Appendix B

Upland/Wetland Delineation Report









Cannibal Island Restoration ProjectUpland/Wetland Delineation Report

June 2022

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1. Introduction

GHD prepared this Upland/Wetland Delineation Report (report) and accompanying appendices on behalf of CalTrout in support of the Cannibal Island Restoration Project, Loleta, CA (Appendix A, Figure 1—Vicinity Map). This report supports the project's environmental documentation, permitting, and construction planning as deemed appropriate. The proposed Project Area includes much of Cannibal Island north of Cannibal Island Road (with a small strip of pasture just to the south of Cannibal Island Road) up to the water's edge at Seven Mile Slough and Mosley Slough (Figure 1). A private residence on the east side has been excluded from the Project Area. This report was largely completed in 2020 after the initial field investigations for the Project were conducted, and has been updated to include findings from a separate investigation in 2022 to assess wetland resources in an area that was included in the Project Study Boundary after the 2020 studies were completed as a result of potential raising and widening of Cannibal Island Road. This report is subject to, and must be read in conjunction with, the limitations set out in Section 5, Special Terms and Conditions, and the assumptions and qualifications contained throughout the report.

1.1 Site History

The Cannibal Island Restoration Project is located in agricultural bottoms and tidal saltmarsh in the Eel River Delta in Loleta, Humboldt County, CA. The Cannibal Island Restoration Project will seek to restore and expand natural estuarine functions and processes in the Project Area to promote recovery of habitat for native fish, invertebrates, wildlife and plant species compatible with surrounding working lands and public access. To achieve the project goal, construction activities are anticipated to include modifications to the existing dikes/water control structures, excavation of slough channels and placement of fill that combined will restore connectivity to the estuary while preventing off-site flood impacts.

The historical diking and draining of coastal wetlands for ranching and agriculture in the Eel River Delta caused a major loss of coastal salt marsh in the estuary around the turn of the 20th Century. As the levees have failed and the ground has compacted and subsided, Cannibal Island has largely reverted to tidal marsh. Some functional pasture remains on the east side of the Project Area, and in a small strip to the south of Cannibal Island Road. The area within the levees is subject to a muted tidal prism, and contains estuarine marsh and waters as well as pasture. Uplands have been delineated in areas of historical fill and along the remaining upland pasture within this predominantly wetland project area.

1.2 Regulatory Background

1.2.1 Federal Regulations

Waters of the United States

The Code of Federal Regulations (CFR), 40 CFR § 230.3 states, "The term waters of the United States means:

- (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide:
- (2) All interstate waters including interstate wetlands;
- (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
 - (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
 - (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (iii) Which are used or could be used for industrial purposes by industries in interstate commerce;
- (4) All impoundments of waters otherwise defined as waters of the United States under this definition:
- (5) Tributaries of waters identified in paragraphs (s)(1) through (4) of this section;
- (6) The territorial sea;
- (7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (s)(1) through (6) of this section; waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States" (40 CFR § 230.3).

Section 404 Waters

In tidal environments, Section 404 waters are those waters which extend up to the High Tide Line (HTL) or the landward extent of adjacent wetlands (33 CFR § 328.4). The HTL may be determined by hydrologic data, a tide gauge, or by direct observations of physical features such as vegetation, detritus, or other physical markings indicating the typical high tide extent (33 CFR § 328.3). The HTL does not include atypical storm surges (33 CFR § 328.3). In the Eel River Estuary, previous studies have established the high tide line and tidal wetland boundaries correspond with the 9-foot elevation contour (NAVD 88) (Winzler & Kelly et al. 2011).

Wetlands Definition

40 CFR § 230.3 continues and defines, "The term wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas" (40 CFR § 230.3).

Wetlands Delineation Manual

In addition, the 1987 Corps of Engineers- Wetlands Delineation Manual states, "If hydrophytic vegetation is being maintained only because of man-induced wetland hydrology that would no longer exist if the activity (e.g., irrigation) were to be terminated, the area should not be considered a wetland," (USACE 1987).

1.2.2 State Regulations

The State Water Resources Control Board's (SWRCB) April 2019 *Procedures for Discharges of Dredged or Fill Material to Waters of the State* declares the following:

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.

The Water Code defines "waters of the state" broadly to include "any surface water or groundwater, including saline waters, within the boundaries of the state." "Waters of the state" includes all "waters of the U.S." The following wetlands are waters of the state:

- 1. Natural wetlands,
- 2. Wetlands created by modification of a surface water of the state, and
- 3. Artificial wetlands that meet any of the following criteria:
 - a. Approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration:
 - b. Specifically identified in a water quality control plan as a wetland or other water of the state;
 - c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or
 - d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not waters of the state unless they also satisfy the criteria set forth in 2, 3a, or 3b):
 - i. Industrial or municipal wastewater treatment or disposal,
 - ii. Settling of sediment,
 - iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program,
 - iv. Treatment of surface waters,
 - v. Agricultural crop irrigation or stock watering,
 - vi. Fire suppression,
 - vii. Industrial processing or cooling,
 - viii. Active surface mining even if the site is managed for interim wetlands functions and values,
 - ix. Log storage,
 - x. Treatment, storage, or distribution of recycled water, or
 - xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or
 - xii. Fields flooded for rice growing.

All artificial wetlands that are less than an acre in size and do not satisfy the criteria set forth in 2, 3.a, 3.b, or 3.c are not waters of the state. If an aquatic feature meets the wetland definition, the burden is on the applicant to demonstrate that the wetland is not a water of the state. (SWRCB 2019).

The April 2020 Implementation Guidance for the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State further clarifies, "Human activity can

cause changes to the surrounding landscape (e.g., grading activities, road construction, direct hydromodification) such that wetlands form where wetlands did not previously exist. Where such artificial wetlands are now a relatively permanent part of the natural landscape, and are not subject to ongoing operation and maintenance, they are waters of the state. By requiring that the wetlands are relatively permanent, the framework excludes wetlands that are temporary or transitory. That they are part of the natural landscape also indicates the relative permanence of the wetlands and suggests that the wetland is self-sustaining without ongoing operation and maintenance activities, and provides similar ecosystem services as natural wetlands. By way of example, this category of wetlands includes situations where water flow is permanently redirected as the result of human activity, such as grading in another area, such that new wetlands form in areas that were previously dry. These wetlands may not be natural wetlands because they result from human activity and they were not formed by modifying a water of the state (rather they were an indirect result), but nevertheless they take on the function of natural wetlands such that they should be considered waters of the state. This category would not include artificial wetlands constructed for specific purposes listed in section II.3.d because the artificial wetland would likely require ongoing maintenance such that they would not be deemed "relatively permanent," and/or the artificial wetland is not part of the "natural landscape" (SWRCB 2020). Of the state's documents from 2019 and 2020 neither of them address ditches.

1.2.3 California Coastal Commission

The California Coastal Act Section 30121 defines wetlands as "[L]ands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens" (CCC 2011).

The Coastal Commission's "one-parameter definition" is outlined in the California Code of Regulations, Title 14 Section 13577 where it states, "Wetland shall be defined as land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent and drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salts or other substances in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deep-water habitats" (14 CCR §13577) (CCC 2011).

California Code of Regulations Title 14 Section 30233, "limits the filling of wetlands to identified high priority uses, including certain boating facilities, public recreational piers, restoration, nature study, and incidental public services (such as burying cables or pipes). Any wetland fill must be avoided unless there is no feasible less environmentally damaging alternative, and authorized fill must be fully mitigated" (14 CCR §30233) (CCC 2011).

Federal Geographic Data Committee (FGDC) Wetland Classification Standard

The Classification of Wetlands and Deepwater Habitats of the United States (FGDC 2013), based on Cowardin et al. (1979), states that wetlands must have at least one of the three wetland attributes: predominantly hydrophytic vegetation, predominantly hydric soil, and hydrology. However, they state that all available information should be used, and all three attributes should be considered if they are present (FGDC 2013).

1.3 Summary

GHD conducted the upland/wetland delineation fieldwork on July 17th, August 14th, and August 19th 2020. Following the initial wetland study, the Project Study Boundary was expanded following the original surveys in 2022 to include raising and widening approximately 2,800 feet of Cannibal Island Road at the southern edge of the Project Area, which was investigated for wetland one and threeparameter wetlands and uplands on May 19, 2022 and June 03, 2022. The delineation in its entirety was conducted within the approximately 794.8-acre Project Area, as shown in Appendix A, Figure **2—Wetland Delineation Overview.** The vast majority of the Project Area is regularly flooded and composed of jurisdictional wetlands and other waters of the U.S./State (Appendix A, Figure Set **2—Wetland Delineation**). Wetlands and other waters within the Project Area include Palustrine Emergent Wetlands, Estuarine Emergent Wetlands, Estuarine Subtidal Waters, Estuarine Intertidal Unconsolidated Shore, and Estuarine Intertidal Aquatic Beds. Levees and other higher-elevation areas of the Project Area were investigated for potential uplands, defined herein as areas that do not meet Army Corps of Engineers (USACE 2020a) three-parameters wetland definition based on hydrophytic vegetation, hydric soils, and wetland hydrology. Due to the location of the Project Area within the Coastal Zone boundary, the areas that did not meet the USACE three-parameter wetland definition were also investigated to determine whether they meet California Coastal Commission (CCC) one-parameter wetland definition.

Delineators sampled a total of thirty-six paired sample plots, placed eighteen wetland-upland boundary sample points, and placed 72 intermediate boundary points within the Project Area. The wetland delineation determined that, in addition to levees bounded by elevation contours, nine potential upland areas that do not meet the USACE three-parameter wetland definition occur within the Project Area, covering a total of 16.93 acres. Uplands consisted of levees, historical fill and concrete foundations, pasture, a public access road, and a semi-natural berm. Three of the areas mapped as uplands were dominated by hydrophytic vegetation (FAC or FACW), and these two-parameter uplands may be considered one-parameter wetlands subject to CCC jurisdiction (**Table 1—Feature Summary**).

Results of the 2020 and 2022 investigations are provided in **Appendix A, Figure Set 2**. Datasheets documenting conditions observed during the 2020 investigation are included in **Appendix B**, and a complete species list with the Western Mountains Valleys and Coast Region wetland indicator status of all plants documented during the delineation efforts in both 2020 and 2022 is provided in **Appendix C.** Photographs of the site are included in **Appendix D**.

Table 1. Feature Summary

Feature Type	Area (acres)	Jurisdiction
3-Parameter Wetlands	777.89	USACE, RWQCB, CCC
3-Parameter Uplands	11.15	None
2-Parameter Uplands	5.78	Potential CCC Wetlands

2. Methodology

2.1 Wetland delineation approach

GHD Soil Scientist Misha Schwarz and GHD Botanist Kelsey McDonald conducted the first wetland delineation on July 17th, August 14th, and August 19th 2020 with CDFW Environmental Scientist Michael van Hattem on the latter two dates. The Project Study Boundary (PSB) was expanded, following the original surveys in 2022 to include approximately 2,800 feet of road (Cannibal Island Road) at the southern edge of the Project Area to be raised and widened, by GHD Botanist Kolby Lundgren and Misha Schwarz. The area encompassed by the expanded PSB was visited on May 19, 2022 and June 3, 2022 to determine where the wetland boundary lay on either side of Cannibal Island Road. To define a wetland, the USACE requires that vegetation, soil, and hydrology (three parameters) all show wetland attributes (USACE 1987; USACE 2010). The CCC requires only one parameter of the three to be present in order to define the site as a wetland (14 CCR 13577). The wetland delineation used USACE criteria from the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region* (USACE 2010). The current standard field forms provided by the USACE (2010) were used to collect vegetation, soils, and hydrology data.

Vegetation, soil, and hydrology data were collected in transects across the upland/wetland boundary with two plots (upland/wetland) per transect. The naming convention used on datasheets to designate upland or wetland plots associated with a transect is -U or -W, respectively.

One-parameter and three-parameter wetland/upland boundaries and plots were mapped in the 2020 field investigations with a Trimble Geo 7X Handheld Global Positioning System (GPS) with the Global Navigation Satellite System (GNSS) capability, which was attached to an external antenna to establish sub-meter accuracy. Wetland/upland boundary intermediate GPS points were mapped in the 2022 field investigations with an EOS Arrow 100 Submeter Global Positioning System (GPS) with Global Navigation Satellite System (GNSS). The wetland/upland boundary was recorded with the GPS unit as needed to map the wetland's spatial extent. Data were post-processed using GPS Pathfinder office, which referenced UNAVCO base stations. The wetland/upland boundary intermediate GPS points were collected without recording soils, vegetation, or hydrology data, as appropriate to record the wetland's spatial extent. The points were then connected in the office using ArcMap software for figure creation.

During the delineation mapping, each upland area was designated with a number (e.g., "U01"), and the paired wetland points were also labeled with their respective upland number. **Appendix B** contains all datasheets recorded during the delineation. Levee transects were denoted by the levee area (e.g., "L01").

2.2 Botanical methodology

Vegetation data collection consisted of listing the dominant species in the herbaceous, shrub, and tree layer within a standard-sized plot determined by the strata layer. The species' wetland indicator status for the Western Mountains, Valleys, and Coast Region was then denoted in the respective column, using the standard reference: *National Wetland Plant List* for *Western Mountains, Valleys, and Coast Region* (USACE 2020b). This list classifies species based on the probability that they are found in wetlands (USACE 1987), ranging from Obligate (almost always in wetlands) [OBL], Facultative/Wet (67% to 99% in wetlands) [FACW], Facultative (34% to 66% in wetlands) [FAC],

Facultative/Up (1% to 33% in wetlands) [FACU], or Uplands (less than 1% in wetlands) [UP]. Species that do not appear on the list are considered to be in the upland category (Lichvar et al. 2016). Standard procedures for documenting hydrophytic vegetation indicators were used per the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0) (USACE 2010). A complete list of plants documented at the site with respective wetland indicator status from both 2020 and 2022 field investigations is included in **Appendix C**.

2.3 Soils methodology

Hydric soils were defined based on the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (USACE 2010) procedures in combination with the Natural Resources Conservation Service's (NRCS) definitions presented in *Field Indicators of Hydric Soils in the United States* (USDA/NRCS 2018). Soil pits were dug to an approximate depth of 12 to 16 inches. Data on soil color, texture, and redoximorphic features were recorded. Any observed redoximorphic features (iron concentrations) were noted along with their percentage within the soil matrix, and care was taken to distinguish chromas of 1 and 2 indicative of an iron-depleted soil within 12 inches of the soil surface (USACE 2010; USDA/NRCS 2018).

The *Munsell Soil Color Book* (COLOR, M. 2000) was used to describe the soil colors for the entire depth of the test pit. Moist, natural soil aggregate (ped) surfaces, which had not been crushed, were used to determine the soil's color. Soils with low chroma were verified as being hydric or upland with *Field Indicators of Hydric Soils in the United States* (Version 8.2, 2018).

2.3.1 Existing Soils Information

The U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) identifies five hydric soil units, one primarily non-hydric complex, and water within the Project Area (map in **Appendix A, Figure 3—Soil Map Units** and report in **Appendix E**). A brief map unit description, as generated by the NRCS, is provided for each soil unit below (NRCS 2020). The information provided in the 2020 NRCS report remains accurate for the 2022 expanded PSB. While the soil units are informative, the mapping scales are usually too broad to characterize the small scale of the Project Area features accurately.

Weott, 0 to 2 percent slopes

The map unit composition is as follows: 85 percent Weott and 15 percent minor components. Weott soil is considered prime farmland if irrigated and drained, and it has a capability classification of 5w. The parent material is alluvium derived from mixed sources. Weott soil occurs in backswamps, depressions, and flood-plain steps. The soil consists of very poorly drained silt loam 0-4 inches from the water table. Weott soil is hydric and has high available water capacity, ranging from non-saline to very slightly saline.

Swainslough-Occidental complex, 0 to 2 percent slopes

The map unit composition is as follows: 70 percent Swainslough and similar soils, 20 percent Occidental and similar soils, and 10 percent minor components. Swainslough soils are not prime farmland (capability classification 5w). The parent material is alluvium derived from mixed sources. Swainslough soil occurs in backswamps, depressions, flood-plain steps, and salt marshes. It consists of silty clay loam 0-4 inches from the water table. Swainslough soil is hydric, very poorly

drained, and has high available water capacity. The soil ranges from non-saline to slightly saline. Occidental soil is a similar hydric silty clay loam that occurs in tidal marshes and salt marshes, and it ranges from slightly saline to strongly saline (see description below).

Arlynda, 0 to 2 percent slopes

The map unit composition is as follows: 85 percent Arlynda and similar soils, and 15 percent minor components. Arlynda soil is prime farmland if irrigated/drained (capability classification 5w). The parent material is alluvium derived from mixed sources. Arlynda soil occurs in meander scars, backswamps, depressions, and flood-plain steps. The soil consists of a top layer of slightly decomposed organic material (0-3 inches) above deep silty clay loam. Arlynda soil occurs 0-4 inches from the water table. Arlynda soil is hydric, very poorly drained, and has high available water capacity. Arlynda soil ranges from non-saline to slightly saline.

Occidental, 0 to 2 percent slopes

The map unit composition is as follows: 90 percent Occidental and 10 percent minor components. Occidental soil is not considered prime farmland, and it has a capability classification of 7w. The parent material is alluvium derived from mixed sources. Occidental soil occurs in salt marshes. The soil consist of very poorly drained silty clay loam with a 0-3 inch peat top layer. Occidental soil occurs 0-4 inches from the water table. Occidental soil is hydric and has moderate available water capacity, ranging from slightly saline to strongly saline.

Wigi, 0 to 2 percent slopes

The map unit composition is as follows: 90 percent Wigi, occasionally flooded, and similar soils, and 10 percent minor components. Wigi soil is not considered prime farmland, and it has a capability classification of 7s. The parent material is alluvium derived from mixed sources. Wigi soil occurs in salt marshes. Wigi soil consists of a thin peat organic horizon (0-1 inches) and an A horizon of silt loam (1-7 inches), above a deep layer of silty clay loam. Wigi soil is very poorly drained and occurs 0-6 inches from the water table. Wigi soil is hydric, has high available water capacity, and can be strongly saline.

Samoa-Clambeach complex, 0 to 50 percent slopes

The map unit composition is as follows: 65 percent Samoa and similar soils, 30 percent Clambeach and similar soils, and 5 percent minor components. These soils are not considered prime farmland, and have a capability classifications of 6e and 5w, respectively. The parent material is eolian and marine sand derived from mixed sources. Samoa soil occurs in dunes, and Clambeach soil occurs in deflation basins. Samoa soil consists of a thin organic horizon of slightly decomposed plant material (0-1 inches) above deep sand. Samoa soil is typically more than 80 inches from the water table. Samoa soil is non-hydric and has low water capacity. In contrast, Clambeach soil consists of sand and may be hydric, occurring 0-4 inches from the water table. The soils range from non-saline to very slightly saline (NRCS 2020).

2.4 Hydrology methodology

GHD performed the 2020 delineation in late summer, during the dry season. The 2022 delineation was performed in the spring, while hydrology was still apparent. A NRCS Wetlands (WETS) Climate Table is provided for both 2020 and 2022 for the Woodley Island Station in Eureka, CA in **Appendix F**. Aerial photography and preliminary field visits in the spring of 2020 were used to inform potential

areas for investigation during fieldwork (particularly upland areas). The National Wetland Inventory Mapper was referenced before conducting fieldwork and is included in **Appendix A**, **Figure 4—National Wetland Inventory** (NWI 2020). The flood hazard map is also included in **Appendix A**, **Figure 5—FEMA Flood Map**. Wetland hydrology indicators, such as drainage patterns, material deposits, soil saturation, high water table, topographic position, or surface water presence, were recorded in the field.

The site is hydrologically connected to the Eel River Estuary via a failing tidegate, and intermittently connected via overwash at an area of levee failure on the northwest side of the Project Area. The previously determined High Tide Line at the 9 feet NAVD 88 elevation contour (created from 2009 - 2011 CA Coastal Conservancy Coastal Lidar Project) was used as the upper wetland boundary of tidal waters on the outboard side of the levees. Based on upland/wetlands trasects and changes in vegetation, GPS points were taken at the wetland/upland boundary on the inboard side of the levees to determine their elevation within the muted system. Field observations and GPS data showed upland/wetland boundaries along the levees within the muted tidal sytem, corresponding with the 10-foot NAVD 88 contour line. The 9-foot elevation contour was used to trace the outboard side of uplands on the top of the levees, and the 10-foot contour was primarily used to trace uplands/wetlands boundaries on the inboard side of the levees. The 9 to 10-foot elevation riprap around the failing tidegate was also classified as upland based on a lack of wetland characteristics.

3. Results

GHD performed the majority of the delineation on July 17th, August 14th, and August 19th 2020. Weather conditions were partly coudy to sunny with no precipitation. NOAA weather data from the Eureka Forecast Office at Woodley Island weather station recorded no precipitation within 14-days pror to the first survey, and less than 0.1 inches in the 14 days prior to the later surveys (Appendix F) (NCEI 2020). The expanded Project Study Boundary was visited on May 19th and June 3rd 2022 to determine where the wetland boundary lay on either side of Cannibal Island Road. Weather conditions were partly cloudy with light wind. NOAA weather data from the Eureka Forecast Office at Woodley Island weather station recorded 1.03 inches of precipitation within vithin 14-days prior to the first survey, and 0.31 inches of precipitation prior to the second survey (Appendix F) (NCEI 2020). The Project Area is primarily composed of three-parameter, potential USACE jurisdictional wetlands and other waters classified as Estuarine Intertidal Emergent (E2EM1), Palustrine Emergent (PEM1), Estuarine Intertidal Unconsolidated Shore (E2US) using Cowardin nomenclature from the Classification of Wetlands and Deepwater Habitats of the United States (FGDC 2013). Potential USACE three-parameter wetlands comprise the majority of the Project Area (777.89 out of 794.82 acres). Levees over 10 feet elevation (NAVD 88) on the inboard side provide a substantial area of potential uplands (7.41 acres). Additionally, nine potential upland areas covering 9.52 acres do not meet USACE three-parameter wetland definition, leading to a total upland area of 16.93 acres (Table 2—USACE Upland Determinations within the Project Area). Three of the potential uplands are considered two-parameter uplands because plots passed the Dominance Test for hydrophytic vegetation. Two parameter uplands, which cover a total of 5.78 acres, might be considered CCC one-parameter wetlands based on the presence of hydrophytic vegetation (FAC or wetter). Two-parameter uplands were mapped based on topographic position, upland soils, lack of any primary hydrology indicators, and the lack of more than one secondary indicator. Four levee sampling points were also described to show the inner upland/wetland boundary. Appendix A, Figure Set 2 shows the results of the upland/wetland delineation.

Additionally, the expanded Project Study Boundary was investigated to determine where the wetland boundary lay on either side of Cannibal Island Road. Four areas were assessed for wetland parameters to the south of the property fence line running along the south edge of the road. The areas were within the southernmost edge of the Project Study Boundary and the fenceline, in an area of grazing pasture comprised of a mix of native and non-native vegetation. The areas received a rapid assessment of site conditions, including characterization of soil and vegetation in an effort to determine if they would qualify as upland plots. Complete USACE data forms were not collected for these sites. Hydrology was clearly present in the form of ponded water in two areas within the expanded Project Area with saturated soils surrounding them. Local residents described the area as being flooded in the winter with at least 1 foot of water ponding on the road surface for weeks at a time, extending into the pasture on either side of the road (potential three-parameter wetlands mapped on north side of the road in 2020). Each of the four areas were relatively homogenous in soil characteristics, with silty hydric soils comprised of a 70% 2.5Y 3/2 matrix and 30% 7.5YR 4/6 redox concentrations on ped faces starting at 1" depth and conintueing at least 14 inches (depth of soil pits). These features were observed throughout the soil column and across all four plots. Vegetation was assessed for dominance of hydrophytes, of which all four sites had greater than 50% dominance of FAC or wetter vegetation. Dominant species observed at these sites included: white clover (Trifolium repens) (FAC), English plantain (Plantago lanceolata) (FACU), spiny fruit buttercup (Ranunculus muricatus) (FACW), perennial rye grass (Festuca perennis) ((FAC), common velvet grass (Holcus lanatus) (FAC), and Kentucky blue grass (Poa pratensis) (FAC). The areas of ponded water contained pale spike-rush (Eleocharis macrostachya) (OBL) and silverweed (Potentilla ansarina) (OBL), with the edges densely occupied by marsh meadow-foxtai (Alopecuris geniculatus) (OBL). The landform in this area is a river floodplain that is influenced annually by both tide water flooding in from the north of Cannibal Island Road and silt deposition from the Eel River to the south. As such, this area was mapped as a three-parameter wetland per USACE definition (USACE 1987; USACE 2010), and the road surface to edge of pavement mapped as potential three-parameter uplands (Appendix A, Figure Set 2).

3.1 Three-Parameter Uplands

Potential three-parameter uplands occur on levees, islands of historical fill, remnant sand dunes, a public use road, and areas developed for historical ranch use. Three-parameter uplands did not contain wetland soils, hydrological indicators, or pass the Dominance Test for hydrophytic vegetation. Potential three-parameter uplands covered a total of 11.15 acres, including 7.41 acres of levee and 3.74 acres of other uplands.

Upland 1

Upland 1 is an area of historical legal fill and a poured concrete foundation associated with previous ranch structures on the southwestern side of the study area that covers a total of 0.05 acres. Vegetation in upland 1 around the concrete slab was dominated by invasive wild radish (*Raphanus sativus*) (UPL) and Queen Anne's lace (*Daucus carota*) (FACU). The wetlands area surrounding the Upland 1 mound consisted of wet pasture strongly dominated by creeping bentgrass (*Agrostis stolonifera*) (FAC). Soils in the U1T1-U pit consisted of a single horizon of very gravelly sandy loam that appeared to be fill sourced from dredge material. The upland soil had a matrix color of 2.5Y 3/2. No redoximorphic features or hydrological indicators were observed in soils associated with Upland 1.

Upland 2

Upland 2 consisted of a 0.80-acre mound north of the dilapidated house. This area roughly coincides with the Samoa-Clambeach sand dune soil complex, and may have been a pre-existing relic dune feature prior to historical development and possible filling. The mound may also have been created or enhanced as a cattle refuge from surrounding lowlands. Upland 2 was dominated by wild radish, Poison hemlock (*Conium maculatum*), and other weedy species. The surrounding low-lying wetlands contained a variety of hydrophytic pasture grasses and some fresh to brackish wetland plants. Soils in the U2T1-U pit consisted of two fill horizons. The top layer (0-7 inches) consisted of loam fill with a matrix color of 10YR 2/2. The second horizon (7-16 inches) consisted of gravelly loam with a 10YR 2/2 matrix color with mixed riverine spoils and woody debris. Soils in the U2T2 pit consisted of three horizons. The top horizon (0-3 inches) consisted of silt loam with a matrix color of 2.5Y 4/2. The second horizon (3-10 inches) consisted of silt loam with a matrix color of 2.5Y 3/2. The lower horizon (10-16 inches) consisted of sandy loam with a matrix color of 2.5Y3/2. No redoximorphic features or hydrological indicators were observed in Upland 2.

Upland 3

Upland 3 consisted of 0.25 acres of a likely filled mound north of Upland 2, and was similarly characterized by wild radish and other weedy species. The surrounding wetlands were primarily characterized by creeping bentgrass and other hydrophytic species. Soil in the U3T1-U consisted of a horizon of silt loam (0-3 inches) with a matrix color of 10YR 2/2 above a horizon of sandy loam with a matrix color of 2.5Y 3/2. No redoximorphic features or hydrological indicators were observed in the upland pit.

Upland 4

Upland 4 is the northwesternmost likely filled mound, and it covers 0.85 acres. It was primarily vegetated by wild radish. The surrounding wetland's vegetation was strongly hydrophytic, with Pacific silverweed (*Potentila anserina*) among the dominant species. Soil in the U4T1-U pit consisted of three horizons: a top layer of loam (0-3 inches) with a matrix color of 10YR 3/2; a layer of silt loam (3-10 inches) with a matrix color of 2.5Y 3/2; and a layer of sandy loam (10-14 inches) with a matrix color of 2.5Y 3/2. No redoximorphic features or hydrological indicators were observed.

Upland 12

Upland 12 is an island of historical fill created as pond or water holding area near the current ranch on the eastern side of the Project Area. The fill was vegetated by weedy species such as perennial rye grass (*Festuca perennis*) and California burclover (*Medicago polymorpha*). The surrounding wetland area consisted of saltmarsh dominated by pickleweed (*Salicornia pacifica*). Soil in the U012T1-U pit was topped by layer of fill (0-8 inches) characterized by extremely gravelly sandy loam and a matrix color of 2.5Y 3/2, above a layer of gravelly sandy loam with the same matrix color. No redoximorphic features or hydrology indicators were observed.

Poured Concrete/Floating Concrete Pad

An area of poured concrete and a floating concrete pad that appear to have been historically used as a barn occurs within a wet pasture on the northeastern corner of the Project Area. The footprint of the concrete was recorded by GPS. No other data was recorded because of the lack of natural soils and vegetation.

Levees

Levees stretch around the western and northern sides of the Project Area, and the peaks of the levees range from approximately 9 to 13 feet in elevation (NAVD 88). The upland/wetland boundary on the inboard side of the levees roughly corresponded with the 10-foot contour line, a foot higher than the tidal influence area on the outboard side. The levees and failing tidegate hold water within the Project Area, likely increasing the period of inundation from the muted tides and precipitation during the rainy season. Uplands on the levee bounded by the 10 foot contour on the inboard side and the 9 foot contour on the outboard side cover a total of 7.36 acres. Additionally, 0.05 acres of the 9 to 10-foot elevation riprap around the failing tidegate was added to upland acreage based on a lack of wetland characteristics. In total, 7.41 acres of upland levees were mapped within the Project Area. The uplands on levees were primarily dominated by California blackberry (Rubus ursinus) (FACU) at the peak, with Pacific aster (Symphyotrichum chilense) (FAC), wild radish (UPL), Queen Anne's lace (FACU), and a variety of non-native grasses around the edges. One of the three upland levee datapoints, L010T1-U, passed the Dominance Test (FAC or wetter) for hydrophytic vegetation, with two facultative dominant species as well as upland wild radish, but it did not pass the Prevalence Index (PI>3). Overall, the vegetation on the upland portion of the levees was not hydrophytic. Wetlands at the lower levee edge (within wetlands) often consisted of gumplant patches or other brackish marsh species. Soils within the levee uplands consisted of silt with a matrix color of 2.5Y 3/2 to 2.5Y 3/3 with no redoximorphic features, or redoximorphic features at 9 inches or deeper (which would not meet the relevant soil indicator). No hydrological indicators occurred within upland levees. Please see Wetland Determination Data Forms in Appendix B for details.

Public Use Road

The expanded Project Study Boundary surveyed in May and June of 2022 extended the southernmost boundary of the original Project Area further south, across Cannibal Island Road and approximately 30 feet south of the fenceline bordering the edge of the road into active grazing pasture. Three-parameter wetlands were observed in this pasture to the south of the road, extending the boundary of the wetlands already mapped to the north of the road. The paved surface of this road is a three-parameter upland boundary due to lack of vegetation, soils, and hydrology (concrete/gravel surface).

Table 2 USACE Upland Determinations within the Project Area

Upland Name	Upland Parameters	Area (acres)
Upland 1	3	0.05
Upland 2	3	0.80
Upland 3	3	0.25
Upland 4	3	0.85
Upland 10	2	1.27
Upland 11	2	2.01
Upland 12	3	0.40
Upland 13	2	2.50

Upland Name	Upland Parameters	Area (acres)
Concrete Pad	3	0.10
Levees	3	7.41
Public Use Road	3	1.29
Total Upla	16.93	

3.2 Potential CCC One-Parameter Wetlands

Two-parameter uplands, which may be considered one-parameter wetlands by the CCC, are discussed below. The following areas did not have wetland soils or hydrology, but they passed the Dominance Test for hydrophytic vegetation (FAC or wetter). GHD recommends that the CCC considers areas dominated by Facultative species with no other wetland indicators to be uplands. Facultative (FAC) species are defined as equally likely to occur in wetlands and uplands (34-66 percent occurring in wetlands). As USFWS Regional Wetland Coordinator Ralph Tiner stated in a published review of the concept of a hydrophyte, "These [FAC] species, by definition, have a broad ecological amplitude with no affinity for wetlands or nonwetlands and, therefore, are not indicative of either" (Tiner 1991). Facultative plants are equally likely to act as hydrophytes growing in saturated conditions as non-hydrophytes growing in dry conditions. Without any evidence of hydric soil or hydrology, FAC plants should not be considered sufficient to indicate the presence of wetlands. Upland soils and the lack of hydrological indicators provide evidence that they are not growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content, and therefore the plants are not acting as hydrophytes. Based on the principle that FACdominated uplands do not qualify as wetlands, Upland 11 and Upland 13 should not be considered wetlands, while Upland 10 might be considered a one-parameter wetland with a predominance of FACW species (66-99 percent probability of occurring in wetlands).

Upland 10

Upland 10 is a 1.27-acre low berm that may be a semi-natural feature that formed near the levee breach. The vegetation is dominated by a mixture of native giant scouring rush (*Equisetum hymale* ssp. *affine*) (FACW) and a mixture of non-native grasses. The vegetation passed the Dominance Test and the Prevalence Index for hydrophytic vegetation. Soil pits at U10T1-U and U10T2-U showed upland characteristics. The soil at U10T1-U contained layers of silt loam (0-3 inches, 3-10 inches) with a matrix color of 10YR 3/2 and a layer of loamy sand with the same matrix color (10-16 iches). The soil at U010T2-U contained a top horizon (0-8 inches) of silt loam with a matrix color of 2.5Y 3/3 above a layer of loamy sand (8-16 inches) with the same matrix color. No redoximorphic features or hydrological indicators were observed in Upland 10. However, based on the dominant hydrophytic (FACW) vegetation, the location might be considered a one-parameter wetland.

Upland 11

Upland 11 is a 2.01-acre area with the remnants of a former ranch house on the west side of the Project Area. The vegetation is primarily dominated by a mixture of wild radish (UPL), English plantain (*Plantago lanceolata*) (FACU) and facultative non-native grasses including purple velvetgrass (*Holcus lanatus*) and creeping bentgrass. The vegetation passed the Dominance Test in two out of three plots in Upland 11 due to the number of facultative dominant species. The soil consisted of two horizons of silt loam with matrix colors of 2.5Y 3/2.5 to 2.5Y 3/3 (0-9/10 inches)

above sandy loam with a matrix color of 2.5Y 3/2.5 to 2.5Y 3/3 (9/10-16 inches). Please see datasheets U11T1-U, U11T2-U, and U11T3-U for soil details. Upland 11 did not show redoximorphic features or wetland hydrology indicators. Large woody debris accumulated on the eastern side of Upland 11 indicates that the area may be subject to overwash during intense storm surge or extreme high tide events. Upland 11 consists of an elevated fill berm with non-hydric soils that may be occasionally subject to flooding/overwash, and it contains a mixture of upland and hydrophytic vegetation. Upland 11 coincides with NRCS-mapped Samoa-Clambeach sand dune soil complex, and the house may have been built upon a relic dune feature. Based on landform position, soil, and the prevalence of upland plants, it is recommended that this area is considered upland despite passing the Dominance Test.

Upland 13

Upland 13 is a 2.50-acre pasture area extending north from a privately owned residential and operational ranching property (excluded from Project Area). Vegetation is dominated by perennial ryegrass and creeping bentgrass, which are non-native facultative pasture grasses. Upland 13 is distinguished from surrounding wet pasture by its elevated landform position and lack of hydric soil and hydrology indicators. Soils consisted of silt loam with a matrix color of 2.5Y 3/2. Upland pits (U13T1-U, U13T2-U, and U13T3-U) showed redoximorphic concentrations starting at 8-9 inches. Because the soils in Upland 13 did not show 5 percent or more redoximorphic concentrations within 8 inches of the surface, they do not meet the applicable hydric soil indicator F6—Redox Dark Surface. No wetland hydrology was observed in Upland 13. Upland 13 may be considered a one-parameter wetland based on dominant FAC pasture grasses, but it is recommended that this area is considered upland because FAC species are not a reliable indicator of wetlands on their own.

3.3 Wetlands within the Project Area

3.3.1 Estuarine Intertidal Emergent Wetlands

Estuarine Intertidal Emergent Wetlands with persistent vegetation (code E2EM1) within the Project Area include hundreds of acres of northern coastal saltmarsh and brackish marsh dominated by native pickleweed (*Salicornia pacifica*), invasive dense-flowered cordgrass (*Spartina densiflora*) marsh, gum plant (*Grindelia stricta*), salt rush (*Juncus lescurii*), and salt grass (*Distichlis spicata*). Estuarine intertidal areas are regularly flooded and exposed by the tides and extend from the marine environment upstream and inland to areas of low ocean-derived salts (FGDC 2013). Much of the area previously mapped as Palustrine by the National Wetlands Inventory (NWI) (**Appendix A, Figure 4**) is now converted to Estuarine Intertidal Emergent Wetlands.

3.3.2 Palustrine Emergent Wetlands

Palustrine emergent wetlands with persistent vegetation (PEM1) also comprise a major portion of the Project Area. Palustrine emergent wetlands within the Project Area are primarily dominated by creeping bentgrass and other hydrophytic pasture grasses. Palustrine emergent wetlands primarily occur as grazed pasture, especially on the eastern side of the Project Area and in a small strip to the south of Cannibal Island Road, and as an intermediate band of lower salinity and less frequent inundation between brackish/salt marsh and uplands throughout the Project Area.

3.4 Other Waters within the Project Area

3.4.1 Estuarine Subtidal

Estuarine subtidal sloughs with unconsolidated mud bottom (E1UB3) and estuarine subtidal aquatic beds (E1AB1 and E1AB3) occur within the Project Area. Subtidal sloughs outside of the levees are subject to full tidal range. Within the levees, slough channels are subject to muted tidal influence via the failing tidegate.

3.4.2 Estuarine Intertidal Unconsolidated Shore and Aquatic Beds

Estuarine Intertidal channels and flats with mud substrate (E2US3) and algal beds (E2AB1) occur within the muted tidal estuary at approximately 4-5 foot elevation (NAVD88). Outside of the levee, intertidal mudflats and algal beds appear to occur within a wider elevation range (within ~2 feet to 6 feet elevation NAVD88 contour range).

Table 3. Delineation Sampling Point Locations

Transect Point	Latitude	Longitude
U1T1	40.647043	-124.296290
L1T1	40.647793	-124.297721
U2T1	40.657052	-124.294438
U2T2	40.657375	-124.294240
U3T1	40.658210	-124.293228
U4T1	40.658851	-124.292203
L010	40.654227	-124.295363
L011	40.658432	-124.294853
L012	40.656913	-124.296094
U10T1	40.656737	-124.295663
U10T2	40.656633	-124.295999
U11T1	40.654725	-124.295395
U11T2	40.655092	-124.295601
U11T3	40.656249	-124.295067
U12T1	40.651114	-124.285000
U13T1	40.649292	-124.282704
U13T2	40.650301	-124.281196
U13T3	40.651313	-124.279592

4. Conclusions

The upland/wetland delineation for the Cannibal Island Restoration project, primarily completed on August 19th, 2020 with an assessment of a small additional area on May 19, 2022 and on June 3, 2022, determined the extent of uplands within the Project Area. Three-parameter wetlands and other waters cover approximately 777.89 acres out of the 794.82-acre Project Area. Uplands were delineated within the Project Area based on a lack of hydrophytic vegetation, soils, and hydrology. Uplands that did not have any of the three wetland attributes have been designated as three-

parameter uplands. Potential uplands cover a total of 16.93 acres. Three-parameter uplands cover 11.15 acres, including upland levees. Two-parameter uplands (Uplands 10, 11, and 13) contained upland soil and lacked hydrology indicators, but they were characterized by FAC or wetter vegetation. Two-parameter uplands covered 5.78 acres of the Project Area, and the CCC may consider these to be one-parameter wetlands subject to CCC jurisdiction. However, we request that the CCC considers the two uplands dominated by FAC species (Upland 11 and 13, totalling 4.50 acres) to be non-jurisdictional uplands based on the lack of reliable wetland indicators, resulting in a total potential CCC-upland area of 15.65 acres. The wetland delineation results are provided in map format in **Figure 2** and associated insets in **Appendix A**. Field datasheets are contained in **Appendix B**.

