drology Indicators:		· check all that anniv)				
Remarks: IYDROLO Wetland Hyd Primary Indic	GY drology Indicators:			Seconda	ary Indicators (2 or more required)		
Remarks: HYDROLOG Wetland Hyd Primary Indic Surface V	GY drology Indicators: cators (minimum of one		Salt Crust (B11)	Seconda Wat	ary Indicators (2 or more required) ler Marks (B1) (Riverine)		
Remarks: HYDROLO Wetland Hyo Primary Indic Surface High Wa	GY drology Indicators: cators (minimum of one Water (A1) drer Table (A2)		Salt Crust (B11) Biotic Crust (B12)	Seconda Wat Sed	ary Indicators (2 or more required) der Marks (B1) (Riverine) liment Deposits (B2) (Riverine)		
HYDROLO Wetland Hyd Primary Indic Surface High Wa Saturatio	GY drology Indicators: eators (minimum of one Water (A1) tter Table (A2) on (A3)	e required	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)	<u>Second:</u> Wai Sed Driff	ary Indicators (2 or more required) ter Marks (B1) (Riverine) liment Deposits (B2) (Riverine) t Deposits (B3) (Riverine)		
HYDROLO Wetland Hyd Primary Indic Surface V High Wa Saturatio Water M	GY drology Indicators: eators (minimum of one Water (A1) tter Table (A2) on (A3) arks (B1) (Nonriverin	e required	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Seconda Wat Sed Driff Dra	ary Indicators (2 or more required) ler Marks (B1) (Riverine) liment Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10)		
HYDROLOG Wetland Hyd Primary Indic Surface V High Wa Saturation Water Mi	GY drology Indicators: eators (minimum of one Water (A1) hter Table (A2) on (A3) arks (B1) (Nonriverin ht Deposits (B2) (Nonr	e required e) riverine)	 Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R 	<u>Second:</u> Wai Sed Drifi Dra zoots (C3) Dry.	ary Indicators (2 or more required) ter Marks (B1) (Riverine) timent Deposits (B2) (Riverine) t Deposits (B3) (Riverine) tinage Patterns (B10) -Season Water Table (C2)		
HYDROLOG Wetland Hyd Primary Indic Surface V High Wa Saturatio Water Mater Mater Sedimen Drift Dep	GY drology Indicators: eators (minimum of one Water (A1) hter Table (A2) on (A3) arks (B1) (Nonriverin ht Deposits (B2) (Nonriverin hosits (B3) (Nonriverin	e required e) riverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4)	Seconda	ary Indicators (2 or more required) ter Marks (B1) (Riverine) liment Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8)		
HYDROLOG Wetland Hyd Primary Indic Surface Many High Wa Saturatio Water Many Sedimen Drift Dep Surface Surfac	GY drology Indicators: eators (minimum of one Water (A1) ter Table (A2) on (A3) arks (B1) (Nonriverin to Deposits (B2) (Nonriverin sosits (B3) (Nonriverin Soil Cracks (B6)	e required e) viverine) ne)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Seconda	ary Indicators (2 or more required) ter Marks (B1) (Riverine) liment Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9)		
HYDROLOG Wetland Hyd Primary Indic Surface V High Wa Saturatio Water Mi Sedimen Drift Dep Surface S Inundation	GY drology Indicators: eators (minimum of one Water (A1) hter Table (A2) on (A3) arks (B1) (Nonriverin ht Deposits (B2) (Nonriverin hosits (B3) (Nonriverin	e required e) viverine) ne)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Seconda	ary Indicators (2 or more required) ter Marks (B1) (Riverine) timent Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9)		
HYDROLOG Wetland Hyd Primary Indic Surface V High Wa Saturatio Water M Sedimen Drift Dep Surface S Inundation	GY drology Indicators: eators (minimum of one Water (A1) eter Table (A2) on (A3) arks (B1) (Nonriverin et Deposits (B2) (Nonriverin soil Cracks (B6) on Visible on Aerial Im tained Leaves (B9)	e required e) viverine) ne)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (contract) Thin Muck Surface (C7)	Seconda	ary Indicators (2 or more required) ter Marks (B1) (Riverine) liment Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9)		
HYDROLOG Wetland Hyd Primary Indic Surface V High Wa Saturatio Water M Sedimen Drift Dep Surface S Inundatic Water-St	GY drology Indicators: eators (minimum of one Water (A1) ter Table (A2) on (A3) arks (B1) (Nonriverin at Deposits (B2) (Nonriverin cosits (B3) (Nonriverin Soil Cracks (B6) on Visible on Aerial Im tained Leaves (B9) vations:	e required e) viverine) ne) nagery (B7	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C1) Thin Muck Surface (C7) Other (Explain in Remarks)	Seconda	ary Indicators (2 or more required) ter Marks (B1) (Riverine) timent Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9)		
HYDROLO Wetland Hyd Primary Indic Surface V High Wa Saturatio Water Mater Mater Mater Sedimen Drift Dep Surface S Inundatio Water-St	GY drology Indicators: eators (minimum of one Water (A1) ter Table (A2) on (A3) arks (B1) (Nonriverin to Deposits (B2) (Nonriverin cosits (B3) (Nonriverin Soil Cracks (B6) on Visible on Aerial Im tained Leaves (B9) vations: er Present? Yes	e required riverine) ne) agery (B7	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) Thin Muck Surface (C7) Other (Explain in Remarks)	Seconda	ary Indicators (2 or more required) ter Marks (B1) (Riverine) timent Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9)		
HYDROLOG Wetland Hyd Primary Indic Surface High Wa Saturatio Water M: Sedimen Drift Dep Surface S Inundatio Water-St Field Observ Surface Water	GY drology Indicators: eators (minimum of one Water (A1) hter Table (A2) on (A3) arks (B1) (Nonriverin ht Deposits (B2) (Nonriverin Soil Cracks (B6) on Visible on Aerial Im tained Leaves (B9) vations: er Present? Yes Present? Yes	e required e) riverine) ne) aggery (B7	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (column) Other (Explain in Remarks) Depth (inches): Depth (inches):	Seconda	ary Indicators (2 or more required) ter Marks (B1) (Riverine) timent Deposits (B2) (Riverine) t Deposits (B3) (Riverine) tinage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) tillow Aquitard (D3) C-Neutral Test (D5)		
Remarks: HYDROLO Wetland Hyd Primary Indic Surface V High Wa Saturatio Water Many Sedimen Drift Dep Surface S Inundatio Water-St Field Observ Surface Water Water Table I Saturation Pro	GY drology Indicators: eators (minimum of one Water (A1) ter Table (A2) on (A3) arks (B1) (Nonriverin to Deposits (B2) (Nonriverin soil Cracks (B6) on Visible on Aerial Im tained Leaves (B9) vations: er Present? Yes resent? Yes resent? Yes resent? Yes resent? Yes	e required e) riverine) ne) agery (B7	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C1) Thin Muck Surface (C7) Other (Explain in Remarks) O	Seconds Wat Sed Drift Dra Coots (C3) Dry Cra C6) Satu Sha FAC	ary Indicators (2 or more required) ter Marks (B1) (Riverine) timent Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9)		
Remarks: HYDROLO Wetland Hyd Primary Indic Surface V High Wa Saturatio Water Many Sedimen Drift Dep Surface S Inundatio Water-St Field Observ Surface Water Water Table I Saturation Pro	GY drology Indicators: eators (minimum of one Water (A1) ter Table (A2) on (A3) arks (B1) (Nonriverin to Deposits (B2) (Nonriverin soil Cracks (B6) on Visible on Aerial Im tained Leaves (B9) vations: er Present? Yes resent? Yes resent? Yes resent? Yes resent? Yes	e required e) riverine) ne) agery (B7	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (column) Other (Explain in Remarks) Depth (inches): Depth (inches):	Seconds Wat Sed Drift Dra Coots (C3) Dry Cra C6) Satu Sha FAC	ary Indicators (2 or more required) ter Marks (B1) (Riverine) timent Deposits (B2) (Riverine) t Deposits (B3) (Riverine) tinage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) tillow Aquitard (D3) C-Neutral Test (D5)		
Remarks: HYDROLO Wetland Hyd Primary Indic Surface V High Wa Saturatio Water Many Sedimen Drift Dep Surface S Inundatio Water-St Field Observ Surface Water Water Table I Saturation Pro	GY drology Indicators: eators (minimum of one Water (A1) ter Table (A2) on (A3) arks (B1) (Nonriverin to Deposits (B2) (Nonriverin soil Cracks (B6) on Visible on Aerial Im tained Leaves (B9) vations: er Present? Yes resent? Yes resent? Yes resent? Yes resent? Yes	e required e) riverine) ne) agery (B7	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C1) Thin Muck Surface (C7) Other (Explain in Remarks) O	Seconds Wat Sed Drift Dra Coots (C3) Dry Cra C6) Satu Sha FAC	ary Indicators (2 or more required) ter Marks (B1) (Riverine) timent Deposits (B2) (Riverine) t Deposits (B3) (Riverine) tinage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) tillow Aquitard (D3) C-Neutral Test (D5)		
Remarks: HYDROLOG Wetland Hyd Primary Indic Surface Mater Mater Mater Mater Sedimen Drift Dep Surface Mater-St Field Observ Surface Water Table I Saturation Pro (includes cap Describe Reco	GY drology Indicators: eators (minimum of one Water (A1) ter Table (A2) on (A3) arks (B1) (Nonriverin to Deposits (B2) (Nonriverin soil Cracks (B6) on Visible on Aerial Im tained Leaves (B9) vations: er Present? Yes resent? Yes resent? Yes resent? Yes resent? Yes	e required e) riverine) ne) agery (B7	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C1) Thin Muck Surface (C7) Other (Explain in Remarks) O	Seconds Wat Sed Drift Dra Coots (C3) Dry Cra C6) Satu Sha FAC	ary Indicators (2 or more required) ter Marks (B1) (Riverine) timent Deposits (B2) (Riverine) t Deposits (B3) (Riverine) tinage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) tillow Aquitard (D3) C-Neutral Test (D5)		

Project/Site: Olsen		City/C	:ountv	. Pase	Rebles Sampling F	Date: 3-26-19
		Oity/ O	our ity		State: A Sampling F	Point: 5
Investigator(s): Tilligheit, Andersen						
Landform (hillslope, terrace, etc.): <u>Drainage</u> Subregion (LRR): <u>LRR</u>	1 -1 - 0	Local		(concave,	convex, none).	_ Slope (%)
Subregion (LRR):	Lat: <u>ئ</u>	206	<u> </u>	20-1	Long: <u>-12639186</u>	Datum: <u>~~~~~</u>
Soil Map Unit Name: Arbuckle-Sun Kide						INCE, A.C.
Are climatic / hydrologic conditions on the site typical for the					•	
Are Vegetation, Soil, or Hydrology	significantly	disturl	bed?	Are "	Normal Circumstances" present? Ye	es No
Are Vegetation, Soil, or Hydrology	naturally pro	blema	atic?	(If ne	eded, explain any answers in Remarl	ks.)
SUMMARY OF FINDINGS - Attach site map	showing	sam	plin	g point l	ocations, transects, importa	nt features, etc.
Hydrophytic Vegetation Present? Yes	No V		la 4b	a Campled	A v.o.a	
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes Yes N	Vo			e Sampled in a Wetlar	nd?	
Wetland Hydrology Present? Yes N	No		WILL	ili a vvetiai	16310	
Remarks:				1		
in chame!						
VEGETATION – Use scientific names of plan	nts.				Ţ	
	Absolute	Dom	ninant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:)	<u>% Cover</u>				Number of Dominant Species	1
1					That Are OBL, FACW, or FAC:	(A)
2					Total Number of Dominant	3 (B)
3					Species Across All Strata:	(B)
4		= Tot	tal Co	ver	Percent of Dominant Species	33 (A/B)
Sapling/Shrub Stratum (Plot size:)	•	_ , , ,	iai oo	VOI	That Are OBL, FACW, or FAC:	∑ (A/B)
1. \$\sqrt{\psi}\$					Prevalence Index worksheet:	
2					Total % Cover of: N	
3					OBL species x 1 =	
4					FACW species x 2 =	
5			4-10-		FAC species x 3 = FACU species x 4 =	
Herb Stratum (Plot size: MX M)		_			UPL species x 5 =	
1. Bromus diandrus		<u> </u>		UPL	Column Totals: (A)	
2. Hordeum muninum	30		<u>"</u>	FACU	Column rotale.	(5)
3. Juncus mexicanus	30	<u> </u>	<i>P</i>	FACW	Prevalence Index = B/A =	
4. Elymno caput medical	10				Hydrophytic Vegetation Indicator	's:
5. Etodyum op.	_ <u>5</u>		1/		Dominance Test is >50%	
6. capsella buisa-pastoris	5				Prevalence Index is ≤3.0¹ Morphological Adaptations¹ (Pr	rouldo aumnortina
7					data in Remarks or on a seg	parate sheet)
8	110		tal Co		Problematic Hydrophytic Veget	ation ¹ (Explain)
Woody Vine Stratum (Plot size:)		101	lai Cu	vei		
1					¹ Indicators of hydric soil and wetlan	
2					be present, unless disturbed or prol	Diematic.
		_ = Tot	tal Cov	ver	Hydrophytic Vegetation	
% Bare Ground in Herb Stratum % Cove	r of Biotic C	rust _	10	<u> </u>	Present? Yes	No <u> </u>
Remarks:					<u> </u>	·
					•	
1						

C	6	ı	ı
O	v	1	

Sampling Point: __5__

Type: Co-Concentration, D-Depletion, RM-Reduced Matrix, CS-Covered or Coated Sand Grains. Tocation: PL-Pore Lining, M-Matrix, Phydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils; Histocol (A1) Lining Matrix (A1) (LRR C) Sardy Rodox (B5) 1 cm Music (A9) (LRR C) 1 cm Music (A9) (LRR C) 2 cm Music (A1) (LRR C) 3 cm Music (A2) 4 cm Music (A2	Depth	Matrix		Redo	x Features				
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Third of Coated Sand Grains. Third of Carlot (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils¹: 1 cm Muck (Ap) (LRR D) 2 cm Muck (Ap) (LRR D) 3 c	(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²		
Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	0-12	10 YR 3/2	100		-			SCL	sandy clay loans
Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									0 J
Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)								*******	
Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)				W				-	
Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted.) Histosof (A1)									
Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted.) Histosof (A1)			-					-	
Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted.) Histosof (A1)									
Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted.) Histosof (A1)				34000					
Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted.) Histosof (A1)									
Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted.) Histosof (A1)	¹ Type: C=C	Concentration, D=Der	oletion, RM=R	educed Matrix. C	S=Covered	or Coate	d Sand Gr	ains ² l oc	eation: PI =Pore Lining M=Matrix
Histosel (A1)	Hydric Soil	Indicators: (Applic	able to all LF	RRs, unless othe	rwise note	d.)	a cana ch		
Histic Epipedon (A2) Stripped Matrix (S6) 2 cm Muck (A10) (LRR B)						,			-
Black Histlic (A3)		· ·							· · · · · ·
Hydrogen Sulfide (Ay)						(F1)			
Statisfied Layers (A5) (LRR C) Depleted Matrix (F3) Cither (Explain in Remarks) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A12) Redox Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type:				-	-				The state of the s
1 cm Muck (A9) (LRR D)			C)			,			, ,
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) and Mucky Mineral (S1) wetland hydrology must be present, unless disturbed or problematic. Sandy Gleyed Matrix (S4) Wernal Pools (F9) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type: Depth (inches): >// Hydric Soil Present? Yes No Primary Indicators (Primary Indicators (Pri			•			·6)			Explain in Containey
Thick Dark Surface (A12) Redox Depressions (F9) Sindicators of hydrophytic vegetation and welland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type:		, , , ,	e (A11)		•	•			
Sandy Mucky Mineral (S1)			` ,					3Indicators	of hydrophytic vegetation and
Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type:						,			
Restrictive Layer (if present): Type:					` ,				
Depth (inches):	Restrictive	Layer (if present):							
Remarks: Gandy Soil no by Afric indicators Primary Indicators (minimum of one required: check all that apply) Surface Water (A1) High Water Table (A2) Salt Crust (B12) Saturation (A3) Water Marks (B1) (Riverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B3) (Riverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B3) (Riverine) Water Marks (B1) (Nonriverine) Sediment Deposits (B3) (Riverine) Water Marks (B1) (Nonriverine) Sediment Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Type:	none							
Remarks: Gandy Soil no by Afric indicators Primary Indicators (minimum of one required: check all that apply) Surface Water (A1) High Water Table (A2) Salt Crust (B12) Saturation (A3) Water Marks (B1) (Riverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B3) (Riverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B3) (Riverine) Water Marks (B1) (Nonriverine) Sediment Deposits (B3) (Riverine) Water Marks (B1) (Nonriverine) Sediment Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Depth (in	iches): >/7	2					Hydric Soil	Prosent? Vos No
Sandy 30.1								Tiyane don	rieseitti resNo
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) _ Surface Water (A1) Salt Crust (B11) Water Marks (B1) (Riverine) High Water Table (A2) Biotic Crust (B12) Sediment Deposits (B2) (Riverine) Saturation (A3) Aquatic Invertebrates (B13) Drift Deposits (B3) (Riverine) Sediment Deposits (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Roots (C3) Dry-Season Water Table (C2) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No<	N/DDAL 6								
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Sediment Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									- Constitution - Cons
Surface Water (A1) Salt Crust (B11) Water Marks (B1) (Riverine) High Water Table (A2) Biotic Crust (B12) Sediment Deposits (B2) (Riverine) Saturation (A3) Aquatic Invertebrates (B13) Drift Deposits (B3) (Riverine) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Roots (C3) Dry-Season Water Table (C2) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Veginoludes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Riverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B3) (Riverine) Sediment Deposits (B2) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Sediment Deposits (B3) (Nonriverine) Sediment Deposits (B3) (Riverine) Dry-Season Water Table (C2) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Vestand Hydrology Present? Yes No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			ne required; c	heck all that apply	/)			<u>Secon</u>	dary Indicators (2 or more required)
Saturation (A3)		• ,						W	ater Marks (B1) (Riverine)
Water Marks (B1) (Nonriverine)	High Wa	ater Table (A2)		Biotic Crus	t (B12)			Se	ediment Deposits (B2) (Riverine)
Sediment Deposits (B2) (Nonriverine)	Saturati	on (A3)		Aquatic Inv	ertebrates/	(B13)		Dr	rift Deposits (B3) (Riverine)
Sediment Deposits (B2) (Nonriverine)	Water M	larks (B1) (<mark>Nonriveri</mark>	ine)	Hydrogen	Sulfide Odd	r (C1)		× Dr	rainage Patterns (B10)
✓ Drift Deposits (B3) (Nonriverine) — Presence of Reduced Iron (C4) — Crayfish Burrows (C8) _ Surface Soil Cracks (B6) — Recent Iron Reduction in Tilled Soils (C6) — Saturation Visible on Aerial Imagery (C9) _ Inundation Visible on Aerial Imagery (B7) — Thin Muck Surface (C7) — Shallow Aquitard (D3) _ Water-Stained Leaves (B9) — Other (Explain in Remarks) — FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No ✓ Depth (inches): Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches): Yes No ✓ Depth (inches): ✓ Wetland Hydrology Present? Yes No Vincludes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Sedime	nt Deposits (B2) (No r	nriverine)	Oxidized R	hizosphere	s along L	iving Root		
Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5) Field Observations: Surface Water Present?	∠ Drift Dep	oosits (B3) (Nonrive r	ine)	Presence of	of Reduced	Iron (C4)			
Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No _X Depth (inches): Water Table Present? Yes No _X Depth (inches): Yes No _X Depth (inches): Water Table Present? Yes No _X Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Yes No No No No Yes No _	Surface	Soil Cracks (B6)							
	Inundati	on Visible on Aerial I	magery (B7)	Thin Muck	Surface (C	7)	, ,		
Field Observations: Surface Water Present? Yes No _X Depth (inches):	Water-S	tained Leaves (B9)	,		-	-			
Surface Water Present? Yes No _X Depth (inches): Water Table Present? Yes No _X Depth (inches): Saturation Present? Yes No _X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		. ,							to Hould, Foot (Bo)
Water Table Present? Yes No _X Depth (inches):/ Saturation Present? Yes No _X Depth (inches):/ Wetland Hydrology Present? Yes No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			ae Na	X Donth (inc	bon):				
Saturation Present? Yes No _X_ Depth (inches): Wetland Hydrology Present? Yes No						17	-		
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							-		\checkmark
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			esNo	X Depth (inc	:hes): <i>></i> _	1.6	_ Wetla	nd Hydrology	Present? Yes No
	Describe Re	corded Data (stream	gauge, monitr	oring well aerial r	hotos prev	ious insn	ections) if	f available:	
Remarks:			gg.,e	omig tron, donar p	ilotoo, prov	iodo iiiop	0000110), 11	avallable.	
ACHIGINS.	Domarko								
	Remarks:								