5. Special Terms and Conditions

5.1 Purpose of this Report

GHD prepared this report for CalTrout, and CalTrout may only use and rely on this report for the purpose agreed upon between GHD and CalTrout, as set out in the scope and contract for work effort reported herein. GHD Inc. is not liable for any action arising out of the reliance of any third party on the information contained within this report. GHD otherwise disclaims responsibility to any entity other than CalTrout arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

5.1 Scope and Limitations

This report does not authorize any individuals to develop, fill, or alter the delineated wetlands. Verification of the delineation by jurisdictional agencies is necessary prior to the use of this report for planning and development purposes. A USACE, agency-approved, delineation map, and a jurisdictional approval letter are required to signify confirmation of delineation results. In situations where a field investigation determines that no jurisdictional wetlands occur, jurisdictional concurrence with these findings is recommended.

The delineation conclusions were based on the information available during the period of the investigation, which took place in July-August 2020 and May-June 2022. The opinions, conclusions, and any recommendations in this report are based on conditions encountered and information reviewed by the date of preparation of the report. Site conditions may change after the date of this report. GHD does not accept responsibility arising from, or in connection with, any change to the site conditions. GHD is also not responsible for updating this report if the site conditions change unless contracted to do so.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions, and any recommendations in this report are based on the information obtained from and testing undertaken at or in connection with specific sample points. Conditions at other locations of the site may be different from the conditions found at the specific sample points.

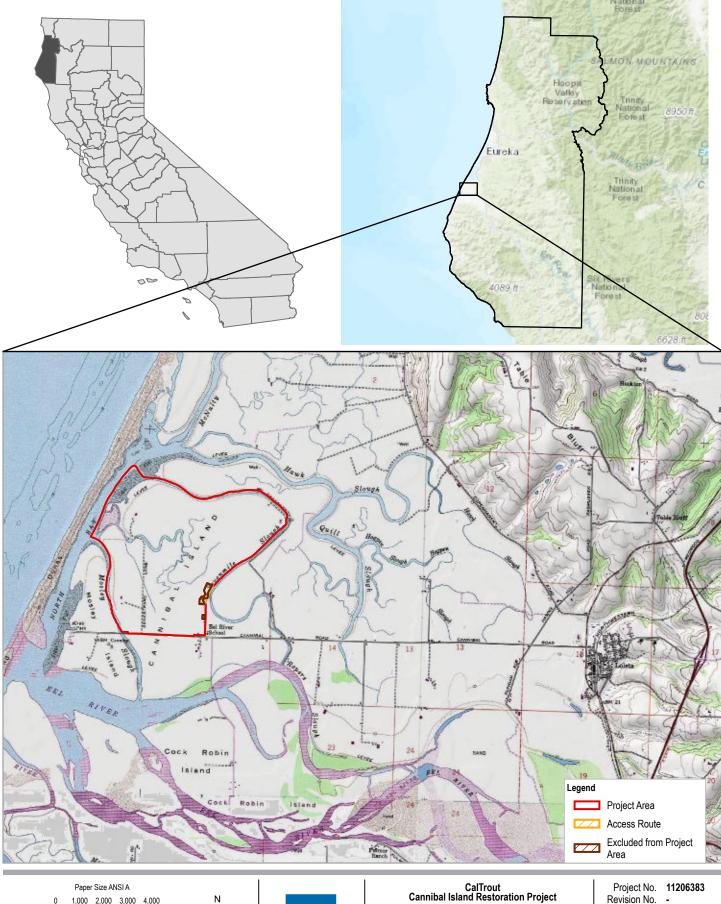
6. References

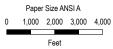
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Appendices

Appendix A – Figures





Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet





Date **Jun 2022**

Vicinity Map

FIGURE 1



0 250 500 750 1,000 1,250

Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet





CalTrout
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Date Jun 2022

Wetland Delineation Overview

FIGURE 2







Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet





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Wetland Delineation







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Wetland Delineation







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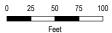
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Date Jun 2022

Wetland Delineation







Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet





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Wetland Delineation







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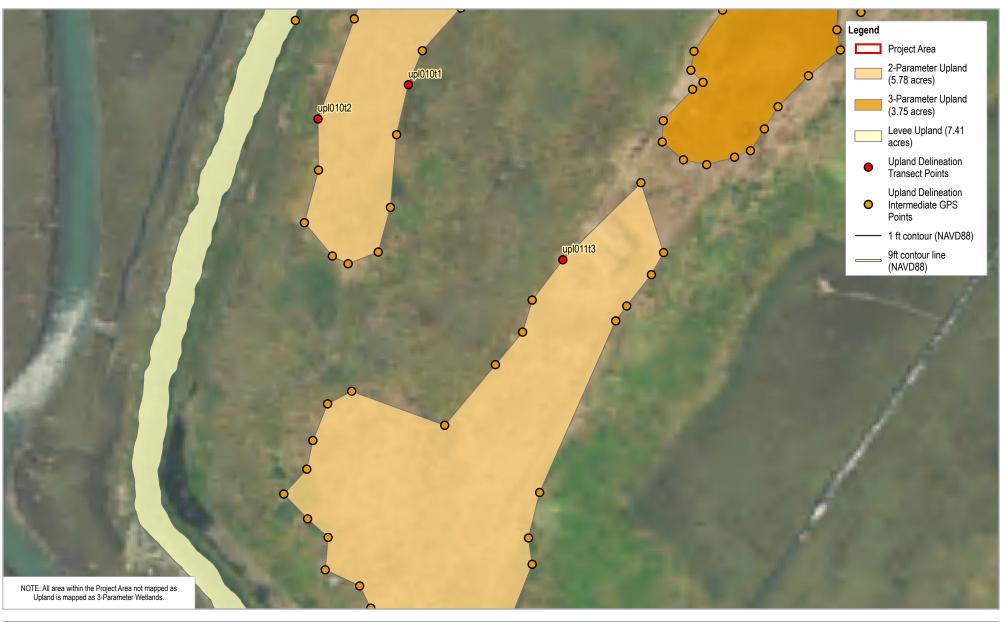




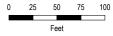
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Date Jun 2022

Wetland Delineation







Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet



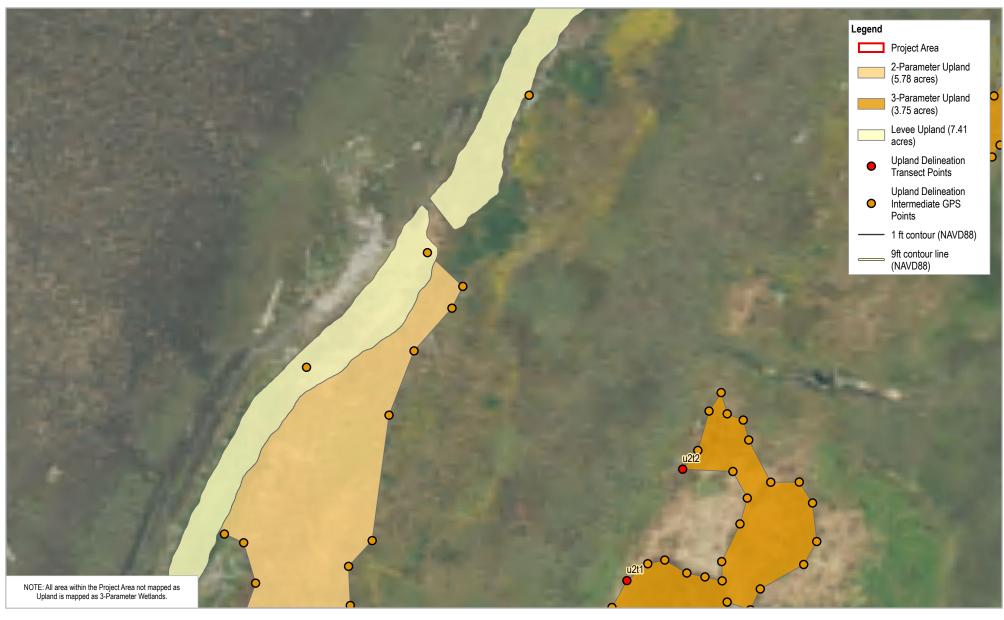


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Wetland Delineation





Paper Size ANSI A (1 inch = 100 feet) 0 25 50 75 100



Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

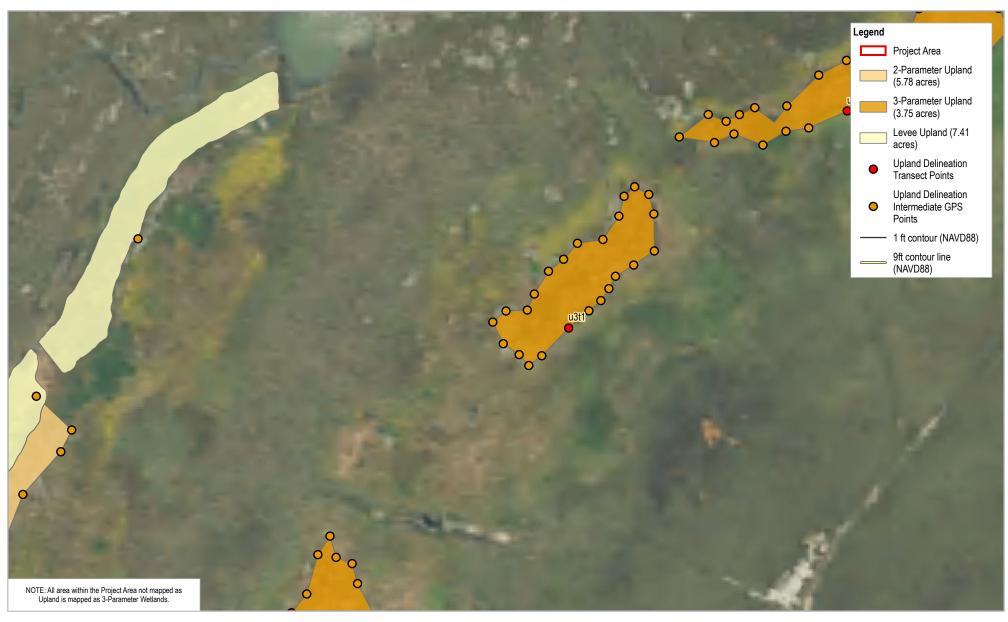




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Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet





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Wetland Delineation







Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet





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Wetland Delineation







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Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet





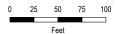
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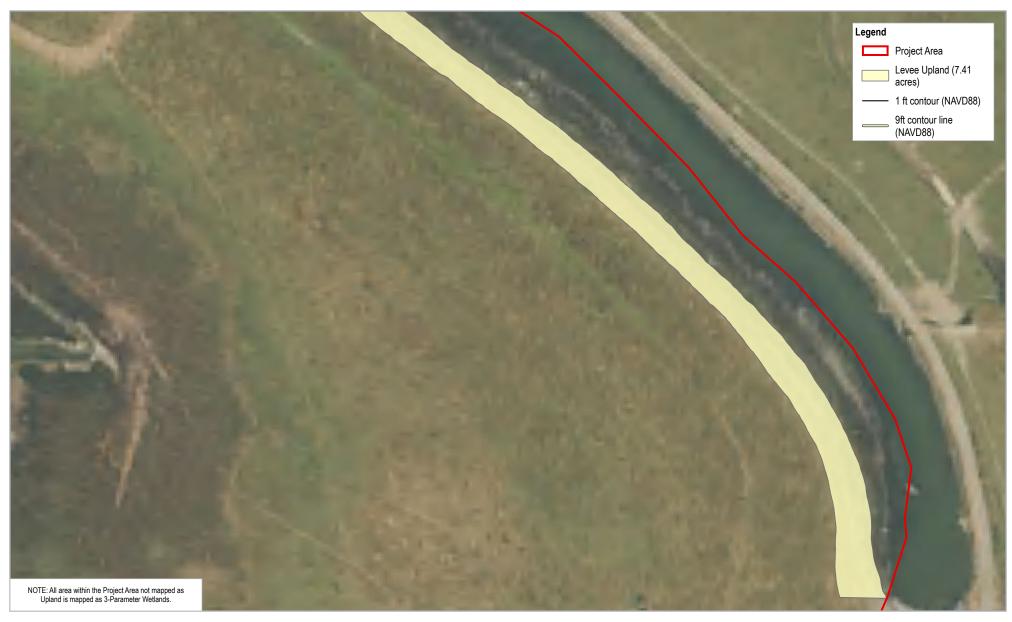


CalTrout Cannibal Island Restoration Project

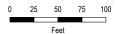
Project No. 11206383 Revision No. -

Date Jun 2022

Wetland Delineation







Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet





CalTrout
Cannibal Island Restoration Project

Project No. 11206383 Revision No. -

Date Jun 2022

Wetland Delineation







Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet





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Wetland Delineation







Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet





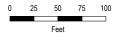
CalTrout Cannibal Island Restoration Project Project No. 11206383 Revision No. -

Date Jun 2022

Wetland Delineation







Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet





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Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

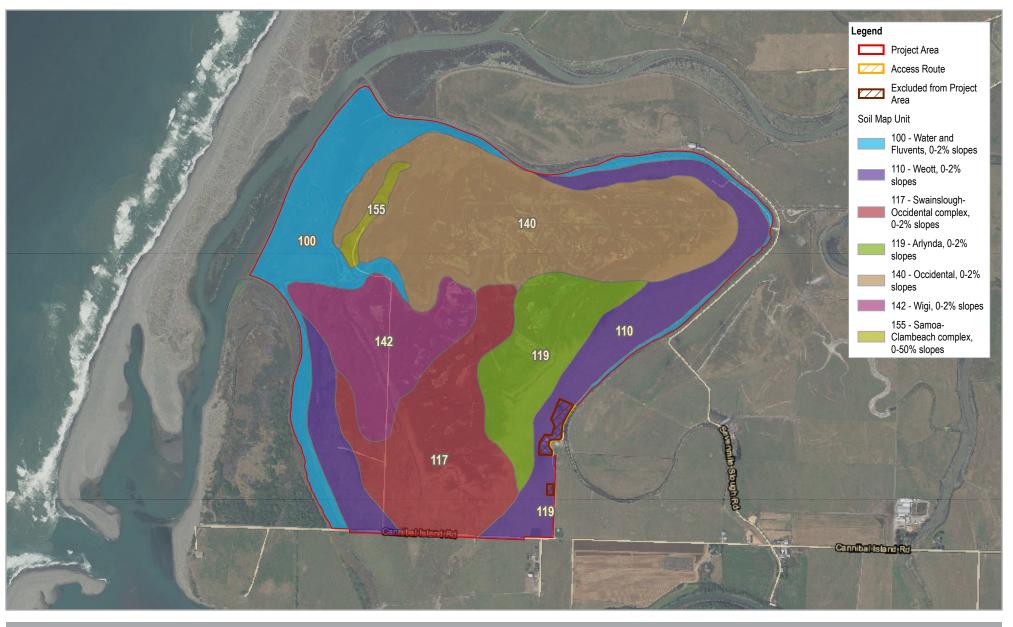


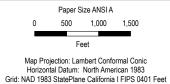


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Date Jun 2022

Wetland Delineation







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Project No. 1126383 Revision No. -

Date Jun 2022

Soil Map Units

FIGURE 3





Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet





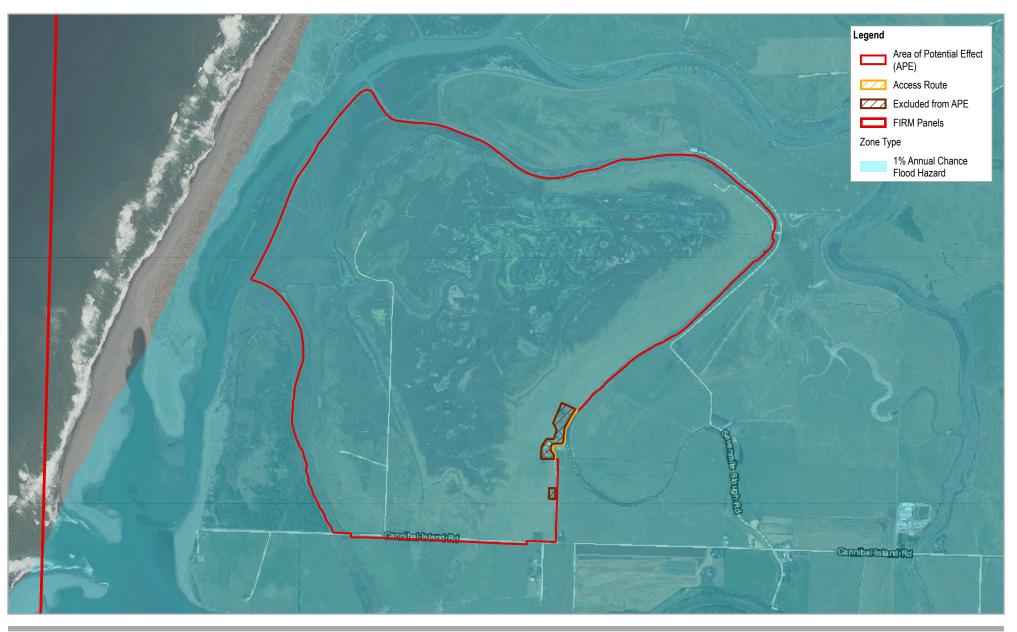
CalTrout
Cannibal Island Restoration Project

Project No. 11206383 Revision No. -

Date Jun 2022

National Wetland Inventory

FIGURE 4





Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet





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Date Jun 2022

FEMA Flood Map

FIGURE 5

Appendix B – Data Sheets

Profile Description: (Describe to the depth needed to document the Indicator or Depth Matrix Redox Features (Inches) Color (moist) % Color (moist) % Type! O-(2 2.5 Y 3/2 100	and Grains. 2 Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils3: 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated S-Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MI Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Restrictive Layer (if present): Type: Depth (inches): Remarks: Alstrictive Layer (if present): Type: Depth (inches): Matrix (F2) Surface Water (A1) Water-Stained Leaves (B9) (exceed the Matrix (B1) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Matrix (B2) Deviced Matrix (B3) Oxidized Rhizospheres along Living Deposits (B3) Oxidized Rhizospheres along Living Deposits (B3)	and Grains. 2 Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils3: 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Stydric Soil Indicators: {Applicable to all LRRs, unless otherwise noted.} Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MI Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1)	and Grains. 2 Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils3: 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Stydric Soil Indicators: {Applicable to all LRRs, unless otherwise noted.} Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MI Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1)	and Grains. 2 Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils3: 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (F1) (except MI) Depleted Below Dark Surface (A11) Sandy Gleyed Matrix (F2) Depleted Matrix (F3) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Restrictive Layer (if present): Type: Depth (inches): Remarks: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Siripped Matrix (S6) Loamy Mucky Mineral (F1) (except MI Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F6) Peleted Dark Surface (F6) Peleted Matrix (F3) Redox Dark Surface (F6) Peleted Matrix (F3) Aca - Small bar and	and Grains. 2 Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils3: 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Address Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (F1) (except MI) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (F2) Sandy Mucky Mineral (S1) Sandy Beleted Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Redox Depressions (F8) Remarks: Redox Dark Surface (F6) Remarks (F8) Remarks (F8) Remarks (F8) Remarks (F8) Remarks (F8) Remarks (F8) Remarks (F8)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
Indicators:	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
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Algoric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (F1) (except MI) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (F2) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Redox Depressions (F8) Remarks: Alga - Small bar a Alga - Small bar a Marca -	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (F1) (except MI) Depleted Below Dark Surface (A11) Sandy Gleyed Matrix (F2) Depleted Matrix (F3) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Restrictive Layer (if present): Type: Depth (inches): Remarks: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Siripped Matrix (S6) Loamy Mucky Mineral (F1) (except MI Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F6) Peleted Dark Surface (F6) Peleted Matrix (F3) Redox Dark Surface (F6) Peleted Matrix (F3) Aca - Small bar and	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
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Black Histic (A3)	PRA 1) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Matrix (F3) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Dark Surface (F7) Redox Depressions (F8) Restrictive Layer (if present): Type: Depth (inches): Remarks: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Loamy Gleyed Matrix (F2) Depleted Matrix (F2) Redox Dark Surface (F6) Depleted Matrix (F2) Pepleted Matrix (F2) Depleted Matrix (F2) Pepleted Matrix (F2) Pepleted Matrix (F2) Pepleted Matrix (F3) Redox Dark Surface (F6) Pepleted Matrix (F2) Pepleted Matrix (F2) Pepleted Matrix (F3) Redox Dark Surface (F6) Pepleted Matrix (F3) Redox Dark Surface (F6) Pepleted Matrix (F2) Pepleted Matrix (F3) Redox Dark Surface (F6) Pepleted Matrix (F2) Pepleted Matrix (F2) Pepleted Matrix (F3) Redox Dark Surface (F6) Pepleted Matrix (F2) Pepleted Matrix (F2) Pepleted Matrix (F3) Redox Dark Surface (F6) Pepleted Matrix (F3) Redox Dark Surface (F6) Pepleted Matrix (F2) Pepleted Matrix (F2) Pepleted Matrix (F3) Redox Dark Surface (F6) Pepleted Matrix (F2) Pepleted Matrix (F1) Redox Dark Surface (F6) Pepleted Matrix (F2) Pepleted Dark Surface (F6) Pepleted Dark Surface (F7) Redox Dark Surface (F7) Redox Dark Surface (F7) Redox Dark Surface (F7) Redox Dark Surface (F1) Redox Dark Surface (F	Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Redox Depressions (F8) Restrictive Layer (if present): Type: Depth (inches): Remarks: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (exce High Water Table (A2) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Saltivir Marks (B1) Deposits (B3) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Matrix (F3) Redox Dark Surface (F7) Redox Dark Surface (F7) Redox Dark Surface (F7) Redox Dark Surface (F7) Redox Dark Surface (F6) Depleted Matrix (F3) Redox Dark Surface (F7) Redox Dark Su	Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Restrictive Layer (if present): Type: Depth (inches): Remarks: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Redox Dark Surface (F6) Depleted Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Pepleted Dark Surface (F7) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Dark Su	wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Remarks: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Depleted Dark Surface (F7) Redox Depressions (F8) Area - Small barn & Area	wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
Sandy Gleyed Matrix (S4) Redox Depressions (F8) Restrictive Layer (if present): Type: Depth (inches): Remarks: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (exce High Water Table (A2) MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Living the state of the state o	unless disturbed or problematic. Hydric Soil Present? Yes No
Restrictive Layer (if present): Type: Depth (inches): Remarks: Alga - Small bar & YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (exce High Water Table (A2) MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Living the content of the	Hydric Soil Present? Yes No
Type:	
Depth (inches): Comparison	
/ DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) // Alan - Small Barn & // Alan - Small Barn & // Water Apply) Water-Stained Leaves (B9) (excended with the poly) Water-Stained Leaves (B9) (excended with the poly) Water Table (A2) Saturation (A3) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living	
/DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) // MRA 1, 2, 4A, and 4B) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living	
rimary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Water Minimum of one required; check all that apply) Water All that apply) Water Stained Leaves (B9) (excendence) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit	
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Water Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin	Secondary Indicators (2 or more required)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) MLRA 1, 2, 4A, and 4B) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living	
Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Livit	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin	Drainage Patterns (B10)
Sediment Deposits (B2) Drift Deposits (B3) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin	Dry-Season Water Table (C2)
Drift Deposits (B3) Oxidized Rhizospheres along Livin	
	Saturation Visible on Aerial Imagery (CS
Autral Mar of Littlet (H4)	
	Shallow Aquitard (D3)
Iron Deposits (B5) Recent Iron Reduction in Tilled So	
Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (I	, , , ,
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8)	Frost-Heave Hummocks (D7)
eld Observations:	
urface Water Present? Yes No Depth (inches):	
/ater Table Present? Yes No Depth (inches):	
aturation Present? Yes No Depth (inches):	W # 10 1 2 2 2 10 V
ncludes capillary fringe) escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	Wetland Hydrology Present? Yes NoX
emarks	
W 0.	

2

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region Project/Site: Capo: ballsland _____ City/County: Lole+3 Sampling Date: 717/2 Applicant/Owner: __ State: CA Sampling Point: 171 Investigator(s): Misha Schwarz, Ihekay Madora Section, Township, Range: Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Slope (%): Subregion (LRR): _ | Datum: Soil Map Unit Name: _ NWI classification: 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 > 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 V No_ Hydric Soil Present? Yes __/_ No ____ Is the Sampled Area Wetland Hydrology Present? within a Wetland? Yes _ V No ____ Remarks: 8 ft from wetland edge VEGETATION – Use scientific names of plants. Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size: _____) % Cover Species? Status **Number of Dominant Species** That Are OBL, FACW, or FAC: **Total Number of Dominant** Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B) Sapling/Shrub Stratum (Plot size: _____) Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species _____ x 1 = _ FACW species x2=____ x 3 = ____ FAC species FACU species _____ x 4 = ____ = Total Cover UPL species _____ x 5 = ____ Herb Stratum (Plot size: 1 ~1 Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is >50% _ 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants Problematic Hydrophytic Vegetation (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Woody Vine Stratum (Plot size: _____) Hydrophytic Vegetation Present?

Remarks: All facultative, passes dominance test. Does not pass FAC-Neutral

% Bare Ground in Herb Stratum

SOIL							- 7/17	/2 Sampling Point: UITI-
Profile Des	cription: (Describe	to the dep	th needed to docum	nent the in	ndicator	ے or confirm	T 7/17	re of indicators)
Depth	Matrix		Redox	x Features		•••••••••••		ce of marcators.,
(inches)	Color (moist)	%	Color (moist)	%	Type	_Loc²	<u>Texture</u>	Remarks_
0-3	2.543/2	100		- Page			511/	Silte Laam
3-14	2.544/2	90	7.548416	10		M	111	10 11
		. —						
		·						- <u> </u>
l ——								
1T 0-0								
Hydric Soil	Indicators: (Applie	letion, RM=	Reduced Matrix, CS	=Covered	or Coate	d Sand Gra		ocation: PL=Pore Lining, M=Matrix.
1		able to all I			d.)			tors for Problematic Hydric Soils ³ :
Histosol	(A1) Dipedoπ (A2)		Sandy Redox (S					cm Muck (A10)
Black Hi			Stripped Matrix (ed Parent Material (TF2)
	п Sulfide (A4)		Loamy Mucky M Loamy Gleyed M			MLRA 1)		ery Shallow Dark Surface (TF12)
	i Below Dark Surface	e (A11)	Depleted Matrix				_ 00	her (Explain in Remarks)
	rk Surface (A12)	. (,	Redox Dark Surf				3Indica	tors of hydrophytic vegetation and
	lucky Mineral (S1)		Depleted Dark S		7)			land hydrology must be present,
	leyed Matrix (S4)		Redox Depression		•			ess disturbed or problematic.
Restrictive L	ayer (if present):							To distance of problematic.
Туре:			<u> </u>					
Depth (inc	:hes):						Hudric Soi	il Present? Yes K No
Remarks:							Tiyano oo	Il Present? Yes No
HYDROLOG								
Wetland Hyd	rology Indicators:							
Primary Indic	ators (minimum of on	ne required:	; check all that apply))			Seco	ondary Indicators (2 or more required)
	Vater (A1)		Water-Stain		- (R9) (ex	cent		Water-Stained Leaves (B9) (MLRA 1, 2,
	er Table (A2)			, 2, 4A, an		cop.	— ,	4A, and 4B)
Saturatio			Salt Crust (E				ſ	Drainage Patterns (B10)
Water Ma			Aquatic Inve	•	(B13)			Drainage Patterns (B10) Dry-Season Water Table (C2)
	Deposits (B2)		Hydrogen S					Saturation Visible on Aerial Imagery (C9)
Drift Depo						iving Roots	- (C3)	Seconorphic Position (D2)
	or Crust (B4)		Presence of					Shallow Aquitard (D3)
Iron Depo			Recent Iron		, ,			, ,
	Soil Cracks (B6)		Stunted or S				_	FAC-Neutral Test (D5)
	n Visible on Aerial Im	та оег у (В7)	Other (Expla			(LINEA)		Raised Ant Mounds (D6) (LRR A)
	Vegetated Concave			### ## 1 Ver	ains		— .	Frost-Heave Hummocks (D7)
Field Observ			-7					
Surface Water		e N	o <u> </u>	anti-				
Water Table F								
Saturation Pre			o V Depth (inch					\mathcal{L}
(includes capi	:sen() 10: larv fringe)	5 NO	o <u> </u>	es):		. Wetlan	nd Hydrolog	y Present? Yes You No
Describe Reco	orded Data (stream g	jauge, mon	itoring well, aerial ph	olos, prev	ious inspe	ections), if	available:	
		_						
Remarks:	S A . (-			<i>st</i>	. 1	1	- 1 -
	1) Assumal be	used o-	· To pagriph	ic pos	Him	+ Kyo	tric Sc	gi U
			, , ,	,				

opposite: (200:162) Island	CI	ty/County:	Sampling Date: 717170
Oplicant/Owner:		4/10/2017	State: Sampling Point: LTTUP
endform (billeton)	mald s	ection Township Ran	00'
(fillislope, terrace, etc.): Levee	L	ocal relief (concave, co	onvex none): (CXXIPY Slone (%): A)
ubregion (LRR): A	Lat:		Long: Datum:
Dil Map Unit Name:			NWI classification:
re climatic / hydrologic conditions on the site typical for	this time of year	2 Ves V No	//f no explain in Remarks)
re Vegetation, Soil, or Hydrology	significantly di	isturbed? Are "I	Normal Circumstances" present? Yes
re Vegetation, Soil, or Hydrology			
			eded, explain any answers in Remarks.)
	ap showing s	sampling point lo	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes		1.15.25.25.2	,
Hydric Soil Present? Yes		Is the Sampled	
Wetland Hydrology Present? Yes	No	within a Wetlan	d? Yes No _V
EGETATION - Use scientific names of p			
	Absolute	Dominant Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size:) 1		Species? 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:)		= Total Cover	That Are OBL, FACW, or FAC: 501 (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 =
		= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 1 m2)	2	11 -00	UPL species x 5 =
1. Holeus lanatus	- 30	FAC	Column Totals: (A) (B)
2. Navous carota	_ 25	-Y EACU	Prevalence Index = B/A =
3. Dipsacus fullonum	5	FAC	Hydrophytic Vegetation Indicators:
4. Raphanus sativus	-5	- UPL	1 - Rapid Test for Hydrophytic Vegetation
5. Helminthotecha echicide	210	FAC	2 - Dominance Test is >50%
6. Vicia tetrasperma	- 1 9	UPL	3 - Prevalence Index is ≤3.01
7. Vicia sativa \ 8. Plantago lanceolata	- 1	EACU	 4 - Morphological Adaptations¹ (Provide supportine data in Remarks or on a separate sheet)
9. Potentilla anserina	7	OBL	5 - Wetland Non-Vascular Plants¹
10			Problematic Hydrophytic Vegetation ¹ (Explain)
11			¹Indicators of hydric soil and wetland hydrology must
10:	103	= Total Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)			1,7 - 1,5 - 1 - 1 - 1 - 1
1			_ Hydrophytic
			Vegetation Present? YesNo
2			·
2	- C	_= Total Cover	Tresenti 165 NO

SOIL	CI 7/17/20 Sampling Point: LITT-U
Profile Description: (Describe to the depth needed to document the indicator or	confirm the absence of indicators.)
Depth Matrix Redox Features	,
	Loc ² Texture Remarks
0-9 2.593/2 100	Silt
9-16 2.543/2 92 7.542 4/4 8 C	m 5:1+
¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated S	2
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	
Histosol (A1) Sandy Redox (S5)	Indicators for Problematic Hydric Soils ³ :
Histic Epipedon (A2) Stripped Matrix (S6)	2 cm Muck (A10)
Black Histic (A3) Loamy Mucky Mineral (F1) (except ML	Red Parent Material (TF2) LRA 1) Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Depleted Matrix (F3)	
Thick Dark Surface (A12) Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4) Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):	
Type:	
Depth (inches):	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) Water-Stained Leaves (B9) (exce	
High Water Table (A2) MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1) Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2) Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Oxidized Rhizospheres along Livir	ng Roots (C3) Geomorphic Position (D2)
Algal Mat or Crust (B4) Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5) Recent Iron Reduction in Tilled So	pils (C6) FAC-Neutral Test (D5)
Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (L	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface (B8)	
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No 😕
(includes capillary tringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	ions), if available:
Remarks:	
Soil pit 2/3 up leuce	
, , ,	

-and Owner.	с	ty/County: Lole	Sampling Date: 7/17/2
stigator(s): M. Schwarz, K. McDor	-11		State: <u>CA</u> Sampling Point: <u>1</u> 71-
dform (hillstone towns at 1 a 1 6 9	1919 S	ection, Township, Rai	nge:
dform (hillslope, terrace, etc.): Levee		ocal relief (concave,	convex, none): Oche Slope (%): _C
	Lat:		Long: Datum:
Map Unit Name:	7733	1	NWI classification:
climatic / hydrologic conditions on the site typical for this	time of yea		
Vegetation, Soil, or Hydrologysi	gnificantly d	isturbed? Are	"Normal Circumstances" present? Yes No
e Vegetation, Soil, or Hydrology n	aturally prob	elematic? (If ne	eeded, explain any answers in Remarks.)
JMMARY OF FINDINGS - Attach site map :	showing	sampling point I	ocations, transects, important features e
lydrophytic Vegetation Present? Yes V No. 19dric Soil Present? Yes V No. 19dric Soil Present?		Is the Sampled	d Area
Vetland Hydrology Present? Yes N		within a vvetial	nur res v No
gemarks: 9ft from metlandedo	e.		
	0		
EGETATION – Use scientific names of plan	+0		
The state of the s	Absolute	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species? Status	Number of Dominant Species
•			That Are OBL, FACW, or FAC:(A)
			Total Number of Dominant
			Species Across All Strata:
l			Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)		= Total Cover	That Are OBL, FACW, or FAC: (AV
1. Corindelia stricta vac strict	16	Y FACE	Prevalence Index worksheet:
2			Total % Cover of: Multiply by:
3			OBL species x 1 =
4			FAC species x2 =
5			FAC species x 3 = FACU species x 4 =
Herb Stratum (Plot size: 1 m2)	-6	_ = Total Cover	UPL species x 5 =
1. Atriplex prostrata	10	FAC	Column Totals: (A) (I
2. Loty's corniculatus	40	Y CAC	
3. Agrostis stobnitera	8	FAC	Prevalence Index = B/A = Hydrophytic Vegetation Indicators:
4. Juncus balticus sup ater	50	Y FACT	1 - Rapid Test for Hydrophytic Vegetation
5. Plantago lancedata	2	EAU	2 - Dominance Test is >50%
6. Helmintotecha echicidas	1	EAC	3 - Prevalence Index is ≤3,0 ¹
		_03	4 - Morphological Adaptations (Provide support
7. Parapholis strippia			data in Remarks or on a separate sheet)
8			
8	_		5 - Wetland Non-Vascular Plants ¹
8			5 - Wetland Non-Vascular Plants Problematic Hydrophytic Vegetation (Explain)
8			5 - Wetland Non-Vascular Plants ¹
8			5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology mus
8	117	_= Total Cover	5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology mus be present, unless disturbed or problematic.
8	117	_= Total Cover	5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology mus be present, unless disturbed or problematic. Hydrophytic
8	117	_= Total Cover	5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology mus be present, unless disturbed or problematic. Hydrophytic

Profile Des	cription: (Describe	to the der	oth needed to docu	ment the indicato	r or confirm	the absence of in	70 Sampling Point:
Depth	Matrix			x Features	i di commi	trie absence of it	idicators.)
(inches)	Color (moist)	%	Color (moist)	%Type ¹	Loc²	Texture	Remarks
0-3	2.513/2	100				<u>5i1+</u>	Nemarks
3-14	2.543/2						
	2.3)/ C	- 00	7.54 4/6	<u> </u>		<u></u>	
¹Type: C=C	oncentration, D=Dep	letion, RM	=Reduced Matrix. C	S=Covered or Coat	ed Sand Gra	uins ² Location	n: PL=Pore Lining, M=Matrix,
Hydric Soil	Indicators: (Applic	able to all	LRRs, unless othe	rwise noted.)			r Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Redox (S5)		2 cm Mu	•
	pipedon (A2)		Stripped Matrix	-			ent Material (TF2)
Black Hi			Loamy Mucky I	dineral (F1) (excep	t MLRA 1)		llow Dark Surface (TF12)
	n Sulfide (A4)		Loamy Gleyed				kplain in Remarks)
	Below Dark Surface	e (A11)	Depleted Matrix			_	
	ork Surface (A12) lucky Mineral (S1)		Redox Dark Su				hydrophytic vegetation and
	leyed Matrix (S4)		Depleted Dark				drology must be present,
	ayer (if present):		redux Depless	ions (Fo)	-	uniess dis	turbed or problematic.
Type:							
	ches):					Hodele Cell Dece	
Remarks:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			<u> </u>		Hydric Soil Pres	ent? Yes X No
LVDDOL O							
Wetland Hyd	Irology Indicators:					_	
	ators (minimum of o	ne required	f: check all that anni-	Λ		Consider	factlanta v fo
Surface \		<u> </u>		ned Leaves (B9) (e			Indicators (2 or more required)
	ter Table (A2)			l, 2, 4A, and 4B)	xceht		Stained Leaves (B9) (MLRA 1,
Saturatio			Salt Crust	-			and 4B)
Water Ma				ertebrates (B13)			ge Patterns (B10)
	t Deposits (B2)			Sulfide Odor (C1)			ason Water Table (C2)
	osits (B3)			hizospheres along	Living Roots		ion Visible on Aerial Imagery (C rphic Position (D2)
	or Crust (B4)			of Reduced Iron (C4			v Aquitard (D3)
Iron Dep				Reduction in Tille	•		eutral Test (D5)
	Soil Cracks (B6)			Stressed Plants (D			Ant Mounds (D6) (LRR A)
Inundatio	n Visible on Aerial In	nagery (B7		lain in Remarks)			eave Hummocks (D7)
_	Vegetated Concave	Surface (E		,			(47)
ield Observ					<u> </u>		
Surface Wate	r Present? Ye	s N	No <u>X</u> Depth (inc	hes):	_		Δ
Water Table F		s N		hes):			ω
Saturation Pre	llary fringe)		lo Depth (inc	hes):	_ Wetlan	d Hydrology Pres	sent? Yes No
Describe Rec	orded Data (stream g	gauge, moi	nitoring well, aerial p	hotos, previous ins	pections), if	available:	-
Remarks:	3 . /						
remarks.	1)015801 1	<_1.	male 1 4 - 1	, (
temaiks.	Dasea Gh	570	nsly hydri	c 501/			
temarks.) Dasea Gn	, 5-lm	nsly hydri	[c Sor/			

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Canalal Island Applicant/Owner		City/County: Lole	eta	Sampling Date: 7/17/2
Applicant/Owner;			State: CA	_ Sampling Point: UZTH
Investigator(s): M. Schwarz, K.	McDonald	Section, Township, F	Range:	
Landform (hillslope, terrace, etc.): <u>filled</u>	nound	Local relief (concave	convex. none): Conv	Vex Slope (%):~ C
Subregion (LRR):	Lat:		Long:	Datum:
Soil Map Unit Name:		- /	NWI classif	ication:
Are climatic / hydrologic conditions on the site ty	pical for this time of ye	ear? Yes V No	(If no, explain in	Remarks.)
Are Vegetation, Soil, or Hydrolog	y significantly	disturbed? Are	"Normal Circumstances"	present? Yes No
Are Vegetation, Soil, or Hydrolog			needed, explain any answ	
SUMMARY OF FINDINGS - Attach s				
AT A CONTRACT OF STATE OF STAT	No/_		300000000000000000000000000000000000000	
Hydric Soil Present? Yes	No V	Is the Sample	d Area	1
Wetland Hydrology Present? Yes	No/	within a Wetla	and? Yes	No
Remarks: Upland area apper			The Carrier Sol	90.
	Absolute		Dominance Test work	sheet:
<u>Tree Stratum</u> (Plot size:) 1		Species? Status	Number of Dominant S That Are OBL, FACW,	pecies or FAC: (A)
2			Total Number of Domin	
3			Species Across All Stra	
4			Percent of Dominant Sp	nacias
Sapling/Shrub Stratum (Plot size:) -	= Total Cover	That Are OBL, FACW, o	or FAC: 50°/ (A/B)
1			Prevalence Index work	
2.				Multiply by:
3				x1 =
4				x 2 = x 3 =
5				x4=
Herb Stratum (Plot size: 1m2		= Total Cover	UPL species	
1. Comium maculatum	30	Y FAC		(A) (B)
2. Raphanus sativus	35	Y Upl	The second second	
3. Cirsium vulgare		FACU	Hydrophytic Vegetatio	= B/A =
4. Holcus lanatus		EAC	1 - Rapid Test for H	
5			2 - Dominance Test	
6			3 - Prevalence Inde	x is ≤3.0 ¹
7			4 - Morphological A	daptations ¹ (Provide supporting
8				or on a separate sheet)
9			5 - Wetland Non-Va	
10 11				hytic Vegetation¹ (Explain) and wetland hydrology must
Woody Vine Stratum (Plot size:	68	= Total Cover	be present, unless distur	
1			Hydrophytic	100
2			Vegetation	No 🗸
% Bare Ground in Herb Stratum <u>32</u>		Total Cover		
Remarks: Opes not pass do	minance to	est. Does	not pass FA	C-Neutral Test