Project/Site: 0/50~	City/0	County: Pessi	e Robles	Sampling Date: <u>3-26-19</u>
Applicant/Owner: 0/56a			State: CA	Sampling Point:
Investigator(s): Andersen Tilligheit	Secti	on, Township, Rai	nge: T265 R1	36
Landform (hillslope, terrace, etc.):	Loca	l relief (concave, o	convex, none):	Ca V Slope (%): 1
Subregion (LRR): LBRC	Lat: 3500	60111	Long: -172691	007 Datum: WG88
Soil Map Unit Name: Craple y clay				cation: None
Are climatic / hydrologic conditions on the site typical for this				
Are Vegetation, Soil, or Hydrologys				present? Yes No
Are Vegetation, Soil, or Hydrology n			eded, explain any answe	
SUMMARY OF FINDINGS – Attach site map				
Wetland Hydrology Present? YesV N Remarks:	o	Is the Sampled within a Wetlan	nd? Yes	No
Area may be historically of Not recently disturbed	15 turbect	Etherg	h Perebreak	5 0
VEGETATION – Use scientific names of plan	ts.			
	% Cover Spe		Dominance Test work Number of Dominant S That Are OBL, FACW,	pecies –
1. <u>0</u> 2				
3.			Total Number of Domin Species Across All Stra	
4			,	` ,
Sapling/Shrub Stratum (Plot size:)	= To	tal Cover	Percent of Dominant Space That Are OBL, FACW,	
1. 1		<u> </u>	Prevalence Index wor	
2				Multiply by:
3.				x 1 =
4.			· ·	x 2 =
5			i ·	x 3 =
Herb Stratum (Plot size: 1 m x 1 m)	=10	tal Cover		x 4 = x 5 =
1. Junious Sufonius	36	Y FACW	The state of the s	
2. Poa annua	15	T FAC	Column Totals.	(D)
3. <u>FESPER (?)</u>	10 /	U, FAC		= B/A =
4. Lythys (?)	5/	OBL	Hydrophytic Vegetation	l l
5		7/00/14/14/14	✓ Dominance Test is	
6			Prevalence Index is	i i
7				ptations ¹ (Provide supporting s or on a separate sheet)
8	/ 10			phytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: _n/a)	= 10	tal Cover	,	
1			¹ Indicators of hydric soi be present, unless distu	l and wetland hydrology must urbed or problematic.
2		tal Cover	Hydrophytic	
% Bare Ground in Herb Stratum 35 % Cover		4 ₀	Vegetation	s No
Remarks:				

ed)
y (C9)
)

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Wetland Hydrology Present? Yes

Saturation Present? Yes _____ No ____ Depth (inches): _____ Wetland Hydrole (includes capillary fringe)

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

Remarks:

Project/Site: O/Sen	City/County: <u>Pa</u>	50 Rables Sampling Date: 4-16-19
Applicant/Owner: Olser	##	State: Sampling Point:
Investigator(s): Althouse + Tilliqueit	Section, Township,	Range: <u>1265 R 13</u> E
Landform (hillslope, terrace, etc.):	Local relief (concav	ve, convex, none): <u>ceccos c</u> Slope (%):
Subregion (LRR): / RR	_ Lat: <u>35,60929</u>	Long: $\underline{-129639371}$ Datum: $\underline{\mathcal{U}(1S86)}$
Soil Map Unit Name: Rincon Clay loan		NWI classification: NOCC
Are climatic / hydrologic conditions on the site typical for thi	is time of year? Yes No	o (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologys	significantly disturbed? A	re "Normal Circumstances" present? Yes No/_
Are Vegetation, Soil, or Hydrology r	naturally problematic? (If	f needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing sampling poin	t locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes N	NO / la the Same	lad Avec
Hydric Soil Present? Yes N	ls the Samp	tland? Yes No
Wetland Hydrology Present? Yes N	NO	
Remarks:	minage o High rais	afall year, Owner of house
Remarks: North of house becuth e felo said septic system lowled	up this year, Site	e may have been , afflue . cool
VEGETATION – Use scientific names of plan		seach to ever
	Absolute Dominant Indicato	
Tree Stratum (Plot size:)	% Cover Species? Status	- Number of Dominant Species
1		That Are OBL, FACW, or FAC:(A)
3		Total Number of Dominant Species Across All Strata: (B)
4.		()
	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size: _ / / _)		Prevalence Index worksheet:
1		Total % Cover of: Multiply by:
3		OBL species x 1 =
4		FACW species x 2 =
5		FAC species x 3 =
Herb Stratum (Plot size:)	<i>[</i> = Total Cover	FACU species x 4 =
1. Callidriche	34 Y OBL	UPL species x 5 = Column Totals: (A) (B)
2. Lythrum hy sopilation	10 N	Column Totals: (A) (B)
3. Jencus butanius	_ <u>5</u> N	Prevalence Index = B/A =
4. Brassica spo	<u> </u>	Hydrophytic Vegetation Indicators:
5. Calystigia sp.	<u> </u>	_
6. Epilosium spo	- - / //	Prevalence Index is \$3.0 Morphological Adaptations ¹ (Provide supporting
7. <u>Tarm</u> (60)		data in Remarks or on a separate sheet)
	-	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 1/a)		
1		 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2		_
	= Total Cover	Hydrophytic Vegetation
% Bare Ground in Herb Stratum 10 % Cover	r of Biotic Crust	Present? Yes No
Remarks:		

Depth	tion (Describe i	o tne aek	th needed to docu	nent the	indicator	or confir	n the absence o	f indicators.)	
	Matrix			x Feature				,	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹ _	_Loc ²	Texture	Remarks	
<u>0-6</u> _	10 YR 2/1	100							
6-12	104R2/1	97	10/135/2	2		M	56		***
			10YP.516			$\overline{\mathcal{M}}$		*	
			101110						
· ·	·			· —					
_									
Type: C=Conc	entration, D=Deple	etion, RM:	Reduced Matrix, CS	S=Covere	d or Coate	d Sand G		tion: PL=Pore Lining, M=I	
		ble to all	LRRs, unless other		ted.)			or Problematic Hydric Sc	oils³:
Histosol (A1	•		Sandy Redo					ck (A9) (LRR C)	
_ Histic Epipe _ Black Histic			Stripped Ma Loamy Muc		51 (54)			ck (A10) (LRR B)	
Hydrogen S	` '		Loamy Gley				Reduced		
	yers (A5) (LRR C)	Depleted Ma		(12)			ent Material (TF2) xplain in Remarks)	
	(A9) (LRR D)	•	Redox Dark		(F6)		Other (E.	Apiaiii iii Neiliaiks)	
	low Dark Surface	(A11)	Depleted Da		` '				
Thick Dark S	Surface (A12)		Redox Depr				³ Indicators of	hydrophytic vegetation ar	nd
	ky Mineral (S1)		Vernal Pools	s (F9)			wetland hydrology must be present,		
	ed Matrix (S4)						unless dist	urbed or problematic.	
Restrictive Laye									,
Type:	**								
Denth (inches							1		
	s):>/^						Hydric Soil Pi	resent? Yes	No
Remarks:				- (1 · c			Hydric Soil Pi	resent? Yes	No <u> </u>
Remarks:			ed annu	all y			Hydric Soil Pi	resent? Yes	No
Remarks:			ed connu	ill y			Hydric Soil Pi	resent? Yes	No
emarks: L!Ke(y	inot say		ed annu	. l(y			Hydric Soil Pi	resent? Yes	No <u> </u>
emarks: L!Ke(y OROLOGY	not car		ed annu	all y			Hydric Soil Pi	resent? Yes	No
emarks: L. Ke (y /DROLOGY /etland Hydrole	ogy Indicators:	west.					Hydric Soil Pr	resent? Yes	No_V
Temarks: L!Ke(y /DROLOGY /etland Hydrolerimary Indicator	ogy Indicators:	west.	; check all that apply)				resent? Yes	
Pemarks: CHECY DROLOGY Vetland Hydrological rimary Indicator Surface Wat	ogy Indicators:	west.	; check all that apply Salt Crust () B11)			Seconda		
POROLOGY Vetland Hydrologic Timary Indicator Surface Wat High Water 1	ogy Indicators: 's (minimum of one er (A1) Table (A2)	west.	; check all that apply Salt Crust (Biotic Crusi) B11) i (B12)			Seconda	nry Indicators (2 or more re	equired)
Cemarks: COROLOGY Vetland Hydrologic rimary Indicator Surface Wat High Water 1 Saturation (A	ogy Indicators: 's (minimum of one er (A1) Table (A2)	e required	; check all that apply Salt Crust () B11) i (B12)			Seconda Wat Sed	ary Indicators (2 or more re er Marks (B1) (Riverine)	equired)
POROLOGY Potland Hydrological Surface Wate High Water Saturation (A Water Marks)	ogy Indicators: rs (minimum of one er (A1) Table (A2) A3) rs (B1) (Nonrivering	e required	; check all that apply Salt Crust (Biotic Crusi Aquatic Inv Hydrogen S	B11) t (B12) ertebrates	s (B13) dor (C1)		<u>Seconda</u> Wat Sed Drift Drai	ary Indicators (2 or more re er Marks (B1) (Riverine) iment Deposits (B2) (Rive Deposits (B3) (Riverine) nage Patterns (B10)	equired)
PROLOGY Vetland Hydrologic Surface Wate High Water Saturation (A) Water Marks Sediment De	ogy Indicators: rs (minimum of one er (A1) Table (A2) A3) r (B1) (Nonriverine	e required	; check all that apply Salt Crust (Biotic Crust Aquatic Inv Hydrogen S Oxidized Ri	B11) i (B12) ertebrates Sulfide Ochizospher	s (B13) dor (C1) res along L		<u>Seconda</u> Wat Sed Drift Drai	ary Indicators (2 or more re er Marks (B1) (Riverine) iment Deposits (B2) (Rive Deposits (B3) (Riverine)	equired)
PROLOGY Vetland Hydrological Material Saturation (A Water Marks Sediment Deposits Deposits Sediment Deposits Sediment Deposits Marks Sediment Deposits Sediment Sedi	ogy Indicators: es (minimum of one er (A1) Table (A2) A3) e (B1) (Nonriverine eposits (B2) (Nonriverine s (B3) (Nonriverine	e required	; check all that apply Salt Crust (Biotic Crusi Aquatic Inv Hydrogen S	B11) i (B12) ertebrates Sulfide Ochizospher	s (B13) dor (C1) res along L		<u>Seconda</u> Wat Sed Drift Drai ts (C3) Dry-	ary Indicators (2 or more re er Marks (B1) (Riverine) iment Deposits (B2) (Rive Deposits (B3) (Riverine) nage Patterns (B10)	equired)
PROLOGY Vetland Hydrologic Surface Wate High Water Saturation (A) Water Marks Sediment De	ogy Indicators: es (minimum of one er (A1) Table (A2) A3) e (B1) (Nonriverine eposits (B2) (Nonriverine s (B3) (Nonriverine	e required	; check all that apply Salt Crust (Biotic Crust Aquatic Inv Hydrogen S Oxidized Ri	B11) t (B12) ertebrates Sulfide Ochizospher	s (B13) dor (C1) res along L d Iron (C4))	Seconda Wat Sedi Drift Drai ts (C3) Dry-	ery Indicators (2 or more re er Marks (B1) (Riverine) iment Deposits (B2) (Rive Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2)	equired)
PROLOGY Vetland Hydrological Indicator Surface Wate High Water Tale Saturation (A) Water Marks Sediment Deposits Surface Soil	ogy Indicators: es (minimum of one er (A1) Table (A2) A3) e (B1) (Nonriverine eposits (B2) (Nonriverine s (B3) (Nonriverine	e required	; check all that apply Salt Crust (Biotic Crust Aquatic Inv Hydrogen S Oxidized Ri Presence o Recent Iror) B11) t (B12) ertebrate: Sulfide Oc hizospher f Reduce i Reductio	s (B13) dor (C1) res along L d Iron (C4) on in Tilled)	Seconda Wat Sedi Drift Drai ts (C3) Dry- Cray) Satu	ery Indicators (2 or more re er Marks (B1) (Riverine) iment Deposits (B2) (Rive Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2)	equired)
PROLOGY Vetland Hydrological Figure 1 (A) Water Marks Sediment Deposite Surface Soil Inundation V	ogy Indicators: es (minimum of one er (A1) Table (A2) A3) 6 (B1) (Nonriverin eposits (B2) (Nonr es (B3) (Nonriverir Cracks (B6)	e required	; check all that apply Salt Crust (Biotic Crust) Aquatic Inv Hydrogen S Oxidized Ri Presence o) B11) t (B12) ertebrate: Sulfide Oc hizospher f Reduce r Reductio Surface ((s (B13) dor (C1) res along L d Iron (C4) on in Tilled C7))	<u>Seconda</u> Wat Sedi Drift Drai ts (C3) Dry Cray) Satu Shal	ery Indicators (2 or more re er Marks (B1) (Riverine) iment Deposits (B2) (Rive Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) iration Visible on Aerial Im	equired)
PROLOGY Vetland Hydrological Figure 1 (A) Water Marks Sediment Deposite Surface Soil Inundation V	ogy Indicators: rs (minimum of one er (A1) Table (A2) A3) r (B1) (Nonriverin eposits (B2) (Nonriverin cracks (B6) isible on Aerial Im- ed Leaves (B9)	e required	; check all that apply Salt Crust (Biotic Crust Aquatic Inv Hydrogen S Oxidized Ri Presence o Recent Iror) B11) t (B12) ertebrate: Sulfide Oc hizospher f Reduce r Reductio Surface ((s (B13) dor (C1) res along L d Iron (C4) on in Tilled C7))	<u>Seconda</u> Wat Sedi Drift Drai ts (C3) Dry Cray) Satu Shal	ery Indicators (2 or more re er Marks (B1) (Riverine) iment Deposits (B2) (Rive Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) eration Visible on Aerial Im low Aquitard (D3)	equired)
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Pemarks: // DROLOGY // Vetland Hydrological indicator Surface Wate High Water Marks Sediment De Drift Deposite Surface Soil Inundation Volumer Staine Water Staine Vetled Observation Urface Water Proposite Vater Table Presentation Presentation Presentation Presentation // Action 19 // Action	ogy Indicators: rs (minimum of one er (A1) Table (A2) A3) 6 (B1) (Nonriverin eposits (B2) (Nonriverin Cracks (B6) isible on Aerial Ime ed Leaves (B9) ons: resent? Yes ent? Yes	e) iverine) agery (B7	; check all that apply Salt Crust (Biotic Crust (Aquatic Inv Hydrogen S Oxidized R Presence o Recent Iror Thin Muck S Other (Expl	B11) t (B12) ertebrates Sulfide Ochizospher f Reducet Reductic Surface ((ain in Reduce):	s (B13) dor (C1) res along L id Iron (C4) on in Tilled C7) marks)	Soils (C6	Seconda Wat Sedi Drift Drai ts (C3) Dry- Cray Satu FAC	ery Indicators (2 or more re er Marks (B1) (Riverine) iment Deposits (B2) (Rive Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) eration Visible on Aerial Im low Aquitard (D3)	equired)
Properties of the control of the con	ogy Indicators: rs (minimum of one er (A1) Table (A2) A3) s (B1) (Nonriverin eposits (B2) (Nonr es (B3) (Nonriverin Cracks (B6) isible on Aerial Imade Leaves (B9) ons: resent? Yes ent? Yes y fringe)	e) iverine) agery (B7	; check all that apply Salt Crust (Biotic Crust (Aquatic Inv Hydrogen S Oxidized R Presence o Recent Iror Thin Muck S Other (Expl	B11) i (B12) ertebrates Sulfide Ochizospher f Reduceti Surface ((ain in Rei hes):	s (B13) dor (C1) res along L d Iron (C4) on in Tilled C7) marks)	Soils (C6	Seconda Wat Sed Drift Draits (C3) Dry- Cray Satu Shal FAC	ery Indicators (2 or more refer Marks (B1) (Riverine) iment Deposits (B2) (Riverine) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) iration Visible on Aerial Imlow Aquitard (D3) -Neutral Test (D5)	equired)
PROLOGY Vetland Hydrological Interpretation Vater Presenticuted Operation Vater Table Presenticutes capillary	ogy Indicators: rs (minimum of one er (A1) Table (A2) A3) s (B1) (Nonriverin eposits (B2) (Nonr es (B3) (Nonriverin Cracks (B6) isible on Aerial Imade Leaves (B9) ons: resent? Yes ent? Yes y fringe)	e) iverine) agery (B7	: check all that apply Salt Crust (Biotic Crust Aquatic Inv Hydrogen S Oxidized R Presence o Recent Iror Thin Muck S Other (Expl	B11) i (B12) ertebrates Sulfide Ochizospher f Reduceti Surface ((ain in Rei hes):	s (B13) dor (C1) res along L d Iron (C4) on in Tilled C7) marks)	Soils (C6	Seconda Wat Sed Drift Draits (C3) Dry- Cray Satu Shal FAC	ery Indicators (2 or more refer Marks (B1) (Riverine) iment Deposits (B2) (Riverine) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) iration Visible on Aerial Imlow Aquitard (D3) -Neutral Test (D5)	equired)