SOIL		**	c T	7/17	/70 Sampling Point: UZTI-
Profile Description: (Describe to the	depth needed to docur	nent the indicator	or confirm	the absence	of indicators.)
Depth Matrix		x Features_		22301100	of maleators,
(inches) Color (moist) %	Color (moist)	%Type	Loc ²	Texture	Remarks
0-7 104R2/2 10	0			Loam	FII
7-16 1048 2/2 10	<u> </u>			Gravelly	Loan Fill W
					Some river ru
					w/ Some would
					debris
					Cerriy
	34				
¹ Type: C=Concentration, D=Depletion,	RM=Reduced Matrix CS	=Covered or Coste	d Sond Con		offers DI - Day - Aller - Aller - Aller
Hydric Soil Indicators: (Applicable to	all LRRs, unless other	wise noted.)	J Saliu Gra		cation: PL=Pore Lining, M=Matrix, ors for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S	•			n Muck (A10)
Histic Epipedon (A2)	Stripped Matrix				Parent Material (TF2)
Black Histic (A3)	Loamy Mucky M	lineral (F1) (except	MLRA 1)		/ Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed N				er (Explain in Remarks)
Depleted Below Dark Surface (A11)					
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Redox Dark Sur				rs of hydrophytic vegetation and
Sandy Gleyed Matrix (S4)	Depleted Dark S Redox Depressi	, ,			nd hydrology must be present.
Restrictive Layer (if present):	readx Deplessi	Ons (FB)		unies	s disturbed or problematic.
Туре:					
Depth (inches):				Hydric Soil	Present? Yes No 🗡
Remarks:					10310
HYDROLOGY			<u> </u>		
Wetland Hydrology Indicators:	Sanda de la companya				
Primary Indicators (minimum of one requ		* *			dary Indicators (2 or more required)
Surface Water (A1)		ed Leaves (B9) (ex	cept	W	ater-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)		, 2, 4A, and 4B)			4A, and 4B)
Saturation (A3) Water Marks (B1)	Salt Crust (I	•			ainage Patterns (B10)
		ertebrates (B13)			y-Season Water Table (C2)
Sediment Deposits (B2) Drift Deposits (B3)		ulfide Odor (C1)			aturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		izospheres along Li	ving Roots		eomorphic Position (D2)
Iron Deposits (B5)		Reduced Iron (C4) Reduction in Tilled	D=: - (OC)		nallow Aquitard (D3)
Surface Soit Cracks (B6)		Stressed Plants (D1)			AC-Neutral Test (D5)
Inundation Visible on Aerial Imagery		ain in Remarks)	(LRR A)		aised Ant Mounds (D6) (LRR A)
Sparsely Vegetated Concave Surface		an in ivemaiks)		FIG	ost-Heave Hummocks (D7)
Field Observations:					
	No Y Depth (inch	nes):			
		nes):	. 1		
	1.0	ies):	·	d Mandagla	Present? Yes No
(includes capillary fringe)					Present? Yes No
Describe Recorded Data (stream gauge,	monitoring well, aerial ph	otos, previous inspe	ections), if a	ıvailabl e :	
Develop					
Remarks:				7)	

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region Project/Site: Cannibal Island City/County: Loleka Sampling Date: Applicant/Owner: State: CA Sampling Point: U2T Investigator(s): M. Schwarz. McDood & Section, Township, Range: _ Landform (hillslope, terrace, etc.): £100001210 Local relief (concave, convex, none): \(\text{NCM-P} \) Slope (%): \(\text{Slope} \) Subregion (LRR): Lat: _____ Long: ____ Soil Map Unit Name: NWI classification: Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ __ (If no, explain in Remarks.) Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes \ ___, 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? Hydric Soil Present? Is the Sampled Area Yes // within a Wetland? Wetland Hydrology Present? 8ft from wetland boundary VEGETATION - Use scientific names of plants. Absolute Dominant Indicator **Dominance Test worksheet:** Tree Stratum (Plot size: % Cover Species? Status **Number of Dominant Species** That Are OBL, FACW, or FAC: **Total Number of Dominant** Species Across All Strata: Percent of Dominant Species 100% (A/B) That Are OBL, FACW, or FAC: Sapling/Shrub Stratum (Plot size:) Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species ____ x1=___ FACW species x 2 = FAC species _ ___ x 3 = ___ FACU species x 4 = = Total Cover x 5 = ____ Herb Stratum (Plot size: Column Totals: _ (A) _____ (B) Prevalence Index = B/A = **Hydrophytic Vegetation Indicators:** 1 - Rapid Test for Hydrophytic Vegetation 1 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.01 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants1 Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Woody Vine Stratum (Plot size:) Hydrophytic Vegetation = Total Cover % Bare Ground in Herb Stratum dominance test. Does not pass FAC-Neutral

SOIL CI 7	17/ Zozo Sampling Point: UZII-U
Profile Description: (Describe to the depth needed to document the indicator or confirm	
Depth Matrix Redox Features	,
(inches) Color (moist) % Color (moist) % Type Loc2	Texture Remarks
0-3 2.543/2 100	5:14
3-14 2.543/2 70 754814 30 c m	Silt
	2
Trues CoConnectation Deposition Date Delivers and the connectation Deposition Deposition Delivers and the connectation Deposition Deposit	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Gra Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	
· · · · · · · · · · · · · · · · · · ·	Indicators for Problematic Hydric Soils ³ :
Histosof (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6)	2 cm Muck (A10)
Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1)	 Red Parent Material (TF2) Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Depleted Matrix (F3)	Other (Explain in Remarks)
Thick Dark Surface (A12)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4) Redox Depressions (F8)	unless disturbed or problematic,
Restrictive Layer (if present):	
Туре:	,
Depth (inches):	Hydric Soil Present? Yes / No No
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Sagandary Indicators /D as was assistant
Surface Water (A1) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required)
High Water Table (A2) MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 2,
Saturation (A3) Salt Crust (B11)	4A, and 4B)
Water Marks (B1) Aquatic Invertebrates (B13)	Drainage Patterns (B10)
Sediment Deposits (B2) Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)
Drift Deposits (B3) Oxidized Rhizospheres along Living Roots	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Presence of Reduced Iron (C4)	
Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6)	Shallow Aquitard (D3)
Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A)	_
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Raised Ant Mounds (D6) (LRR A)Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface (B8)	Flost-Heave Hulfilliocks (D7)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No K Depth (inches):	\bigcirc
	and Musicala and Barrantis and Mark K
_(includes capitlary fringe)	nd Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if	available:
Demodes	
Assumal based on strong hydric soil	Ţ.

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

roject/Site: [200, bal Islan			intains, Valleys, an	
- owner.			Cintar (A)	Complian Delet 1 1777
ivestigator(s): M. Schwicz, 14	Hemay.M.	Section Township Re	orare.	_ Sampling Point.
andform (hillslope, terrace, etc.):	hound	Local relief (concave	convey none): A - a v	10V Slane 10V 5
Subregion (LRR):	Late	Local relief (concave,	convex, none), Tronv	Slope (%):
oil Map Unit Name:	Lat		Long:NWI classif	Datum:
Are climatic / hydrologic conditions on the site	typical for this time of ve	ar? Yes V No	/If no explain in	Pamarke \
Are Vegetation, Soil, or Hydrol	nav significantly			present? Yes No
Are Vegetation, Soil, or Hydro				
SUMMARY OF FINDINGS - Attach			eeded, explain any answ ocations, transects	
Printer and the Tall and the Control of the Control	s No V			
Hydric Soil Present? Ye	s No/	Is the Sampled	Area	/
Wetland Hydrology Present? Ye Remarks:	s No	within a Wetlan	nd? Yes	No
VEGETATION – Use scientific nam	nes of plants.			n -
		Dominant Indicator	Dominance Test work	ksheet:
Tree Stratum (Plot size:)	% Cover	Species? Status	Number of Dominant S	Species
12.			That Are OBL, FACW,	or FAC: (A)
3.			Total Number of Domin	The state of the s
4.			Species Across All Stra	ata: (B)
Sapling/Shrub Stratum (Plot size:		= Total Cover	Percent of Dominant S That Are OBL, FACW,	pecies or FAC:(A/B)
1			Prevalence Index wo	
2.			Total % Cover of:	Multiply by:
3				x 1 =
4				x 2 =
5				x 3 =
		= Total Cover		x 4 =
Herb Stratum (Plot size: \\mathrea{12}\) 1. \ \text{Plot \text{Stratum}} \text{X} \\ \text{Arbaneus} \text{X}	- 10	UPL?	UPL species	x5 = (B)
2. Rachans sativus		YUPL		
3. Conjum maculatum		FAC		x = B/A =
4. Heracleum maximum		FAC	Hydrophytic Vegetati	
5.			2 - Dominance Te	Hydrophytic Vegetation
6			3 - Prevalence Ind	
7				Adaptations ¹ (Provide supporting
8.			data in Remark	(s or on a separate sheet)
9			5 - Wetland Non-\	
10				ophytic Vegetation ¹ (Explain)
11			Indicators of hydric so	oil and wetland hydrology must
Woody Vine Stratum (Plot size:		= Total Cover	be present, unless dist	turbed or problematic.
1			Hydrophytic	
2			Vegetation	n 1/
% Bare Ground in Herb Stratum		= Total Cover	Present? Ye	No
Remarks: Does not passe	lominance te	52+.		i i

SOIL						(T 1/	17/2	Sampling Poi	nt: UZTZ
Profile Desc	ription: (Describe	to the depth	needed to docu	ment the ind	licator o	r confirm	the absent	e of indic	ators.)	
			Red	ox Features			,	7	,	
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type ¹	Loc²	Texture		Remarks	5
0-3	2.544/2	100					51110	oam		
3-10	2.543/2	100	- Allerton		-		5:11	Loan		
10-16	2.543/2	100	-	-			Sand			
							200710	1 - 10 - 1	<u>~</u>	
										
l			-							
¹Type: C=Co	ncentration, D=Dep	letion. RM=R	educed Matrix C	S=Covered o	- Coated	Sand Gra	nine 2 ₁	posties C	II =Dage I (ning	44-44-4 E
Hydric Soil (ndicators: (Applic	able to all LF	Rs, unless othe	rwise noted.)	Sailu Gia		tors for P	L=Pore Lining.	M=Matrix.
Histosol			_ Sandy Redox (,			m Muck (_	inc sons :
Histic Ep	ipedon (A2)		Stripped Matrix	•					Material (TF2)	
Black His		_	Loamy Mucky I		except N	ILRA 1)			Dark Surface	(TF12)
	Sulfide (A4)	_	_ Loamy Gleyed	Matrix (F2)					in in Remarks)	,
	Below Dark Surfac	e (A11)	_ Depleted Matrix				-			
I	rk Surface (A12) ucky Mineral (S1)	-	Redox Dark Su						rophytic vegeta	
1	eyed Matrix (S4)	_	Depleted DarkRedox Depress						logy must be pr	
	ayer (if present):		_ redux Depless	SIUIIS (FO)	-	_	unie	ss disturb	ed or problema	iic.
"	hes):		_				Umdala Ca	U 23	0 1/	6
Remarks:			-				Hydric So	Present	? Yes	No <u> </u>
	 									
HYDROLOG										
_	rology Indicators:									
	itors (minimum of o	ne required; c					<u>Seco</u>	ndary Indi	cators (2 or mo	re required)
Surface V	* *			ined Leaves (ept	'	Nater-Stai	ned Leaves (B9) (MLRA 1, 2,
	er Table (A2)			1, 2, 4A, and	4B)			4A, and	l 4B)	
Saturation	- ,		Salt Crust					Orainage F	atterns (B10)	
Water Ma				vertebrates (В	-			Dry-Seaso	n Water Table ((C2)
	Deposits (B2)			Sulfide Odor (Saturation	Visible on Aeria	al Imagery (C9)
Drift Depo				thizospheres		ing Roots	G (C3) (3eomorph	ic Position (D2)	
_	or Crust (B4)			of Reduced In	. ,				uitard (D3)	
Iron Depo				n Reduction in					al Test (D5)	
	oil Cracks (B6)			Stressed Plan		(LRR A)			Mounds (D6) (
	n Visible on Aerial Ir Vegetated Concave		Other (Exp	lain in Remar	ks)		F	rost-Heav	e Hummocks (I) 7)
Field Observa	-	Sulface (Do)								
Surface Water			V .							
		s No .	1.0	hes):						i
Water Table P		s No	16	thes):						1-
Saturation Pre (includes capil		es No .	Depth (inc	:hes):		Wetlan	id Hydrolog	y Present	? Yes	No 🕭
	orded Data (stream	gauge, monito	oring well, aerial o	hotos, previo	us inspec	tions) if	available:	_	<u> </u>	
		9	_ ,			2/1				
Remarks:							_			

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region Project/Site: Cannibal Island City/County: Joleta Sampling Date: 1/17/20 Applicant/Owner: State: CA Sampling Point: U2T2 Wet Investigator(s): M. Schwarz, M. McDonald Section, Township, Range: Landform (hillslope, terrace, etc.): + Control Local relief (concave, convex, none): Oche Slope (%): Subregion (LRR): A Long: _____ Datum: Soil Map Unit Name: _ NWI classification: ___ 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 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. Yes ___/_ No ____ Hydrophytic Vegetation Present? Is the Sampled Area Hydric Soil Present? within a Wetland? Wetland Hydrology Present? Yes , No Remarks: 6 ft from wetland edge. Connect to U2TI arez by perin sula on VEGETATION - Use scientific names of plants. Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size: ____) % Cover Species? Status Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Sapling/Shrub Stratum (Plot size: ____) Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species x1=____ FACW species x 2 = FAC species ____ x3 = ____ FACU species _____ x 4 = ____ = Total Cover UPL species _____ x 5 = ____ Herb Stratum (Plot size: Potentilla anterina Column Totals: Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 4. Lotus corniculatus 1 - Rapid Test for Hydrophytic Vegetation 5. Plantago lanceolata Y 2 - Dominance Test is >50% restuca perennis 3 - Prevalence Index is ≤3.01 7. Raphan's caphinastrum 4 - Morphological Adaptations (Provide supporting NB data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 100 = Total Cover Woody Vine Stratum (Plot size: ____) Hydrophytic Vegetation Present? = Total Cover % Bare Ground in Herb Stratum

Dominance Test, Passes FAC-Neutral

					(J = =	7/17/20 Sampling Point: U2T2
Profile Des	cription: (Describe t	o the dept	h needed to docum	nent the indicator	or confirm	n the absence of indicators.)
Depth	Matrix			x Features		
(inches)	Color (moist)	%	Color (moist)	%Type¹	Loc ²	Texture Remarks
0->	2543/2	<u>/w</u> .			777	Siltloan
3-13	2.543/2	95	7.54R 4/4	5 (m	Siltloan
		 -	7 2 1 1/7			3177 COUR
						
l			2			
İ					_	
						
¹Type: C=C	oncentration, D=Deple	etion RM=	Reduced Matrix, CS	=Covered or Cost	ad Sand Gr	rains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applica	ble to all L	RRs. unless other	wise noted.)	su Saliu Gi	indicators for Problematic Hydric Soils ³ :
Histosol			Sandy Redox (S	•		
	pipedon (A2)	-	Stripped Matrix	•		2 cm Muck (A10)
	istic (A3)	-	Loamy Mucky M		MI DA 1	Red Parent Material (TF2) Very Shallow Dark Surface (TF12)
_	en Sulfide (A4)	_	Loamy Gleyed N		I INLENDA I /	Other (Explain in Remarks)
	d Below Dark Surface	(A11)	Depleted Matrix			Other (Explain in Remarks)
	ark Surface (A12)	7	Redox Dark Sur			³ Indicators of hydrophytic vegetation and
Sandy N	lucky Mineral (S1)		Depleted Dark S			wetland hydrology must be present,
Sandy G	Sleyed Matrix (S4)		Redox Depressi			unless disturbed or problematic.
Restrictive I	Layer (if present):					
Туре:						
Depth (inc	ches):					Hydric Soil Present? Yes No
Remarks:						Tryune Son Flesent? Tes NO
HYDROLO	<u> </u>					
HIDROLO	GY	<u> </u>				
	GY drology Indicators:					
Wetland Hyd	drology Indicators:	e required;	check all that apply)		Secondary Indicators (2 or more required)
Wetland Hyd	drology Indicators: cators (minimum of one	e required;			xcent	Secondary Indicators (2 or more required)
Wetland Hyd Primary Indic	drology Indicators: ators (minimum of one Water (A1)	e required;	Water-Stain	ed Leaves (B9) (e	xcept	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hyd Primary India Surface ' High Wa	drology Indicators: cators (minimum of one Water (A1) ter Table (A2)	e required;	Water-Stain MLRA 1	ed Leaves (B9) (e , 2, 4A, and 4B)	xcept	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Primary Indic Surface High Wa Saturatio	drology Indicators: cators (minimum of one Water (A1) ter Table (A2) on (A3)	e required;	Water-Stain MLRA 1 Salt Crust (ned Leaves (B9) (e , 2, 4A, and 4B) B11)	xcept	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Wetland Hyd Primary India Surface High Wa Saturatio Water M	drology Indicators: cators (minimum of one Water (A1) ter Table (A2) on (A3) arks (B1)	e required;	Water-Stain MLRA 1 Salt Crust (I	ned Leaves (B9) (e , 2, 4A, and 4B) B11) ertebrates (B13)	xcept	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hyd Primary Indic Surface High Wa Saturatio Water M Sedimen	drology Indicators: cators (minimum of one Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2)	e required;	Water-Stain MLRA 1 Salt Crust (i Aquatic Inve	ned Leaves (B9) (e , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1)		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Wetland Hyd Primary Indic Surface High Wa Saturatio Water M Sedimen Drift Dep	drology Indicators: cators (minimum of one Water (A1) ter Table (A2) on (A3) arks (B1) ot Deposits (B2) oosits (B3)	e required;	Water-Stain MLRA 1 Salt Crust (i Aquatic Inve	ned Leaves (B9) (e , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along	Living Root	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2)
Wetland Hyd Primary Indic Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma	drology Indicators: cators (minimum of one Water (A1) ter Table (A2) on (A3) arks (B1) ot Deposits (B2) osits (B3) ot or Crust (B4)	e required;	Water-Stain MLRA 1 Salt Crust (i Aquatic Inve Hydrogen S Oxidized Rh	ned Leaves (B9) (e , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C4	Living Root	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hyd Primary Indic Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep	drology Indicators: cators (minimum of one Water (A1) ter Table (A2) on (A3) arks (B1) ot Deposits (B2) posits (B3) ot or Crust (B4) osits (B5)	e required;	Water-Stain MLRA 1 Salt Crust (i Aquatic Inve Hydrogen S Oxidized Ri Presence of Recent Iron	ned Leaves (B9) (e , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C4 Reduction in Tilled	Living Root) I Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hyd Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface S	drology Indicators: cators (minimum of one Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6)		Water-Stain MLRA 1 Salt Crust (i Aquatic Inve Hydrogen S Oxidized Ri Presence of Recent Iron Stunted or S	ned Leaves (B9) (e , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C4 Reduction in Tilled Stressed Plants (D	Living Root) I Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) S (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hyd Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundatio	cators (minimum of one water (A1) ter Table (A2) on (A3) arks (B1) ot Deposits (B2) osits (B3) ot or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ima	agery (B7)	Water-Stain MLRA 1 Salt Crust (i Aquatic Inve Hydrogen S Oxidized Ri Presence of Recent Iron Stunted or S Other (Explain	ned Leaves (B9) (e , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C4 Reduction in Tilled Stressed Plants (D	Living Root) I Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hyd Primary Indic Surface ' High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio Sparsely	drology Indicators: cators (minimum of one Water (A1) ther Table (A2) on (A3) arks (B1) of Deposits (B2) osits (B3) of or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ima Vegetated Concave S	agery (B7)	Water-Stain MLRA 1 Salt Crust (i Aquatic Inve Hydrogen S Oxidized Ri Presence of Recent Iron Stunted or S Other (Explain	ned Leaves (B9) (e , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C4 Reduction in Tilled Stressed Plants (D	Living Root) I Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) S (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hyd Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface	drology Indicators: cators (minimum of one Water (A1) ther Table (A2) on (A3) arks (B1) of Deposits (B2) osits (B3) of or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ima Vegetated Concave S	agery (B7)	Water-Stain MLRA 1 Salt Crust (i Aquatic Inve Hydrogen S Oxidized Ri Presence of Recent Iron Stunted or S Other (Explain	ned Leaves (B9) (e , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C4 Reduction in Tilled Stressed Plants (D	Living Root) I Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) S (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hyd Primary Indic Surface ' High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio Sparsely	cators (minimum of one water (A1) ter Table (A2) on (A3) arks (B1) ot Deposits (B2) osits (B3) ot or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Image Vegetated Concave Separations:	agery (B7) Surface (B8	Water-Stain MLRA 1 Salt Crust (i Aquatic Inve Hydrogen S Oxidized Ri Presence of Recent Iron Stunted or S Other (Explain)	ned Leaves (B9) (e , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C4 Reduction in Tilled Stressed Plants (D ain in Remarks)	Living Root) I Soils (C6) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) S (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hyd Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio Sparsely	cators (minimum of one water (A1) ter Table (A2) on (A3) arks (B1) ot Deposits (B2) osits (B3) ot or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Image Vegetated Concave Separations:	agery (B7) Surface (B8	Water-Stain MLRA 1 Salt Crust (i Aquatic Inve Hydrogen S Oxidized Ri Presence of Recent Iron Stunted or S Other (Explain)	ned Leaves (B9) (e , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C4 Reduction in Tilled Stressed Plants (D ain in Remarks)	Living Root) I Soils (C6) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) S (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hyd Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Observ Surface Water	cators (minimum of one Water (A1) Iter Table (A2) In (A3) In (A3) In (B1) In Deposits (B2) In (B3) It or Crust (B4) In (B5) In Visible on Aerial Imit In Vegetated Concave Separations: Iter Present? In Ves	agery (B7) Surface (B8	Water-Stain MLRA 1 Salt Crust (i Aquatic Inve Hydrogen S Oxidized Ri Presence of Recent Iron Stunted or S Other (Explain) Depth (inch	ned Leaves (B9) (e , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C4 Reduction in Tiller Stressed Plants (D ain in Remarks)	Living Root) I Soils (C6) I) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) S (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hyd Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Observ Surface Water Water Table I Saturation Princludes cap	cators (minimum of one Water (A1) Iter Table (A2) In (A3) In (A3) In (A3) In (A3) In (B1) In Deposits (B2) In (B3) It or Crust (B4) In (B5) In Visible on Aerial Imit In Vegetated Concave Solutions: In Present? In Yes Iter Present? Iter Yes Iter Y	agery (B7) Surface (B8 No	Water-Stain MLRA 1 Salt Crust (i Aquatic Inve Hydrogen S Oxidized Ri Presence of Recent Iron Stunted or S Other (Explain) Depth (inch	need Leaves (B9) (e , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C4 Reduction in Tilled Stressed Plants (D ain in Remarks)	Living Root) I Soils (C6) I) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Season (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hyd Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Observ Surface Water Table I Saturation Princludes cap	cators (minimum of one Water (A1) Iter Table (A2) Iter Table (A2) Iter Table (A2) Iter Table (B1) Iter Table (B2) Iter Table (B3) Iter Crust (B4) Iter Crust (B4) Iter Crust (B6) Iter Crust (B6) Iter Crust (B6) Iter Vegetated Concave Services Iter Present? Iter Present? Iter Present? Iter Yes Iter Present? Iter Yes Iter Present Pres	agery (B7) Surface (B8 No	Water-Stain MLRA 1 Salt Crust (i Aquatic Inve Hydrogen S Oxidized Ri Presence of Recent Iron Stunted or S Other (Explain) Depth (inch	need Leaves (B9) (e , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C4 Reduction in Tilled Stressed Plants (D ain in Remarks)	Living Root) I Soils (C6) I) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Season (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hyd Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Observ Surface Water Water Table I Saturation Pri	cators (minimum of one Water (A1) Iter Table (A2) In (A3) In (A3) In (A3) In (A3) In (B1) In Deposits (B2) In (B3) It or Crust (B4) In (B5) In Visible on Aerial Imit In Vegetated Concave Solutions: In Present? In Yes Iter Present? Iter Yes Iter Y	agery (B7) Surface (B8 No	Water-Stain MLRA 1 Salt Crust (i Aquatic Inve Hydrogen S Oxidized Ri Presence of Recent Iron Stunted or S Other (Explain) Depth (inch	need Leaves (B9) (e , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C4 Reduction in Tilled Stressed Plants (D ain in Remarks)	Living Root) I Soils (C6) I) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Season (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hyd Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio Sparsely Field Observ Surface Water Table I Saturation Pr (includes cap Describe Rec	drology Indicators: eators (minimum of one Water (A1) ter Table (A2) on (A3) arks (B1) ot Deposits (B2) osits (B3) ot or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ima Vegetated Concave S vations: er Present? Yes esent? Yes esent? Yes ellary fringe)	agery (B7) Surface (B8	Water-Stain MLRA 1 Salt Crust (i Aquatic Inve Hydrogen S Oxidized Ri Presence of Recent Iron Stunted or S Other (Explain) Depth (inch Depth (inch Depth (inch	ned Leaves (B9) (e , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C4 Reduction in Tilled Stressed Plants (D ain in Remarks) nes):	Living Root) I Soils (C6) I) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Season (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hyd Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio Sparsely Field Observ Surface Water Table I Saturation Pri	drology Indicators: eators (minimum of one Water (A1) ter Table (A2) on (A3) arks (B1) ot Deposits (B2) osits (B3) ot or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ima Vegetated Concave S vations: er Present? Yes esent? Yes esent? Yes ellary fringe)	agery (B7) Surface (B8	Water-Stain MLRA 1 Salt Crust (i Aquatic Inve Hydrogen S Oxidized Ri Presence of Recent Iron Stunted or S Other (Explain) Depth (inch Depth (inch Depth (inch	ned Leaves (B9) (e , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C4 Reduction in Tilled Stressed Plants (D ain in Remarks) nes):	Living Root) I Soils (C6) I) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Season (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hyd Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio Sparsely Field Observ Surface Water Table I Saturation Pri	cators (minimum of one Water (A1) Iter Table (A2) In (A3) In (A3) In (A3) In (A3) In (B1) In Deposits (B2) In (B3) It or Crust (B4) In (B5) In Visible on Aerial Imit In Vegetated Concave Solutions: In Present? In Yes Iter Present? Iter Yes Iter Y	agery (B7) Surface (B8	Water-Stain MLRA 1 Salt Crust (i Aquatic Inve Hydrogen S Oxidized Ri Presence of Recent Iron Stunted or S Other (Explain) Depth (inch Depth (inch Depth (inch	ned Leaves (B9) (e , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along f Reduced Iron (C4 Reduction in Tilled Stressed Plants (D ain in Remarks) nes):	Living Root) I Soils (C6) I) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Season (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

pplicant/Owner:	SIAND		City/County:	State: A Sampling Date: 711712	
vestigator(s): M. Schwar	V. War	- 11		State: Sampling Point.	
andform the	Z 17, MCI	Donald.	Section, Township, Re	convex, none): <u>Canvex</u> Slope (%): <u>5-</u>	
(hillslope, terrace, etc.): 🔽	They work	10	Local relief (concave,	convex, none):	
				Long: Datum:	
oil Map Unit Name:				NWI classification:	
				(If no, explain in Remarks.)	
re Vegetation, Soil,				"Normal Circumstances" present? Yes No	
re Vegetation, Soil,	or Hydrology	naturally pro	blematic? (If n	eeded, explain any answers in Remarks.)	
SUMMARY OF FINDINGS -	Attach site m	ap showing	sampling point	locations, transects, important features, e	
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes	-	Is the Sampled within a Wetla	d Area	
Remarks: Gft from	1 wettan	id edge			
EGETATION – Use scientif	ic names of p	Absolute	Dominant Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 1		% Cover	Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)	
2				Total Number of Dominant	
3				Species Across All Strata: (B)	
4			= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:	
Sapling/Shrub Stratum (Plot size:				Prevalence Index worksheet:	
1 2				Total % Cover of: Multiply by:	
3.				OBL species x 1 =	
4.				FACW species x 2 =	
5,				FACU species x 3 = FACU species x 4 =	
Herb Stratum (Plot size: 1M	L		= Total Cover	UPL species x 5 =	
1. Raphanus sativus	× Clobbail	05 mg	Y UPI	Column Totals: (A) (B)	
Conium macula	time the	8	FAC		
3.	# " T " - " - " - " - " - " - " - " - " -	-2-2, 12-2		Prevalence Index = B/A = Hydrophytic Vegetation Indicators:	
4.				1 - Rapid Test for Hydrophytic Vegetation	
5.				2 - Dominance Test is >50%	
6				3 - Prevalence Index is ≤3.01	
7				4 - Morphological Adaptations ¹ (Provide supporting	
8				data in Remarks or on a separate sheet)	
9				5 - Wetland Non-Vascular Plants¹	
10				Problematic Hydrophytic Vegetation¹ (Explain)	
11		70	Total Cover	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Woody Vine Stratum (Plot size:)		- Total Cover		
1.				Hydrophytic	
2.				Vegetation	
% Bare Ground in Herb Stratum 2	2%		= Total Cover	Present? Yes No _V	
wes not	pass Do	nosprim	e lest, 13	bes not pass FAC-Neutral.	

SOIL	CF 1/12/ 2070 Sampling Point: U3!/-
Profile Description: (Describe to the depth needed to document the indicate	
Depth Matrix Redox Features	,
(inches) Color (moist) % Color (moist) % Type	
0-3 10422/2 100	- Siltloan
3-15 2.5 \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	- Sandy Loam
<u> </u>	
Tunos Co-Consentration De-Destation District Conference	2
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coal Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	
	Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6)	2 cm Muck (A10)
Black Histic (A3) Loamy Mucky Mineral (F1) (exce	med Parent Material (TF2) pt MLRA 1) Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Depleted Matrix (F3)	
Thick Dark Surface (A12) Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	wetland hydrology must be present.
Sandy Gleyed Matrix (S4) Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):	
Type:	
Depth (inches):	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)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2,
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (High Water Table (A2) MLRA 1, 2, 4A, and 4B)	except Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) MLRA 1, 2, 4A, and 4B) Satt Crust (B11)	water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13)	water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Water All that apply) Water Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (High Water Table (A2) MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along	water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) g Living Roots (C3) Geomorphic Position (D2)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (High Water Table (A2) MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Algal Mat or Crust (B4) Presence of Reduced Iron (C	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) g Living Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Algal Mat or Crust (B4) Presence of Reduced Iron (C1) Iron Deposits (B5) Recent Iron Reduction in Tilli	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) g Living Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) ed Soils (C6) FAC-Neutral Test (D5)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Algal Mat or Crust (B4) Presence of Reduced Iron (C1) Iron Deposits (B5) Recent Iron Reduction in Tillicular Surface Soil Cracks (B6) Stunted or Stressed Plants (III)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) GLiving Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) ed Soils (C6) FAC-Neutral Test (D5) D1) (LRR A) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (High Water Table (A2) MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Algal Mat or Crust (B4) Presence of Reduced Iron (C1) Iron Deposits (B5) Recent Iron Reduction in Tilling Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) g Living Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) ed Soils (C6) FAC-Neutral Test (D5)
Primary Indicators (minimum of one required: check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (High Water Table (A2) MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Algal Mat or Crust (B4) Presence of Reduced Iron (C1) Iron Deposits (B5) Recent Iron Reduction in Tille Surface Soil Cracks (B6) Stunted or Stressed Plants (I1) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) G Living Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) ed Soils (C6) FAC-Neutral Test (D5) D1) (LRR A) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one required: check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Algal Mat or Crust (B4) Presence of Reduced Iron (C1) Iron Deposits (B5) Recent Iron Reduction in Tilling Surface Soil Cracks (B6) Stunted or Stressed Plants (Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations:	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) ed Soils (C6) FAC-Neutral Test (D5) D1) (LRR A) Frost-Heave Hummocks (D7)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) GLiving Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) ed Soils (C6) FAC-Neutral Test (D5) D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) GLiving Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) ed Soils (C6) FAC-Neutral Test (D5) D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) GLiving Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) ed Soils (C6) FAC-Neutral Test (D5) D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) GLiving Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) ed Soils (C6) FAC-Neutral Test (D5) D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) GLiving Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) ed Soils (C6) FAC-Neutral Test (D5) D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): Saturation Present?	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) GLiving Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) ed Soils (C6) FAC-Neutral Test (D5) D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) GLiving Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) ed Soils (C6) FAC-Neutral Test (D5) D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) GLiving Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) ed Soils (C6) FAC-Neutral Test (D5) D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): Saturation Present?	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) GLiving Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) ed Soils (C6) FAC-Neutral Test (D5) D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No

Project/Site: (AAA:\-A		1.1	untains, Valleys, and Coast Region
Applicant/Owner:		City/County:	Sampling Date: 711712
nvestigator(a) NA	11	Lancer Sec.	State: CA Sampling Point: U3TI-W
nvestigator(s): M. Schwarz, K.M.C.	70919	Section, Township, Ra	ange:
Sub-serial (hillslope, terrace, etc.): \[\sqrt{codplaid}		Local relief (concave,	convex, none): MCMC Slope (%): 12
Sourcegion (LRR): A	Lat:		Long: Datum:
Soil Map Unit Name:			NWI classification:
Are climatic / hydrologic conditions on the site typical for			
Are Vegetation, Soil, or Hydrology			"Normal Circumstances" present? Yes No
re Vegetation, Soil, or Hydrology	_ naturally pro	oblematic? (If n	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site ma	p showing	sampling point	locations, transects, important features, etc
Hydrophytic Vegetation Present? Yes		to the Committee	/
Hydric Soil Present? Yes		Is the Sampled within a Wetla	1/
Wetland Hydrology Present? Yes Remarks:	No	- January Carrons	
Nemarks.			
EGETATION – Use scientific names of pla	ants.		via a la compa
	Absolute		Dominance Test worksheet:
ree Stratum (Plot size:)		Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
			That Are OBL, FACW, or FAC: (A)
			Total Number of Dominant Species Across All Strata: (B)
		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
apling/Shrub Stratum (Plot size:)			Prevalence Index worksheet:
			Total % Cover of: Multiply by:
-			OBL species x 1 =
			FACW species x 2 =
			FAC species x 3 =
		- Tatal Causa	FACU species x 4 =
erb Stratum (Plot size: 1m²)		= Total Cover	UPL species x 5 =
Agrostis stelenifera	70	Y FAC	Column Totals: (A) (B)
Potentilla ansecina	30	Y OBL	Prevalence Index = B/A =
Holous lanatus		FAC	Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
			Y 2 - Dominance Test is >50%
			3 - Prevalence Index is ≤3.0 ¹
			4 - Morphological Adaptations (Provide supporting
	7		data in Remarks or on a separate sheet)
			5 - Wetland Non-Vascular Plants ¹
			Problematic Hydrophytic Vegetation ¹ (Explain)
			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	101	= Total Cover	be present, unless disturbed of problematic.
ody Vine Stratum (Plot size:)			
			Hydrophytic
			Vegetation Present? Yes No
~		= Total Cover	1000
are Ground in Herb Stratum			

SOIL						(T 7/12/70 Sampling Point: U-> 11 U
Profile Des	cription: (Describe t	o the depth	needed to docum	ent the ir	ndicator o	or confirm	the absence of indicators.)
Depth	Matrix			Features			•
(inches)	Color (moist)	%	Color (moist)	<u>%</u>		Loc²	Texture Remarks
0-4	2.5 43/2	100		_	-	_	Sillboam
1-13	7 = 43/2	85	7.54R4/4	15			23 1 1 C 1 1 .
4-15	2.5/1/2		7.7 127 4			PYM	SITTIONIN to Sandy lang
						_	
l							
l 							
	oncentration, D=Depl					d Sand Gra	-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Hydric Soil	Indicators: (Applica	ble to all LF	RRs, unless otherv	vise note	d.)		Indicators for Problematic Hydric Soils ³ :
Histosol	(A1)	_	_ Sandy Redox (S	5)			2 cm Muck (A10)
Histic E _l	oipedon (A2)	_	_ Stripped Matrix (S6)			Red Parent Material (TF2)
Black Hi	stic (A3)	_	_ Loamy Mucky M	ineral (F1)	(except	MLRA 1)	Very Shallow Dark Surface (TF12)
Hydroge	n Sulfide (A4)	_	_ Loamy Gleyed M	latrix (F2)			Other (Explain in Remarks)
Deplete	d Below Dark Surface	(A11) _	_ Depleted Matrix	(F3)			
Thick Da	ark Surface (A12)	X	Redox Dark Surf	ace (F6)			³ Indicators of hydrophytic vegetation and
Sandy N	fucky Mineral (S1)	_	_ Depleted Dark S	urface (F7	7)		wetland hydrology must be present.
Sandy G	Bleyed Matrix (S4)	_	_ Redox Depression	ons (F8)			unless disturbed or problematic.
Restrictive I	Layer (if present):						<u> </u>
Type:							
Depth (in	ches).		_				Hydric Soil Present? Yes No K
Remarks:			-				Hydric Soil Present? Yes No _K
HYDROLO	GY						
	drology Indicators:						
	ators (minimum of on	e required; o				.	Secondary Indicators (2 or more required)
Surface	Water (A1)		Water-Stain	ed Leave:	s (B9) (ex	cept	Water-Stained Leaves (B9) (MLRA 1, 2,
High Wa	ter Table (A2)		MLRA 1,	, 2, 4A, ar	nd 4B)		4A, and 4B)
Saturatio	on (A3)		Salt Crust (I	311)			Drainage Patterns (B10)
Water M	arks (B1)		Aquatic Inve	ertebrates	(B13)		Dry-Season Water Table (C2)
Sedimer	t Deposits (B2)		Hydrogen S				Saturation Visible on Aerial Imagery (C9)
	osits (B3)					iving Roots	s (C3) Geomorphic Position (D2)
	t or Crust (B4)		Presence of				Shallow Aquitard (D3)
	osits (B5)		_		٠,	,	
			Recent Iron				X FAC-Neutral Test (D5)
	Soil Cracks (B6)	(30.00)	Stunted or S) (LKK A)	Raised Ant Mounds (D6) (LRR A)
	on Visible on Aerial In		Other (Expla	ain in Rem	narks)		Frost-Heave Hummocks (D7)
	Vegetated Concave	Surface (B8)	 				
Field Observ	/ations:		-				
Surface Water	er Present? Ye	s No	Depth (incl	nes):		_	
Water Table	Present? Ye	sNo	1 4 4				\bigcirc
Saturation Pr			Depth (inch			_	ad Hudralanu Danasata. Vasa V
(includes cap		3110	Deptil (illici	ies)		- AAGUSI	nd Hydrology Present? Yes Y No
	corded Data (stream g	gauge, monit	oring well, aerial ph	otos, prev	vious insp	ections), if	available:
		_					
Remarks:	0 .					-	
Nelliaiks.	VASSUMU	54501	on Strong 1	Steic	. Soil	/	
	7127011-)	7011-			

me Lannibal Island	Ch	County del	ntains, Valleys, and Coast Region
Pulcant/Owner:	City	County.	Sampling Point: UHT 1-UP
resugator(s): M. Cohluster V MA	0 11	La referencia de la companya della companya de la companya della c	Sampling Folia.
(misiope, terrace etc.)			A (
oil Map Unit Name:			Long: Datum:
re climatic / hydrologic conditions on the site typical for	or this time of year?	Yes V No	(If no, explain in Remarks.)
re Vegetation, Soil, or Hydrology	significantly dis		
re Vegetation, Soil, or Hydrology	naturally proble		Normal Circumstances" present? Yes No
			eded, explain any answers in Remarks.)
Hydrophytic Vegetation Present? Yes	nap snowing sa	ampling point is	ocations, transects, Important features, etc.
The data of the	No V	Is the Sampled	Area
Wetland Hydrology Present? Yes	No V	within a Wetlan	
Remarks: 8 ft from wetta	2))		A 11 1 = 11 11 - 2 - 11
DIT HOT WEND	nd edge	-	
	3		
EGETATION – Use scientific names of	plants.		
Tree Stratum (Plot size:)	Absolute D	ominant Indicator	Dominance Test worksheet:
1	% Cover S	pecies? Status	Number of Dominant Species
2.			That Are OBL, FACW, or FAC: (A)
3			Total Number of Dominant
1			Species Across All Strata: (B)
			Percent of Dominant Species That Are OBL, FACW, or FAC:
Sapling/Shrub Stratum (Plot size:)			That Are OBL, FACW, or FAC:(A/B) Prevalence Index worksheet:
1 2.			
2.			OBL species x 1 =
			FACW species x 2 =
5			FAC species x 3 =
Herb Stratum (Plot size: 1m²)	_	Total Cover	FACU species x 4 =
. Bagnarus sztivus x raphan			UPL species x 5 =
humex crispus	HAMOUN BO	A OST	Column Totals: (A) (B)
Equisetum hymale spa	dia 1	FAC	Prevalence Index = B/A =
Table to I will late aby		FACL	Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
			≥ 2 - Dominance Test is >50%
			o . revalence index is 25.0
			4 - Morphological Adaptations¹ (Provide supportin data in Remarks or on a separate sheet)
			5 - Wetland Non-Vascular Plants¹
0			Problematic Hydrophytic Vegetation¹ (Explain)
1,			Indicators of hydric soil and wetland hydrology must
Woody Vino Stratus (Dist.)	83 =	Total Cover	be present, unless disturbed or problematic.
Voody Vine Stratum (Plot size:)			
			Hydrophytic
			Vegetation Present? Yes No
6 Bare Ground in Herb Stratum		Total Cover	
Daio Ciodila ili Ficio Gualdini			
temarks:	1974 - 10 to	T .	ocs not pass FAC-Neutral