Project/Site: OSea		City/Coun	nty: Pas	9 Robies Sampling Date: 4-16-19
Applicant/Owner: 0500	·			State: _ A Sampling Point: _ S
Investigator(s): Althouse + Tillight eit	-	Section.		
Landform (hillslope, terrace, etc.): Stream		Local reli	ef (concave	convex none): COACAV-C Slone (%): /
Subregion (LRR): LRRC	Lat: 《	5.61	235 7	Long: 1729.635638 Datum: 4/355
Soil Map Unit Name: Rincer clay loa				
/				
Are climatic / hydrologic conditions on the site typical for this				
Are Vegetation, Soil, or Hydrologys	-			'Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology r SUMMARY OF FINDINGS – Attach site map				eded, explain any answers in Remarks.) ocations, transects, important features, etc.
	0			
	°		the Sampled	
	0	wi	thin a Wetlar	nd? Yes No
Remarks: Eastern forcesed study a VEGETATION - Use scientific names of plan		-		f
	Absolute	Domina	nt Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)			? Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2.	- ——			Total Number of Dominant
3				Species Across All Strata: (B)
4.		= Total C	Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:/ C (A/B)
Sapling/Shrub Stratum (Plot size:				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3.		-		OBL species x 1 =
4.				FACW species x 2 =
5	•			FAC species x 3 =
- 1/2		= Total C	Cover	FACU species x 4 =
Herb Stratum (Plot size: 5.46) 1. flechais macrostach ya	0	W	FACIN	UPL species x 5 =
	-30	- V	- FACOU	Column Totals: (A) (B)
3 Romex Condonicalus	7			Prevalence Index = B/A =
a. Romex condancialus 4. Polypogon monspeliersis	- - -			Hydróphytic Vegetation Indicators:
5.				Dominance Test is >50%
6				Prevalence Index is ≤3.0¹
7				Morphological Adaptations ¹ (Provide supporting
8.	· 			data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: // ()	84	= Total C	Cover	Troblematic Hydrophytic Vegetation (Explain)
1				¹ Indicators of hydric soil and wetland hydrology must
2				be present, unless disturbed or problematic.
		= Total C	Cover	Hydrophytic
% Bare Ground in Herb Stratum/ C % Cover		•		Vegetation
Remarks:	OI DIOUIC OI	<u>رے _</u>		Present? Yes No
Flecture coming up in lever Channel could be a love	- Trans. 1	- A. C	(c., /	
Treat Consider the Least	per 1		icenic l	
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Florine Descr	intion: /Dogoriba	éa éba dané	h naadad ta daaum		ndlaatau	au aantium	the chacues of	ladiantaus \	
Dankla		to the depi	h needed to docum			or confirm	i the absence of	indicators.)	
Depth (inches)	Matrix Color (moist)	%	Color (moist)	<u>Features</u> %	s Type ¹	_Loc²	Texture	Remarks	
0-3	1019.2/1	100	COIOI (IIIOIOI)		Турс			Nemarks	
		· 	10 001					-A	
<u>3-12+</u>	104B2/1	23	104R 5/1	<u> 55</u>	$\overline{}$		<u> </u>	y - Next West Colonia State Service as	
			10YR 3/4	2	0				
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			,						
 Tumai C=Cai	naantration D-Davi	leties DM-	Dadward Matrix CO			4 0 = 1 4 0	21 41	DI Des liste M. Martin	
			Reduced Matrix, CS: RRs, unless other			a Sana Gr		on: PL=Pore Lining, M=Matrix. Problematic Hydric Soils ³ :	
-		able to all i	·		au.)			· ·	
Histosol (A1) pedon (A2)		Sandy Redox Stripped Mat					k (A9) (LRR C) k (A10) (LRR B)	
Histic ⊑pi			Simpled Mai		1 (51)			Vertic (F18)	
	Sulfide (A4)		Loamy Gleye	-				nt Material (TF2)	
	Layers (A5) (LRR C	3)	Depleted Ma		(1 2)			plain in Remarks)	
	ck (A9) (LRR D)	'	Redox Dark		F6)		01.10. (EA)	oran, in recination	
	Below Dark Surface	e (A11)	Depleted Da	,	•				
	k Surface (A12)	. ,	Redox Depre				³ Indicators of hydrophytic vegetation and		
Sandy Μι	ucky Mineral (S1)		Vernal Pools	(F9)	•		wetland hyd	wetland hydrology must be present,	
Sandy Gle	eyed Matrix (S4)					unless disturbed or problematic.			
	ayer (if present):								
Type:	none								
Depth (inch	nes):>/~_						Hydric Soil Pre	esent? Yes No	
Remarks:							·		
YDROLOG	SY								
	SY rology Indicators:								
Vetland Hydi	rology Indicators:	ne required	; check all that apply)			Secondar	y Indicators (2 or more required)	
Vetland Hydi rimary Indica	rology Indicators: ators (minimum of or	ne required							
Vetland Hydi Primary Indica Surface W	rology Indicators: ators (minimum of or Vater (A1)	ne required	Salt Crust (I	B11)			Wate	r Marks (B1) (Riverine)	
Vetland Hydi rimary Indica Surface W High Wate	rology Indicators: ators (minimum of or Vater (A1) er Table (A2)	ne required	Salt Crust (I	B11) (B12)	s (B13)		Wate Şedir	r Marks (B1) (Riverine) ment Deposits (B2) (Riverine)	
Vetland Hydi rimary Indica Surface W High Wate Saturatior	rology Indicators: ators (minimum of or Vater (A1) er Table (A2) n (A3)		Salt Crust (I Biotic Crust Aquatic Inve	B11) (B12) ertebrates			Wate Sedir Drift	r Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine)	
rimary Indica Surface W High Wate Saturation Water Ma	rology Indicators: ators (minimum of or Vater (A1) er Table (A2) n (A3) rks (B1) (Nonriveri	ne)	Salt Crust (I Biotic Crust Aquatic Inve	B11) (B12) ertebrates Sulfide Od	lor (C1)	iving Roo	Wate Şedii Drift _/_ Drair	or Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10)	
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Vetland Hydi Primary Indica Surface W High Water Saturation Water Ma Sediment Drift Depo Surface S Inundation Water-Sta Surface Water	rology Indicators: ators (minimum of or Vater (A1) er Table (A2) n (A3) rks (B1) (Nonriveria Deposits (B2) (Non rosits (B3) (Nonriveria roll Cracks (B6) n Visible on Aerial Ir ained Leaves (B9) ations: r Present? Ye resent? Ye resent?	ne) nriverine) ine) magery (B7	Salt Crust (IBiotic CrustAquatic InveHydrogen SOxidized RiPresence oRecent IronThin Muck SOther (Expl	B11) (B12) ertebrates Sulfide Od nizospher f Reduces Reductio Surface ((ain in Res	lor (C1) res along l d Iron (C4 on in Tilled C7)) Soils (C6	Wate Sedir Drift t Drain ts (C3) Dry-5 Crayl) Satur Shall	or Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C3 ow Aquitard (D3) Neutral Test (D5)	