SOIL		CI 2/12/20 Sampling Point: 047/-
Profile Description: (Describe to the dept	h needed to document the indicator or	confirm the absence of indicators.)
DepthMatrix	Redox Features	
(inches) Color (moist) %		Loc ² Texture Remarks
0-3 109123/2 100		- Loam
3-10 2-543/2 100		- Siltloam
10-14 2.543/2 100		- Sandy Loam
		140
¹ Type: C=Concentration, D=Depletion, RM=	Padurad Matrix, CS=Covered as Control 5	Cond Coning 31 and the District At 10 at 10
Hydric Soil Indicators: (Applicable to all L	RRs. unless otherwise noted)	Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
	Sandy Redox (S5)	•
Histic Epipedon (A2)	Stripped Matrix (S6)	2 cm Muck (A10) Red Parent Material (TF2)
1	Loamy Mucky Mineral (F1) (except ML	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	,
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4) Restrictive Layer (if present):	Redox Depressions (F8)	unless disturbed or problematic.
Type:		
Depth (inches):	<u> </u>	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)	Water-Stained Leaves (B9) (exce	pt Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along Living	ng Roots (C3) Geomorphic Position (D2)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tilled Sc	· · · · · · · · · · · · · · · · · · ·
Surface Soil Cracks (B6)	LRR A) Raised Ant Mounds (D6) (LRR A)	
Inundation Visible on Aerial Imagery (B7)	Frost-Heave Hummocks (D7)	
Sparsely Vegetated Concave Surface (Bi	3)	
Field Observations:		
	o _k Depth (inches):	
	o Depth (inches):	9
Saturation Present? Yes N	o L Depth (inches):	Wetland Hydrology Present? Yes No 🗶
(includes capillary fringe)	. '	· · · · · · · · · · · · · · · · · · ·
Describe Recorded Data (stream gauge, mon	itoring well, aerial priotos, previous inspect	tions), if available:
Donada		
Remarks:		

roject/Site:	DAIATON	City/County	ern mount	ains, valleys,	and Coast Region
pplicant/Owner:		,,-		State: (A	Sampling Point: UHTI-
vestigator(s): M. Schurz 7. K.M.	Llmo	Castian Ta		_ State	Sampling Point: U9 11
andform (hillslope, terrace, etc.): Flood plate	7	Local relief	viisiip, Range	-	
ubregion (LRR): A	Lab	Local relief	(concave, con	vex, none): YIC	Slope (%):
ubregion (LRR):	Lat:			ong:	Datum:
	mr. m	2.11	7	NWI clas	ssification:
re climatic / hydrologic conditions on the site typical for	this time of year	ar? Yes _\			,
re Vegetation, Soil, or Hydrology	_ significantly	disturbed?	Are "No	rmal Circumstance	es" present? Yes No
re Vegetation, Soil, or Hydrology	_ naturally pro	blematic?	(If need	ed, explain any an	swers in Remarks.)
UMMARY OF FINDINGS - Attach site ma	p showing	sampling	point loca	ations, transe	cts, important features, et
Hydrophytic Vegetation Present? Yes	No		0.0000000000000000000000000000000000000	20.4.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0	,
Hydric Soil Present? Yes	No	Is the	Sampled Ar	ea	1
Wetland Hydrology Present? Yes	No		n a Wetland?	Yes_	/_ No
Remarks: 15 ft from wetland	9	-			
		Dominant	Indicator D	ominance Test w	orkoho st.
Tree Stratum (Plot size:)	% Cover	Species?	Ctatus	umber of Dominan	at Species
1			I TI	at Are OBL, FAC	W, or FAC: (A)
				tal Number of Do	minant
34			S	ecies Across All S	
			Pe	ercent of Dominan	t Species
Sapling/Shrub Stratum (Plot size:)	-	= Total Cov	er Th	at Are OBL, FAC	W, or FAC: 100% (A/B)
1				evalence Index w	vorksheet:
2				Total % Cover of	
3			U	BL species	x 1 =
4			F/	C species	x 2 =
5	-		F/	CU species	x 3 = x 4 =
Herb Stratum (Plot size: 1m²	-	= Total Cov	er UI	PL species	x4
1. Potentilla anserina	_70	Y	OBL C	olumn Totals:	(A) (B)
· Agrostis stolonifera	30	Y	FAC		
3. Holcus lanatus			FAC H	drophytic Venet	lex = B/A = ation Indicators:
4					or Hydrophytic Vegetation
5				2 - Dominance 1	Test is >50%
5				3 - Prevalence I	
7				4 - Morphologica	al Adaptations (Provide supportion
8 9.				data in Rema	arks or on a separate sheet)
9 10				5 - Wetland Non	
11	7 - 7 -			dicators of hydria	drophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)	101	= Total Cove	r De	present, unless d	soil and wetland hydrology must isturbed or problematic.
1			н	drophytic	
2			Ve	getation	
% Bare Ground in Herb Stratum		Total Cove		esent?	Yes No
Remarks: Passes Dominance	Test,	Pass	es FA	C-Neut	ral

Profile Description: (Describe to the depth needed to document the indicator or conf	
	TT 7/17/20 Sampling Point: <u>U471-U</u> Tirm the absence of Indicators.)
Depth Matrix Redox Features	•
(inches) Color (moist) % Color (moist) % Type¹ Loc²	
0-3 2.543/2 100	
3-13 2.54 3/2 BO 7-18 4/4 20 C M	Silt Loam
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand	Grains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2) Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA Loamy Gleyed Matrix (F2)	
Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Matrix (F3)	Other (Explain in Remarks)
Thick Dark Surface (A12) Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4) Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):	
Type:	1.0
Depth (inches):	Hydric Soil Present? Yes No
Remarks:	<u> </u>
HYDROLOGY	
Wetland Hydrology Indicators:	
	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
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) Method Invertebrates (B13)	Water-Stained Leaves (B9) (MLRA 1, 2,
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) Hydrogen Sulfide Odor (C1)	Water-Stained Leaves (B9) (MLRA 1, 2,4A, and 4B)Drainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required: check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living References	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except High Water Table (A2) MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Living Rd Algal Mat or Crust (B4) Presence of Reduced Iron (C4)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Living Royal Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (Caster Soil Cracks (B6)) Stunted or Stressed Plants (D1) (LRR 1) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) A) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Satt Crust (B11) Water Marks (B1) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Ves No Depth (inches): Saturation Present? Yes No Depth (inches): Weter Table Present? Ves No Depth (inches): Weter Check all that apply) Water Table Present? Weter Table Present? Weter Table Present? Weter Table Present? Yes No Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) oots (C3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) A) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7) tland Hydrology Present? Yes ⋉ No □
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) oots (C3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) A) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7) tland Hydrology Present? Yes ⋉ No □
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) tland Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) tland Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) tland Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) tland Hydrology Present? Yes No

pject/Site: Cannibal Island	c	ity/County: Lolet	7	_ Sampling Date: Z/1914
plicant/Owner: CDFW /estigator(s): M. Schwarz, H. W indform (hillslope, terrace, etc.): \evec		A Van Hallion	State:	_ Sampling Point: LOIOH
restigator(s): M. Schwarz, M. M	Coold, 5	ection, Township, Ran	nge:	- C-8
ubregion (LRR):	Lat:	fr my m n	Long:	Datum:
pil Map Unit Name:				fication:
e climatic / hydrologic conditions on the site typical	for this time of yea	r? Yes No	(If no, explain in	Remarks.)
re Vegetation, Soil, or Hydrology		listurbed? Are "	Normal Circumstances	" present? Yes No
re Vegetation, Soil, or Hydrology	naturally prob		eded, explain any ansv	
UMMARY OF FINDINGS - Attach site			ocations, transec	ts, important features, etc
Hydrophytic Vegetation Present? Yes	No	Section 1	Lovi -	,
Hydric Soil Present? Yes	_ No	Is the Sampled	Area nd? Yes	No.
Wetland Hydrology Present? Yes	No/			
Remarks: Facultative dominant hydrophytes.	species o	on levee do	not appear	r to be acting as
EGETATION - Use scientific names of	plants.			
<u>Tree Stratum</u> (Plot size:) 1)	% Cover		Number of Dominant That Are OBL, FACU	Species 7
2			Total Number of Dor	ninant 7
3			Species Across All S	
4			Percent of Dominant	Species
Santing (Shark Stark) and (Distance)		= Total Cover	That Are OBL, FAC	
Sapling/Shrub Stratum (Plot size:1.			Prevalence Index v	vorksheet:
2.			Total % Cover of	
3.			OBL species	
4.			FACW species	
5			FAC species	5 x3= 135
17		= Total Cover	FACU species	$\frac{3}{4} \times 4 = 132$
Herb Stratum (Plot size: 1m2		Y FAC	UPL species Column Totals:	4
1. Supplystrichunchile	23	Y FAC		4.66
3. Raphanus Sativus	10	Y UPL	A	dex = B/A = 3.69
4. Plantago lanceolata	10	aw	Hydrophytic Vege	
5. Rumex acetosella	8	EACU	2 - Rapid Test	for Hydrophytic Vegetation
6. Anthoxanthumodora	turn 15	FAW	3 - Prevalence	
7. Potentilla anserina	2	OBL	A STATE OF THE PARTY OF THE PAR	rindex is \$3.0 cal Adaptations¹ (Provide supportin
8.			data in Rem	narks or on a separate sheet)
9			5 - Wetland No	n-Vascular Plants ¹
10.			Problematic Hy	ydrophytic Vegetation ¹ (Explain)
11.				soil and wetland hydrology must
Woody Vine Stratum (Plot size:)	100	_= Total Cover	be present, unless	disturbed or problematic.
1			- Hydrophytic	3.
2.			Vegetation Present?	Vac V No
		- Total Course	Fiesenti	103 _Y 140
% Bare Ground in Herb Stratum	_	_= Total Cover		

SUIL	$\mathcal{E}//$	4/20 CI Sampling Point: LO/D-
Profile Description: (Describe to the	depth needed to document the indicator or confin	m the absence of indicators.)
Depth Matrix	Redox Features	V-
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	
0=4 2.543/3 10	<u></u>	Siltleam
4-16 2.54313 100)	Siltlam
	_ 	
		· ——
Type: C=Concentration, D=Depletion, F Hydric Soll Indicators: (Applicable to	RM=Reduced Matrix, CS=Covered or Coated Sand G	
		Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Histic Epipedon (A2)	Sandy Redox (S5) Stripped Matrix (S6)	2 cm Muck (A10)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Red Parent Material (TF2)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
Depleted Below Dark Surface (A11)		Other (Explain in Remarks)
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Type:		
Depth (inches):	V	Hydric Soil Present? Yes No
Remarks:		
HYDROLOGY		57
Wetland Hydrology Indicators:	N.	
Primary Indicators (minimum of one requ	ired; check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along Living Roo	
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soils (C6	
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRR A	
Inundation Visible on Aerial Imagery		Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surfac	e (B8)	
Field Observations:	N. C.	
Surface Water Present? Yes	No Depth (inches):	
Water Table Present? Yes	No Depth (inches):	
		and Hydrology Present? Yes No
	monitoring well, aerial photos, previous inspections),	if available:
Demoka	The state of the s	
Remarks:		-
	4	A. Carrier and A. Car

20111111111111	Sland		City/County: Lole	tas	ampling Date: 814/20
oplicant/Owner (CCL)				State: (A S	ampling Point: 1 010-
vestigator(s): M. Schwar	I. K.Mcs	Shand	Section, Township, Ra	nge:	
andform (hillslope, terrace, etc.): Le	vee		Local relief (concave.	convex, none): Canve	Slope (%): \ C
ubregion (LRR):					
oil Map Unit Name:					
re climatic / hydrologic conditions on			/		
					sent? Yes V No
re Vegetation, Soil, o					
re Vegetation, Soil, c				eeded, explain any answers	
UMMARY OF FINDINGS -		A CONTRACTOR	sampling point i	ocations, transects, i	mportant reatures, et
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes //		Is the Sampled	Area /	
Wetland Hydrology Present?		No	within a Wetlan	/	No
Remarks:	165				
					*
EGETATION - Use scientif	ic names of pl	lants.			
es en en es en es en es		Absolute		Dominance Test worksh	eet:
Tree Stratum (Plot size:			Species? Status	Number of Dominant Spe	
1				That Are OBL, FACW, or	FAC: (A)
2. 3.				Total Number of Dominan	
				Species Across All Strata	
Sapling/Shrub Stratum (Plot size: _			= Total Cover	Percent of Dominant Spec That Are OBL, FACW, or	FAC: 100% (A/B
1.				Prevalence Index works	
					Multiply by:
				OBL species	
				FACW species	
5				FACIL anguing	
1.1			= Total Cover	FACU species	
Herb Stratum (Plot size: 12		(()	Y FAC	Column Totals:	
Agrostis stole		$-\frac{20}{20}$	Y COBL	Column Totals.	_ (, (,
Potentilla do	secina	-15	- OBL		B/A =
Disticulis spice		15	FACIN	Hydrophytic Vegetation	
Simplyo toich		12 12 N	FAC	1 - Rapid Test for Hy 2 - Dominance Test i	
- scartore in ince	Old (College)			3 - Prevalence Index	
					aptations ¹ (Provide supportir
					r on a separate sheet)
				5 - Wetland Non-Vas	cular Plants ¹
0.				Problematic Hydroph	ytic Vegetation ¹ (Explain)
1.					nd wetland hydrology must
		100	= Total Cover	be present, unless disturt	ed or problematic.
Voody Vine Stratum (Plot size:			4		
•				Hydrophytic	1
				Vegetation Present? Yes	√ No
	1		= Total Cover		
% Bare Ground in Herb Stratum	0				

SOIL					91	114/20	CI	Sampling Point: <u>LOID</u> -
Profile Desc	cription: (Describe	to the dept	h needed to docum	ent the ir	ndicator o	or confirm	the absence of in	ndicators.)
Depth	Matrix			Features			77	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	_Loc²	Texture	Remarks
0-3	2.543/2	90	7542314	10		m	Silf Loam	7
3-14	2.543/2	80	2.547-4/4	ZO		m		
3-14	0.7 17/6		4.311-414	20			Silt Loan	1
142								
								
			 					
l								
								222
1T								
	oncentration, D=Depl Indicators: (Applica					Sand Gr		n: PL=Pore Lining, M=Matrix.
		anie to ali t			u.)			or Problematic Hydric Soils ³ :
Histosol			Sandy Redox (S	-	1000		2 cm Mu	
	oipedon (A2)	-	Stripped Matrix (ent Material (TF2)
	stic (A3)	-	Loamy Mucky M			MLRA 1)		allow Dark Surface (TF12)
	n Sulfide (A4) I Below Dark Surface	- (0.44)	Loamy Gleyed M				Other (E:	xplain in Remarks)
	ark Surface (A12)	- (^11)	Depleted Matrix Redox Dark Surl				31	Character by Athenry and Athenry A
_	lucky Mineral (S1)	-	Depleted Dark S		^\			hydrophytic vegetation and ydrology must be present,
	Bleyed Matrix (S4)	-	Redox Depression	,	′			turbed or problematic.
	ayer (if present):		redox bepressi	<i>3</i> 113 (1 0)			uniess dis	turbed or problematic.
Type:	, (p							
	ches):						Undid Call Bus	
	Jilea).		 .				Hydric Soil Pres	sent? Yes X No No No
Remarks:								
i i								
HYDROLO	CV	•						
	irology Indicators:							
Primary Indic	ators (minimum of or	ne required:	check all that apply	<u> </u>			<u>Secondary</u>	Indicators (2 or more required)
Surface '	Water (A1)		Water-Stain	ed Leaves	s (B9) (ex	cept	Water-	Stained Leaves (B9) (MLRA 1, 2,
High Wa	ter Table (A2)		MLRA 1	2, 4A, an	id 4B)		4A,	and 4B)
Saturatio	on (A3)		Salt Crust (I	311)			Draina	ge Patterns (B10)
Water M	arks (B1)		Aquatic Inve	ertebrates	(B13)			eason Water Table (C2)
Sedimen	t Deposits (B2)		Hydrogen S					tion Visible on Aerial Imagery (C9)
Drift Dep	osits (B3)		Oxidized RI	izosphere	s along L	ivina Root		orphic Position (D2)
	t or Crust (B4)		Presence of					w Aquitard (D3)
Iron Dep			Recent Iron					leutral Test (D5)
	Soil Cracks (B6)		Stunted or S			. ,	r —	I Ant Mounds (D6) (LRR A)
	on Visible on Aerial In	nagery (R7)				, (CIXIX A)		, , , , , ,
	Vegetated Concave			alli ili Neli	iaiksj		FIOSI-F	teave Hummocks (D7)
Field Observ		Ouriace (Di						
		- N						
Surface Wate			o Depth (incl					
Water Table I	Present? Ye	sN	o V Depth (inch	ies);		-		,
Saturation Pr	esent? Ye	s N	o Depth (incl	ies):		_ Wetla	nd Hydrology Pre	sent? Yes 🗶 No
(includes cap Describe Rec	illary tringe) corded Data (stream (nauge mon	itoring well serial at	intas nres	inus inen	ections) if	Favailable:	
	orded bata (stream)	gaage, mon	intolling well, actial pi	iotos, prev	nous msp	ections), ii	avallable.	
Domedia								
Remarks:								

pplicant/Owner: CDFW		M Man Hallman	State: _CA _ Sampling Point: _COII-
Ivestigator(s): M. Schwarz, H. M	Dary 1d,	Section, Township, Ra	ange:
andform (hillslope, terrace, etc.):		Local relief (concave,	convex, none): Slope (%):
ubregion (LRR):	Lat:		Long: Datum:
oil Map Unit Name:			NWI classification:
re climatic / hydrologic conditions on the site typical for	or this time of yea	ar? Yes V No_	(If no, explain in Remarks.)
re Vegetation, Soil, or Hydrology	significantly	disturbed? Are	"Normal Circumstances" present? Yes No
re Vegetation, Soil, or Hydrology	naturally pro	blematic? (If ne	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site n	nap showing	sampling point I	locations, transects, important features, etc
Hydrophytic Vegetation Present? Yes	No V		
Hydric Soil Present? Yes		Is the Sample	
Wetland Hydrology Present? Yes	_ No	within a Wetlan	nd/ Yes No_V
Remarks:			
EGETATION – Use scientific names of	plants.		
	Absolute	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)		Species? Status	Number of Dominant Species That Are OBL. FACW. or FAC: (A)
1			That Are OBL, FACW, or FAC:(A)
2			Total Number of Dominant
3. 4.			Species Across All Strata: (B)
	=	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 331 (A/B
Sapling/Shrub Stratum (Plot size: 15	15	7 .01.	Prevalence Index worksheet:
Lupinus arboreus X			Total % Cover of: Multiply by:
3.			OBL species x 1 =
i.			FACW species x 2 =
5.			FAC species x 3 =
1.2	15	= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 1m2)	00	V CAC	UPL species x5 =
	ne do	FAC	Column Totals: (A) (B
Raphinit sativus	- 40	- A OAC	Prevalence Index = B/A =
Conjum naculatur	$-\frac{6}{70}$		Hydrophytic Vegetation Indicators:
Holas Iznatus	15	$\overline{}$	1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominance Test is >50%
-			3 - Prevalence Index is ≤3.0¹
-			4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
			5 - Wetland Non-Vascular Plants
0.			Problematic Hydrophytic Vegetation ¹ (Explain)
1.			Indicators of hydric soil and wetland hydrology must
	93	= Total Cover	be present, unless disturbed or problematic.
A TOTAL CONTRACT OF THE PARTY O	-0	- A. 2. 201. 12 1. 621.	
A TOTAL PROPERTY OF THE PARTY O			Undranhida
Voody Vine Stratum (Plot size:)			Hydrophytic
Noody Vine Stratum (Plot size:)			Vegetation
Noody Vine Stratum (Plot size:) . Bare Ground in Herb Stratum516_		= Total Cover	

SOIL		4/1/20	CI	Sampling Point: 44	511-0
Profile Description: (Describe to the	depth needed to document the indicator or	confirm the a	bsence of inc	dicators.)	- 8.
Depth <u>Matrix</u>	Redox Features			•	
(inches) Color (moist) %	Color (moist) % Type ¹	Loc ² Tex	kture	Remarks	
0-3 NA				Dramic Wood	Debi
13-6 2.54313 K	io	- 50	Hloam		
6-15 2.543/3 10	0		17 Low		
<u> </u>	 	_ 	17 COM	<u> </u>	
					
		17.			
		_			
True Cocceptation Debutation					
Hydric Soil Indicators: (Applicable to	RM=Reduced Matrix, CS=Covered or Coated S			PL=Pore Lining, M=Mat	
Histosol (A1)	•	"		Problematic Hydric Soi	ls':
Histic Epipedon (A2)	Sandy Redox (S5) Stripped Matrix (S6)	-	2 cm Muck		
Black Histic (A3)	Coamy Mucky Mineral (F1) (except M	II PA 1\		nt Material (TF2) ow Dark Surface (TF12)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	_		ow Dark Surface (1F12) Dain in Remarks)	
Depleted Below Dark Surface (A11)		_	_ 011161 (EXP	Admi in Ivemants)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	3	Indicators of h	ydrophytic vegetation and	d
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)			rology must be present.	
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)			rbed or problematic.	
Restrictive Layer (if present):	·				
Type:					
Depth (inches):		Hydr	ic Soil Prese	nt? Yes No	X
HYDROLOGY Wetland Hydrology Indicators:					
Primary Indicators (minimum of one requ	uizad: chack all that anniu)		0	** * **	
Surface Water (A1)				ndicators (2 or more requi	
High Water Table (A2)	Water-Stained Leaves (B9) (exce	ept		tained Leaves (B9) (MLR	A 1, 2,
Saturation (A3)	MLRA 1, 2, 4A, and 4B) Salt Crust (B11)		•	and 4B)	
Water Marks (B1)	Aquatic Invertebrates (B13)			e Patterns (B10)	
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)			son Water Table (C2)	(00)
Drift Deposits (B3)	Oxidized Rhizospheres along Livi	ing Boots (C3)		on Visible on Aerial Image	ery (C9)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	ing Roots (C3)		phic Position (D2)	
Iron Deposits (B5)	Recent Iron Reduction in Tilled S	oils (C6)		Aquitard (D3) utral Test (D5)	
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (Ant Mounds (D6) (LRR A)	
Inundation Visible on Aerial Imagery		(EICH A)		eave Hummocks (D7)	l
Sparsely Vegetated Concave Surface				are Hamilious (D/)	
Field Observations:	, , , , , , , , , , , , , , , , , , ,				- 00
Surface Water Present? Yes	No Depth (inches):				
Water Table Present? Yes		-			
Saturation Present? Yes		Wetland Hyd	irology Prese	ent? Yes No	K
(includes capillary fringe) Describe Recorded Data (stream gauge,	monitoring well, aerial photos, previous inspec	1			-6
	, , , , , , , , , , , , , , , , , , ,				
Remarks:					

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region Project/Site: Canibal Island City/County: Loleta Sampling Date: 8 Applicant/Owner: CDFW Investigator(s): M. Schwerz, H. Moderald, Section, Township, Range: Landform (hillslope, terrace, etc.): Lexe bottom Local relief (concave, convex, none): Convex Slope (%): 2 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____ Soil Map Unit Name: ___ NWI classification: Are climatic / hydrologic conditions on the site typical for this time of year? Yes ______ No ____ (If no, explain in Remarks.) Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes V 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 V No Is the Sampled Area Hydric Soil Present? Yes V/ No _____ within a Wetland? Wetland Hydrology Present? Yes V Remarks: VEGETATION - Use scientific names of plants. Absolute Dominant Indicator **Dominance Test worksheet:** Tree Stratum (Plot size: _____) % Cover Species? Status **Number of Dominant Species** 1.____ That Are OBL, FACW, or FAC: **Total Number of Dominant** Species Across All Strata: Percent of Dominant Species 100% (A/B) That Are OBL, FACW, or FAC: Sapling/Shrub Stratum (Plot size: Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species _____ x 1 = _____ FACW species ____ x 2 = ___ FAC species x 3 = FACU species _____ x 4 = ____ = Total Cover Herb Stratum (Plot size: x 5 = Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = **Hydrophytic Vegetation Indicators:** 1 - Rapid Test for Hydrophytic Vegetation Y 2 - Dominance Test is >50% __ 3 - Prevalence Index is ≤3.01 4 - Morphological Adaptations (Provide supporting 7. data in Remarks or on a separate sheet) __ 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Woody Vine Stratum (Plot size: _____) Hydrophytic Vegetation Present? = Total Cover

Western Mountains, Valleys, and Coast - Version 2.0

in wetland edge. Passes dominance and FAC-neutral

% Bare Ground in Herb Stratum _

SOIL		2/14/20	CZ Sampling Point: Loll - W
Profile Description: (Describe to the de	epth needed to document the indicator of	100	absence of indicators)
Depth Matrix	Redox Features		describe of maledities.)
(inches) Color (moist) %	Color (moist) % Type	_Loc² 7	Texture Remarks
0-5 Organic	Horizon -0 -	-	
5-14 2.543/2 75		M S	iltloon
2 14 2 3 1 1/10 1/2	7.3 17.4/4		
	·		
¹Type: C=Concentration, D=Depletion, RM	M=Reduced Matrix, CS=Covered or Coated	Sand Grains.	
Hydric Soil Indicators: (Applicable to a	·		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)		2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)		Red Parent Material (TF2)
Black Histic (A3) Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1) (except I	MLRA 1)	Very Shallow Dark Surface (TF12)
Pydrogen Sulfide (A4) Depleted Below Dark Surface (A11)	Loamy Gleyed Matrix (F2) Depleted Matrix (F3)		Other (Explain in Remarks)
Thick Dark Surface (A12)	Redox Dark Surface (F6)		³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)		unless disturbed or problematic.
Restrictive Layer (if present):			
Туре:	_		
Depth (inches):		Hv	/dric Soil Present? Yes No
Remarks:			
HYDROLOGY			
Wetland Hydrology Indicators:			
Primary Indicators (minimum of one require	ed; check all that apply)		Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (exc	cept	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)		4A, and 4B)
Saturation (A3)	Salt Crust (B11)		Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
Sediment Deposits (B2)	— Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along Li	iving Roots (C	3) Geomorphic Position (D2)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tilled		FAC-Neutral Test (D5)
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1)	(LRR A)	Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery (E	_ ,		Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface Field Observations:	(88)		
Surface Water Present? Yes	10 mm		
Water Table Present? Yes	1	I	10
Saturation Present? Yes (includes capillary fringe)	· · · · ·		lydrology Present? Yes No
Describe Recorded Data (stream gauge, m	onitoring well, aerial photos, previous inspe	ections), if ava	illable;
Remarks:			

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region Project/Site: Cappibal Island City/County: Loleta Sampling Date: 814/20 Applicant/Owner: COFW Investigator(s): M. Schwarz, H. McDonald, Section, Township, Range: Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): CONCX Slope (%): 5-10 Lat: ______ Long: _____ Subregion (LRR): NWI classification: Soil Map Unit Name: ___ Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ____ (If no, explain in Remarks.) Are "Normal Circumstances" present? Yes _____ No ____ Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? 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. Yes ___ No_ Hydrophytic Vegetation Present? Is the Sampled Area Yes ____ No ____ Hydric Soil Present? within a Wetland? Wetland Hydrology Present? Yes Remarks: 1-parameter VEGETATION - Use scientific names of plants. Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size: _____) % Cover Species? Status Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Sapling/Shrub Stratum (Plot size: _____) Prevalence Index worksheet: Total % Cover of: OBL species FACW species FAC species 3 FACU species = Total Cover UPL species Herb Stratum (Plot size: 1 m2) 95_ (A) Column Totals: Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 4. Printage lanceolata_ CACU 1 - Rapid Test for Hydrophytic Vegetation Runex acetosella Y 2 - Dominance Test is >50% 6. Vicia sativa Y 3 - Prevalence Index is ≤3.01 __ 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Woody Vine Stratum (Plot size: _____) Hydrophytic Vegetation Present? % Bare Ground in Herb Stratum <u>51'debris</u> == Total cover Remarks: Passes daminance, and the prevalence index. Passes FAC-Neutral, 10 ft from wetland edge. = Total Cover

SOIL		2/14/20	CI	Sampling Point:()(
Profile Description: (Describe to the dep	th needed to document the indicato			
Depth Matrix	Redox Features			
(inches) Color (moist) %	Color (moist) % Type ¹	Loc ²	Texture	Remarks
0-3 10483/2 100			Silt Coar	
3-10 104R3/2 100			Sittloam	
10-16 10 4R3/2 160			Loams S	Sand
· · · · · · · · · · · · · · · · · · ·				
1-				
Type: C=Concentration, D=Depletion, RM= Hydric Soil Indicators: (Applicable to all		ed Sand Gr		PL=Pore Lining, M=Matrix.
Histosof (A1)	Sandy Redox (S5)			Problematic Hydric Soils ³ :
Histic Epipedon (A2)	Stripped Matrix (S6)		2 cm Muck	t (A10) It Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (excep	ot MLRA 1)		ow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	•		Plain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)		9	
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Redox Dark Surface (F6)			ydrophytic vegetation and
Sandy Mucky Millerar (ST) Sandy Gleyed Matrix (S4)	Depleted Dark Surface (F7) Redox Depressions (F8)			rology must be present, rbed or problematic.
Restrictive Layer (if present):			uniess distu	Thed or problematic.
Type:				
Depth (inches):			Hydric Soil Prese	nt? Yes No
Remarks:				
HYDROLOGY				<u> </u>
				100
Wetland Hydrology Indicators:	to almost all that and a			
Primary Indicators (minimum of one required Surface Water (A1)				ndicators (2 or more required)
Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (e	except		tained Leaves (B9) (MLRA 1, 2,
Saturation (A3)	MLRA 1, 2, 4A, and 4B) Salt Crust (B11)			nd 4B)
Water Marks (B1)	Aquatic Invertebrates (B13)			e Patterns (B10) son Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)			on Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along	Livina Root		phic Position (D2)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C	_	Shallow	Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tille	d Soils (C6)	FAC-Ne	utral Test (D5)
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D)1) (LRR A)	Raised A	Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery (B7			Frost-He	ave Hummocks (D7)
Sparsely Vegetated Concave Surface (B	i8)			
Field Observations:				
Surface Water Present? Yes N	-9.			
Water Table Present? Yes N	10.0	_		f
Saturation Present? Yes N (includes capillary fringe)	lo Depth (inches):	Wetla	nd Hydrology Prese	ent? Yes No 🞾
Describe Recorded Data (stream gauge, mor	nitoring well, aerial photos, previous in:	spections), if	available:	
Remarks:				

pplicant/Owner:	210/10		City/County: LONC	17	_ Sampling Date:	41
evestigator(s): M. Schuser	1/ 1/4 0		WanHatter	State:	_ Sampling Point:	10
andform (bills)	2-16. MCI.	jourigi	Section, Township, Re	inge:		
andform (hillslope, terrace, etc.):	rom of be	m	Local relief (concave,	convex, none): COO	Slope (%)):Lo
ubregion (LRR):		Lat:		Long:	Datum:	
oil Map Unit Name:				NWI classif	fication:	
e climatic / hydrologic conditions on the						
re Vegetation, Soil, or H	Hydrology	significantly	disturbed? Are	"Normal Circumstances"	present? Yes N	No
re Vegetation, Soil, or H	Hydrology	naturally pro	blematic? (If no	eeded, explain any answ	ers in Remarks.)	
UMMARY OF FINDINGS - At	tach site map	showing	sampling point l	ocations, transect	s, important feature	es, e
Hydrophytic Vegetation Present?	-	No				
Hydric Soil Present?	Yes		Is the Sample	. /	/	
Wetland Hydrology Present?	Yes/_	No	within a Wetlan	nd? Yes <u>v</u>	No	
EGETATION – Use scientific	names of pla	nts.	,			
2 1/20			Dominant Indicator	Dominance Test work	ksheet:	
Tree Stratum (Plot size:			Species? Status	Number of Dominant S		376
1				That Are OBL, FACW,	or FAC:	(A)
2				Total Number of Domin		(0)
3 4				Species Across All Stra	ata:	(B)
			= Total Cover	Percent of Dominant S	pecies or FAC: 160%	/A/D
Sapling/Shrub Stratum (Plot size:				Prevalence Index wor		(///
1			\longrightarrow	Total % Cover of:		
2				for many state of the state of	x1=	
3					x 2 =	
4				FAC species	x 3 =	
5			= Total Cover		x 4 =	
Herb Stratum (Plot size: 1m2				UPL species	x 5 =	
1. Junis lescurii		-82	Y FACU	Column Totals:	(A)	_ (B)
2. Lotus comiculat				Prevalence Index	c = B/A =	
3. Potentilla anse	cina -	-13-	- CBL FAC	Hydrophytic Vegetati		
4. Holaus lanatus	Cara	-3	FAC		Hydrophytic Vegetation	
5. Agrostis Stoloni	445			2 - Dominance Tes	st is >50%	
6 7				3 - Prevalence Ind	ex is ≤3.0 Adaptations¹ (Provide supp	nortin
8					s or on a separate sheet)	porting
9				5 - Wetland Non-V	'ascular Plants ¹	
10				The second second second second	phytic Vegetation ¹ (Explain	
11				¹ Indicators of hydric so be present, unless dist	il and wetland hydrology m	nust
			= Total Cover	be present, unless dist	urbed or problematic.	
Woody Vine Stratum (Plot size:				Section 1		
1			$\overline{}$	Hydrophytic Vegetation	1	
2		_	= Total Cover	Present? Ye	No	
% Bare Ground in Herb Stratum	5_					
Remarks: 15F+ from FAC-Neutral.	wetlar	nd edg	se. Passes	Dominance	e Test &	

OIL	2/4/	Sampling Point: U10
rofile Description: (Describe to the de	epth needed to document the indicator or confirm	n the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type Loc²	Texture Remarks
0-4 2-543/2 100)	5-1160m
4-14 2543/2 PO	2.54R31d 20 c m	Silt Coans
Type: C=Concentration, D=Depletion, RI	M=Reduced Matrix, CS=Covered or Coated Sand Gr	
lydric Soil Indicators: (Applicable to a	II LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	
Hydrogen Sulfide (A4)Depleted Below Dark Surface (A11)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Thick Dark Surface (A12)	Depleted Matrix (F3) Redox Dark Surface (F6)	Simplify of hudges had a constaller and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,
_ Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		anicas distance of problematic.
		1
_		
Туре:		Hudrig Spil Bracont 2 Voc Y
Type: Depth (inches):		Hydric Soil Present? Yes Y No
Туре:		Hydric Soil Present? Yes No
Type: Depth (inches):		Hydric Soil Present? Yes No
Type: Depth (inches):		Hydric Soil Present? Yes Y No
Type: Depth (inches): Remarks:		Hydric Soil Present? Yes Y No
Type: Depth (inches): Remarks: YDROLOGY		Hydric Soil Present? Yes Y No
Type: Depth (inches): Remarks: YDROLOGY Vetland Hydrology Indicators:		Hydric Soil Present? Yes No No
Type: Depth (inches): Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one require		Hydric Soil Present? Yes No No
Type:		Secondary Indicators (2 or more required)
Type: Depth (inches): Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one require	ed; check all that apply)	Secondary Indicators (2 or more required)
Type:	ed: check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B)
Type:	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10)
Type: Depth (inches): Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3)	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Type: Depth (inches): Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	ed: check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C
Type:	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C
Type:	ed: check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Caster Caster C
Type:	ed; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Caster (C3)) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Type:	ed: check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Casts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Type:	ed: check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Caster (C3)) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Type:	ed: check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Caster (C3)) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Type:	ed: check all that apply) — Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along Living Roo — Presence of Reduced Iron (C4) — Recent Iron Reduction in Tilled Soils (C6 — Stunted or Stressed Plants (D1) (LRR A) B7) — Other (Explain in Remarks) (B8)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Caster (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Type:	ed: check all that apply) — Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along Living Roo — Presence of Reduced Iron (C4) — Recent Iron Reduction in Tilled Soils (C6) — Stunted or Stressed Plants (D1) (LRR A) B7) — Other (Explain in Remarks) (B8)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Caster (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Type:	ed; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Caster (C3)) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Type:	ed; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Caster (C3)) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

estigator(s): M. Schwarz, K. Ma	0 11	M. Van Hatten	State: A Sampling Point: 010
			convex, none): COVEX Slope (%): 5-
			Long: Datum:
Map Unit Name:			NWI classification:
climatic / hydrologic conditions on the site typical for	r this time of yea	ar? Yes No _	(If no, explain in Remarks.)
Vegetation, Soil, or Hydrology	significantly	disturbed? Are	"Normal Circumstances" present? Yes No
Vegetation, Soil, or Hydrology	naturally pro	blematic? (If ne	eeded, explain any answers in Remarks.)
JMMARY OF FINDINGS - Attach site m	ap showing	sampling point l	ocations, transects, important features, et
ydrophytic Vegetation Present? Yes	No		Children and the childr
ydric Soil Present? Yes		Is the Sampled	
Vetland Hydrology Present? Yes	No_	within a Wetlar	nd? Yes No/_
EGETATION – Use scientific names of p	lants.		
	Absolute	Dominant Indicator	Dominance Test worksheet:
ree Stratum (Plot size:)		Species? Status	Number of Dominant Species That Are OBL FACW, or FAC: (A)
			That Are OBL, FACW, or FAC: (A)
			Total Number of Dominant Species Across All Strata: (B)
			Openico / In Charles
		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:
Sapling/Shrub Stratum (Plot size:)	11		Prevalence Index worksheet:
			Total % Cover of: Multiply by:
2,	_	-	OBL species x1 = O
3.			FACW species
4			FAC species x3 = 105
5		= Total Cover	FACU species 26 x4= 109
Herb Stratum (Plot size: 102	600		UPL species $\frac{L}{100}$ x 5 = $\frac{20}{299}$ (B)
1. Equisetum hymale	-30	Y FACL	
2. Plantago lantedata	_ 	-EACU	Prevalence Index = B/A = 2.99
3. Raphanus ativus	-3	FAC	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
4. Elymus repens	-5	FACU	2 - Dominance Test is >50%
6. Festuca bromoldes	30	YFAC	3 - Prevalence Index is ≤3.0¹
7. Vicia sativa		<u>upl</u>	4 - Morphological Adaptations (Provide supporting
8. Bromus hordaceus	_18	EAW_	data in Remarks or on a separate sheet)
9.			5 - Wetland Non-Vascular Plants ¹
10.			Problematic Hydrophytic Vegetation¹ (Explain)
11	100		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		= Total Cover	
1. Plot size.			Hydrophytic
2			Vegetation
% Bare Ground in Herb Stratum		= Total Cover	Present? Yes No
			vegetation change is the w/many FAC & FACU grasses & & FAC-neutral.

		B 8	
-	u J	ш	

9/14/76 CT Sampling Point: U/0-U

Profile Desc	ription: (Describ	e to the dep	th needed to docu	ment the i	ndicator	or confirm	n the absence of indicators.)
Depth	Matrix			ox Features			
(inches)	Color (moist)	%	Color (moist)	%	Type'	_Loc ²	Texture Remarks
0-8	2.543)	100					5,1460m
8-16	2.5431	3 100		-	_	-	Loams Saed
			-				
							
l ——	<u></u>						
l ——							
l		_					
			· · · · · · · · · · · · · · · · · · ·				
¹Type: C=C	necentration D=D	nletion PM-	Reduced Matrix, C	S-Caused		4 5224 624	24
			Reduced Matrix, C LRRs, unless othe			a Sana Gra	rains, ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Histosol			Sandy Redox (,		_
_	oipedon (A2)		Stripped Matrix				2 cm Muck (A10) Red Parent Material (TF2)
Black Hi			Loamy Mucky) (excent	MLRA 1)	
	n Sulfide (A4)		Loamy Gleyed	-		, martin	Other (Explain in Remarks)
	d Below Dark Surfa	ace (A11)	Depleted Matri		•		
Thick Da	ark Surface (A12)		Redox Dark St	ırface (F6)			³ Indicators of hydrophytic vegetation and
	lucky Mineral (S1)		Depleted Dark		7)		wetland hydrology must be present,
	leyed Matrix (S4)		Redox Depress	sions (F8)			unless disturbed or problematic.
	ayer (if present):						
Type:							12
Depth (inc	ches):						Hydric Soil Present? Yes No
Remarks:	-						
HYDROLO	cv						
				_			
_	irology Indicator						
		one required	; check all that app				Secondary Indicators (2 or more required)
	Water (A1)			ined Leave		cept	Water-Stained Leaves (B9) (MLRA 1, 2,
	ter Table (A2)			1, 2, 4A, a	nd 4B)		4A, and 4B)
Saturation	` '		Salt Crust	(B11)			Drainage Patterns (B10)
Water M				vertebrates			Dry-Season Water Table (C2)
	t Deposits (B2)		— , ,	Sulfide Od	` '		Saturation Visible on Aerial Imagery (C9)
	osits (B3)			Rhizospher	_	_	ts (C3) Geomorphic Position (D2)
	t or Crust (B4)			of Reduced			Shallow Aquitard (D3)
-	osits (B5)			n Reductio			• •
	Soil Cracks (B6)			Stressed I) (LRR A)	
	on Visible on Aeria			olain in Rer	narks)		Frost-Heave Hummocks (D7)
	Vegetated Conca	ve Surface (E					
Field Observ			Y				
Surface Water		Yes N	No.	ches):		-	
Water Table			te de	ches):		-	4
Saturation Pr		Yes N	lo <u> </u>	ches):		_ Wetlar	ind Hydrology Present? Yes No 😕
(includes cap Describe Rec		m galline mor	nitoring well, aerial	nhotos ore	vinus inen	ectione\ if	f available
		3-494, 11101	vinig trell, acilal	prioros, pre	rions ilish	occiona), II	, evalidate.
Remarks:				-			
- white							2

Applicant/Owner; OSCW nvestigator(s): M. Schwarz, K.M.	10 11	M. VanHallen_	State: CA Sampling Point: UNC
ivestigator(s): M. Schwarz, K.M.	10720919	Section, Township, R	ange: Sinne (%):
-andform (hillslope, terrace, etc.): 1015 become	n	Local relief (concave	, convex, none): ONVEX Slope (%): 5
Subregion (LRR):	Lat:		Long: Datum:
Soil Map Urfit Name:	- 1 TW 1 PT		NWI classification:
Are climatic / hydrologic conditions on the site typical			(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology			"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology	naturally pro	oblematic? (If n	needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site	map showing	sampling point	locations, transects, important features, e
Hydrophytic Vegetation Present? Yes/		Tale Common	7
.,,	_ No	Is the Sample within a Wetla	
Wetland Hydrology Present? Yes	No	Within a Wede	
Remarks:			
ESETATION III-s asignific names of	nlanta		
EGETATION – Use scientific names of	Transfer de la company	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)		Species? Status	Number of Dominant Species
			That Are OBL, FACW, or FAC:(A)
9,			Total Number of Dominant
S			Species Across All Strata:
·			Percent of Dominant Species That Are OBL FACW, or FAC: (A/E
Sapling/Shrub Stratum (Plot size:)		= Total Cover	That the obej the the
·			Prevalence Index worksheet: Total % Cover of: Multiply by:
			OBL species x1 =
			FACW species x 2 =
			FAC species x 3 =
		13012	FACU species x 4 =
erb Stratum (Plot size: 1m²)	-	= Total Cover	UPL species x 5 =
Potentilla anslina	40	Y asl	Column Totals: (A) (B
Distichlis spicata	45	Y FACW	Prevalence Index = B/A =
Lotus comiculatus	10	FAC	Hydrophytic Vegetation Indicators:
Rimex acotosella	4	EACU	1 - Rapid Test for Hydrophytic Vegetation
Bromus hordeaceus			2 - Dominance Test is >50%
THE STATE OF THE S			3 - Prevalence Index is ≤3.01
			4 - Morphological Adaptations¹ (Provide supporting
			data in Remarks or on a separate sheet)
			5 - Wetland Non-Vascular Plants ¹
			Problematic Hydrophytic Vegetation (Explain)
			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Control of the Asset Towns of the	100=	Total Cover	
ody Vine Stratum (Plot size:)			0.00.00.00
			Hydrophytic Vegetation
		Total Cover	Present? Yes No
	=	Total Cover	
Bare Ground in Herb Stratum	_		

			9						12
SOIL			ə 1º		81	2/70	CI	Sampling Point:	010-6
Profile Des	cription: (Describe	to the dep	th needed to docur	nent the ir	ndicatór d	or confirm t	the absence of inc		
Depth	Matrix			x Features				•	
(inches)	Color (moist)		Color (maist)	%	Type ¹	Loc²	Texture	Remarks	
0-3	2.543/2	100		·			SII+ Cour	<u> </u>	
3-10	2-513/2	80	7548311	20			5: Hlum		
10-16	7543/2	90	2.44 %	10	_	_		and	
				,			<u> </u>		
				-					
			 -	· ——					
									
	oncentration, D=Dep					Sand Grai	ns. ² Location:	PL=Pore Lining, Ma	=Matrix,
	Indicators: (Applic	able to all I	RRs, unless other	wise note	d.)			Problematic Hydri	
Histosol			Sandy Redox (S				2 cm Muc		
	pipedon (A2)	,	Stripped Matrix					nt Material (TF2)	
	istic (A3) en Sulfide (A4)		Loamy Mucky M Loamy Gleyed I	- ,		MLKA 1)		low Dark Surface (TF plain in Remarks)	-12)
	d Below Dark Surface	e (A11)	Depleted Matrix				Other (EX	piain in Remarks)	
Thick Da	ark Surface (A12)	` ,	Redox Dark Sur				3Indicators of h	ydrophytic vegetatio	n and
	Mucky Mineral (S1)		Depleted Dark \$		7)			drology must be pres	
	Bleyed Matrix (S4)		Redox Depress	ions (F8)			unless distu	irbed or problematic,	
	Layer (if present):								
Type:	ab a a N					[\rangle	
Depth (inc	ches):			_			Hydric Soil Prese	ent? Yes	No
HYDROLO									,
	drology Indicators:				-			· · ·	
Primary Indic	cators (minimum of or	ne required	check all that apply	<u>)</u>			Secondary I	ndicators (2 or more	required)
	Water (A1)		Water-Stair			cept	Water-S	itained Leaves (B9) (MLRA 1, 2,
	iter Table (A2)			I, 2, 4A, an	nd 4B)		•	and 4B)	
Saturatio	arks (B1)		Salt Crust (/D40\			e Patterns (B10)	
	it Deposits (B2)		Aquatic Inv Hydrogen 8					son Water Table (C	•
	osits (B3)		· ·			iving Roots		on Visible on Aerial I phic Position (D2)	magery (C9)
_	it or Crust (B4)		Presence o		_	-	· · —	Aquitard (D3)	
	osits (B5)		Recent Iron		, ,		10	utral Test (D5)	
	Soil Cracks (B6)		Stunted or				1	Ant Mounds (D6) (LF	RR A)
Inundatio	on Visible on Aerial Ir	magery (B7)	Other (Exp	lain in Rem	narks)			eave Hummocks (D7	
Sparsely	Vegetated Concave	Surface (B	8)						
Field Observ			\ <u>\</u>					_	
Surface Water			o Depth (inc	hes):		-			
Water Table I			o Depth (inc	33		-		10	
Saturation Pr (includes cap	illary fringe)		o Depth (inc		ione ieee		d Hydrology Pres	ent? Yes	No
Pescind Mec	corded Data (stream	gauge, mor	ntonny well, aerial p	notos, prev	vious inspi	ections), if a	ivaliadie:		
Remarks:						-			_

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region Project/Site: Camibal Island City/County: Loleta Sampling Date: 814120 Applicant/Owner; CTFW State: A Sampling Point: LO1240 Investigator(s): M. Schwarz, H. M. Social M. Van Jahren, Range: Landform (hillslope, terrace, etc.): ユャママ Local relief (concave, convex, none): Cのパメ Slope (%) Subregion (LRR): _____ Lat: _____ Long: _____ Datum: Soil Map Unit Name: ____ NWI classification: 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 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. No Hydrophytic Vegetation Present? Yes Is the Sampled Area Hydric Soil Present? within a Wetland? Wetland Hydrology Present? Yes Remarks: VEGETATION - Use scientific names of plants. Absolute Dominant Indicator **Dominance Test worksheet:** Tree Stratum (Plot size: _____) % Cover Species? Status **Number of Dominant Species** That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species = Total Cover That Are OBL, FACW, or FAC: Sapling/Shrub Stratum (Plot size: _______) Prevalence Index worksheet: 1. Rubus ursinus Total % Cover of: OBL species x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ ____ x 4 = FACU species 70 = Total Cover UPL species _ x 5 = ____ Herb Stratum (Plot size: 1m2 _ (A) _____ (B) 1. Symphyotrichem chilense Column Totals: FAC Prevalence Index = B/A = 110 Hydrophytic Vegetation Indicators: 3. Raphanus X 1 - Rapid Test for Hydrophytic Vegetation FACW 2 - Dominance Test is >50% 5. THOCUS LESCUCII __ 3 - Prevalence Index is ≤3.0¹ ___ 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants1 Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 37 = Total Cover Woody Vine Stratum (Plot size: _____) Hydrophytic Vegetation = Total Cover Present? % Bare Ground in Herb Stratum _ _ _ |

From wetland edge Does not pass Dominance Test.

Remarks:

SOIL	8/14	1/20 CI	Sampling Point: LO/Z -
Profile Description: (Describe to the dep	th needed to document the indicator or	confirm the abso	
Depth Matrix	Redox Features		•
(inches) Color (moist) %		Loc ² Textur	re Remarks
0-2 wood Deb	<u>rici </u>		
2-6 2-54-2/3 100			Hoam
6-16 2.543/3 100		SiHloam	
•			
			
4017			
¹ Type: C=Concentration, D=Depletion, RM=	Reduced Matrix, CS=Covered or Coated S		² Location: PL=Pore Lining, M=Matrix,
Hydric Soil Indicators: (Applicable to all I	-	Indi	cators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)		2 cm Muck (A10)
Histic Epipedon (A2) Black Histic (A3)	Stripped Matrix (S6)		Red Parent Material (TF2)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1) (except ML Loamy Gleyed Matrix (F2)		Very Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	_	Other (Explain in Remarks)
Thick Dark Surface (A12)	Redox Dark Surface (F6)	3Ind	icators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		vetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)		inless disturbed or problematic.
Restrictive Layer (if present):			
Type:			1
Depth (inches):		Hydric	Soil Present? Yes No
IYDROLOGY Wetland Hydrology Indicators:			<u> </u>
Primary Indicators (minimum of one required)	; check all that apply)	S	econdary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (exce		_ Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)		4A, and 4B)
Saturation (A3)	Salt Crust (B11)		_ Drainage Patterns (B10)
Water Marks (В1)	Aquatic Invertebrates (B13)		_ Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)		_ Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along Livir	ng Roots (C3)	
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)		_ Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tilled So		_ FAC-Neutral Test (D5)
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (L	LRR A)	Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery (B7)	· · · · · · · · · · · · · · · · · · ·	_	_ Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface (B	8)		
Field Observations:			
	lo Depth (inches):		
	lo Depth (inches):		(/
Saturation Present? Yes N (includes capillary fringe) Describe Recorded Data (stream gauge, mon	Depth (inches):		logy Present? Yes No
and the state bate (stream gauge, mon	mornig wen, aeriai photos, previous inspect	lions), ir avallable	
Remarks:			

		Only County.	Sampling Date:
Oplicant/Owner: CDFW			State: CA Sampling Point: LO 12
restigator(s): M. Schwart, K. M.	Donald	Section, Township, R	ange: State: Sampling Point:
androrm (hillslope, terrace, etc.): Lever both	mo	Local relief (concave.	convex none): 0 001/6 V Slone (%): (C
Jbregion (LRR):	Lat:		Long: Datum:
oil Map Unit Name:			NWI classification:
re climatic / hydrologic conditions on the site typical fo	or this time of ye		(If no, explain in Remarks.) /
re Vegetation, Soil, or Hydrology			"Normal Circumstances" present? Yes No
re Vegetation, Soil, or Hydrology			needed, explain any answers in Remarks.)
			locations, transects, important features, e
Hydrophytic Vegetation Present? Yes J.	No		Para - Branch Carlotte Carlott
Hydric Soil Present? Yes	_ No	Is the Sample	
Wetland Hydrology Present? Yes	_ No	within a Wetla	nd? Yes <u>V</u> No
Remarks:			
EGETATION – Use scientific names of p	olants.	2.717	
Tree Stratum (Plot size:	Absolute	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:) 1)	% Cover	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 Species Across All Strata: (B)
4			
			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:
2			OBL species x 1 =
3			FACW species x 2 =
4 5			FAC species x 3 =
		= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: \\nabla^\tau_\)		Later Bridge	UPL species x 5 = Column Totals: (A) (B)
1. Potentilla ansecina	60	y 08C	Column Totals:(A)(B)
2 Juneus lesquii	$-\frac{\omega}{2}$	Y FAIL	Prevalence Index = B/A =
Consothe Sarmentas		FACW	Hydrophytic Vegetation Indicators:
Disticulis spicata		PACC	1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
5.			3 - Prevalence Index is ≤3.01
3. 7.			4 - Morphological Adaptations¹ (Provide supporting
3.			data in Remarks or on a separate sheet)
).			5 - Wetland Non-Vascular Plants¹
10			Problematic Hydrophytic Vegetation¹ (Explain)
11			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	97	= Total Cover	be present, unless disturbed or problematic.
Noody Vine Stratum (Plot size:)			Hardwoods atta
			Hydrophytic Vegetation
2		= Total Cover	Present? Yes No
% Bare Ground in Herb Stratum	_		
Remarks: 10 ft from wetter			

OIL		0/19/	20 07	
Profile Description: (Describe to the depth needed to doc		or confirm	the absence of ind	cators.)
	dox Features	12		
2 1 1/02/	%Type¹	Loc ²	Texture	Remarks
70.110210 100	<u> </u>		SiHloam	1 O.M.
<u>-14 2543/1 80 7.548310</u>	20 C	M	5/14 Coam	
		<u> </u>		
	:10			
				· · · · · · · · · · · · · · · · · · ·
			2	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, (ydric Soil Indicators: (Applicable to all LRRs, unless oth	CS=Covered or Coat	ed Sand Gra		PL=Pore Lining, M=Matrix. Problematic Hydric Soils ³ :
_ Histosol (A1)			2 cm Muck	•
Histic Epipedon (A2) Stripped Matr				Material (TF2)
	y Mineral (F1) (excep	t MLRA 1)	7.0	w Dark Surface (TF12)
_ Hydrogen Sulfide (A4) Loamy Gleyer			Other (Exp	lain in Remarks)
Depleted Below Dark Surface (A11) Depleted Mat			t.	
_ Thick Dark Surface (A12)	Surrace (F6) k Surface (F7)			drophytic vegetation and
Sandy Gleyed Matrix (S4) Bepleted Daniel Sandy Gleyed Matrix (S4)				ology must be present, bed or problematic.
estrictive Layer (if present):	(, o,		0111000 010101	see or productive.
Type:				
1,900:		i		
Depth (inches):			Hydric Soil Preser	nt? Yes W No
			Hydric Soil Preser	nt? Yes V No
Depth (inches): Remarks: YDROLOGY Vetland Hydrology Indicators:			Hydric Soil Preser	nt? Yes W No
Depth (inches):emarks: /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one required; check all that app				dicators (2 or more required)
Depth (inches):emarks: /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one required; check all that apple Surface Water (A1) Water-St	tained Leaves (B9) (e	except	Secondary In Water-St	dicators (2 or more required) ained Leaves (B9) (MLRA 1, 2,
Depth (inches):emarks: /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one required: check all that app _ Surface Water (A1) Water-St _ High Water Table (A2) MLR/	tained Leaves (B9) (e A 1, 2, 4A, and 4B)	except	Secondary In Water-St 4A, a	dicators (2 or more required) ained Leaves (B9) (MLRA 1, 2,
Depth (inches):emarks: /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one required; check all that app Surface Water (A1) Water-St High Water Table (A2) MLR/ Saturation (A3) Salt Crus	tained Leaves (B9) (e A 1, 2, 4A, and 4B) st (B11)	except	Secondary In Water-St 4A, a	dicators (2 or more required) ained Leaves (B9) (MLRA 1, 2, and 4B) Patterns (B10)
Depth (inches):emarks: POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one required; check all that applications (Material) Water-St _ High Water Table (A2) Salt Crus _ Saturation (A3) Salt Crus _ Water Marks (B1) Aquatic I	tained Leaves (B9) (e A 1, 2, 4A, and 4B) st (B11) Invertebrates (B13)	except	Secondary In Water-St 4A, a Drainage Dry-Seas	dicators (2 or more required) ained Leaves (B9) (MLRA 1, 2, and 4B) Patterns (B10) son Water Table (C2)
Depth (inches):emarks: POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one required; check all that apple ap	tained Leaves (B9) (eA 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) on Sulfide Odor (C1)	·	Secondary In Water-St 4A, a Drainage Dry-Seas	dicators (2 or more required) ained Leaves (B9) (MLRA 1, 2, nd 4B) Patterns (B10) son Water Table (C2) n Visible on Aerial Imagery (C9)
Depth (inches):	tained Leaves (B9) (e A 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) in Sulfide Odor (C1) I Rhizospheres along	Living Roots	Secondary In Water-St 4A, a Drainage Dry-Sease Saturatio	dicators (2 or more required) ained Leaves (B9) (MLRA 1, 2, nd 4B) Patterns (B10) son Water Table (C2) n Visible on Aerial Imagery (C9) ohic Position (D2)
Pepth (inches):	tained Leaves (B9) (e A 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) en Sulfide Odor (C1) I Rhizospheres along e of Reduced Iron (C	Living Roots	Secondary In Water-St 4A, a Drainage Dry-Seas Saturation (C3) Geomory Shallow	dicators (2 or more required) ained Leaves (B9) (MLRA 1, 2, nd 4B) Patterns (B10) son Water Table (C2) n Visible on Aerial Imagery (C9) chic Position (D2) Aquitard (D3)
Depth (inches):	tained Leaves (B9) (e A 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) in Sulfide Odor (C1) I Rhizospheres along	Living Roots 4) ed Soils (C6)	Secondary In Water-St 4A, an Drainage Dry-Seas Saturation (C3) Geomore Shallow A	dicators (2 or more required) ained Leaves (B9) (MLRA 1, 2, nd 4B) Patterns (B10) son Water Table (C2) n Visible on Aerial Imagery (C9) ohic Position (D2)
Depth (inches):	tained Leaves (B9) (eA 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) in Sulfide Odor (C1) I Rhizospheres along e of Reduced Iron (Cron Reduction in Tille	Living Roots 4) ed Soils (C6)	Secondary In Water-St 4A, al Drainage Dry-Sease Saturation (C3) Geomory Shallow A FAC-Net Raised A	dicators (2 or more required) ained Leaves (B9) (MLRA 1, 2, and 4B) Patterns (B10) con Water Table (C2) In Visible on Aerial Imagery (C9) Chic Position (D2) Aquitard (D3) Itral Test (D5)
Depth (inches):	tained Leaves (B9) (eA 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) in Sulfide Odor (C1) If Rhizospheres along e of Reduced Iron (Cron Reduction in Tille or Stressed Plants (D	Living Roots 4) ed Soils (C6)	Secondary In Water-St 4A, al Drainage Dry-Sease Saturation (C3) Geomory Shallow A FAC-Net Raised A	dicators (2 or more required) ained Leaves (B9) (MLRA 1, 2, and 4B) Patterns (B10) Son Water Table (C2) In Visible on Aerial Imagery (C9) Phic Position (D2) Aquitard (D3) Atral Test (D5) Int Mounds (D6) (LRR A)
Depth (inches):	tained Leaves (B9) (e A 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) in Sulfide Odor (C1) I Rhizospheres along e of Reduced Iron (C ron Reduction in Tille or Stressed Plants (C explain in Remarks)	Living Roots 4) ed Soils (C6) 01) (LRR A)	Secondary In Water-St 4A, al Drainage Dry-Sease Saturation (C3) Geomory Shallow A FAC-Net Raised A	dicators (2 or more required) ained Leaves (B9) (MLRA 1, 2, and 4B) Patterns (B10) Son Water Table (C2) In Visible on Aerial Imagery (C9) Phic Position (D2) Aquitard (D3) Atral Test (D5) Int Mounds (D6) (LRR A)
Depth (inches):	tained Leaves (B9) (eA 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) in Sulfide Odor (C1) I Rhizospheres along e of Reduced Iron (Cron Reduction in Tille or Stressed Plants (Caplain in Remarks)	Living Roots 4) ed Soils (C6) 01) (LRR A)	Secondary In Water-St 4A, al Drainage Dry-Sease Saturation (C3) Geomory Shallow A FAC-Net Raised A	dicators (2 or more required) ained Leaves (B9) (MLRA 1, 2, and 4B) Patterns (B10) Son Water Table (C2) In Visible on Aerial Imagery (C9) Phic Position (D2) Aquitard (D3) Atral Test (D5) Int Mounds (D6) (LRR A)
Depth (inches):	tained Leaves (B9) (e A 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) in Sulfide Odor (C1) I Rhizospheres along e of Reduced Iron (C ron Reduction in Tille or Stressed Plants (C explain in Remarks) inches):	Living Roots 4) ed Soils (C6) 01) (LRR A)	Secondary In Water-St 4A, a Drainage Dry-Seas Saturation (C3) Geomory Shallow A FAC-Neu Raised A Frost-He	dicators (2 or more required) ained Leaves (B9) (MLRA 1, 2, and 4B) Patterns (B10) son Water Table (C2) n Visible on Aerial Imagery (C9) chic Position (D2) Aquitard (D3) atral Test (D5) and Mounds (D6) (LRR A) ave Hummocks (D7)
Depth (inches):	tained Leaves (B9) (eA 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) in Sulfide Odor (C1) I Rhizospheres along e of Reduced Iron (Cron Reduction in Tille or Stressed Plants (Caplain in Remarks)	Living Roots 4) ed Soils (C6) 01) (LRR A)	Secondary In Water-St 4A, al Drainage Dry-Sease Saturation (C3) Geomory Shallow A FAC-Net Raised A	dicators (2 or more required) ained Leaves (B9) (MLRA 1, 2, and 4B) Patterns (B10) son Water Table (C2) n Visible on Aerial Imagery (C9) chic Position (D2) Aquitard (D3) atral Test (D5) and Mounds (D6) (LRR A) ave Hummocks (D7)
Depth (inches):	tained Leaves (B9) (eA 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) in Sulfide Odor (C1) if Rhizospheres along e of Reduced Iron (Cron Reduction in Tille or Stressed Plants (Explain in Remarks) inches):	Living Roots 4) ed Soils (C6) 01) (LRR A)	Secondary In Water-St 4A, al Drainage Dry-Sease Saturation (C3) Geomory FAC-Neu Raised A Frost-He	dicators (2 or more required) ained Leaves (B9) (MLRA 1, 2, and 4B) Patterns (B10) son Water Table (C2) n Visible on Aerial Imagery (C9) chic Position (D2) Aquitard (D3) atral Test (D5) and Mounds (D6) (LRR A) ave Hummocks (D7)
Depth (inches):	tained Leaves (B9) (eA 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) in Sulfide Odor (C1) if Rhizospheres along e of Reduced Iron (Cron Reduction in Tille or Stressed Plants (Explain in Remarks) inches):	Living Roots 4) ed Soils (C6) 01) (LRR A)	Secondary In Water-St 4A, al Drainage Dry-Sease Saturation (C3) Geomory FAC-Neu Raised A Frost-He	dicators (2 or more required) ained Leaves (B9) (MLRA 1, 2, and 4B) Patterns (B10) son Water Table (C2) n Visible on Aerial Imagery (C9) chic Position (D2) Aquitard (D3) atral Test (D5) and Mounds (D6) (LRR A) ave Hummocks (D7)
Port (inches):	tained Leaves (B9) (eA 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) in Sulfide Odor (C1) if Rhizospheres along e of Reduced Iron (Cron Reduction in Tille or Stressed Plants (Explain in Remarks) inches):	Living Roots 4) ed Soils (C6) 01) (LRR A)	Secondary In Water-St 4A, al Drainage Dry-Sease Saturation (C3) Geomory FAC-Neu Raised A Frost-He	dicators (2 or more required) ained Leaves (B9) (MLRA 1, 2, and 4B) Patterns (B10) son Water Table (C2) n Visible on Aerial Imagery (C9) chic Position (D2) Aquitard (D3) atral Test (D5) and Mounds (D6) (LRR A) ave Hummocks (D7)
POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one required: check all that apple Surface Water (A1)	tained Leaves (B9) (eA 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) in Sulfide Odor (C1) if Rhizospheres along e of Reduced Iron (Cron Reduction in Tille or Stressed Plants (Explain in Remarks) inches):	Living Roots 4) ed Soils (C6) 01) (LRR A)	Secondary In Water-St 4A, al Drainage Dry-Sease Saturation (C3) Geomory FAC-Neu Raised A Frost-He	dicators (2 or more required) ained Leaves (B9) (MLRA 1, 2, and 4B) Patterns (B10) son Water Table (C2) n Visible on Aerial Imagery (C9) chic Position (D2) Aquitard (D3) atral Test (D5) and Mounds (D6) (LRR A) ave Hummocks (D7)
Population (Property of the Control	tained Leaves (B9) (eA 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) in Sulfide Odor (C1) if Rhizospheres along e of Reduced Iron (Cron Reduction in Tille or Stressed Plants (Explain in Remarks) inches):	Living Roots 4) ed Soils (C6) 01) (LRR A)	Secondary In Water-St 4A, al Drainage Dry-Sease Saturation (C3) Geomory FAC-Neu Raised A Frost-He	dicators (2 or more required) ained Leaves (B9) (MLRA 1, 2, and 4B) Patterns (B10) son Water Table (C2) n Visible on Aerial Imagery (C9) chic Position (D2) Aquitard (D3) atral Test (D5) and Mounds (D6) (LRR A) ave Hummocks (D7)

oject/Site: Cannibal Island	c	ity/County: Lole	ta	_ Sampling Date: 8/14/2
policant/Owner: (CCI.)			State: CA	Sampling Point 11171
vestigator(s): M. Schwacz, K	McDona W.	section, Township, Ra	nge:	
indform (hillslope, terrace, etc.): Caped	bern	ocal relief (concave,	convex, none):(an	Vex Slope (%): 5-1
ubregion (LRR):	Lat:		_ Long:	Datum:
oil Map Unit Name:				fication:
e climatic / hydrologic conditions on the site ty	pical for this time of year	r? Yes No _	(If no, explain in	Remarks.)
re Vegetation, Soil, or Hydrolog			"Normal Circumstances	" present? Yes V No
re Vegetation, Soil, or Hydrolog			eeded, explain any ansv	vers in Remarks.)
UMMARY OF FINDINGS - Attach			ocations, transec	ts, important features, et
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes	No	Is the Sampled	I Araz	
Remarks: Cap of full ov	er sandy s	soils arou	nd old ha	use.
/EGETATION – Use scientific name		Daminant Indicator	Dominance Test wo	rkeheet:
Tree Stratum (Plot size:) 1.		Dominant Indicator Species? Status	Number of Dominant That Are OBL, FACW	Species 🥎
2. 3.			Total Number of Dom Species Across All St	
4		= Total Cover	Percent of Dominant	Species /, or FAC: 66 (A/B
Sapling/Shrub Stratum (Plot size:		The state of the s	Prevalence Index wo	
1,			Total % Cover of	Multiply by:
2			OBL species	x1=
3			FACW species	
4		-	FAC species	^
5		= Total Cover	TAGG Species	$\frac{0}{1}$ x4= $\frac{185}{1}$
Herb Stratum (Plot size: 1 m²		N		$\frac{7}{9}$ (A) $\frac{37}{1}$ (B)
1. Bachanus rativus	x 35	TUPL		
2. Con:um maculatur	17	Y FAC	Prevalence Inde	ex = B/A = 3,74
3. Holaus Ianatus	20 25	Y FAC	Hydrophytic Vegeta	r Hydrophytic Vegetation
4. Agrostis stolonife	6	FAC	V 2 - Dominance T	
5. Elymus repens	v 2	UPL	3 - Prevalence In	
6. iupinus arboreus	1		1	I Adaptations ¹ (Provide supportin
7 8			data in Rema	rks or on a separate sheet)
9.			5 - Wetland Non-	
10				rophytic Vegetation ¹ (Explain)
11.			¹ Indicators of hydric s	soil and wetland hydrology must sturbed or problematic.
A CONTRACTOR OF THE STATE OF TH	99	= Total Cover	Do produit diness di	200 No. 200 No. 100 No. 200 No.
Woody Vine Stratum (Plot size:			Hudrophytic	
1,			Hydrophytic Vegetation	V
2		= Total Cover	Present?	Yes No
% Bare Ground in Herb Stratum			1 2	- ack OT
Remarks: Does pass	Dominance	Test, but	GOES VOT	bass LT.
Does not Pass	FAC-Neut	ral. GFt	from wetl.	and edge.

SOIL Sampling Point: Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Redox Features Color (moist) (inches) Color (moist) % Type¹ Loc² Texture Siltloan 100 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: Histosol (A1) Sandy Redox (S5) ___ 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (TF12) Hydrogen Sulfide (A4) Loamy Gleved Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) 3Indicators of hydrophytic vegetation and Sandy Mucky Mineral (S1) wetland hydrology must be present, Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic. Restrictive Layer (if present): Type: _ Depth (inches): **Hydric Soil Present?** Remarks: **HYDROLOGY** Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2, High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) _ Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) ___ Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) ___ FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7)

Saturation Present? (includes capillary fringe)

Field Observations:

Surface Water Present?

Sparsely Vegetated Concave Surface (B8)

Yes ____ No ____ Depth (inches): __

Yes ____ No __Y Depth (inches): ___ Water Table Present? Yes _____ No _____ Depth (inches): _______

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

Remarks:

Wetland Hydrology Present? Yes _____ No _

olicant/Owner:	- \	Av. all.lla.a	State: Sampling Point: 11
estigator(s): M. Schwarz, K. Mo	Elevery F	Section, Township, Rar	nge:
ndform (hillslope, terrace, etc.): Bottom of Fil	1 bern	Local relief (concave, o	convex, none): Slope (%):2-<
bregion (LRR):	Lat:		Long: Datum:
il Map Unit Name:			
e climatic / hydrologic conditions on the site typical fo			
e Vegetation, Soil, or Hydrology		listurbod2 Are "	Normal Circumstances" present? Yes No
e Vegetation, Soil, or Hydrology			eded, explain any answers in Remarks.)
UMMARY OF FINDINGS – Attach site m	ap showing	sampling point le	ocations, transects, important features, et
Hydrophytic Vegetation Present? Yes	No		
Hydric Soil Present?	No	Is the Sampled	
Netland Hydrology Present? Yes		within a Wetlar	nd? Yes No
Remarks:		-	
		1	
EGETATION - Use scientific names of p	plants.		
		Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)		the same of the sa	Number of Dominant Species That Are OBL FACW or FAC: (A)
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:)	_	_ = Total Cover	That Are OBL, FACW, or FAC: 100% (A/E
1.			Prevalence Index worksheet:
2.			
3.			FACW species x 2 =
4.			FAC species x 3 =
5.			FACU species x 4 =
		_ = Total Cover	UPL species x5 =
Herb Stratum (Plot size: 1m2) 1. Assortis stologifera	100	FAC	Column Totals: (A) (B
1. Agrostis stolonifera	100		
2. TOALS corniculatus	- 3	- CBL	Prevalence Index = B/A =
3. Potentilla anserina			Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
4			2 - Dominance Test is >50%
5.			3 - Prevalence Index is ≤3.0¹
6			4 - Morphological Adaptations¹ (Provide support
7.			data in Remarks or on a separate sheet)
8.			5 - Wetland Non-Vascular Plants ¹
9.			Problematic Hydrophytic Vegetation¹ (Explain)
10			¹Indicators of hydric soil and wetland hydrology must
11.	117	= Total Cover	be present, unless disturbed or problematic.
	V C	- + C. C. 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -	
Woody Vine Stratum (Plot size:)			Hydrophytic /
Woody Vine Stratum (Plot size:) 1.			Vegetation No.
Woody Vine Stratum (Plot size:) 1			Present? Yes V No
		= Total Cover	

-	\sim	
•	11 311	

30IL	81/1/20 C Sampling Point UTT VI
Profile Description: (Describe to the depth needed to document the indicator	or confirm the absence of indicators.)
Depth Matrix Redox Features	
(inches) Color (moist) % Color (moist) % Type	Loc ² Texture Remarks
0-3 2.5 43/2 100	_ Siltloan
3-10 2-543/2 80 7.54R3/4 TO C	m Sittloun
10-14 2.54RIR 75 7.54N 1625 C	m Sands loam
	- Jarry Dava
	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coat	and Speed Genine 21 positions Dt - Down Linius Adults At
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	ed Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Solls ³ :
Histosol (A1) Sandy Redox (S5)	-
Histic Epipedon (A2) Stripped Matrix (S6)	2 cm Muck (A10) Red Parent Material (TF2)
Black Histic (A3) Loamy Mucky Mineral (F1) (excep	t MLRA 1) Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Depleted Matrix (F3)	,
Thick Dark Surface (A12) X Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	wetland hydrology must be present.
Sandy Gleyed Matrix (S4) Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):	
Type:	1
Depth (inches):	Hydric Soil Present? Yes No
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Connede - Indicator (6
	Secondary Indicators (2 or more required)
Surface Water (A1) Water-Stained Leaves (B9) (e High Water Table (A2) MLRA 1, 2, 4A, and 4B)	
	4A, and 4B)
	Drainage Patterns (B10)
	Dry-Season Water Table (C2)
	Saturation Visible on Aerial Imagery (C9)
	• • • • • • • • • • • • • • • • • • • •
<u> </u>	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8)	Frost-Heave Hummocks (D7)
Field Observations:	
Surface Water Present? Yes No Y Depth (inches):	
	-
Water Table Present? Yes No Depth (inches);	-
Saturation Present? Yes NoY Depth (inches):	Wetland Hydrology Present? Yes X No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous ins	pections), if available:
Remarks:	

vestigatoria IAA S. A	Milandal	Section Township Ra	State: A Sampling Point: W
vestigator(s): Wot Sommat-2, -171	10000	Jection, Township, Na	convex, none): CONVEX Slope (%): 2
ndform (hillslope, terrace, etc.): Filled by	em	Local relief (concave,	Datum:
			Long: Datum:
il Map Unit Name:			NWI classification:
e climatic / hydrologic conditions on the site typica	I for this time of year	ar? Yes No _	(If no, explain in Remarks.)
e Vegetation, Soil, or Hydrology _	significantly		"Normal Circumstances" present? Yes No
e Vegetation, Soil, or Hydrology _	naturally pro	blematic? (If ne	eeded, explain any answers in Remarks.)
			ocations, transects, important features, et
	No V		
	No V	Is the Sample	
	No	within a Wetlan	nd? Yes No
Remarks:			
GETATION – Use scientific names o	f plants		
CENTION COCCOMMINE NAMES OF	Absolute	Dominant Indicator	Dominance Test worksheet:
ree Stratum (Plot size:)		Species? Status	Number of Dominant Species
			That Are OBL, FACW, or FAC:(A)
			Total Number of Dominant
			Species Across All Strata: (B)
			Percent of Dominant Species
		= Total Cover	That Are OBL, FACW, or FAC:
apling/Shrub Stratum (Plot size:)		Prevalence Index worksheet:
			Total % Cover of: Multiply by:
			OBL species x 1 =
			FACW species x 2 =
			FAC species x 3 =
			FACU species x 4 =
12		_ = Total Cover	UPL species x 5 =
erb Stratum (Plot size:	50	Y FAC	Column Totals: (A) (B
	18	FAC	
Holas lanatus	2	FACIL	Prevalence Index = B/A =
Juncus brewer		Y CACU	Hydrophytic Vegetation Indicators:
Plantago lancialat	1	FAC	1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
Elymus repens			
			3 - Prevalence Index is ≤3.01
			4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
			5 - Wetland Non-Vascular Plants¹
			Problematic Hydrophytic Vegetation ¹ (Explain)
0			¹Indicators of hydric soil and wetland hydrology must
1	100	= Total Cover	be present, unless disturbed or problematic.
Voody Vine Stratum (Plot size:)		- Total Cover	
			Hydrophytic
			Vegetation /
		= Total Cover	Present? Yes No
6 Bare Ground in Herb Stratum	-	5.110.03.03	ass Dominance Test.
bale Glound III Helb Gladdin			