US Army Corps of Engineers Arid West – Version 2.0

Project/Site: 0/sea	City/County:	Casa Robles Sampling Date: 4-16-19
· ·		State: CA Sampling Point: 9
Investigator(s): Althouse + Tilliable:		
		ave, convex, none): <u>(CON YE X</u> Slope (%): 3
Subregion (LRR): / 1573 C	 Lat: 35,610305	Long: -120,635016 Datum: U1758
		NWI classification:
Are climatic / hydrologic conditions on the site typical for		
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology		(If needed, explain any answers in Remarks.)
		int locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes	No.	npled Area
Wetland Hydrology Present? Yes		Vetland? Yes No
Remarks: VEGETATION – Use scientific names of pl	 lants.	
	Absolute Dominant Indica	
Tree Stratum (Plot size: 1/9)	% Cover Species? State	Transfer of Donarian Opecies
1		That Are OBL, FACW, or FAC: (A)
3		Total Number of Dominant Species Across All Strata: (B)
4.		Species Across Air Strata (b)
Sapling/Shrub Stratum (Plot size:	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
4		Prevalence Index worksheet:
2.		Total % Cover of: Multiply by:
٥٠		OBL species x 1 =
4		FACW species x 2 =
5		FAC species x 3 =
Herb Stratum (Plot size:	= Total Cover	FACU species x 4 =
1. Vicia Villase	33 4 UF	UPL species x 5 =
2. Bromas diandros	23 Y. OP/	Column Totals: (A) (B)
3. Centaurea solstitialis	33 Y W/L	Prevalence Index = B/A =
4.		Hydrophytic Vegetation Indicators:
5		Dominance Test is >50%
6		Prevalence Index is ≤3.0¹
7		Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
8		Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)	_ <i> O O </i>	Troblematio riyarophytio vegetation (Explain)
1.		¹ Indicators of hydric soil and wetland hydrology must
2.		be present, unless disturbed or problematic.
	= Total Cover	Hydrophytic
% Bare Ground in Herb Stratum % Cc	over of Biotic Crust	Vegetation Present? Yes No _
Remarks:		

US Army Corps of Engineers

SOIL						Sampling Point:		
Profile Desc	cription: (Describe to the	e depth needed to docu	ment the indicator	or confirm	the absence o	f indicators.)		
Depth	Matrix	Red	ox Features					
(inches)	Color (moist) 9	6 Color (moist)	%Type ¹ _	Loc ²	<u>Texture</u> _	Remarks		
0-18	10 / 3/2							
					-			
						1 2000/01		
1Type: C=C	oncentration, D=Depletion	RM=Reduced Matrix C	S=Covered or Coate	d Sand Gra	ins ² l oca	tion: PL=Pore Lining, M=Matrix.		
	Indicators: (Applicable			ound Ord		or Problematic Hydric Soils ³ :		
Histosol		Sandy Red	•			ck (A9) (LRR C)		
Histic Ep	oipedon (A2)	Stripped M	atrix (S6)			ck (A10) (LRR B)		
	istic (A3)		cky Mineral (F1)		Reduced	Vertic (F18)		
	en Sulfide (A4)		yed Matrix (F2)		Red Parent Material (TF2)			
	d Layers (A5) (LRR C)	Depleted N			Other (E	xplain in Remarks)		
	ıck (A9) (LRR D) d Below Dark Surface (A1		k Surface (F6) Park Surface (F7)					
	ark Surface (A12)	,	oressions (F8)		³ Indicators of hydrophytic vegetation and			
	fucky Mineral (S1)	Vernal Poo			wetland hydrology must be present,			
	Gleyed Matrix (S4)				unless disturbed or problematic.			
	Layer (if present):							
Type:	none							
Depth (in	ches): $\underline{\hspace{1cm} > / {\cal S}}$				Hydric Soil P	resent? Yes No <u></u>		
Remarks:								
			1					
IVDDALA	OV					11 11 11 11 11 11 11 11 11 11 11 11 11		
HYDROLO								
Wetland Hy	drology Indicators:							
Primary Indic	cators (minimum of one re	quired; check all that app	ly)		Seconda Seconda	ary Indicators (2 or more required)		
	Water (A1)	Salt Crust	• •		Water Marks (B1) (Riverine)			
=	iter Table (A2)	Biotic Cru			Sediment Deposits (B2) (Riverine)			
Saturation	` '		overtebrates (B13)		Drift Deposits (B3) (Riverine)			
	larks (B1) (Nonriverine)		Sulfide Odor (C1)			inage Patterns (B10)		
	nt Deposits (B2) (Nonrive		Rhizospheres along	-		-Season Water Table (C2)		
	oosits (B3) (Nonriverine)	· 	of Reduced Iron (C	•		yfish Burrows (C8)		
	Soil Cracks (B6) on Visible on Aerial Image		on Reduction in Tille	u Solis (Cb)		uration Visible on Aerial Imagery (C		
	on visible on Aerial image tained Leaves (B9)		k Surface (C7) plain in Remarks)			illow Aquitard (D3) C-Neutral Test (D5)		
Field Obser	<u> </u>	Other (EX	piaiti iti Netitatks)		FAU	י-ואפתוומו ופאו (המ)		
Surface Water		No Depth (in	achoo):					
		— · · · — — · · · · · · · · · · · · · ·		-				
Water Table		No Depth (in	A	1 384-41-	al Usake-l *	Dunnando Van Na V		
Saturation Pr	resent? Yes	No Depth (ir	iches):	Wetlar	ia Hyarology l	Present? Yes No 🔽		

Saturation Present? Yes _____ No ___ Depth (inches): _____ Wetland Hydrold (includes capillary fringe)

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

Remarks:

US Army Corps of Engineers

Project/Site: OS	Ci	ity/County: Pas.	o Robles Sampling Date: 4-16-19
Applicant/Owner: Olses			State: Sampling Point:
Investigator(s): Althouse o Tilliake.		ection, Township, Rai	nge: <u>7265 R13</u> E
Landform (hillslope, terrace, etc.):			
Subregion (LRR): $\angle RR$		609295	Long: -120,638511 Datum: (Je15)
Soil Map Unit Name: Arbuckle - Posida	5 (622)	olex	NWI classification:
Are climatic / hydrologic conditions on the site typical for th			
Are Vegetation, Soil, or Hydrology			"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology			eded, explain any answers in Remarks.)
		•	ocations, transects, important features, etc.
Hydric Soil Present? Yes	No No No	Is the Sampled	
			2
Remarks: High rainfall feat, flexede is bringe of peach	rd colve.	rt cleating	ig pondo Locution
VEGETATION – Use scientific names of pla			
Tree Stratum (Plot size:		Dominant Indicator Species? Status	Dominance Test worksheet:
1.			Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant
3.			Species Across All Strata: (B)
4			Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: A/a)	=	Total Cover	That Are OBL, FACW, or FAC: (A/B)
1			Prevalence Index worksheet:
2			
3			OBL species x 1 = FACW species x 2 =
4			FAC species x3 =
J. 7.		Total Cover	FACU species x 4 =
Herb Stratum (Plot size:)		,	UPL species x 5 =
1. bythrom hyssopotolia	- — -	Y OBL	Column Totals: (A) (B)
2. Cynoclondactylon		Y FACU FAC	Dravalance Index - D/A -
3. Phlyganum aranestrum 4. Junious butenius	- 5 -	Y FACW	Prevalence Index = B/A = Hydrophytic Vegetation Indicators:
5. Graphalivm S.a.		P Lace	Dominance Test is >50%
6.			Prevalence Index is ≤3.0¹
7.		***************************************	Morphological Adaptations ¹ (Provide supporting
8.			data in Remarks or on a separate sheet)
/.	10=	Total Cover	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:			1
1			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2		T. I. I. O.	•
% Bare Ground in Herb Stratum % Cove	= er of Biotic Cru	Total Cover	Hydrophytic Vegetation Present? Yes No
Remarks:			
	٠		