	1/4/ Zo CZ Sampling Point: UO/IT
Profile Description: (Describe to the depth needed to document the indicator or c	
Depth Matrix Redox Features	
(inches) Color (moist) % Color (moist) % Type L	oc ² Texture Remarks
0-3 2.543/2.5 /00 -	- Siltlaan
3-10 2.543/3 100	- Silt Loan
10-14 7.54 3/3 100	- Sandiloam
100	- Janaj Coam
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sa	and Grains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2) Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3) Loamy Mucky Mineral (F1) (except MLI	,
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Depleted Matrix (F3) Redox Dark Surface (F6)	Stadiostan of trudes to at
Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	Indicators of hydrophytic vegetation and wetland hydrology must be present,
Sandy Gleyed Matrix (S4) Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):	The state of proportions.
Type:	
Depth (inches)	Hydric Soil Present? Yes NoX
Remarks	
HANDON OOA	
HYDROLOGY	
Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1) Water-Stained Leaves (B9) (excep	t Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2) MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3) Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1) Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2) Hydrogen Sulfide Odor (C1)	Saturation Visible on April Impega, (CO)
	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Oxidized Rhizospheres along Living	g Roots (C3) Geomorphic Position (D2)
Drift Deposits (B3) Oxidized Rhizospheres along Living Algal Mat or Crust (B4) Presence of Reduced Iron (C4)	g Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
 Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil 	g Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5)
Drift Deposits (B3) Oxidized Rhizospheres along Living Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soil Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (L1)	g Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A)
 Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil 	g Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5)
Drift Deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soil Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil Stunted or Stressed Plants (D1) (Li	g Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A)
Drift Deposits (B3) Oxidized Rhizospheres along Living Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soil Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (L1 Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Field Observations:	g Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A)
Drift Deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil Stunted or Stressed Plants (D1) (L1) Other (Explain in Remarks) Depth (inches):	g Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A)
Drift Deposits (B3) Oxidized Rhizospheres along Living Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soil Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (L1 Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches):	g Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Drift Deposits (B3) Oxidized Rhizospheres along Living Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soil Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (L1 Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches):	g Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
Drift Deposits (B3) Oxidized Rhizospheres along Living Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soil Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (L1 Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches):	g Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
Drift Deposits (B3) Oxidized Rhizospheres along Living Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soil Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (Li Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches):	g Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
Drift Deposits (B3) Oxidized Rhizospheres along Living Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soil Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (L1 Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches):	g Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
Drift Deposits (B3) Oxidized Rhizospheres along Living Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soil Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (Li Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches):	g Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
Drift Deposits (B3) Oxidized Rhizospheres along Living Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soil Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (Li Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches):	g Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No

olientia CN CIX		City/County: LOIC	ta Sampling Date: 8/14/
plicant/Owner: CDFC	1	M 1/20 (1-1)	State: A Sampling Point:
restigator(s): M. Schwarz, 1	6. McDonald	Section, Township, Ra	ange:
ndform (hillslope, terrace, etc.): Verw	1	Local relief (concave,	convex, none): _CCCVC X Slope (%): \(
bregion (LRR): 1	Lat:		Long: Datum:
oil Map Unit Name:			NWI classification:
e climatic / hydrologic conditions on the site ty	pical for this time of ye	/	(If no, explain in Remarks.)
e Vegetation, Soil, or Hydrolog	gy significantly		"Normal Circumstances" present? Yes Vo
e Vegetation, Soil, or Hydrolog			eeded, explain any answers in Remarks.)
UMMARY OF FINDINGS - Attach s	site map showing		locations, transects, important features,
Hydrophytic Vegetation Present? Yes			
Hydric Soil Present? Yes	4_ No	Is the Sample	
Netland Hydrology Present? Yes	V No	within a Wetla	nd? Yes No
EGETATION – Use scientific name	s of plants.		
Tree Stratum (Plot size:)	Absolute	Dominant Indicator	Dominance Test worksheet:
,	<u> 7₀ Cover</u>	Species? Status	Number of Dominant Species
			That Are OBL, FACW, or FAC: (A
			Total Number of Dominant Species Across All Strata; (B
i			
		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: \(\subseteq \text{OO'}\)(a) (A)
Sapling/Shrub Stratum (Plot size:			Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3,			OBL species x 1 =
J			FACW species x 2 =
5			FAC species x 3 =
Herb Stratum (Plot size: \\m^2		= Total Cover	FACU species x 4 =
Potentilla ansenna	10	Y OBL	UPL species x 5 = Column Totals: (A) (E
2. Junas lescurii	10		
Agrostis Stolonifer	2 8	FAC	Prevalence Index = B/A =
Disticulis spicata			Hydrophytic Vegetation Indicators:1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is >50%
3			3 - Prevalence Index is ≤3.0¹
⁷ .			4 - Morphological Adaptations¹ (Provide supporti
3			data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants'
10			Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must
11		= Total Cover	be present, unless disturbed or problematic.
		_ Total Cover	
Woody Vine Stratum (Plot size:			and a single
			Hydrophytic ,
1			Vegetation /
Woody Vine Stratum (Plot size:			

SOIL		9/14/2	C Sampling Point: U
Profile Description: (Describe to the	depth needed to document the inc	licator or confirm	the absence of indicators.)
DepthMatrix	Redox Features		,
(inches) Color (moist) %		Type Loc2	Texture Remarks
0-4 Orianic	O horizon _		O-M.
4-14 2.543/2 80		- 140	
4-14 2.212/2	7.5425/8 20	C M	Siltloon/Silts clay loan
			
¹ Type: C=Concentration, D=Depletion,	RM=Reduced Matrix, CS=Covered o	r Coated Sand Gra	ains. ² Location PL=Pore Lining, M=Matrix
Hydric Soil Indicators: (Applicable to	all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils
Histosol (A1)	Sandy Redox (S5)		2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)		Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	,	Other (Explain in Remarks)
Depleted Below Dark Surface (A11			
Thick Dark Surface (A12)	Redox Dark Surface (F6)		³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		wetland hydrology must be present.
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)		unless disturbed or problematic
Restrictive Layer (if present):	, , , , , , , , , , , , , , , , , , , ,		The distance of proportion
Type:			
Depth (inches):			
Remarks:			Hydric Soil Present? Yes No
HYDROLOGY			
Wetland Hydrology Indicators:			
Primary Indicators (minimum of one req	uited: check all that apply)		Secondary Indicators (D
			Secondary Indicators (2 or more require
Surface Water (A1)	Water-Stained Leaves		Water-Stained Leaves (B9) (MLRA
High Water Table (A2)	MLRA 1, 2, 4A, and	4B)	4A, and 4B)
Saturation (A3)	Salt Crust (B11)		Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrates (E	313)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sulfide Odor	(C1)	Saturation Visible on Aerial Imagery
Drift Deposits (B3)	Oxidized Rhizospheres	along Living Roots	
Algal Mat or Crust (B4)	Presence of Reduced In		Shallow Aquitard (D3)
Iron Deposits (85)	Recent Iron Reduction i		•
Surface Soil Cracks (B6)	Stunted or Stressed Pla		Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imager			
Sparsely Vegetated Concave Surfa	· · · · —	ina)	Frost-Heave Hummocks (D7)
	Ze (B0)		
Field Observations:	V		
Surface Water Present? Yes			
Water Table Present? Yes	No Depth (inches):		1.4
	No Depth (inches):	Wetlar	nd Hydrology Present? Yes 🗶 No _
(includes capillary fringe)			
Describe Recorded Data (stream gauge	, monitoring well, aerial photos, previo	ous inspections), if	available
Remarks:			

pplicant/Owner: CNFW		A.Van Halland	State: Sampling Point:
nvestigator(s): M. Schwarz, 14 M	100 and 4	Section, Township, Ra	nge:
andform (hillslope, terrace, etc.): bec_	m	Local relief (concave,	convex, none): CONVEX Slope (%): 10-
			Long: Datum:
oil Map Unit Name:			NWI classification:
re climatic / hydrologic conditions on the site typical f		/	(If no, explain in Remarks.)
re Vegetation, Soil, or Hydrology			"Normal Circumstances" present? Yes No
re Vegetation, Soil, or Hydrology			eeded, explain any answers in Remarks.)
나타하기 하는 아니는 그 그 이번 사람이 없다.			ocations, transects, important features, etc
Hydrophytic Vegetation Present? Yes	No		
Hydric Soil Present? Yes		Is the Sampled	I Area /
Wetland Hydrology Present? Yes	٧,	within a Wetlan	nd? Yes No
EGETATION – Use scientific names of	plants.	Dominant Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size:) 1)	% Cover	Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2			
3			Total Number of Dominant Species Across All Strata: (B)
1			
		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 1001 (A/B)
Sapling/Shrub Stratum (Plot size:)			Prevalence Index worksheet:
1 2			Total % Cover of: Multiply by:
3.			OBL species x 1 =
1.			FACW speciesS x2 = \
5.			FAC species
		= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 1 1 2			UPL species x 5 =
. Holcus lanatus	<u> </u>	YEAC	Column Totals: 100 (A) 292 (B)
Tuncus brewer			Prevalence Index = B/A = 2.92
Elymus repens		- FAC	Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominance Test is >50%
			¥ 3 - Prevalence Index is ≤3.01
			4 - Morphological Adaptations¹ (Provide supportin data in Remarks or on a separate sheet)
)			5 - Wetland Non-Vascular Plants¹
0			Problematic Hydrophytic Vegetation¹ (Explain)
11.			¹Indicators of hydric soil and wetland hydrology must
	100	= Total Cover	be present, unless disturbed or problematic.
Noody Vine Stratum (Plot size:)		, Total Cotto	
			Hydrophytic
2.			Vegetation ,
% Bare Ground in Herb Stratumし		= Total Cover	Present? Yes No
			eutral. Passes PT.

Profile Desc			8/	14/70 CT Sampling Point: 000
	cription: (Describe	to the depth	needed to document the indicator or c	
Depth	Matrix		Redox Features	
(inches)	Color (moist)	%	Color (moist) % Type ¹ L	oc ² Texture Remarks
0-3	2.543/2	100		- Siltloan
3-10	2-543/3	100		- Srlt Louis
10-16	2.543/3	100		- Sandy lour
70	01111			- Jano Idan
		- — –		
			<u> </u>	
Type: C=C	oncentration, D=Dep	letion, RM=R	educed Matrix, CS=Covered or Coated Si	and Grains. ² Location: PL=Pore Lining, M=Matrix.
lydric Soil I	Indicators: (Applic	able to all LR	Rs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol	(A1)	_	Sandy Redox (S5)	2 cm Muck (A10)
	oipedon (A2)		Stripped Matrix (S6)	Red Parent Material (TF2)
_ Black Hi		_	Loamy Mucky Mineral (F1) (except ML	
	n Sulfide (A4)		Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
	d Below Dark Surface	e (A11)	_ Depleted Matrix (F3)	•
	ark Surface (A12) lucky Mineral (S1)	-	Redox Dark Surface (F6) Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and
	Bleyed Matrix (S4)	_	Redox Depressions (F8)	wetland hydrology must be present, unless disturbed or problematic.
	_ayer (if present):		_ redux Depressions (i o)	unless disturbed or problematic.
Туре	, . (. , , .			
	ches):			Hydric Soil Present? Yes No
emarks				riyulic son Fresent? Tes ND
Vetland Hyd	drology Indicators:			
Vetland Hyd	drology Indicators: ators (minimum of o			Secondary Indicators (2 or more required)
letland Hydrimary Indic	drology Indicators: ators (minimum of o Water (A1)		Water-Stained Leaves (B9) (excep	tot Water-Stained Leaves (B9) (MLRA 1, 2,
letland Hyd rimary Indic Surface \ High Wa	drology Indicators: eators (minimum of o Water (A1) ter Table (A2)		Water-Stained Leaves (B9) (exception MLRA 1, 2, 4A, and 4B)	water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
etland Hydrimary Indic Surface \ High Wa Saturatio	drology Indicators: eators (minimum of o Water (A1) ter Table (A2) on (A3)		Water-Stained Leaves (B9) (exception MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10)
/etland Hyd rimary Indic Surface \ High Wa Saturatio Water Mi	drology Indicators: eators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1)		Water-Stained Leaves (B9) (exception MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
letland Hyd rimary Indic Surface N High Wa Saturatio Water Ma	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2)		Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
/etland Hydrimary Indice Surface Notes High Was Saturation Water Manuel Sedimen Drift Dep	drology Indicators: cators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3)		Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin	water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) prainage Patterns (B10) pry-Season Water Table (C2) saturation Visible on Aerial Imagery (C9) g Roots (C3) Geomorphic Position (D2)
/etland Hyd rimary Indic Surface N High Wa Saturatio Water Ma Sedimen Drift Dep Algal Ma	drology Indicators: cators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) t or Crust (B4)		Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4)	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
/etland Hydrimary Indice Surface V High Wa Saturatio Water Ma Sedimen Drift Dep Algal Ma	drology Indicators: cators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3)		Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sol	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
/etland Hydrimary Indice Surface V High Wa Saturatio Water Mi Sedimen Drift Dep Algal Ma Iron Dep	drology Indicators: cators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) t or Crust (B4) osits (B5)	<u>ne required, c</u>	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil Stunted or Stressed Plants (D1) (L	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A)
/etland Hydrimary Indice Surface V High Wa Saturatio Water Mi Sedimen Drift Dep Algal Ma Iron Dep	drology Indicators: cators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) Soil Cracks (B6)	<u>ne required, c</u>	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi Stunted or Stressed Plants (D1) (L	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
/etland Hydrimary Indice Surface Note High Was Saturation Water Missed Sedimen Drift Dep Algal MaIron Depi Surface SInundation Sparsely	cators (minimum of one cators (minimum of one cators (minimum of one cators (Ma)) arks (Ma) bosits (Ma) cosits (Ma) cos	<u>ne required, c</u>	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi Stunted or Stressed Plants (D1) (L	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) — Drainage Patterns (B10) — Dry-Season Water Table (C2) — Saturation Visible on Aerial Imagery (C9 g Roots (C3) — Geomorphic Position (D2) — Shallow Aquitard (D3) — FAC-Neutral Test (D5) — Raised Ant Mounds (D6) (LRR A)
Vetland Hydrimary Indice Surface Version Water Meter M	drology Indicators: cators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial In Vegetated Concave vations:	<u>ne required, c</u>	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi Stunted or Stressed Plants (D1) (L. Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) — Drainage Patterns (B10) — Dry-Season Water Table (C2) — Saturation Visible on Aerial Imagery (C9 g Roots (C3) — Geomorphic Position (D2) — Shallow Aquitard (D3) — FAC-Neutral Test (D5) — Raised Ant Mounds (D6) (LRR A)
Vetland Hydrimary Indice Surface V High Wa Saturatio Water Mi Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio Sparsely ield Observ	cators (minimum of one water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial In Vegetated Concave vations:	magery (B7) Surface (B8)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil Stunted or Stressed Plants (D1) (L.) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) — Drainage Patterns (B10) — Dry-Season Water Table (C2) — Saturation Visible on Aerial Imagery (C9 g Roots (C3) — Geomorphic Position (D2) — Shallow Aquitard (D3) — FAC-Neutral Test (D5) — Raised Ant Mounds (D6) (LRR A)
Vetland Hydrimary Indice Surface Valuration Water May Sedimen Drift Dep Algal Ma Iron Dep Surface Surface Surface Surface Water Water Water Water Table I aturation Pressurface Water Table I aturation Pressurface Surface I aturation Pressurface Water Table I aturation Pressurface Water Table I aturation Pressurface Water Table I aturation Pressurface I I aturation Pressurface I I aturation Pressurface Water Table I aturation Pressurface I I I I I I I I I I I I I I I I I I I	cators (minimum of one water (A1) ter Table (A2) on (A3) arks (B1) ot Deposits (B2) osits (B3) ot or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial In Vegetated Concave vations: er Present? Present? Yesent? Yesent? Yesent?	magery (B7) Surface (B8)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi Stunted or Stressed Plants (D1) (L. Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A)
Vetland Hydrimary Indice Surface Valuration Water Manager Valuration Prift Dep Algal Manager Valuration Surface Surface Surface Surface Water Valuration Princludes cap	drology Indicators: cators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial In Vegetated Concave vations: er Present? Present? Ye esent? Ye esent? Ye illary fringe)	magery (B7) Surface (B8) s No	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi Stunted or Stressed Plants (D1) (L. Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
Primary Indice Surface Note High Wales Saturation Water May Sediment Drift Dep Algal Mater Table In Surface Water Table In Surface Water Table In Surface S	drology Indicators: cators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial In Vegetated Concave vations: er Present? Present? Ye esent? Ye esent? Ye illary fringe)	magery (B7) Surface (B8) s No	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi Stunted or Stressed Plants (D1) (L Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
rimary Indic Surface N High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio Sparsely ield Observ urface Water Vater Table I aturation Pre ncludes cap escribe Rec	drology Indicators: cators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial In Vegetated Concave vations: er Present? Present? Ye esent? Ye esent? Ye illary fringe)	magery (B7) Surface (B8) s No	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi Stunted or Stressed Plants (D1) (L Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
Primary Indic Primary Indic Surface Note that I had been seen seen seed to be	drology Indicators: cators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial In Vegetated Concave vations: er Present? Present? Ye esent? Ye esent? Ye illary fringe)	magery (B7) Surface (B8) s No	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi Stunted or Stressed Plants (D1) (L Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
Primary Indice Surface Notes Indice Surface Notes Indice Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundation Sparsely ield Observe Surface Water Table Indices Capared	drology Indicators: cators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial In Vegetated Concave vations: er Present? Present? Ye esent? Ye esent? Ye illary fringe)	magery (B7) Surface (B8) s No	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi Stunted or Stressed Plants (D1) (L Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No

Project/Site: Cannibal Island		City/Count	. Lole	Sampling Date: 8/14/20
Applicant/Owner: ()				State: CA Sampling Point 11173
Investigator(s): M. Schwarz, H. Mcs	mald.	M.Vant	wnship. Ra	ange:
				convex, none): Canvex Slope (%): 5
				Long: Datum:
Soil Map Unit Name:				NWI classification:
Are climatic / hydrologic conditions on the site typical for the			/	
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.
	No			
Hydric Soil Present? Yes	No		e Sampled	
Wetland Hydrology Present? Yes		with	iin a Wetlai	nd? Yes V No
VEGETATION - Use scientific names of pla				
Tree Stratum (Plot size:)	Absolute % Cover		Indicator	Dominance Test worksheet:
1			_	Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2				
3				Total Number of Dominant Species Across All Strata: (B)
4		= Total Co	ver	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:
2				OBL species x 1 =
3				FACW species x 2 =
4			_	FAC species x 3 =
**		= Total Co	ver	FACU species x 4 =
Herb Stratum (Plot size: 1m2) 1. Agrostis stolonifera	~~	7/	C	UPL species x 5 =
				Column Totals: (A) (B)
2. Hotas lanatus			CAC	Prevalence Index = B/A =
3. Juneus brenzer,			FACW	Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				y 2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.01
7 8.				4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9				5 - Wetland Non-Vascular Plants
10.				Problematic Hydrophytic Vegetation¹ (Explain)
11				¹ Indicators of hydric soil and wetland hydrology must
	100	= Total Co	er	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1		-		Hydrophytic
2		The state of the s		Vegetation Present? Yes \/ No
% Bare Ground in Herb Stratum		= Total Cov	er	No. 7 (1) 2 (1) 2 (1) 2 (1) 2 (1) 2 (1) 2 (1) 2 (1) 2 (1) 2 (1) 2 (1) 2 (1) 2 (1) 2 (1) 2 (1) 2
Remarks: 15 ft from wetland FAC-Neutral.	edge	P	asses	Dominance Test &

Profile Description: (Describe to the	depth needed to document the indicator or confirm	the absence of indicators)
Depth Matrix	Redox Features	tale absence of maleators.)
(inches) Color (moist) %	Color (moist) % Type Loc²	Texture Remarks
0-2 Organic (om
2-14 2.543/2 85	5 754R 414 15 C M	Si 4 Louin
-14 2.3 1/16 0	73716414 10 C WI	Sr 4 Coan
Type: C=Concentration, D=Depletion, F	RM=Reduced Matrix, CS=Covered or Coated Sand Gr	ains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to	all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)Depleted Below Dark Surface (A11)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Thick Dark Surface (A12)	Depleted Matrix (F3) ✓ Redox Dark Surface (F6)	Should and a see through the second second
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	Indicators of hydrophytic vegetation and wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
		Times distance of problematic.
Restrictive Layer (if present):		
Restrictive Layer (if present): Type:		
Туре:		Hydric Soil Present? Yes X No.
* * * * * * * * * * * * * * * * * * * *		Hydric Soil Present? Yes No
Type: Depth (inches):		Hydric Soil Present? Yes No
Type: Depth (inches):		Hydric Soil Present? Yes No
Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators:		Hydric Soil Present? Yes No
Type: Depth (inches): Remarks: YDROLOGY Vetland Hydrology Indicators:	ired; check all that apply)	
Type: Depth (inches): Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requi	ired; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required)
Type: Depth (inches): Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requi		Secondary Indicators (2 or more required)
Type: Depth (inches): Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required) Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1,
Type: Depth (inches): Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required one re	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B)
Type:	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Type:	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) 	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C2)
Type:	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Type:	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Type:	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Type:	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Type:	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Type:	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Type:	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Type:	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Type:	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): No Depth (inches):	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)

Applicant/Owner: CNFW	- 1/ 4/	- IIM	Van	aller.	State: CA	_ Sampling Point:
and and the state of the state	2,19.1010	Dayar	Section,	Township, R	ange:	T S Book of A
Landform (hillslope, terrace, etc.): \(\sum_{\text{\tint{\text{\tin}\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\tex{\tex	en		Local re	elief (concave	, convex, none): Conv	Slope (%): 0
Subregion (LRR):			_		Long:	Datum:
Soil Map Unit Name:				-	NWI classi	fication:
Are climatic / hydrologic conditions on				- 6.	(If no, explain in	Remarks.)
Are*Vegetation, Soil,					"Normal Circumstances"	present? Yes No
Are Vegetation, Soil,	r Hydrology _	naturally pro	oblematic	? (If n	needed, explain any answ	vers in Remarks.)
SUMMARY OF FINDINGS -	Attach site	map showing	sampl	ling point	locations, transect	s. important features, et
Hydrophytic Vegetation Present?	Yes	1		0,0,0,0,0	3.2557.77	-, mportant routing of
Hydric Soil Present?		No_V_	Is	the Sample		1
Wetland Hydrology Present?		_ No/	w	ithin a Wetla	and? Yes	No/_
EGETATION – Use scientific	c names of	• 1111111111111111111111111111111111111				
Tree Stratum (Plot size:)	Absolute % Cover	Domina	ant Indicator s? Status	Dominance Test wor	110115011
,				ototus	Number of Dominant S That Are OBL, FACW	Species (A)
2						100
					Total Number of Domi Species Across All Str	
Sapling/Shrub Stratum (Plot size:			= Total (Cover	Percent of Dominant S That Are OBL, FACW,	
)			Prevalence Index wo	
			_		Total % Cover of:	Multiply by:
				-	OBL species	x1 =
						x 2 =
						x 3 =
	~		= Total C	Cover		x 4 =
Eestuca Decenn's		50	V	CAC		x 5 =
Lotus caniculatus		162		FAC	Column Totals:	(A) (B)
Hadeum murini		10	-	FAC	Prevalence Index	: = B/A =
Medicado polym		30	V	EACU	Hydrophytic Vegetati	
Rimex alcher			-	Prico		Hydrophytic Vegetation
					2 - Dominance Tes	
					3 - Prevalence Ind	ex is \$3.0° Adaptations¹ (Provide supportin
					data in Remark	s or on a separate sheet)
					5 - Wetland Non-V	ascular Plants1
)						phytic Vegetation ¹ (Explain)
,					Indicators of hydric so	il and wetland hydrology must
oody Vine Stratum (Plot size:	· ·		= Total Co	over	be present, unless dist	urbed or problematic.
					Car Average and	
					Hydrophytic Vegetation	1
			Total Co	wer		s No \
		_	- I Ulai UC	/VCI	The state of the s	
Bare Ground in Herb Stratum Lemarks: G ft from L						

	4	
SOIL	2/11/20	CI

	. 4	1)(
SOIL	2/11/20	CZ Sampling Point: U012-
Profile Description: (Describe to the depth	needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-8 2.543/2 100		E. Gracelle Sanda loam (fill)
8-14 2-543/2 100		Gravelly Sanda Loan
		1
		
¹ Type: C=Concentration, D=Depletion, RM=Re	educed Matrix, CS=Covered or Coated Sand Gra	rains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LR		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	_ Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	_ Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	<u> </u>
Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Thick Dark Surface (A12)	Depleted Matrix (F3) Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Type:	_	
Depth (inches):	_	Hydric Soil Present? Yes No
Remarks:		
		0
HYDROLOGY		
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; c	hants all that a t. 3	
		Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2) Saturation (A3)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Water Marks (B1)	Salt Crust (B11) Aquatic Invertebrates (B13)	Drainage Patterns (B10)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along Living Root	
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soils (C6)	
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRR A)	
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface (B8)		
Field Observations:	16	
Surface Water Present? Yes No	Depth (inches):	
Water Table Present? Yes No		321
Saturation Present? Yes No	PS 1	and Hydrology Present? Yes No
(includes capillary fringe)	7	
Describe Recorded Data (stream gauge, monito	oring well, aerial photos, previous inspections), it	f available;

Remarks:

Project/Site: Cannibal Island	city/county: Lale	Sampling Date: 8/9/10
Applicant/Owner: CDFW		State: CA Sampling Point: U.Z.Tu
nvestigator(s): M. Schwarz, K.M.	Daniel M. Van Hattern	State. Sampling Form.
and form (hillstone towns at a 12 and 2	Section, Township, Ra	ange.
		, convex, none): <u>Cov CX</u> Slope (%): <u>G</u>
Subregion (LRR):	Lat:	Long: Datum:
Soil Map Unit Name:	,	NWI classification:
Are climatic / hydrologic conditions on the site typica	If 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 _		needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site	map showing sampling point	locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes		
Hydric Soil Present? Yes _√	/ No Is the Sample	d Area and? Yes V No No No
Remarks: Brackish Saltmarsh	a between square	fill beam and aggrazing
VEGETATION – Use scientific names o	f plants.	
Tree Stratum (Plot size:)		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A)
1		
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:
2		OBL species x 1 =
3		FACW species x 2 =
4		FAC species x 3 =
5	- Total Course	FACU species x 4 =
Herb Stratum (Plot size: \\nabla^2	= Total Cover	UPL species x 5 =
1. Saliconia pacifica	99 Y OBL	Column Totals: (A) (B)
2 Attibles Drostvata	LL FAC	Prevalence Index = B/A =
3. Agrostis Stalonifers	ZL FAC	Hydrophytic Vegetation Indicators:
4. Pallipagn Monspelie	ASIS LI FACU	1 - Rapid Test for Hydrophytic Vegetation
5.		2 - Dominance Test is >50%
6,		3 - Prevalence Index is ≤3.0¹
7		4 - Morphological Adaptations (Provide supporting
8		data in Remarks or on a separate sheet)
9		5 - Wetland Non-Vascular Plants¹
10		Problematic Hydrophytic Vegetation¹ (Explain)
11		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	= Total Cover	problem of problem
		II. desable to
1		Hydrophytic Vegetation
	= Total Cover	Present? Yes No
% Bare Ground in Herb Stratum		
Remarks: 5 ft from edge	Passes Dominano	e Test. Passes FAC-Neutral
9	, . Dove Den film to	~ 1056. 1 25305 1 PC 1000173
Return to map		

_		
-	IF 161	1

8/19/20 CI Sampling Point: UO12-W

1		to the dep				or confirm	the absence of indicators.)
Depth (inches)	Matrix Color (moist)	%	Color (moist)	x Feature %	Type ¹	_Loc²	TextureRemarks
0-1	2.59 4/2	100					Silfleam
1-9	2.544/2		7.548414	70		M	Siltloan
0.11	1/1	00	7311414	<u> 20 </u>			
9-11	7 54 11.	60	1 -4 01/1		- —		Organic Burind O hirizon
110 15	2.544/1	90	7.54 129/4	10		m	SiltLoam
			(A)				
¹Type: C=C	oncentration D=Dan	letion PM-	Reduced Matrix, CS		d or Coole		2 and a state of the state of t
			LRRs, unless other			u Sanu Gia	ains. ² Location: PL=Pore Lining, M=Matrix, Indicators for Problematic Hydric Soils ³ :
Histosol			Sandy Redox (S		,		2 cm Muck (A10)
	pipedon (A2)		Stripped Matrix				Red Parent Material (TF2)
_	stic (A3)		Loamy Mucky M		1) (except	MLRA 1)	Very Shallow Dark Surface (TF12)
	n Sulfide (A4)		Loamy Gleyed N		2)		Other (Explain in Remarks)
	Below Dark Surfac	e (A11)	Depleted Matrix				1
	ark Surface (A12) lucky Mineral (S1)		Redox Dark Sur				³ Indicators of hydrophytic vegetation and
	Gleyed Matrix (S4)		Depleted Dark S Redox Depressi	-	-/)		wetland hydrology must be present, unless disturbed or problematic.
	Layer (if present):			0113 (1 0)			unless disturbed of problematic.
Type:							
	ches):	*	_				Hydric Soil Present? Yes No
Remarks:							1,751.5 501.1 1551.1 165
9 11							
W.							
HYDROLO							
	drology Indicators:						
		ne required	: check all that apply		-		Secondary Indicators (2 or more required)
	Water (A1)		Water-Stair			cept	Water-Stained Leaves (B9) (MLRA 1, 2,
	ter Table (A2)			, 2, 4A, a	and 4B)		4A, and 4B)
Saturation	• •		Salt Crust (-	(F) 4 P)		Drainage Patterns (B10)
114	arks (B1)		Aquatic Inv				Dry-Season Water Table (C2)
178	it Deposits (B2) osits (B3)		Hydrogen S			D	Saturation Visible on Aerial Imagery (C9)
111111	t or Crust (B4)		Oxidized RI Presence o			_	, ,
	osits (B5)		Recent Iron				Shallow Aquitard (D3) X FAC-Neutral Test (D5)
	Soil Cracks (B6)		Stunted or			, ,	
	on Visible on Aerial I	magery (B7				, (EICIC PC)	Frost-Heave Hummocks (D7)
	Vegetated Concave		. —				1 tost-field a fiditiffocks (D7)
Field Observ							
Surface Wate	er Present? Ye	es N	No X Depth (inci	hes):			
Water Table			No Depth (incl			_	
Saturation Pr			lo Depth (incl			- Wetlar	nd Hydrology Present? Yes X No
(includes cap	illary fringe)					-	
Describe Rec	corded Data (stream	gauge, moi	nitoring well, aerial pl	hotos, pr	evious insp	ections), if	available:
Remarks:							
							=

pplicant/Owner: _CDFW		A.Van Hallen	State: <u>CA</u> Sampling Point: <u>US</u>
vestigator(s): M. Schurz, K.	McDonaldi	Section, Township, R.	ange:
andform (hillslope, terrace, etc.): had	very bottoms	Local relief (concave,	convex, none): NOCE Slope (%):
ubregion (LRR): A	Lat:		Long: Datum:
			NWI classification:
re climatic / hydrologic conditions on the site typic			
re Vegetation, Soil, or Hydrology			"Normal Circumstances" present? Yes No
re Vegetation, Soil, or Hydrology			eeded, explain any answers in Remarks.)
			locations, transects, important features, e
	/_ No		
Hydric Soil Present? Yes	No 🗸	Is the Sample	d Area
Wetland Hydrology Present? Yes	No J	within a Wetla	nd? Yes No
		vation pasti	renear road (~100ft)
EGETATION – Use scientific names	Absolute	Dominant Indicator	Dominance Test worksheet:
Free Stratum (Plot size:)			Number of Dominant Species That Are OBL, FACW, or FAC: (A)
1			That Are OBL, FACW, or FAC: (A)
			Total Number of Dominant
i. ,			Species Across All Strata: (B)
		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/E
Sapling/Shrub Stratum (Plot size:		, Total Gover	That Are OBL, FACW, or FAC: (A/E
-			Total % Cover of: Multiply by:
2			OBL species x1 =
			FACW species x 2 =
			FAC species 101 x3= 303
5		- Tatal Course	FACU species x 4 =
Herb Stratum (Plot size: 1m²)		= Total Cover	UPL species x 5 =
1. Festura perennis	60	Y FAC	Column Totals: 102 (A) 307 (B)
2. Agresti's stolonitera	35_	Y GAC	Prevalence Index = B/A =
3. Trifolium repens			Hydrophytic Vegetation Indicators:
· Raninculus repens		EAC	1 - Rapid Test for Hydrophytic Vegetation
Terfolin fragition		FACU	Y 2 - Dominance Test is >50%
			3 - Prevalence Index is ≤3.0'
7			4 - Morphological Adaptations (Provide supporting
3			data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants ¹
)			Problematic Hydrophytic Vegetation ¹ (Explain)
10			Indicators of hydric soil and wetland hydrology must
11.		Tatal Cavas	be present, unless disturbed or problematic.
Noody Vine Stratum (Plot size:) 102	= Total Cover	
1			Hydrophytic
2.			Vegetation
			Present? Yes V No
% Bare Ground in Herb Stratum		= Total Cover	

SOIL						8/19/2	020	CJ.	Sampling Po	oint: <u>U-0/3-</u>
Profile Des	cription: (Describe	to the dept	h needed to docum	nent the ir	ndicator	or confirm	the abse	nce of ind	icators.)	
Depth	Matrix			Features						
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	_Type'	Loc²	Texture		Remar	ks
0-8	2.543/2	100					5-11-1	64 m	 	
8-10	2.543/2	96	7.54R 4H	4		M	Silfl	oam		
10.12	2.543/2	85	754R4/4	15	C	-M	5117	Loam		
	•								-	
										
i ——										
								_		
								_		
			Reduced Matrix, CS			d Sand Gra			PL=Pore Lining	
1 -		cable to all I	RRs, unless other		d.)				Problematic H	ydric Soils³:
Histosol	. ,		Sandy Redox (S					2 cm Muck		
	pipedon (A2) istic (A3)		Stripped Matrix	. ,) (=====	MI DA A	_		t Material (TF2)	
	en Sulfide (A4)		Loamy Mucky M Loamy Gleyed N			(WILKA I)		-	ow Dark Surface lain in Remarks	
	d Below Dark Surfac	ce (A11)	Depleted Matrix				— '	Ouiei (Exp	iaiii iii reiliaiks	')
	ark Surface (A12)		Redox Dark Sur				³ India	cators of hy	drophytic vege	etation and
	Mucky Mineral (S1)		Depleted Dark S	urface (F7	7)				rology must be	
	Gleyed Matrix (S4)		Redox Depressi	ons (F8)			uı	nless distu	bed or problem	ıatic.
	Layer (if present):									
Type:			· · · · ·							6
Depth (in Remarks:	ches):	-					Hydric S	Soil Prese	nt? Yes	No
HYDROLO	icv		<u>.</u>					-	<u>.</u>	
	drology Indicators	•	 .							
			: check all that apply	١			Se	econdany Ir	dicators (2 or n	nore required\
	Water (A1)	one regained	Water-Stair		c /R0) /e	vcent				B9) (MLRA 1, 2,
ı —	ater Table (A2)			, 2, 4A, aı		vcehr	_		nd 4B)	D9) (WILRA 1, 2,
Saturati	, ,	Ni.	Salt Crust (10 10,				Patterns (B10)	100
l	larks (B1)		Aquatic Inv		(B13)		_		son Water Table	
Sedime	nt Deposits (B2)		Hydrogen S							erial Imagery (C9)
Drift De	posits (B3)		Oxidized R	hizosphere	es along	Living Root	ts (C3)		phic Position (D	
Algal Ma	at or Crust (B4)		Presence o	f Reduced	l Iron (C4	l)		Shallow	Aquitard (D3)	
l — ·	oosits (B5)		Recent Iron	Reductio	n in Tilled	d Soils (C6)) _	_ FAC-Net	utral Test (D5)	
	Soil Cracks (B6)		Stunted or			1) (LRR A)		_	ant Mounds (D6	
ı	on Visible on Aerial			ain in Ren	narks)		_	_ Frost-He	ave Hummocks	s (D7)
Field Obser	y Vegetated Concav	е Ѕипасе (В	8)					<u> </u>		=
Surface Wat		res N	lo X Depth (inc	haaliii						
Water Table			10	191		-				
Saturation P			lo Depth (inc lo Depth (inc			-		la ave Dana e	nt? Yes	6
(includes car	pillary fringe)				50		_		ent? Yes	No Y
Describe Re	corded Data (stream	n gauge, moi	nitoring well, aerial p	hotos, pre	vious ins	pections), it	f available:			1
Remarks:										

pplicant/Owner:OFW						State: Sampling Point: STI
ivestigator(s): M. Schwar	Z. H.N	100	Mald M.	Section, To	wnship, Ra	inge: Sampling Point:
						convex, none): 1000 Slope (%): La
ubregion (LRR):			Lat		(00.100.10)	Long: Datum:
						NWI classification:
re climatic / hydrologic conditions on	the site typic	al for	this time of use	-2 V /		(If no, explain in Remarks.)
						/
re Vegetation, Soil, o						"Normal Circumstances" present? Yes/ No
re Vegetation, Soil, o						eeded, explain any answers in Remarks.)
Hydrophytic Vegetation Present?			No	Sampiin	g point i	ocations, transects, important features, et
Hydric Soil Present?	Yes	VI	No		e Sampled	Area
Wetland Hydrology Present?	Yes	V	No	with	in a Wetlar	nd? Yes No
Remarks: Graced past		of nl	ante			
		_	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:						Number of Dominant Species
1						That Are OBL, FACW, or FAC: (A)
2		-			$\overline{}$	Total Number of Dominant
3 4					-	Species Across All Strata: (B)
				= Total Co		Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: _				- 10tal C0	ver	That Are OBL, FACW, or FAC: (A/B)
1						Prevalence Index worksheet:
2						
3						FACW species x 2 =
4				_		FAC species 97 x3 = 291
5				= Total Co		FACU species
Herb Stratum (Plot size: M2				- Total Co	ver	UPL species x 5 =
1. Aggostis stolonifes	3		_8_		CAC	Column Totals: 100 (A) 303 (B)
2. Festura perenni			85		FAC	Prevalence Index = B/A = 3.03
3. Ranunculus repe	2				FAC	Hydrophytic Vegetation Indicators:
4. Trifalium fragil	ecum				EALU	1 - Rapid Test for Hydrophytic Vegetation
5		_				2 - Dominance Test is >50%
6						∆ 3 - Prevalence Index is ≤3.0
7 8					_	 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9.						5 - Wetland Non-Vascular Plants¹
10						Problematic Hydrophytic Vegetation¹ (Explain)
11,						¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:			100	= Total Cov	/er	be present, unless disturbed or problematic.
1						G as too.
2					_	Hydrophytic Vegetation
				= Total Cov	/er	Present? Yes No
% Bare Ground in Herb Stratum	Z			0.000		
Kemarks: (()						nance Test, Does not passing tation change from upland.

$\sim \sim 1$	
Sec. 31.	
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8/19/26 CI

Sampling Point: ()-013-W

Profile Desc	ription: (Describ	e to the dept	h needed to docur	nent the i	ndicator	or confirm	the absence of indic	ators.)
Depth	Matrix			x Feature:				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	_Loc ²	<u>Texture</u>	Remarks
0-5	2.543/2						Siltloam	
5-14	2.573/2	90	7.54R4/4	10	C	M	SiltLiam	<u></u>
		·						
		_ — ·						
¹Type: C=Co	oncentration, D=D	epletion, RM=	Reduced Matrix, CS	S=Covered	or Coate	ed Sand Gra	ains. ² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appl	icable to all L	RRs, unless other	wise note	ed.)			roblematic Hydric Soils³:
Histosol	(A1)		Sandy Redox (S5)			2 cm Muck (A10)
	oipedon (A2)		Stripped Matrix					Material (TF2)
Black Hi			Loamy Mucky N			MLRA 1)		Dark Surface (TF12)
	en Sulfide (A4)	(844)	Loamy Gleyed)		Other (Expla	in in Remarks)
	d Below Dark Surfa ark Surface (A12)	ace (A11)	Depleted Matrix Redox Dark Su				3Indicators of hus	rophytic vegetation and
	lucky Mineral (S1)	7	Depleted Dark		7)		•	logy must be present,
	Gleyed Matrix (S4)	_	Redox Depress		''			ed or problematic.
	Layer (if present):							
Туре:								
Depth (inc	ches):						Hydric Soil Present	7 Yes_ <u>×</u> No
Remarks:								
								İ
HYDROLO	GY							
Wetland Hyd	drology Indicator	s:						
Primary Indic	ators (minimum o	fone required:	check all that appli	y)(y			Secondary Ind	icators (2 or more required)
Surface	Water (A1)		Water-Stai	ned Leave	es (B9) (e	xcept	Water-Sta	ined Leaves (B9) (MLRA 1, 2,
High Wa	iter Table (A2)		MLRA	1, 2, 4A, a	nd 4B)		4A, an	d 4B)
Saturation	on (A3)		Salt Crust	(B11)			Drainage l	Patterns (B10)
Water M	larks (B1)		Aquatic Inv	ertebrate:	s (B13)		Dry-Seaso	n Water Table (C2)
	nt Deposits (B2)		Hydrogen	Sulfide Oc	ior (C1)		Saturation	Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)		Oxidized F	thizospher	es along	Living Roof	ts (C3) Geomorph	ic Position (D2)
	it or Crust (B4)		Presence		,	•		quitard (D3)
	osits (B5)					d Soils (C6)		ral Test (D5)
	Soil Cracks (B6)				•	1) (LRR A)		t Mounds (D6) (LRR A)
	on Visible on Aeria			lain in Re	marks)		Frost-Hea	ve Hummocks (D7)
	/ Vegetated Conca	ive Surface (B	8)					
Field Observ								
Surface Water			o Y Depth (inc			_		
Water Table	Present?		o Y Depth (inc					
Saturation Pr		Yes N	o 🏸 Depth (inc	ches):		_ Wetla	nd Hydrology Preser	t? Yes No ¥
(includes cap Describe Red		m gauge, mor	nitoring well, aerial p	photos, pre	evious ins	pections), i	f available:	
	•		3 , ,			, , -		
Remarks:								

Project/Site: Cannibal Lo	book		City/County:	OICH3 Sampling Date: 8/19/7
Applicant/Owner: () (=1.)				State: CA Committee Daint 113-T
nvestigator(s): M. Schwarz	, KMD	M. bleno	Section, Towns	hip, Range:
				ncave, convex, none): vone Slope (%): 2
				Long: Datum:
4 194 PM 174 PM 184 PM 184 PM				NWI classification:
				No (If no, explain in Remarks.)
Are Vegetation, Soil, o				Are "Normal Circumstances" present? Yes No No
Are Vegetation, Soil, o				(If needed, explain any answers in Remarks.)
				oint locations, transects, important features, etc
Hydrophytic Vegetation Present?	Yes _			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Hydric Soil Present?	Yes			ampled Area
Wetland Hydrology Present?	Yes	No_V	within a	Wetland? Yes No
Remarks: 1-parameter /EGETATION - Use scientifi	c names of p			
Tree Stratum (Plot size:1			Species? St	atus Number of Dominant Species
2				Total Number of Deminent
3				Species Across All Strata: (B)
4Sapling/Shrub Stratum (Plot size:			= 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				PACVV species X Z =
5				FAC species 100 x3 = 100 FACU species x4 =
Herb Stratum (Plot size: 1/1/2	- A		= Total Cover	UPL species x 5 =
1. Acrostis stolon	Gen	36	Y CA	Column Totals: 160 (A) 300 (B)
2. Certuca perent		35	YGA	/
3. Rannoilly reper		u	CA	rievalence index - b/A - 5.00
1. Trifalium repen		6	A3	injunction regulation maicators.
5				2 - Dominance Test is >50%
3				3 - Prevalence Index is ≤3.0¹
7				4 - Morphological Adaptations (Provide supporting
8				data in Remarks or on a separate sheet)
9				5 - Wetland Non-Vascular Plants¹
10				Problematic Hydrophytic Vegetation¹ (Explain)
11		ico	= Total Cover	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:		100	= Total Cover	
	_			Hydrophytic
4.	-			Vegetation Present? Yes / No
% Bare Ground in Herb Stratum	8		= Total Cover	
Remarks: 15 ft from w	settand e	edge. F	Dasses	Dominance Test, Passes PI, Facultative
does not pass	FAC-N	sectial.	100%	Facultative.

SOI	9	
3UI	I	

8/19/20 CI Sampling Point: <u>U-0137</u>2-U

Profile Description: (Describe to the depth needed to document the indic	ator or confirm the absence of indicators.)
Depth Matrix Redox Features	·
(inches) Color (moist) % Color (moist) % Ty	pe ¹ Loc ² Texture Remarks
6-9 2.543/2 100 -	Silt Coam
9-14 7-543/2 90 7.54844 10 0	m · Silt Loam
7	3111 00000
	· · · · · · · · · · · · · · · · · · ·
1	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or C	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (ex	Red Parent Material (TF2)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)	cept MLRA 1) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Depleted Matrix (F3)	Ottles (Explain in Remarks)
Thick Dark Surface (A12) Redox Dark Surface (F6)	3Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4) Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):	
Туре:	
Depth (inches):	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) Water-Stained Leaves (B	9) (except Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2) MLRA 1, 2, 4A, and 4	
Saturation (A3) Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1) Aquatic Invertebrates (B1	3) Dry-Season Water Table (C2)
Sediment Deposits (B2) Hydrogen Sulfide Odor (C	
Drift Deposits (B3) Oxidized Rhizospheres al	
Algal Mat or Crust (B4) Presence of Reduced Iron	
Iron Deposits (B5) Recent Iron Reduction in	Tilled Soils (C6) FAC-Neutral Test (D5)
Surface Soil Cracks (B6) Stunted or Stressed Plant	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark	
Sparsely Vegetated Concave Surface (B8)	
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No Y Depth (inches):	Wetland Hydrology Present? Yes No
(includes capillary fringe)	1
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous	s inspections), if available:
Remarks:	

Project/Site: Camibal Island		City/County: _Lol e	Sampling Date: 8/19/10
Applicant/Owner:			04 (1) 1750
Investigator(s): M. Schwaczy 14. Mc	Donald	Section, Township, Ra	ande.
Landform (hillslope, terrace, etc.):		Local relief (concave	convex, none): 1001 Slope (%): 2
Subregion (LRR):	Lat:	(concave,	Long: Datum:
Soil Map Unit Name:		-	NWI classification:
Are climatic / hydrologic conditions on the site typical for t	this time of yes	ar2 Ves V	NVVI classification:
Are Vegetation, Soil, or Hydrology	significantly		
Are Vegetation, Soil, or Hydrology			"Normal Circumstances" present? Yes No
		COUNTRY OF THE STREET	eeded, explain any answers in Remarks.) locations, transects, important features, etc.
	No	, J p	is success, important reatures, etc.
	No	Is the Sample	
Wetland Hydrology Present? Yes		within a Wetla	nd? Yes V No
VEGETATION – Use scientific names of pla	ints.		
Tree Stratum (Plot size:)	Absolute	Dominant Indicator	Dominance Test worksheet:
	% Cover	Species? Status	Number of Dominant Species
12			That Are OBL, FACW, or FAC: (A)
3			Total Number of Dominant
4			Species Across All Strata: (B)
Sapling/Shrub Stratum (Plot size:)		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (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 $100 \times 3 = 300$
Herb Stratum (Plot size: \\mathbb{\gamma}^2		= Total Cover	FACU species x 4 =
1. Agrostis stolonifera	60	Vac	UPL species x 5 = Column Totals: (A) 300 (B)
2. Festuca perennis	- 25	YEAC	Column Totals: 100 (A) 300 (B)
3. Canunculus repens	7	- FAC	Prevalence Index = B/A =
4. Lotus corniculatus	7	EAC	Hydrophytic Vegetation Indicators:
5		FAC	1 - Rapid Test for Hydrophytic Vegetation
6			Y 2 - Dominance Test is >50% Y 3 - Prevalence Index is ≤3.0¹
7			
8			 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants ¹
10			Problematic Hydrophytic Vegetation ¹ (Explain)
11			¹ Indicators of hydric soil and wetland hydrology must
Noody Vine Stratum (Plot size:)	100=	Total Cover	be present, unless disturbed or problematic.
1			Hydrophytic
2			Vegetation /
% Bare Ground in Herb Stratum		Total Cover	Present? Yes/_ No
Remarks: 150 C			
Pass FAC-Neutral. 100%	Facult	asses Don ative, no	minance &PI. Does not clear vegetation change.

SOIL	8/19/20	CI	Sampling Point: (1-01372-6
Brofile Benediction, (Benediction de Alexander de Alexand			

Depth	cription: (Describe i Matrix	to the depth				or confirm	n the absence of indicators.)
(inches)	Color (moist)	%	Color (moist)	Features %		Loc²	Texture Remarks
10-5	2.543/2	100	-		- 1755		Silkoan
6-13	2.543/2	RS 3	1.54R414	15			Sillloam
0.7-	210/10/10	0.5	7/4				3177 C 00 101
l 							
ļ							
Trunci C-C							. 2
	oncentration, D=Depl Indicators: (Applica					Sand Gra	rains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Histosol			_ Sandy Redox (S		u.,		-
_	pipedon (A2)	_	_ Stripped Matrix (2 cm Muck (A10) Red Parent Material (TF2)
Black Hi			Loamy Mucky M) (except	MLRA 1)	
Hydroge	n Sulfide (A4)	_	Loamy Gleyed M			,	Other (Explain in Remarks)
	i Below Dark Surface	(A11)	_ Depleted Matrix				
	ark Surface (A12)	7	Redox Dark Sur				³ Indicators of hydrophytic vegetation and
1 —	lucky Mineral (S1) Bleyed Matrix (S4)	<u>-</u>	Depleted Dark S		7)		wetland hydrology must be present,
	Layer (if present):		_ Redox Depressi	uns (ro)			unless disturbed or problematic.
Type:	auyer (ii present).						
	 ches):	·	_				Hydric Soil Present? Yes X No
Remarks:			<u></u>				Rydric Soil Fresent? Yes _/_ NO
Noments.							
=							
	<u></u>						
HYDROLO	GY						
_	drology Indicators:						
Primary Indig	ators (minimum of or	ne required; o	check all that apply)			Secondary Indicators (2 or more required)
Surface	Water (A1)		Water-Stain	ed Leave	s (B9) (ex	cept	Water-Stained Leaves (B9) (MLRA 1, 2,
	ter Table (A2)			, 2, 4A, ar	nd 4B)		4A, and 4B)
Saturation	* *		Salt Crust (Drainage Patterns (B10)
	arks (B1)		Aquatic Inve				Dry-Season Water Table (C2)
	t Deposits (B2)		Hydrogen S				Saturation Visible on Aerial Imagery (C9)
	osits (B3)		Oxidized Ri		_	_	ts (C3) Geomorphic Position (D2)
	it or Crust (B4)		Presence of				Shallow Aquitard (D3)
	osits (B5)		Recent Iron			, ,	
	Soil Cracks (B6)		Stunted or \$		•) (LRR A)	
l	on Visible on Aerial In		Other (Expl	ain in Ren	narks)		Frost-Heave Hummocks (D7)
	Vegetated Concave	Surface (B8)	<u> </u>				
Field Observ			V				
Surface Water		s No	13.6			_	
Water Table		s No	1.7			- 1	
Saturation Pr (includes cap		s No	Depth (incl	nes):		_ Wetlar	and Hydrology Present? Yes No
	corded Data (stream	gauge, monit	toring well, aerial pl	notos, prev	vious insp	ections), if	if available:
		_	÷ , = = = = = = = = = = = = = = = = = =			/, •	
Remarks:							74

oplicant/Owner: () 5()			State CA Sampling Date: 819/70
vestigator(s): M. Schunger K. McDo	MILM	galfatten	State: A Sampling Point:
ndform (hillslope, terrace, etc.):	231,31	Section, Township, Ra	inge:
bregion (LRR):		Local relief (concave,	convex, none): flat to renvex Slope (%): 2
	Lat:		Long: Datum:
il Map Unit Name:			NWI classification:
e climatic / hydrologic conditions on the site typical for			(If no, explain in Remarks.)
e Vegetation, Soil, or Hydrology			"Normal Circumstances" present? Yes No
e Vegetation, Soil, or Hydrology	_ naturally pro	oblematic? (If ne	eeded, explain any answers in Remarks.)
UMMARY OF FINDINGS - Attach site ma	ap showing		ocations, transects, important features, et
hydrophytic Vegetation Present?		- Infinity point (ocations, transects, important reatures, et
Hydric Soil Present? Yes		Is the Sampled	I Area /
Vetland Hydrology Present? Yes	No V	within a Wetlan	nd? Yes No/_
		the same of the sa	
parameter near	1099	eventually	peters out to N., tie to road
GETATION - Use scientific names of pl	ants.		
V AVV. IV. A. T.	Absoluto	Dominant Indicator	Dominance Test worksheet:
ree Stratum (Plot size:)		Species? Status	Number of Dominant Species
			That Are OBL, FACW, or FAC: (A)
			Total Number of Dominant
			Species Across All Strata: (B)
			Percent of Dominant Species
apling/Shrub Stratum (Plot size:)		_ = Total Cover	That Are OBL, FACW, or FAC: 100% (A/B
			Prevalence Index worksheet:
			Total % Cover of: Multiply by:
			OBL species x 1 =
-			FACW species x 2 =
			FACULTURE 100 x3= 300
look Stanton (District) 2	_	= Total Cover	FACU species x 4 =
lerb Stratum (Plot size: 122)	75	Y CAG	UPL species x 5 =
Essuca peremis	10	FAL	(B)
Rannalus raens	1<	- FAC	Prevalence Index = B/A = 3.00
		—AC	Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
			✓ 2 - Dominance Test is >50% ✓ 3 - Prevalence Index is ≤3.01
			 4 - Morphological Adaptations¹ (Provide supportin data in Remarks or on a separate sheet)
			5 - Wetland Non-Vascular Plants¹
0.			Problematic Hydrophytic Vegetation ¹ (Explain)
1			¹ Indicators of hydric soil and wetland hydrology must
	100	= Total Cover	be present, unless disturbed or problematic.
loody Vine Stratum (Plot size:)	27 - 27		
			Hydrophytic
		det bregger de la lace	Vegetation Present? Yes No
		= Total Cover	Tes V NO
Bare Ground in Herb Stratum	-		

	:-				8/19/		C7			g Point: _(1-01
	ription: (Describe	to the dep	th needed to docur			or confin	m the abse	nce of inc	licators.)		
Depth (inches)	Matrix Color (moist)			x Features		1 2			_		
(inches) 6-9		%	Color (moist)		Type ¹	_Loc²	Textur		Re	marks	
0-9	2543/2	100		-			2114	Loam			
9-14	2.543/2	<u>85</u>	7548414	15		M	Silt	bean			
•	•		•								
		. ——		- —			. —				
	-										
	_										
										_	
Functi C=C=		Jodina Dita	- Cardyna d Markity i OS					2			
			Reduced Matrix, CS			ed Sand G			PL=Pore L Problemati		
Histosol (SON WAII			Ju.,					n nyuric s	OUIS :
	ipedon (A2)		Sandy Redox (Sandy Stripped Matrix					2 cm Muci Red Parer	c (A10) it Material (1	res)	
_ Black His			Loamy Mucky N		l) (except	MLRA 1			ow Dark Su		21
	n Sulfide (A4)		Loamy Gleyed i				_		olain in Rem		- ;
	Below Dark Surfac	e (A11)	Depleted Matrix		,						
	rk Surface (A12)		Redox Dark Su				3Indi	cators of h	ydrophytic v	egetation :	and
_ Sandy M	ucky Mineral (\$1)		Depleted Dark :	Surface (F	7)		W	etland hyd	rology musi	t be presen	ıt,
	leyed Matrix (S4)		Redox Depress	ions (F8)			u	nless distu	rbed or prol	blematic.	
estrictive L	ayer (if present):				-						
											,
Туре:	hes):		_				Hydric	Soil Prese	nt? Yes	1	No/
Туре:							Hydric	Soil Prese	nt? Yes		No
Type: Depth (inc							Hydric	Soil Prese	nt? Yes		No
Type: Depth (inc							Hydric	Soil Prese	nt? Yes		No
Type: Depth (inc							Hydric	Soil Prese	nt? Yes		No
Type: Depth (inc emarks:	hes):						Hydric	Soil Press	nt? Yes		No
Type:	hes):						Hydric	Soil Prese	nt? Yes		No
Type:	hes): GY rology Indicators:										No
Type: Depth (incline emarks: /DROLOG /etland Hydrimary Indicar	GY rology Indicators:		t; check all that apply	y)					nt? Yes		No
Type: Depth (incline incline inc	GY rology Indicators: ators (minimum of o		Water-Stai	ined Leave		xcept		econdary 1		or more re	
Type: Depth (incline incline incl	GY rology Indicators: ators (minimum of o Vater (A1) er Table (A2)		Water-Stai			xcept		econdary 1	ndicators (2	or more re	
Type: Depth (incline incline inc	Frology Indicators: ators (minimum of o Nater (A1) er Table (A2) n (A3)		Water-Stai	ined Leave 1, 2, 4A, a		xcept		econdary I _ Water-S 4A, a	ndicators (2 tained Leav	or more re	
Type: Depth (inc. emarks: /DROLOC /etland Hyd rimary Indica Surface V High Wat Saturation Water Ma	GY rology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3) arks (B1)		Water-Stai	ined Leave 1, 2, 4A, a (B11)	nd 48)	xcept	<u>S</u>	econdary I _ Water-S 4A, a _ Drainag	ndicators (2 tained Leav and 4B)	or more re res (B9) (M	
Type:	rology Indicators: ators (minimum of o Nater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2)		Water-Stai MLRA Salt Crust	ined Leave 1, 2, 4A, a (B11) vertebrates	and 4B) s (B13)	xcept	<u>S</u>	econdary I _ Water-S 4A, a _ Drainag _ Dry-Sea	ndicators (2 tained Leav and 4B) e Patterns (1	or more re res (B9) (M B10) Fable (C2)	LRA 1,
Type: Depth (inc. emarks: /DROLOC /etland Hyd rimary Indica _ Surface V _ High Wat _ Saturation _ Water Ma	rology Indicators: ators (minimum of o Nater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2)		Water-Stai MLRA Salt Crust Aquatic Inv	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Od	s (B13) for (C1)		<u>S</u>	econdary I Water-S 4A, a Drainag Dry-Sea Saturati	ndicators (2 tained Leav and 4B) e Patterns (I son Water 1	or more re res (B9) (M B10) Fable (C2) n Aerial Im:	LRA 1,
Type:	rology Indicators: ators (minimum of o Nater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)		Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R Presence	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Od Rhizospher of Reduced	nd 4B) s (B13) for (C1) res along d Iron (C4	Living Roo	Section Sectin Section Section Section Section Section Section Section Section	econdary I Water-S 4A, a Drainag Dry-Sea Saturati Geomor	ndicators (2 tained Leav and 4B) e Patterns (I son Water T	or more re res (B9) (M B10) Table (C2) n Aerial Ima	LRA 1,
Type:	rology Indicators: ators (minimum of o Nater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) or Crust (B4) osits (B5)		Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R Presence o	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Od Rhizospher of Reduced n Reduction	nd 48) s (B13) for (C1) res along d Iron (C4 on in Tille	Living Roo 1) d Soils (CC	<u>S</u>	econdary 1 Water-S 4A, a Drainag Dry-Sea Saturati Geomor Shallow FAC-Ne	ndicators (2 tained Leav and 4B) e Patterns (I son Water T on Visible or phic Positio Aquitard (D utral Test (I	or more reves (B9) (MB10) Fable (C2) In Aerial Imit (D2) In (D2) In (D2)	LRA 1,
Type: Depth (inc. Permarks: POROLOG Vetland Hyd Immary Indica Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S	rology Indicators: ators (minimum of o Nater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) or Crust (B4) osits (B5) Soil Cracks (B6)	ne required	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iron Stunted or	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Od Rhizospher of Reduceto Reduction Stressed I	s (B13) for (C1) res along d Iron (C4 on in Tilled Plants (D	Living Roo 1) d Soils (CC	<u>S</u>	econdary 1 Water-S 4A, a Drainag Dry-Sea Saturati Geomor Shallow FAC-Ne	ndicators (2 tained Leav and 4B) e Patterns (I son Water T on Visible of phic Positio Aquitard (D	or more reves (B9) (MB10) Fable (C2) In Aerial Imit (D2) In (D2) In (D2)	LRA 1,
Type:	rology Indicators: ators (minimum of o Nater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) c or Crust (B4) osits (B5) Soil Cracks (B6) n Visible on Aerial I	ne required	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iron Stunted or Other (Exp	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Od Rhizospher of Reduceto Reduction Stressed I	s (B13) for (C1) res along d Iron (C4 on in Tilled Plants (D	Living Roo 1) d Soils (CC	<u>S</u>	econdary 1 Water-S 4A, a Drainag Dry-Sea Saturati Geomor Shallow FAC-Ne Raised	ndicators (2 tained Leav and 4B) e Patterns (I son Water T on Visible or phic Positio Aquitard (D utral Test (I	or more re res (B9) (M B10) Fable (C2) n Aerial Ima n (D2) 3) D5) (D6) (LRR	LRA 1,
Type:	rology Indicators: ators (minimum of o Nater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) or Crust (B4) osits (B5) Soil Cracks (B6) n Visible on Aerial I Vegetated Concave	ne required	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iron Stunted or Other (Exp	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Od Rhizospher of Reduceto Reduction Stressed I	s (B13) for (C1) res along d Iron (C4 on in Tilled Plants (D	Living Roo 1) d Soils (CC	<u>S</u>	econdary 1 Water-S 4A, a Drainag Dry-Sea Saturati Geomor Shallow FAC-Ne Raised	ndicators (2 tained Leav and 4B) e Patterns (i son Water 1 on Visible or phic Positio Aquitard (D utral Test (D Ant Mounds	or more re res (B9) (M B10) Fable (C2) n Aerial Ima n (D2) 3) D5) (D6) (LRR	LRA 1,
Type:	rology Indicators: ators (minimum of o Nater (A1) for Table (A2) in (A3) arks (B1) it Deposits (B2) osits (B3) for Crust (B4) osits (B5) Soil Cracks (B6) in Visible on Aerial II Vegetated Concave ations:	ne required	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iron Stunted or Other (Exp	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Od Rhizospher of Reduceto Reduction Stressed I	s (B13) for (C1) res along d Iron (C4 on in Tilled Plants (D	Living Roo 1) d Soils (CC	<u>S</u>	econdary 1 Water-S 4A, a Drainag Dry-Sea Saturati Geomor Shallow FAC-Ne Raised	ndicators (2 tained Leav and 4B) e Patterns (i son Water 1 on Visible or phic Positio Aquitard (D utral Test (D Ant Mounds	or more re res (B9) (M B10) Fable (C2) n Aerial Ima n (D2) 3) D5) (D6) (LRR	LRA 1,
Type:	rology Indicators: ators (minimum of o Nater (A1) for Table (A2) in (A3) arks (B1) it Deposits (B2) osits (B3) for Crust (B4) osits (B5) Soil Cracks (B6) in Visible on Aerial II Vegetated Concave ations:	ne required	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R Presence o Recent Iron Stunted or Other (Exp	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Od Rhizospher of Reduceto Reduction Stressed I	s (B13) for (C1) res along d Iron (C4 on in Tilled Plants (D marks)	Living Roo 1) d Soils (CC 1) (LRR A	<u>S</u>	econdary 1 Water-S 4A, a Drainag Dry-Sea Saturati Geomor Shallow FAC-Ne Raised	ndicators (2 tained Leav and 4B) e Patterns (i son Water 1 on Visible or phic Positio Aquitard (D utral Test (D Ant Mounds	or more re res (B9) (M B10) Fable (C2) n Aerial Ima n (D2) 3) D5) (D6) (LRR	LRA 1,
Type:	rology Indicators: ators (minimum of o Nater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) or Crust (B4) osits (B5) Soil Cracks (B6) n Visible on Aerial I Vegetated Concave ations: r Present?	magery (B7	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iron Stunted or Other (Exp	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Od Rhizosphen of Reduced n Reduction Stressed I plain in Rer	s (B13) for (C1) res along d fron (C4 on in Tilled Plants (D marks)	Living Roots Soils (Ct LRR A	<u>S</u>	econdary 1 Water-S 4A, a Drainag Dry-Sea Saturati Geomor Shallow FAC-Ne Raised	ndicators (2 tained Leav and 4B) e Patterns (i son Water 1 on Visible or phic Positio Aquitard (D utral Test (D Ant Mounds	or more re res (B9) (M B10) Fable (C2) n Aerial Ima n (D2) 3) D5) (D6) (LRR	LRA 1,
Type:	rology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) n Visible on Aerial I Vegetated Concave ations: r Present? Y	magery (B7	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iron Stunted or Other (Exp	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Od thizospher of Reduced n Reduction Stressed I blain in Rer ches):	s (B13) for (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Roots Soils (Ce 1) (LRR A	ots (C3)	econdary I Water-S 4A, a Drainag Dry-Sea Saturati Geomor Shallow FAC-Ne Raised A Frost-He	ndicators (2 tained Leav and 4B) e Patterns (i son Water 1 on Visible or phic Positio Aquitard (D utral Test (D Ant Mounds	or more re res (B9) (M B10) Fable (C2) n Aerial Ima n (D2) 3) 05) (D6) (LRR ocks (D7)	LRA 1,

plicant/Owner: DFD	10 01	1. Vaclation	State: A Sampling Point: 113T
restigator(s): M. Schwacz, K.M.	101 Journaly:	Section, Township, Ra	nge;
ndform (hillslope, terrace, etc.): both can's		Local relief (concave,	convex, none): 1000 Slope (%): 16
bregion (LRR):	Lat:		Long: Datum:
il Map Unit Name:		1	NWI classification:
e climatic / hydrologic conditions on the site typica			(If no, explain in Remarks.)
e Vegetation, Soil, or Hydrology _		200.00	"Normal Circumstances" present? Yes No
e Vegetation, Soil, or Hydrology _			peded, explain any answers in Remarks.)
			ocations, transects, important features, et
lydrophytic Vegetation Present? Yes		- January	eranono, manocoto, important reatures, et
Hydric Soil Present? Yes		Is the Sampled	
Vetland Hydrology Present? Yes	No	within a Wetlar	nd? Yes No
demarks:			
EGETATION LIPS SSIGNAGE	250.00		
EGETATION – Use scientific names o			
ree Stratum (Plot size:)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet:
			Number of Dominant Species That Are OBL, FACW, or FAC:(A)
-			Total Number of Dominant Species Across All Strata: (B)
			1-7
		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:(A/E
Sapling/Shrub Stratum (Plot size:			Prevalence Index worksheet:
,			Total % Cover of: Multiply by:
3			OBL species x 1 =
			FACW species x 2 =
5			FAC species 100 x3 = 300
		= Total Cover	FACU species x 4 =
Herb Stratum (Plot size:	-		UPL species x 5 =
Agrestis Stobolifer 3		Y FAC	Column Totals: 100 (A) 300 (B
2. Fertuca perennis	-16	FAC	Prevalence Index = B/A =3.00
3. Ranunculusrepens		FAC	Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
5.			2 - Dominance Test is >50%
6 7.			
7			4 - Morphological Adaptations¹ (Provide supporti
9			data in Remarks or on a separate sheet)
10			5 - Wetland Non-Vascular Plants
11			Problematic Hydrophytic Vegetation¹ (Explain)
	100	= Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)			Providingle.
1			Hydrophytic
2			Vegetation /
2			
% Bare Ground in Herb Stratum	_	= Total Cover	Present? Yes V No 1. Passes PI-100°1. Faculat

SOIL				8	1/19/20		CI	Sampling Point	U-01373-1
Profile Des	cription: (Describe	to the dept	h needed to docun	nent the i	ndicator o	r confirm	the absence of i		
Depth	Matrix			x Feature:			_		
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²		Remarks	
0-4	2.543/2	100	= ::0 1/ 1				Siltloum		
7-15	2.5 Y 3/2	<u>85</u>	751R4/4	15	/	m	Sill Loam		
							_		
									
	<u> </u>								
	oncentration, D=Dep					Sand Gr		n: PL=Pore Lining, M	
_	Indicators: (Applic	able to all I	·		ed.)			or Problematic Hydr	ic Soils*:
Histosol	pipedon (A2)	•	Sandy Redox (S Stripped Matrix et al.)				2 cm Mu	ick (A10) ent Material (TF2)	
	istic (A3)	•	Loamy Mucky M		I) (excent	MI RA 1)		ent Material (11-2) allow Dark Surface (T	F12)
	en Sulfide (A4)		Loamy Gleyed N					xplain in Remarks)	1 12)
	d Below Dark Surface	e (A11)	Depleted Matrix		,			,	
	ark Surface (A12)		Redox Dark Sur				³ Indicators of	f hydrophytic vegetati	on and
	Mucky Mineral (S1)		Depleted Dark S	•	7)			ydrology must be pre	10.0
	Sleyed Matrix (S4)		Redox Depressi	ons (F8)			unless dis	turbed or problemation	:
	Layer (if present):								
			_				Mandata Call Bar	V	
Remarks:	ches):						Hydric Soil Pre:	sent? Yes / _	No
	GY								
	drology Indicators:								
-	cators (minimum of o	na roquired	chack all that apply	Λ			Socondan	/ Indicators (2 or more	
	Water (A1)	ile required	. <u>Check all that apply</u> Water-Stair		ec (BO) /ex	cont		-Stained Leaves (B9)	
	ater Table (A2)			l, 2, 4A, a		cehr		-Stained Leaves (69) , and 4B)	(WILKA I, Z,
Saturation			Salt Crust (11G 4D)			age Patterns (B10)	
	larks (B1)		Aquatic Inv	•	s (B13)			eason Water Table (C	:2)
	nt Deposits (B2)		Hydrogen S				· ·	ation Visible on Aerial	
	posits (B3)		Oxidized R			iving Roo		orphic Position (D2)	
	at or Crust (B4)		Presence o		-	_		w Aquitard (D3)	
Iron Dep	oosits (B5)		Recent Iron	Reduction	on in Tilled	Soils (C6		Neutral Test (D5)	
Surface	Soil Cracks (B6)		Stunted or	Stressed	Plants (D1) (LRR A)	Raise	d Ant Mounds (D6) (L	RR A)
	on Visible on Aerial I			lain in Rei	marks)		Frost-	Heave Hummocks (D	7)
Sparsely	Vegetated Concave	Surface (B	8)						W = 10
Field Obser			V						
Surface Wat		es N				- 1			
Water Table		es N	1/2			_ 1		ما	
Saturation Pi (includes car		es N	lo <u> </u>	hes):		_ Wetla	and Hydrology Pre	esent? Yes <u>^</u> _	No
	corded Data (stream	gauge, mor	nitoring well, aerial p	hotos, pre	evious insp	ections), i	if available:	V	П
Řemarks;						_			
· various the,									

Appendix C. On-Site Plant List

Scientific Name	Common Name	Status	Family	Date	WMVC
Achillea millefolium	Yarrow	native	Asteraceae	5/1/2020 5/16/2022	FACU
Agrostis stolonifera	Spreading bentgrass	invasive non- native	Poaceae	5/1/2020 5/16/2022	FAC
Alopecurus geniculatus	Marsh foxtail	native	Poaceae	5/1/2020 5/16/2022	OBL
Angelica hendersonii	Henderson's angelica	native	Apiaceae	5/1/2020	
Angelica lucida	Seacoast angelica	Rare 4.2, native	Apiaceae	5/1/2020	FAC
Anthoxanthum odoratum	Sweet vernal grass	invasive non- native	Poaceae	5/1/2020 5/16/2022	FACU
Artemisia douglasiana	California mugwort	native	Asteraceae	5/21/2020	FACW
Atriplex prostrata	Fat-hen	non-native	Chenopodiaceae	5/1/2020	FAC
Avena barbata	Slim oat	invasive non- native	Poaceae	5/16/2022	FAC
Baccharis pilularis	Coyote brush	native	Asteraceae	5/1/2020	
Bellis perennis	English lawn daisy	non-native	Asteraceae	5/1/2020 5/16/2022	
Bromus diandrus	Ripgut brome	invasive non- native	Poaceae	5/1/2020 5/16/2022	
Bromus hordeaceus	Soft chess	invasive non- native	Poaceae	5/1/2020 5/16/2022	FACU
Bulboschoenus maritimus ssp. paludosus	Salt marsh bulrush	native	Cyperaceae	5/21/2020	OBL
Cardamine oligosperma	Idaho bittercress	native	Brassicaceae	5/1/2020	OBL
Carduus pycnocephalus	Italian thistle	invasive non- native	Asteraceae	5/21/2020	
Carex lyngbyei	Lyngbye's sedge	Rare 2B.2, native	Cyperaceae	5/1/2020	OBL
Castilleja ambigua var. humboldtiensis	Humboldt bay owl's- clover	Rare 1B.2, native	Orobanchaceae	5/1/2020	FACW
Cerastium glomeratum	Large mouse ears	non-native	Caryophyllaceae	5/1/2020	FACU
Chloropyron maritimum ssp. palustre	Point Reyes bird's-beak	Rare 1B.2, native	Orobanchaceae	5/21/2020	OBL
Cirsium arvense	Canada thistle	invasive non- native	Asteraceae	5/16/2022	FAC
Cirsium vulgare	Bullthistle	invasive non- native	Asteraceae	5/1/2020 5/16/2022	FACU
Claytonia perfoliata	Miner's lettuce	native	Montiaceae	5/1/2020	FAC
Conium maculatum	Poison hemlock	invasive non- native	Apiaceae	5/1/2020 5/16/2022	FAC
Convolvulus arvensis	Field bindweed	non-native	Convolvulaceae	5/1/2020	
Cotula coronopifolia	Brass buttons	invasive non- native	Asteraceae	5/1/2020 5/16/2022	OBL
Cuscuta salina	Saltmarsh dodder	native	Convolvulaceae	5/1/2020	
Dactylis glomerata	Orchardgrass	invasive non- native	Poaceae	5/21/2020	FACU
Daucus carota	Carrot	non-native	Apiaceae	5/21/2020	FACU
Deschampsia cespitosa	Tufted hair grass	native	Poaceae	5/1/2020	

Dipsacus fullonum	Wild teasel	invasive non- native	Dipsacaceae	5/1/2020 5/16/2022	FAC
Distichlis spicata	Salt grass	native	Poaceae	5/1/2020	FACW
Eleocharis sp.	Spikerush	native	Cyperaceae	5/1/2020	OBL
Eleocharis macrostachya	Spike-rush	native	Cyperaceae	5/16/2022	OBL
Elymus vancouverensis	Vancouver wild rye	native	Poaceae	7/17/2020	
Elymus repens	Quack grass	non-native	Poaceae	5/21/2020	FAC
Equisetum hyemale ssp. affine	Giant scouring rush	native	Equisetaceae	5/1/2020	FACW
Equisetum telmateia	Giant horsetail	native	Equisetaceae	5/16/2022	FACW
Erodium cicutarium	Coastal heron's bill	invasive non- native	Geraniaceae	5/21/2020	
Festuca arundinacea	Reed fescue	invasive non- native	Poaceae	5/1/2020 5/16/2022	FAC
Festuca bromoides	Brome fescue	non-native	Poaceae	5/1/2020	FAC
Festuca perennis	Italian rye grass	invasive non- native	Poaceae	5/21/2020	FAC
Foeniculum vulgare	Fennel	invasive non- native	Apiaceae	5/1/2020	
Galium aparine	Cleavers	native	Rubiaceae	5/1/2020	FACU
Geranium dissectum	Wild geranium	invasive non- native	Geraniaceae	5/1/2020 5/16/2022	
Grindelia stricta var. stricta	Coastal gum plant	native	Asteraceae	5/1/2020	FACW
Helminthotheca echioides	Bristly ox-tongue	invasive non- native	Asteraceae	5/1/2020 5/16/2022	FAC
Heracleum maximum	Common cowparsnip	native	Apiaceae	5/1/2020	FAC
Holcus lanatus	Common velvetgrass	invasive non- native	Poaceae	5/1/2020 5/16/2022	FAC
Hordeum brachyantherum	Meadow barley	native	Poaceae	5/1/2020	FACW
Hordeum marinum	Seaside barley	non-native	Poaceae	5/1/2020	FAC
Hordeum murinum	Foxtail barley	invasive non- native	Poaceae	5/21/2020 5/16/2022	FAC
Hypochaeris radicata	Hairy cats ear	invasive non- native	Asteraceae	5/1/2020	FACU
Jaumea carnosa	Marsh jaumea	native	Asteraceae	5/1/2020	OBL
Juncus breweri	Brewer's rush	native	Juncaceae	5/1/2020	FACW
Juncus bufonius	Common toad rush	native	Juncaceae	5/1/2020	FACW
Juncus effusus	Lamp rush	native	Juncaceae	5/16/2022	FACW
Juncus hesperius	Coast or bog rush	native	Juncaceae	5/21/2020	FACW
Juncus lescurii	Salt rush	native	Juncaceae	5/21/2020	FACW
Juncus patens	Rush	native	Juncaceae	5/21/2020	FACW
Leontodon saxatilis	Lesser hawkbit	native	Asteraceae	5/16/2022	FAC
Lotus corniculatus	Bird's foot trefoil	non-native	Fabaceae	5/21/2020 5/16/2022	FAC
Lupinus arboreus x	Hybrid bush lupine	native	Fabaceae	5/1/2020	FAC
Lysimachia arvensis	Scarlet pimpernel	non-native	Myrsinaceae	5/1/2020	
Madia sativa	Coast madia	native	Asteraceae	7/17/2020	
Malva neglecta	Dwarf mallow	non-native	Malvaceae	5/21/2020	FACU
Matricaria discoidea	Pineapple weed	native	Asteraceae	5/21/2020 5/16/2022	

Medicago arabica	Spotted burclover	non-native	Fabaceae	5/21/2020	FACU
-	California burclover	invasive non-	Fahaaaa	5/16/2022 5/1/2020	OBL
Medicago polymorpha	California burciover	native	Fabaceae	5/1/2020	OBL
Oenanthe sarmentosa	Water parsley	native	Apiaceae	5/21/2020 5/16/2022	OBL
Parapholis strigosa	Sickle grass	non-native	Poaceae	7/17/2020	OBL
Phalaris arundinacea	Reed canarygrass	native	Poaceae	7/17/2020	
Plantago coronopus	Cut leaf plantain	non-native	Plantaginaceae	5/1/2020 5/16/2022	FAC
Plantago lanceolata	English plantain	invasive non- native	Plantaginaceae	5/1/2020 5/16/2022	FACU
Polystichum munitum	Western sword fern	native	Dryopteridaceae	5/1/2020	FACU
Potentilla anserina ssp. pacifica	Pacific silverweed	native	Rosaceae	5/1/2020 5/16/2022	OBL
Ranunculus repens	Creeping buttercup	invasive non- native	Ranunculaceae	5/21/2020 5/16/2022	FAC
Ranunculus sardous	Hairy buttercup	non-native	Ranunculaceae	5/21/2020	FAC
Raphanus raphanistrum	Jointed charlock	non-native	Brassicaceae	5/1/2020	
Raphanus sativus	Wild radish	invasive non- native	Brassicaceae	5/1/2020 5/16/2022	
Rosa nutkana ssp. nutkana	Nootka rose	native	Rosaceae	5/21/2020 5/16/2022	FACU
Rubus armeniacus	Himalayan blackberry	invasive non- native	Rosaceae	5/1/2020	FAC
Rubus parviflorus	Thimbleberry	native	Rosaceae	5/21/2020	FACU
Rubus ursinus	California blackberry	native	Rosaceae	5/1/2020 5/16/2022	FACU
Rumex acetosella	Sheep sorrel	invasive non- native	Polygonaceae	5/1/2020	FACU
Rumex crispus	Curly dock	invasive non- native	Polygonaceae	5/1/2020 5/16/2022	FAC
Salicornia pacifica	Pickleweed	native	Chenopodiaceae	5/1/2020	OBL
Salix hookeriana	Coastal willow	native	Salicaceae	5/21/2020 5/16/2022	FACW
Sanicula crassicaulis	Pacific sanicle	native	Apiaceae	5/1/2020	
Scirpus microcarpus	Small fruited bulrush	native	Cyperaceae	5/16/2022	OBL
Scrophularia californica	California bee plant	native	Scrophulariaceae	5/1/2020	FAC
Sisymbrium officinale	Hedge mustard	non-native	Brassicaceae	5/21/2020	
Sonchus asper	Spiny sowthistle	non-native	Asteraceae	5/1/2020	FACU
Spartina densiflora	Dense-flowered cordgrass	invasive non- native	Poaceae	5/1/2020	OBL
Spergularia macrotheca var. macrotheca	Sticky sand spurry	native	Caryophyllaceae	5/21/2020	FAC
Spergularia marina	Salt sand spurry	native	Caryophyllaceae	5/1/2020	OBL
Spergularia rubra	Purple sand spurry	non-native	Caryophyllaceae	5/21/2020	FAC
Stachys chamissonis	Hedge nettle	native	Lamiaceae	5/21/2020 5/16/2022	FACW
Symphyotrichum chilense	Pacific aster	native	Asteraceae	5/21/2020 5/16/2022	FAC
Taraxacum erythrospermum	Red-seeded dandelion	non-native	Asteraceae	5/1/2020	
Toxicodendron diversilobum	Poison oak	native	Anacardiaceae	5/1/2020	FAC
Trifolium fragiferum	Strawberry clover	non-native	Fabaceae	7/17/2020	

Trifolium repens	White clover	non-native	Fabaceae	5/21/2020 5/16/2022	FAC
Trifolium wormskioldii	Cow clover	native	Fabaceae	5/1/2020	FACW
Triglochin concinna var. concinna	Arrow grass	native	Juncaginaceae	5/21/2020	OBL
Triglochin maritima	Seaside arrow grass	native	Juncaginaceae	5/1/2020 5/16/2022	OBL
Urtica dioica	Stinging nettle	native	Urticaceae	5/21/2020	FAC
Vicia sativa	Spring vetch	non-native	Fabaceae	5/1/2020 5/16/2022	UPL
Vicia tetrasperma	Four seeded vetch	non-native	Fabaceae	7/17/2020	

Appendix D – Site Photographs



Photo 1. Looking northwest from the tide gate.



Photo 2. Rocked levees around the tide gate.



Photo 3. Inboard side of the tidegate.