SOIL								Sampling Point:	
Profile Desc	ription: (Describe	to the dept	th needed to docum	nent the ir	ndicator	or confirm	the absence of	indicators.)	
Depth	Matrix		Redox Features			.			
(inches)	Color (moist)	%	Color (moist)	%	_Type ¹	_Loc ²	Texture	Remarks	
0-5	1048 2/1	100							
5-124	10119211	20	104R5/2	<u> </u>	<u>D</u>	M	_ 5		
	•								
•									
¹Type: C=Co	ncentration, D=Dep	letion, RM=	Reduced Matrix, CS	=Covered	or Coate	d Sand Gr	ains. ² Locati	on: PL=Pore Lining, M=Matrix	
Hydric Soil I	ndicators: (Applica	able to all	LRRs, unless other	wise note	d.)		Indicators fo	r Problematic Hydric Soils ³ :	
Histosol	· /		Sandy Redo	x (S5)			1 cm Mud	ck (A9) (LRR C)	
	ipedon (A2)		Stripped Ma				2 cm Muck (A10) (LRR B)		
Black His	• •		Loamy Much					Vertic (F18)	
	n Sulfide (A4) Layers (A5) (LRR 0	•\	Loamy Gley Depleted Ma		(F2)			nt Material (TF2)	
	ck (A9) (LRR D)	•)	Redox Dark		F6)		Office (Ex	plain in Remarks)	
	Below Dark Surface	e (A11)	Depleted Da						
	rk Surface (A12)	, ,	Redox Depr				³ Indicators of hydrophytic vegetation and		
Sandy M	ucky Mineral (S1)		Vernal Pools	s (F9)			wetland hydrology must be present,		
	leyed Matrix (S4)						unless dist	urbed or problematic.	
	.ayer (if present):								
	none	ļ-							
Depth (inc	thes): 7/2-1						Hydric Soil Pr	esent? Yes 📈 No _	
Remarks:	Zì.		1 1 1			,		0	
Stripe	Sallerge.	aic n	naterial to	rongi	LOCA	P164.e	rel sain	.	
,	. 0				P			•	
HYDROLOG	GY								
Wetland Hyd	Irology Indicators:								
Dutanama Institu	-t (unlulus, una -f -		والمرموم المحالة المرواء والمرمواء				0		١١.

HYDROLOGY						
Wetland Hydrology Indica	itors:					
Primary Indicators (minimur	n of one rec		Secondary Indicators (2 or more required)			
Surface Water (A1)			Salt Crust (B11)		Water Marks (B1) (Riverine)	
High Water Table (A2)			Biotic Crust (B12)		Sediment Deposits (B2) (Riverine)	
Saturation (A3)			<u> </u> Aquatic Invertebrates (B13)		Drift Deposits (B3) (Riverine)	
Water Marks (B1) (Nor	rriverine)		Hydrogen Sulfide Odor (C1)		Drainage Patterns (B10)	
Sediment Deposits (B2) (Nonriver	ine)	✓ Oxidized Rhizospheres along Li	iving Roots (C3)	Dry-Season Water Table (C2)	
Drift Deposits (B3) (No	nriverine)		Presence of Reduced Iron (C4)		Crayfish Burrows (C8)	
✓ Surface Soil Cracks (Bell	6)		Recent Iron Reduction in Tilled	Soils (C6)	Saturation Visible on Aerial Imagery (C9)	
Inundation Visible on A	erial Imager	y (B7)	Thin Muck Surface (C7)		Shallow Aquitard (D3)	
Water-Stained Leaves	(B9)		Other (Explain in Remarks)		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 (s	tream gauge	e, monitor	ring well, aerial photos, previous insp	ections), if availa	able:	
Remarks:						

Project/Site: 0/501	City/County: Pers	e 206165	Sampling Date: 4-16-19
- /			Sampling Point: / O
Investigator(s): Althouse of Tillighte +			
Landform (hillslope, terrace, etc.):	Local relief (concave.	convex. none):	Ca └ € Slope (%): \\
Subregion (LRR): LRAC Lat:	35,609339	Long: - 120,632	511 Datum: 4758
Soil Map Unit Name: Arbuckle - Pesitos con	LOLEX	N\\// classific	eation: (SVECLE
Are climatic / hydrologic conditions on the site typical for this time	V		
Are Vegetation, Soil, or Hydrology signification	-		present? Yes No
Are Vegetation, Soil, or Hydrology natural		eeded, explain any answe	
SUMMARY OF FINDINGS – Attach site map show			
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes No	within a Wetlan	I Area nd? Yes	No
Remarks: Pool in drainage bedere colver	1		
VEGETATION – Use scientific names of plants.			
1	over Species? Status	Number of Dominant S That Are OBL, FACW,	pecies
3.		Total Number of Domin Species Across All Stra	
4	= Total Cover	Percent of Dominant Sp That Are OBL, FACW,	pecies or FAC: (A/B)
1		Prevalence Index wor	ksheet:
2.		Total % Cover of:	Multiply by:
3		OBL species	x1=
4		FACW species	x 2 =
5		1	x 3 =
Herb Stratum (Plot size:)	= Total Cover		x 4 =
1.			x 5 = (A) (B)
2.		Oolullii Totais.	(A) (B)
3			= B/A =
4		Hydrophytic Vegetation	
5		Dominance Test is	
6		Prevalence Index is	otations ¹ (Provide supporting
7			s or on a separate sheet)
8	= Total Cover	Problematic Hydro	ohytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)	w foldi oovei		
1		¹ Indicators of hydric soi	l and wetland hydrology must
2			inded of problematic.
	= Total Cover	Hydrophytic Vegetation	./
% Bare Ground in Herb Stratum 100 % Cover of Bio	tic Crust		s No
onvege-lated			