Photo 4. Levees dominated by native California blackberry, surrounded by saltmarsh.



Photo 5. Muted tidal waters within the Project Area.



Photo 6. Dilapidated house on 2-parameter upland surrounded by strata of fresh-to-brackish emergent wetland dominated by creeping bentgrass, and saltmarsh dominated by pickleweed.



Photo 7. Uplands north of the dilapidated house.



Photo 8. Hydrophytic plants in former pasture on the northeast side, surrounded by levees dominated by wild radish.



Photo 9. Wet pasture on the northeast side.



Photo 10. Remaining ranch on the east side.



Photo 11. Isolated areas of spike rush and silver weed cinquefoil were observed to the south of Cannibal Island Road in the expanded Project Area where water was ponding. This was surrounded by non-native pasture.

Appendix E – NRCS Custom Soil Resource Report

Map Unit Description

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 in this report, 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, soils that are similar to the named components, and some minor components that differ in use and management from the major soils.

Most of the soils similar to the major components 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. Some minor components, however, have properties and behavior 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*. All the soils of a series have major horizons that are similar in composition, thickness, and arrangement. Soils of a given 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.

Additional information about the map units described in this report is available in other soil reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the soil reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description

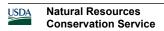
Humboldt County, Central Part, California

100—Water and Fluvents, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 119dm

Elevation: 10 to 50 feet



Mean annual precipitation: 40 to 75 inches Mean annual air temperature: 50 to 59 degrees F

Frost-free period: 300 to 330 days

Farmland classification: Not prime farmland

Map Unit Composition

Water: 60 percent

Fluvents and similar soils: 35 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of

the mapunit.

Description of Water

Setting

Landform: Rivers on channels Down-slope shape: Concave, linear

Across-slope shape: Linear

Description of Fluvents

Setting

Landform: Point bars on channels

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Base slope

Down-slope shape: Concave, convex

Across-slope shape: Linear

Parent material: Alluvium derived from mixed

Typical profile

A - 0 to 13 inches: gravelly fine sandy loam

C - 13 to 59 inches: extremely gravelly sandy loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches Drainage class: Somewhat excessively drained Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)

Depth to water table: About 0 inches Frequency of flooding: FrequentNone

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0

mmhos/cm)

Available water capacity: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): 5w Land capability classification (nonirrigated): 5w

Hydrologic Soil Group: B/D

Other vegetative classification: Riparian & Wetland Vegetation

(RNPR001CA)

Hydric soil rating: Yes

Minor Components

Typic udifluvents

Percent of map unit: 4 percent Landform: Meandering channels

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

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

Rock outcrop

Percent of map unit: 1 percent

Landform: Channels

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Base slope

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

110—Weott, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: hs3l

Elevation: 0 to 150 feet

Mean annual precipitation: 35 to 80 inches Mean annual air temperature: 50 to 55 degrees F

Frost-free period: 275 to 330 days

Farmland classification: Prime farmland if irrigated and drained

Map Unit Composition

Weott and similar soils: 85 percent Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of

the mapunit.

Description of Weott

Setting

Landform: Backswamps, depressions, flood-plain steps Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Tread

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

Parent material: Alluvium derived from mixed sources

Typical profile

Ap - 0 to 12 inches: silt loam

Bg1 - 12 to 26 inches: silt loam

Bg2 - 26 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)

Depth to water table: About 0 to 4 inches Frequency of flooding: OccasionalNone

Frequency of ponding: Frequent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0

mmhos/cm)

Available water capacity: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): 5w Land capability classification (nonirrigated): 5w

Hydrologic Soil Group: B/D Hydric soil rating: Yes

Minor Components

Worswick

Percent of map unit: 5 percent

Landform: Natural levees, flood-plain steps Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

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

Swainslough

Percent of map unit: 4 percent

Landform: Depressions, flood-plain steps, salt marshes,

backswamps

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread, talf

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

Arlynda

Percent of map unit: 3 percent

Landform: Flood-plain steps, meander scars, backswamps,

depressions

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

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

Ferndale

Percent of map unit: 3 percent Landform: Flood-plain steps

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

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

117—Swainslough-Occidental complex, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: hs2f

Elevation: 0 to 20 feet

Mean annual precipitation: 35 to 80 inches
Mean annual air temperature: 50 to 56 degrees F

Frost-free period: 275 to 330 days

Farmland classification: Not prime farmland

Map Unit Composition

Swainslough and similar soils: 70 percent Occidental and similar soils: 20 percent

Minor components: 10 percent

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

Description of Swainslough

Setting

Landform: Backswamps, depressions, flood-plain steps, salt

marshes

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread, talf, dip

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

Parent material: Alluvium derived from mixed sources

Typical profile

A - 0 to 12 inches: silty clay loam

Bg1 - 12 to 31 inches: silty clay loam

Bg2 - 31 to 60 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)

Depth to water table: About 0 to 4 inches Frequency of flooding: OccasionalNone

Frequency of ponding: Frequent

Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0

mmhos/cm)

Available water capacity: High (about 10.1 inches)

Interpretive groups

Land capability classification (irrigated): 5w Land capability classification (nonirrigated): 5w

Hydrologic Soil Group: C/D Hydric soil rating: Yes

Description of Occidental

Setting

Landform: Tidal marshes, salt marshes Landform position (three-dimensional): Talf

Down-slope shape: Linear, convex Across-slope shape: Linear, convex

Parent material: Alluvium derived from mixed sources

Typical profile

A - 0 to 8 inches: silty clay loam

Bzg1 - 8 to 24 inches: silty clay loam

Bzg2 - 24 to 33 inches: silty clay loam

Bzg3 - 33 to 62 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

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: About 0 to 6 inches Frequency of flooding: OccasionalNone

Frequency of ponding: Frequent

Maximum salinity: Slightly saline to strongly saline (4.0 to 25.0

mmhos/cm)

Available water capacity: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): 7w Land capability classification (nonirrigated): 7w

Hydrologic Soil Group: C/D Hydric soil rating: Yes

Minor Components

Worswick

Percent of map unit: 4 percent

Landform: Flood-plain steps, natural levees Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

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

Loleta

Percent of map unit: 3 percent Landform: Fan remnants, alluvial fans



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

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

Arlynda

Percent of map unit: 3 percent

Landform: Meander scars, backswamps, depressions, flood-plain

steps

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

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

119—Arlynda, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: hs3p

Elevation: 0 to 160 feet

Mean annual precipitation: 35 to 80 inches Mean annual air temperature: 50 to 55 degrees F

Frost-free period: 275 to 330 days

Farmland classification: Prime farmland if irrigated and drained

Map Unit Composition

Arlynda and similar soils: 85 percent Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of

the mapunit.

Description of Arlynda

Setting

Landform: Meander scars, backswamps, depressions, flood-plain

steps

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

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

Parent material: Alluvium derived from mixed sources

Typical profile

Oi - 0 to 3 inches: slightly decomposed plant material

A - 3 to 14 inches: silty clay loam
Bg1 - 14 to 22 inches: silty clay loam
Cg1 - 22 to 63 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)

Depth to water table: About 0 to 4 inches Frequency of flooding: OccasionalNone

Frequency of ponding: Frequent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0

mmhos/cm)

Available water capacity: High (about 11.6 inches)

Interpretive groups

Land capability classification (irrigated): 5w Land capability classification (nonirrigated): 5w

Hydrologic Soil Group: C/D Hydric soil rating: Yes

Minor Components

Wigi, occasionally flooded

Percent of map unit: 5 percent

Landform: Salt marshes

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

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

Worswick

Percent of map unit: 5 percent

Landform: Natural levees, flood-plain steps Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

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

Loleta

Percent of map unit: 5 percent

Landform: Alluvial fans, fan remnants

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

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

140—Occidental, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: hs43

Elevation: 0 to 30 feet

Mean annual precipitation: 35 to 80 inches Mean annual air temperature: 50 to 55 degrees F

Frost-free period: 275 to 330 days

Farmland classification: Not prime farmland

Map Unit Composition

Occidental and similar soils: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of

the mapunit.

Description of Occidental

Setting

Landform: Salt marshes

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

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

Parent material: Alluvium derived from mixed sources

Typical profile

Oi - 0 to 3 inches: peat

A - 3 to 12 inches: silty clay loam

Bzg1 - 12 to 17 inches: silty clay loam

Bzg2 - 17 to 63 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

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: About 0 to 4 inches Frequency of flooding: NoneOccasional

Frequency of ponding: Frequent

Maximum salinity: Slightly saline to strongly saline (4.0 to 25.0

mmhos/cm)

Available water capacity: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): 7w Land capability classification (nonirrigated): 7w

Hydrologic Soil Group: C/D Hydric soil rating: Yes

Minor Components

Wigi, occasionally flooded

Percent of map unit: 3 percent

Landform: Salt marshes

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

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

Hydraquents, high tidal

Percent of map unit: 3 percent Landform: Tidal marshes

Landform position (three-dimensional): Talf

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

Swainslough

Percent of map unit: 2 percent

Landform: Backswamps, depressions, flood-plain steps, salt

marshes

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread, talf

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

Arlynda

Percent of map unit: 1 percent

Landform: Backswamps, depressions, flood-plain steps, meander

scars

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

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

Typic udifluvents

Percent of map unit: 1 percent Landform: Meandering channels

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

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

142—Wigi, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: hs45

Elevation: 0 to 20 feet

Mean annual precipitation: 35 to 80 inches Mean annual air temperature: 50 to 55 degrees F

Frost-free period: 275 to 330 days

Farmland classification: Not prime farmland

Map Unit Composition

Wigi, occasionally flooded, and similar soils: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of

the mapunit.

Description of Wigi, Occasionally Flooded

Setting

Landform: Salt marshes

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

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

Parent material: Alluvium derived from mixed sources

Typical profile

Oi - 0 to 1 inches: peat A - 1 to 7 inches: silt loam

Bzg1 - 7 to 21 inches: silty clay loam Bzg2 - 21 to 40 inches: silty clay loam Bzg3 - 40 to 60 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)

Depth to water table: About 0 to 6 inches Frequency of flooding: OccasionalNone

Frequency of ponding: Frequent

Maximum salinity: Strongly saline (20.0 to 40.0 mmhos/cm)

Available water capacity: High (about 10.3 inches)

Interpretive groups

Land capability classification (irrigated): 7s Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: C/D Hydric soil rating: Yes

Minor Components

Hydraquents, high tidal

Percent of map unit: 3 percent Landform: Tidal marshes

Landform position (three-dimensional): Talf

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

Occidental

Percent of map unit: 3 percent Landform: Salt marshes

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

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

Arlynda

Percent of map unit: 2 percent

Landform: Depressions, flood-plain steps, meander scars,

backswamps

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

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

Swainslough

Percent of map unit: 1 percent

Landform: Flood-plain steps, salt marshes, backswamps,

depressions

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread, talf

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

Typic udifluvents

Percent of map unit: 1 percent Landform: Meandering channels

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

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

155—Samoa-Clambeach complex, 0 to 50 percent slopes

Map Unit Setting

National map unit symbol: hs2h

Elevation: 0 to 70 feet

Mean annual precipitation: 35 to 80 inches Mean annual air temperature: 50 to 55 degrees F

Frost-free period: 275 to 330 days

Farmland classification: Not prime farmland

Map Unit Composition

Samoa and similar soils: 65 percent Clambeach and similar soils: 30 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of

the mapunit.

Description of Samoa

Setting

Landform: Dunes

Landform position (two-dimensional): Shoulder, backslope, summit

Landform position (three-dimensional): Tread

Down-slope shape: Linear, convex Across-slope shape: Linear, convex

Parent material: Eolian and marine sand derived from mixed

sources

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material

A - 1 to 6 inches: sand AC - 6 to 18 inches: sand C - 18 to 63 inches: sand

Properties and qualities

Slope: 2 to 50 percent

Depth to restrictive feature: More than 80 inches Drainage class: Somewhat excessively drained

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

very high (5.95 to 19.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0

mmhos/cm)

Available water capacity: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: A Hydric soil rating: No

Description of Clambeach

Setting

Landform: Deflation basins

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

Down-slope shape: Concave, linear Across-slope shape: Concave, linear

Parent material: Eolian and marine sand derived from mixed

sources

Typical profile

A - 0 to 9 inches: sand Cg1 - 9 to 20 inches: sand Cg2 - 20 to 63 inches: sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

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

very high (5.95 to 19.98 in/hr)

Depth to water table: About 0 to 4 inches

Frequency of flooding: None

Frequency of ponding: Frequent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0

mmhos/cm)

Available water capacity: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 5w

Hydrologic Soil Group: A/D Hydric soil rating: Yes

Minor Components

Oxyaquic udipsamments, unvegetated

Percent of map unit: 5 percent

Landform: Beaches

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

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

Data Source Information

Soil Survey Area: Humboldt County, Central Part, California

Survey Area Data: Version 6, Jun 1, 2020

Appendix F – Record of Climatological Observations and WETS Table

WETC Chatian: FUDEI/A													
WETS Station: EUREKA WFO WOODLEY ISLAND, CA													
Requested years: 2000 - 2020													
Month	Avg Max Temp	Avg Min Temp	Avg Mean Temp	Avg Precip	30% chance precip less than	30% chance precip more than	Avg number days precip 0.10 or more	Avg Snowfall					
Jan	55.3	40.8	48.1	6.28	3.75	7.62	11	0.0					
Feb	55.4	41.1	48.2	5.39	3.22	6.54	10	0.0					
Mar	56.2	42.6	49.4	5.76	3.94	6.87	11	0.0					
Apr	57.6	44.5	51.0	3.61	2.37	4.33	8	0.0					
May	60.0	48.1	54.0	1.56	0.68	1.90	4	0.0					
Jun	62.5	50.5	56.5	0.66	0.19	0.74	2	0.0					
Jul	63.6	52.8	58.2	0.15	0.04	0.16	0	0.0					
Aug	64.4	53.3	58.9	0.14	0.05	0.16	0	0.0					
Sep	64.3	50.7	57.5	0.76	0.18	0.88	2	0.0					
Oct	61.9	47.2	54.6	2.66	0.93	3.20	5	0.0					
Nov	58.2	43.4	50.8	4.70	3.30	5.58	9	0.0					
Dec	55.0	40.5	47.7	8.31	4.58	10.13	13	0.0					
Annual:					34.26	44.90							
Average	59.5	46.3	52.9	-	-	-	-	-					
Total	-	-	-	39.98			75	0.1					
GROWING SEASON DATES													
Years with missing data:	24 deg = 0	28 deg = 0	32 deg =										
rears with missing data.	24 deg - 0	20 deg = 0	1										
Years with no occurrence:	24 deg = 21	28 deg = 18	32 deg = 1										
Data years used:	24 deg = 21	28 deg = 21	32 deg = 20										
Probability	24 F or higher	28 F or higher	32 F or higher										
50 percent *	No occurrence	No occurrence	2/14 to 12/9: 298 days										
70 percent *	No occurrence	No occurrence	2/5 to 12/18: 316 days										
* Percent chance of the growing season occurring between the Beginning and Ending dates.													
STATS TABLE - total precipitation (inches)													
Yr	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annl
1886												9. 78	9.78
1887	8.86	9.00	2.28		3.51	1.92	0.06	0.07	0. 21	0. 55	2. 66	5. 43	34. 55
1888	12.95	1.98	4.09		0.76	4.66	0.44	0.00	0. 06	1. 15	3. 41	5. 93	35. 43
1889	4.25	1.93	5.91	1.40	7.27	0.37	0.15	0.13	0. 32	8. 36	3. 71	12. 88	45. 28
1890	18.26	13.88	11.57	1.43	1.71	0.90	0.08	0.02	0. 79	0. 44	0. 18	5. 48	54. 74
1891	3.33	9.81 2.53	5.83 5.32	6.37	1.55 3.63	1.53 0.45	0.28	0.31	1. 45	1. 64 2.	2. 72 8.	10. 97 6.	45. 79 33.
1892	3.29	6.27	10.59	2.99	2.43	0.45	0.00	0.09	0. 99 2.	90 4.	8. 19 9.	6. 55 6.	94 49.
1033	5.05	0.21	10.03	۷.33	2.40	0.00	0.00	0.00	39	33	9. 87	69	54

1894	12.38	6.13	7.46	M1.28	1.31	1.67	0.02	0.04	1. 84	3. 12	2. 03	12. 31	49. 59
1895	9.37	3.60	5.31	2.88	5.39	0.06	0.23	0.11	3. 14	0. 05	3. 88	7. 50	41. 52
1896	8.14	4.61	6.93	6.88	6.22	0.51	0.00	0.70	1. 60	2. 37	8. 00	9. 41	55. 37
1897	3.04	11.23	9.85	1.36	0.75	1.60	0.03	0.15	1. 05	2. 63	5. 44	6. 18	43. 31
1898	3.23	8.00	1.80	1.82	2.62	1.21	0.00	0.06	1. 48	2. 13	4. 43	3. 17	29. 95
1899	6.50	5.03	8.53	1.91	1.73	0.75	0.00	0.42	0. 88	4. 28	14. 80	7. 05	51. 88
1900	6.63	6.04	3.42	4.43	2.08	1.70	Т	0.07	0. 21	7. 07	8. 01	5. 27	44. 93
1901	9.93	7.41	3.86	4.08	1.50	0.12	0.03	Т	4. 26	2. 46	3. 96	4. 43	42. 04
1902	1.95	19.49	7.85	4.56	2.70	0.27	0.25	T	0. 14	2. 34	10. 88	8. 33	58. 76
1903	16.07	3.80	7.42	1.23	0.70	0.57	0.06	0.53	0. 28	2. 42	10. 79	4. 03	47. 90
1904	5.24	16.10	19.05	5.14	1.02	0.55	0.75	Т	1. 36	2. 67	4. 41	8. 18	64. 47
1905	4.81	0.99	7.41	0.78	1.99	0.12	0.02	0.00	0. 38	1. 50	3. 93	4. 32	26. 25
1906	7.63	6.27	7.72	2.14	3.57	1.56	0.01	0.01	0. 76	0. 67	3. 13	7. 59	41. 06
1907	10.40	10.57	11.83	3.30	1.69	0.58	Т	2.66	0. 63	1. 48	2. 38	8. 59	54. 11
1908	7.23	6.59	2.82	0.85	2.57	0.19	Т	0.16	0. 02	5. 09	3. 97	3. 91	33. 40
1909	14.41	11.54	2.72	0.24	0.76	0.14	0.55	Т	0. 61	3. 78	12. 60	4. 29	51. 64
1910	7.26	7.33	1.97	0.83	0.64	0.49	0.00	0.00	0. 01	0. 82	6. 86	3. 43	29. 64
1911	8.63	3.75	1.45	3.39	3.52	0.23	Т	0.08	0. 29	1. 68	2. 09	4. 74	29. 85
1912	10.17	5.73	4.73	5.92	1.98	1.29	0.05	0.04	2. 40	1. 55	6. 86	5. 83	46. 55
1913	8.10	0.87	3.61	3.41	1.67	1.60	0.28	0.03	0. 48	0. 88	5. 29	7. 58	33. 80
1914	9.75	4.20	3.13	3.27	0.70	1.73	0.01	T	1. 82	3. 79	2. 42	7. 09	37. 91
1915	9.75	12.39	1.65	1.38	2.07	0.05	0.26	0.00	0. 11	0. 79	6. 15	5. 19	39. 79
1916	13.02	5.18	4.83	1.98	1.48	1.00	1.34	0.12	0. 38	0. 47	3. 13	5. 47	38. 40
1917	5.53	5.10	5.01	3.78	1.02	0.00	0.00	0.02	0. 66	0. 00	6. 43	1. 17	28. 72
1918	2.55	6.29	5.84	1.15	0.29	0.02	0.22	0.21	1. 42	1. 00	4. 74	4. 29	28. 02
1919	7.84	8.18	6.25	4.03	1.48	0.14	0.01	0.01	1. 52	0. 24	2. 99	4. 33	37. 02
1920	1.87	2.11	5.79	3.12	0.04	1.92	0.13	0.49	2. 47	4. 11	6. 35	10. 83	39. 23
1921	8.37	7.45	3.04	1.67	2.54	1.30	0.00	0.01	0. 27	1. 59	6. 21	4. 48	36. 93
1922	2.54	9.75	6.43	2.39	0.95	0.14	0.00	0.03	0. 37	3. 38	3. 32	7. 62	36. 92
1923	3.88	0.50	0.80	2.95	1.26	1.07	0.03	0.02	1. 54	2. 55	2. 86	4. 93	22. 39
1924	1.95	3.19	2.85	0.67	0.08	0.05	0.02	1.03	0. 41	6. 84	6. 37	4. 07	27. 53
1925	3.97	6.49	2.02	7.47	2.57	0.24	T	0.25	3. 56	0. 95	3. 71	4. 84	36. 07
1926	4.69	6.64	0.07	0.94	1.13	T	0.01	0.54	0. 43	3. 49	13. 65	6. 47	38. 06
1927	5.83	10.30	3.95	3.32	1.68	0.91	0.00	0.02	0. 86	1. 17	5. 89	3. 10	37. 03

1968													
1928	1928	3.40	2.78	7.01	5.86	0.12	0.32	0.02	0.05				
1930	1929	4.31	2.06	2.31	2.61	0.14	2.39	Т	0.01	0.	0.	7.	21.
1931	1930	6.32	4.92	1.23	2.54	1.04	0.13	Т	T				24.
1938 7.04 M2.99 7.20 0.97 423 0.20 T 0.05 0.0	1931	4.09	2.39	3.35	1.61	0.49	1.33	0.01	0.01				30.
1933	1932	6.84	1.20	4.54	4.87	1.41	0.11	0.14	0.03				
1935	1933	7.04	M2.93	7.20	0.97	4.23	0.30	Т	0.05				
1936	1934	3.83	2.31	3.61	1.68	1.23	0.29	Т	0.01				
1937	1935	7.25	2.73	5.60	4.86	0.30	0.27	0.09	Т				
1938	1936	8.84	5.89	1.77	2.13	2.23	1.34	0.09	Т				
1939	1937	4.27	5.41	7.19	6.55	0.88	1.35	0.03	0.05				
1940	1938	6.28	13.94	13.97	2.23	0.31	0.01	Т	Т				
1941	1939	4.49	4.41	5.03	0.37	1.85	0.56	0.23	0.06				
1941	1940	4.37	9.62	7.47	0.81	2.54	0.32	0.00	0.00				
1943 5.23 3.51 5.83 3.23 4.25 0.47 0.04 0.21 0.0 4. 3. 1. 32. 1944 2.92 3.62 2.25 4.25 3.49 1.19 0.10 0.19 0.9 0.9 2.9 0.5 36. 1945 3.64 9.55 6.03 2.27 3.43 T T 0.10 1.1 3. 3. 0.9 9. 48. 1946 4.32 5.10 4.68 0.42 1.26 0.30 0.12 0.01 0.1 0.2 2. 4. 1. 1947 3.93 1.33 3.91 1.84 0.17 1.58 1.20 0.10 0.9 0.9 6.6 71 1948 8.23 5.20 6.16 6.53 2.16 0.77 0.25 0.13 1. 3. 3. 7. 3.5 1949 1.63 6.09 6.94 0.41 2.56 0.06 0.16 0.2 0.0 0. 2. 3. 49. 1950 13.79 4.61 7.71 1.93 1.30 1.03 0.05 0.07 0.13 3. 3. 5. 5. 1951 8.47 7.56 3.94 2.05 1.38 T 0.05 0.02 0.0 3. 7. 9. 48. 1952 10.67 6.22 3.78 1.34 1.77 1.98 T 0.01 0.0 0. 0. 1. 3. 9. 1953 12.63 3.44 5.95 3.18 5.83 1.24 T 0.01 0.0 0. 0. 1. 5. 9. 1954 11.78 3.29 3.76 2.78 0.16 2.57 0.04 1.24 0.7 1.5 9. 4. 1955 5.73 1.83 1.82 5.56 0.03 0.11 0.21 T 1. 2. 5. 1.1 3. 1956 11.51 7.47 2.36 0.31 1.58 1.71 0.06 T 0.3 5. 4. 7. 6. 8. 7. 1959 7.23 10.65 3.37 0.52 0.91 0.25 T 0.01 0.1 1. 3. 4. 7. 6. 8. 7. 1959 7.23 10.65 3.37 0.52 0.91 0.25 T 0.01 0.1 1. 0. 0. 0. 2. 1. 4. 4. 1960 3.87 7.48 8.13 2.92 6.05 T 0.02 0.04 0.1 1. 0. 0. 0. 2. 5. 4. 4. 1960 3.87 7.48 8.13 2.92 6.05 T 0.02 0.04 0.1 1. 0. 0. 0. 2. 5. 4. 4. 1961 4.54 7.53 7.90 3.49 3.97 0.50 0.03 0.00 0.0 0. 0. 2. 5. 3. 4. 7.	1941	11.37	6.68	4.31	4.49	3.61	1.52	0.06	0.18				
1944 2.92 3.62 2.25 4.25 3.49 1.19 0.10 0.19 0.10 0.19 79 11 92 0.2 0.36	1942	4.08	6.22	1.77	4.05	5.43	0.57	0.07	0.06				
1945 3.64 9.55 6.03 2.27 3.43 T T 0.10 1.3 3. 47 93 89 89 1946 4.32 5.10 4.68 0.42 1.26 0.30 0.12 0.01 0. 0. 2. 4. 1. 2. 2. 2. 2. 2. 2. 2	1943	5.23	3.51	5.83	3.23	4.25	0.47	0.04	0.21				
1946	1944	2.92	3.62	2.25	4.25	3.49	1.19	0.10	0.19				
1947 3.93 1.33 3.91 1.84 0.17 1.58 1.20 0.10 0.5 6.0 72 0.99 96 1948 8.23 5.20 6.16 6.53 2.16 0.77 0.25 0.13 1. 3. 3. 7. 45. 0.10 0	1945	3.64	9.55	6.03	2.27	3.43	T	Т	0.10				
1948	1946	4.32	5.10	4.68	0.42	1.26	0.30	0.12	0.01				
1949	1947	3.93	1.33	3.91	1.84	0.17	1.58	1.20	0.10				
1950	1948	8.23	5.20	6.16	6.53	2.16	0.77	0.25	0.13				
1951 8.47 7.56 3.94 2.05 1.38 T 0.05 0.02 0. 3. 7. 9. 45	1949	1.63	6.09	6.94	0.41	2.56	0.06	0.16	0.02				
1952 10.67 6.22 3.78 1.34 1.77 1.98 T 0.01 0. 0. 0. 0. 1. 41	1950	13.79	4.61	7.71	1.93	1.30	1.03	0.05	0.07				
1953 12.63 3.44 5.95 3.18 5.83 1.24 T 0.41 0. 3. 9. 3. 50. 1954 11.78 3.29 3.76 2.78 0.16 2.57 0.04 1.24 0. 1. 5. 9. 42. 1955 5.73 1.83 1.82 5.56 0.03 0.11 0.21 T 1. 8. 64 77 63 51. 1956 11.51 7.47 2.36 0.31 1.58 1.71 0.06 T 0. 5. 0. 7. 38. 1957 4.22 4.36 8.77 1.96 3.42 0.30 0.34 0.02 1. 6. 4. 5. 40. 1958 8.57 10.80 6.09 3.67 1.26 0.71 0.05 T 0. 1. 3. 4. 40. 1959 7.23 10.65 3.37 0.52 0.91 0.25 T 0.01 1. 0. 0. 3. 29. 1960 3.87 7.48 8.13 2.92 6.05 T 0.02 0.04 0. 1. 9. 5. 44. 1961 4.54 7.53 7.90 3.49 3.97 0.50 0.03 0.30 0. 2. 5. 3. 40. 10	1951	8.47	7.56	3.94	2.05	1.38	T	0.05	0.02				
1954 11.78 3.29 3.76 2.78 0.16 2.57 0.04 1.24 0. 1. 5. 9. 42. 42. 436 8.77 1.96 8.70 1.958 1.958 8.57 10.80 6.09 3.67 1.26 0.71 1.959 7.23 10.65 3.37 0.52 0.91 1.960 3.87 7.48 8.13 2.92 6.05 T 0.02 0.03 0.04 0.02 0.04 0.1 1. 9. 5. 44. 1.961 1.961 4.54 7.53 7.90 3.49 3.97 0.50 0.03 0.03 0.30 0. 2. 5. 3. 40	1952	10.67	6.22	3.78	1.34	1.77	1.98	Т	0.01				
1955 5.73 1.83 1.82 5.56 0.03 0.11 0.21 T 1. 2. 5. 11. 36. 1956 11.51 7.47 2.36 0.31 1.58 1.71 0.06 T 0. 3.3 47 49 18 47 1957 4.22 4.36 8.77 1.96 3.42 0.30 0.34 0.02 1. 6. 4. 5. 40. 37 00 44 69 89 1958 8.57 10.80 6.09 3.67 1.26 0.71 0.05 T 0. 1. 3. 4. 40	1953	12.63	3.44	5.95	3.18	5.83	1.24	T	0.41				
1956 11.51 7.47 2.36 0.31 1.58 1.71 0.06 T 0.0 5. 0.0 7. 38. 47 49 18 47 1957 4.22 4.36 8.77 1.96 3.42 0.30 0.34 0.02 1. 6. 4. 5. 40. 1958 8.57 10.80 6.09 3.67 1.26 0.71 0.05 T 0. 1. 3. 4. 40. 1959 7.23 10.65 3.37 0.52 0.91 0.25 T 0.01 1. 0. 0. 3. 29. 1960 3.87 7.48 8.13 2.92 6.05 T 0.02 0.04 0. 1. 9. 5. 44. 1961 4.54 7.53 7.90 3.49 3.97 0.50 0.03 0.30 0. 2. 5. 3. 40.	1954	11.78	3.29	3.76	2.78	0.16	2.57	0.04	1.24				
1957 4.22 4.36 8.77 1.96 3.42 0.30 0.34 0.02 1. 6. 4. 5. 40.	1955	5.73	1.83	1.82	5.56	0.03	0.11	0.21	T				
1958 8.57 10.80 6.09 3.67 1.26 0.71 0.05 T 0. 1. 3. 4. 40. 4	1956	11.51	7.47	2.36	0.31	1.58	1.71	0.06	Т				
1959 7.23 10.65 3.37 0.52 0.91 0.25 T 0.01 1. 0. 0. 3. 29. 54 74 28 64 14 1960 3.87 7.48 8.13 2.92 6.05 T 0.02 0.04 0. 1. 9. 5. 44. 61 31 87 08 78 1961 4.54 7.53 7.90 3.49 3.97 0.50 0.03 0.30 0. 2. 5. 3. 40.	1957	4.22	4.36	8.77	1.96	3.42	0.30	0.34	0.02				
1960 3.87 7.48 8.13 2.92 6.05 T 0.02 0.04 0. 1. 9. 5. 44. 0.01 31 87 08 78 1961 4.54 7.53 7.90 3.49 3.97 0.50 0.03 0.30 0. 2. 5. 3. 40.	1958	8.57	10.80	6.09	3.67	1.26	0.71	0.05	Т				
1961 4.54 7.53 7.90 3.49 3.97 0.50 0.03 0.30 0. 2. 5. 3. 40.	1959	7.23	10.65	3.37	0.52	0.91	0.25	T	0.01				
	1960	3.87	7.48	8.13	2.92	6.05	Т	0.02	0.04				
	1961	4.54	7.53	7.90	3.49	3.97	0.50	0.03	0.30				

1962	3.26	6.08	4.04	2.62	0.60	0.11	T	1.92	0. 71	6. 49	6. 77	2. 58	35. 18
1963	1.70	4.74	6.28	10.68	1.74	0.33	0.11	0.07	0. 68	5. 41	6. 91	3. 20	41. 85
1964	11.13	1.20	5.91	0.67	1.59	0.72	0.83	0.03	0. 07	1. 82	12. 11	10. 96	47. 04
1965	5.82	1.36	1.23	5.60	0.44	0.35	Т	0.36	Т	0. 70	5. 20	5. 22	26. 28
1966	9.44	3.12	6.57	1.34	0.06	0.30	0.25	0.50	1. 33	1. 02	9. 86	6. 52	40. 31
1967	8.87	1.47	7.44	5.29	1.52	0.32	0.00	Т	1. 32	2. 15	4. 40	4. 34	37. 12
1968	7.59	2.93	3.85	0.40	1.04	0.20	0.04	1.98	0. 60	2. 81	5. 88	8. 32	35. 64
1969	13.92	7.82	1.56	3.22	1.01	0.34	0.05	Т	0. 36	3. 20	3. 49	9. 60	44. 57
1970	12.46	3.15	2.70	1.54	1.38	0.29	Т	Т	0. 32	2. 11	13. 20	10. 24	47. 39
1971	5.41	3.28	7.91	2.92	1.28	1.51	0.16	0.55	2. 08	0. 92	6. 36	6. 38	38. 76
1972	7.96	5.93	5.08	2.27	1.11	0.88	0.01	0.07	1. 06	1. 97	5. 41	7. 42	39. 17
1973	6.47	3.85	7.10	0.35	0.85	0.23	Т	0.08	2. 35	4. 14	16. 58	7. 02	49. 02
1974	6.02	5.98	6.98	3.15	0.42	0.33	0.11	0.32	Т	1. 76	2. 75	6. 40	34. 22
1975	5.20	7.68	10.73	3.29	1.05	0.58	0.10	0.58	0. 01	6. 77	4. 72	5. 38	46. 09
1976	1.88	7.51	3.12	2.80	0.54	0.14	0.20	1.70	0. 04	0. 28	2. 98	0. 52	21. 71
1977	1.90	2.24	4.33	1.20	2.10	0.07	Т	0.20	3. 35	2. 79	4. 51	6. 60	29. 29
1978	4.52	6.06	2.88	4.10	0.82	0.34	0.03	0.59	2. 72	0. 04	2. 39	1. 16	25. 65
1979	3.82	6.26	1.70	3.94	2.25	0.05	0.31	0.13	1. 15	6. 14	6. 19	3. 75	35. 69
1980	3.19	4.67	6.14	4.18	1.70	0.42	Т	0.07	0. 14	1. 38	2. 49	6. 10	30. 48
1981	7.67	3.72	4.64	0.71	2.02	0.57	Т	0.01	0. 97	3. 71	9. 39	9. 88	43. 29
1982	4.75	5.76	7.06	5.97	0.07	0.78	80.0	0.03	0. 62	4. 89	7. 83	10. 30	48. 14
1983	8.48	9.18	10.73	5.47	1.12	0.65	0.89	3.42	0. 87	1. 87	10. 40	14. 13	67. 21
1984	0.76	5.18	4.70	2.76	2.51	1.07	0.03	0.05	0. 55	3. 67	15. 15	4. 27	40. 70
1985	0.66	3.69	4.68	0.45	1.14	0.89	0.15	0.52	1. 06	4. 07	2. 98	2. 78	23. 07
1986	7.19	10.08	6.12	1.46	2.34	0.21	0.02	Т	2. 70	1. 75	1. 85	3. 83	37. 55
1987	6.48	3.38	6.10	1.15	0.41	0.26	0.20	0.06	0. 02	1. 05	4. 23	10. 92	34. 26
1988	7.13	0.54	1.18	2.06	2.70	2.22	0.05	Т	0. 12	0. 41	8. 93	6. 26	31. 60
1989	4.71	2.88	7.63	2.01	1.67	0.21	0.08	0.13	0. 85	2. 90	1. 60	0. 80	25. 47
1990	7.20	4.50	3.30	1.41	3.74	0.32	0.22	0.71	0. 19	1. 73	3. 07	2. 91	29. 30
1991	1.65	2.75	6.94	2.52	2.16	0.26	1.13	0.37	Т	1. 06	1. 95	2. 36	23. 15
1992	3.99	3.80	3.51	2.42	0.06	1.27	0.25	0.01	0. 33	2. 08	2. 21	9. 33	29. 26
1993	7.15	5.93	4.72	5.94	4.44	1.23	0.37	0.54	0. 03	0. 56	1. 35	7. 12	39. 38
1994	5.09	7.12	2.06	3.30	1.10	0.71	0.08	T	0. 06	0. 54	8. 21	7. 00	35. 27
1995	12.74	1.40	11.18	7.47	1.21	1.85	0.08	0.22	0. 69	0. 53	2. 26	11. 56	51. 19

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1996	10.74	8.11	3.51	4.64	2.40	0.05	0.03	Т	1. 21	3. 50	5. 16	21. 26	60. 61
1997	8.81	2.55	2.73	3.06	0.90	1.25	Т	0.84	2. 05	2. 73	7. 39	4. 73	37. 04
1998	13.42	13.95	7.83	2.23	3.12	0.33	0.16	0.01	0. 08	3. 06	14. 09	5. 40	63. 68
1999	4.37	10.32	8.94	1.79	1.62	0.15	0.04	0.30	0. 05	1. 60	7. 36	3. 02	39. 56
2000	9.71	7.00	2.81	2.15	1.86	0.54	0.04	T	0. 55	2. 99	3. 51	1. 97	33. 13
2001	3.79	3.60	2.45	2.54	0.71	0.69	0.20	0.21	0. 28	1. 00	7. 71	11. 56	34. 74
2002	6.37	5.76	4.32	2.42	0.55	0.28	0.03	0.01	0. 06	0. 06	2. 66	23. 31	45. 83
2003	5.51	3.84	4.91	11.25	1.74	0.04	0.02	0.49	0. 35	0. 55	5. 78	11. 35	45. 83
2004	6.29	8.12	2.38	1.68	1.37	0.06	0.06	0.43	0. 68	5. 71	1. 87	9. 43	38. 08
2005	5.91	2.41	6.24	4.70	3.90	3.08	0.05	0.07	0. 08	2. 40	8. 52	12. 72	50. 08
2006	12.09	6.34	11.11	4.08	1.03	0.35	0.04	Ţ	0. 09	0. 58	7. 41	7. 09	50. 21
2007	1.86	11.86	2.51	2.72	0.86	0.46	0.97	0.08	0. 60	4. 92	2. 33	7. 30	36. 47
2008	9.70	2.73	3.16	2.12	0.04	0.24	0.02	0.47	0. 05	0. 93	4. 05	6. 66	30. 17
2009	1.58	6.20	5.45	1.23	2.93	0.18	0.06	0.02	1. 03	1. 95	4. 15	4. 17	28. 95
2010	9.29	4.20	6.06	7.76	3.51	2.31	0.04	0.15	1. 39	4. 26	4. 69	10. 08	53. 74
2011	2.23	3.62	11.88	4.07	1.43	1.29	0.17	0.04	0. 37	4. 21	3. 86	2. 22	35. 39
2012	7.76	2.63	12.02	4.76	0.77	2.00	0.67	0.07	0. 04	2. 72	6. 36	10. 97	50. 77
2013	2.57	1.78	3.09	2.44	1.17	0.43	0.00	0.08	3. 14	0. 05	1. 29	0. 56	16. 60
2014	1.35	6.09	6.25	1.37	0.58	0.35	0.02	0.02	3. 09	4. 74	3. 89	9. 75	37. 50
2015	1.36	5.04	3.21	2.57	0.07	0.04	0.15	0.41	0. 27	1. 18	4. 88	14. 66	33. 84
2016	12.06	2.98	8.11	2.84	0.76	0.02	0.54	0.04	0. 01	10. 92	6. 98	7. 87	53. 13
2017	10.51	11.10	7.97	5.46	1.31	0.59	0.07	0.05	1. 01	1. 64	7. 40	1. 94	49. 05
2018	7.86	2.87	8.50	5.02	0.79	0.70	0.03	0.05	0. 19	0. 85	4. 94	4. 95	36. 75
2019	6.67	14.43	4.79	2.51	2.61	0.00	0.00	0.18	1. 92	1. 51	1. 75	7. 63	44. 00
2020	7.50	0.60	3.69	2.05	4.73	0.20	0.03	0.08	MT				18. 88

Notes: Data missing in any month have an "M" flag. A "T" indicates a trace of precipitation.

Data missing for all days in a month or year is blank.

Creation date: 2016-07-22

WETO OLL' FUREILA													
WETS Station: EUREKA WFO WOODLEY ISLAND, CA													
Requested years: 2000 - 2022													
Month	Avg Max Temp	Avg Min Temp	Avg Mean Temp	Avg Precip	30% chance precip less than	30% chance precip more than	Avg number days precip 0.10 or more	Avg Snowfall					
Jan	55.3	40.8	48.1	6.13	3.64	7.44	11	0.0					
Feb	55.2	40.9	48.1	5.13	2