rofile Description: (Describe to the dep	th needed to document	the indicator	or contirm t	the absence of	of indicators.)	
Depth <u>Matrix</u>	Redox Fea	tures				
inches) Color (moist) %	Color (moist)	6 Type ¹	_Loc ²	Texture	Remarks	
					No. of the Control of	
	· · · · · · · · · · · · · · · · · · ·			 ,		
					·	
ype: C=Concentration, D=Depletion, RM=			ed Sand Grai		ation: PL=Pore Lining, M=Matrix.	
ydric Soil Indicators: (Applicable to all	·	•			or Problematic Hydric Soils ³ :	
_ ` ´	Histosol (A1) Sandy Redox (S5)			1 cm Muck (A9) (LRR C)		
_ Histic Epipedon (A2) _ Black Histic (A3)	Stripped Matrix (•		2 cm Muck (A10) (LRR B)		
_ Black Histic (A3) _/Hydrogen Sulfide (A4)	Loamy Gleyed M			Reduced Vertic (F18) Red Parent Material (TF2)		
_ Stratified Layers (A5) (LRR C)	Depleted Matrix (Explain in Remarks)	
1 cm Muck (A9) (LRR D)	Redox Dark Surf			_ `	,	
Depleted Below Dark Surface (A11)	Depleted Dark Se	` '		•		
_ Thick Dark Surface (A12)	Redox Depression			³ Indicators of hydrophytic vegetation and		
_ Sandy Mucky Mineral (S1)				wetland hydrology must be present,		
Sandy Gleved Matrix (SA)						
					turbed or problematic.	
estrictive Layer (if present):		•				
Sandy Gleyed Matrix (S4) estrictive Layer (if present): Type:				unless dis	turbed or problematic.	
estrictive Layer (if present): Type: Depth (inches):				unless dis	resent? Yes No	
estrictive Layer (if present): Type: Depth (inches):	_ prol:le Xeso			unless dis	resent? Yes No	
estrictive Layer (if present): Type: Depth (inches):	ordile desc			unless dis	resent? Yes No	
estrictive Layer (if present): Type: Depth (inches):	profile desc			unless dis	resent? Yes No	
estrictive Layer (if present): Type: Depth (inches): Penarks: Ponded - detailed presence of animal w	profile desc aste, Redo			unless dis	resent? Yes No	
estrictive Layer (if present): Type: Depth (inches): Demarks: Donded - defailed DONESPACE of animal with	profile desc easte, Rede			unless dis	resent? Yes No	
estrictive Layer (if present): Type: Depth (inches): emarks: Conded - defailed Orlsence of animal with the condition of				Hydric Soil F	Present? Yes No No Cant	
estrictive Layer (if present): Type: Depth (inches): Penarks: Portsence of animal with the control of the c	; check all that apply)	uptien e o dep		Hydric Soil F	Present? Yes No	
estrictive Layer (if present): Type: Depth (inches): Depth (i	i; check all that apply) Salt Crust (B11)	uptien e o clip		Hydric Soil F	Present? Yes No	
estrictive Layer (if present): Type: Depth (inches): Demarks: Dem	; check all that apply) Salt Crust (B11) Biotic Crust (B1	11p-lien (6 c/g		Hydric Soil F	Present? Yes No	
estrictive Layer (if present): Type: Depth (inches): Demarks: Dem	: check all that apply) Salt Crust (B11) Biotic Crust (B1 Aquatic Invertet	110-1:00 0600 2) rates (B13)		Hydric Soil F	Present? Yes No	
estrictive Layer (if present): Type: Depth (inches): emarks: College of animal with the college of	; check all that apply) Salt Crust (B11) Biotic Crust (B1 _1 Aquatic Invertet Hydrogen Sulfid	2) rates (B13) e Odor (C1)	ret.	Hydric Soil F	Present? Yes No	
estrictive Layer (if present): Type: Depth (inches): emarks: Collected of animal with the collected	i; check all that apply) Salt Crust (B11) Biotic Crust (B1/ Aquatic Invertet Hydrogen Sulfid	2) rates (B13) e Odor (C1) pheres along	Vertien	unless dis	Present? Yes No	
estrictive Layer (if present): Type: Depth (inches): emarks: Collected of animal with the collected	; check all that apply) Salt Crust (B11) Biotic Crust (B1 Aquatic Invertet Hydrogen Sulfid Oxidized Rhizos Presence of Rec	2) rates (B13) e Odor (C1) pheres along l fuced Iron (C4	Living Roots	Second Second Second Dra (C3) Unless dis	Present? Yes No	
estrictive Layer (if present): Type: Depth (inches): emarks: Collect of animal with the collect of	Salt Crust (B11) Salt Crust (B11) Biotic Crust (B1 Aquatic Inverted Hydrogen Sulfid Oxidized Rhizos Presence of Rec	2) rates (B13) e Odor (C1) pheres along l duced Iron (C4 luction in Tilled	Living Roots	Second Second Dra (C3) Dra Sa	Present? Yes No	
estrictive Layer (if present): Type: Depth (inches): emarks: Collect of animal with the collect of	Salt Crust (B11) Salt Crust (B11) Biotic Crust (B1 Aquatic Inverted Hydrogen Sulfid Oxidized Rhizos Presence of Rec	2) rates (B13) e Odor (C1) pheres along I duced Iron (C4 luction in Tilled	Living Roots	Second Second Dri (C3) Sa Sh	Present? Yes No	
estrictive Layer (if present): Type: Depth (inches): emarks: Ponded - defailed Orlsence of animal with TDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1)	Salt Crust (B11) Salt Crust (B11) Biotic Crust (B1 Aquatic Inverted Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec	2) rates (B13) e Odor (C1) pheres along I duced Iron (C4 luction in Tilled	Living Roots	Second Second Dri (C3) Sa Sh	Present? Yes No	
estrictive Layer (if present): Type: Depth (inches): emarks: Collect of animal of the collect of animal of the required of the collect of animal of the required of the collect of the collect of animal of the required of the collect of the col	Salt Crust (B11) Salt Crust (B11) Biotic Crust (B1 Aquatic Inverted Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec	2) rates (B13) e Odor (C1) pheres along l duced Iron (C4 luction in Tillec ice (C7) in Remarks)	Living Roots	Second Second Dri (C3) Sa Sh	Present? Yes No	
estrictive Layer (if present): Type: Depth (inches): emarks: Collect of animal of the collect of the c	check all that apply) Salt Crust (B11) Biotic Crust (B1 Aquatic Invertet Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec Thin Muck Surfa Other (Explain in	2) rates (B13) e Odor (C1) pheres along liduced Iron (C4 luction in Tillectice (C7) in Remarks)	Living Roots (d) Soils (C6)	Second Second Dri (C3) Sa Sh	Present? Yes No	
estrictive Layer (if present): Type: Depth (inches): emarks: Collect of animal will an	check all that apply Salt Crust (B11) Biotic Crust (B1 Aquatic Inverted Hydrogen Sulfid Oxidized Rhizos Presence of Recent Iron Recent Iron Recent Other (Explain in the control of the control	2) rates (B13) e Odor (C1) pheres along l duced Iron (C4 luction in Tillect loce (C7) in Remarks)	Living Roots A Soils (C6)	unless dis	Present? Yes No	
rype: Depth (inches): Type: Depth (inches): Emarks: Collect of animal with a collect of anima	check all that apply Salt Crust (B11) Biotic Crust (B1 Aquatic Invertek Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec Other (Explain in the color of the	2) rates (B13) e Odor (C1) pheres along liduced Iron (C4 luction in Tillectice (C7) in Remarks)	Living Roots I) d Soils (C6) Wetlan	Unless dis	Present? Yes No	

Project/Site: 0/50-	City/Co	unty: <u>Pase</u>	Robbes	Sampling Date: 4-10	6-19
Applicant/Owner:			State: <i>CA</i>	Sampling Point:/	2
Investigator(s): Althouse + till akert	Section	n, Township, Rar	nge: <u>TZ6S R</u>	13E	
Landform (hillslope, terrace, etc.):					10
Subregion (LRR): LRRC Lat	:: <u>35,68</u>	29333	Long: - 179638	<u> 551</u> Datum: <u>ル</u>	16458
			NWI classifica		
Are climatic / hydrologic conditions on the site typical for this time	of year? Ye	s No	(If no, explain in Re	emarks.)	
Are Vegetation, Soil, or Hydrology signific	antly disturb	ed? Are "I	Normal Circumstances" pi	resent? Yes No	<u>را</u> د
Are Vegetation, Soil, or Hydrology natural			eded, explain any answer	s in Remarks.)	
SUMMARY OF FINDINGS – Attach site map show			ocations, transects,	, important features	s, etc.
Hydrophytic Vegetation Present? Yes No Yes N		is the Sampled within a Wetlan		No	
VEGETATION – Use scientific names of plants.	olute Domi	aant Indicator I	Daminanaa Taat warks	ahaati.	
/		nant Indicator es? Status	Dominance Test works Number of Dominant Sp That Are OBL, FACW, o	pecies	(A)
2			Total Number of Domina Species Across All Strat	1	(B)
4	= Tota	Il Cover	Percent of Dominant Sp That Are OBL, FACW, o		(A/B)
Sapinig/Strub Stratum (Plot size) 1			Prevalence Index work	sheet:	
2.				Multiply by:	_
3,				x 1 =	ı
4			FACW species	x 2 =	_
5			•	x 3 =	
Herb Stratum (Plot size:)	= Tota	I Cover		x 4 =	
1. Holdlewan marking 18	50 Y	UPL		x 5 = (A)	
2.			Column rotals.	(A)	_ (D)
3				= B/A =	_
4			Hydrophytic Vegetatio		
5			Dominance Test is		
6			Prevalence Index is	: ≤3.0° otations¹ (Provide support	tina
7				or on a separate sheet)	.iriy
	= Tota	I Cover	Problematic Hydrop	hytic Vegetation ¹ (Explair	n)
Woody Vine Stratum (Plot size: 1/a) 1			¹ Indicators of hydric soil be present, unless distu	and wetland hydrology mr	nust
2	 = Tota	L Cover	Hydrophytic		
% Bare Ground in Herb Stratum % Cover of Bio		O	Vegetation	; No	
Remarks:					

SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Redox Features Color (moist) % Type¹ Loc² Texture Color (moist) ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: ___ Sandy Redox (S5) Histosol (A1) ___ 1 cm Muck (A9) (LRR C) Histic Epipedon (A2) _ Stripped Matrix (S6) ___ 2 cm Muck (A10) (LRR B) Black Histic (A3) ___ Loamy Mucky Mineral (F1) ___ Reduced Vertic (F18) Hydrogen Sulfide (A4) ___ Red Parent Material (TF2) Loamy Gleyed Matrix (F2) ___ Depleted Matrix (F3) ___ Other (Explain in Remarks) Stratified Layers (A5) (LRR C) ___ Redox Dark Surface (F6) _ 1 cm Muck (A9) (LRR D) ___ Depleted Dark Surface (F7) Depleted Below Dark Surface (A11) ___ Redox Depressions (F8) ___ Thick Dark Surface (A12) 3Indicators of hydrophytic vegetation and ___ Vernal Pools (F9) Sandy Mucky Mineral (S1) wetland hydrology must be present, Sandy Gleyed Matrix (S4) unless disturbed or problematic. Restrictive Layer (if present): Type: _ nonl Depth (inches): ____ 712 **Hydric Soil Present?** Yes No Remarks: **HYDROLOGY** Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) __ Salt Crust (B11) ___ Water Marks (B1) (Riverine) ___ High Water Table (A2) ___ Biotic Crust (B12) Sediment Deposits (B2) (Riverine) __ Saturation (A3) ___ Aquatic Invertebrates (B13) ___ Drift Deposits (B3) (Riverine) ___ Water Marks (B1) (Nonriverine) ___ Hydrogen Sulfide Odor (C1) __ Drainage Patterns (B10) ___ Oxidized Rhizospheres along Living Roots (C3) ___ Dry-Season Water Table (C2) Sediment Deposits (B2) (Nonriverine) ___ Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) __ Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) ___ Shallow Aquitard (D3) _ Water-Stained Leaves (B9) Other (Explain in Remarks) _ FAC-Neutral Test (D5) Field Observations: Yes No Depth (inches): Surface Water Present? Yes _____ No ___/ Depth (inches): ___ Water Table Present? Yes ____ No ___/ Depth (inches): ____> / 2 Saturation Present? Wetland Hydrology Present? Yes _____ No ___ (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: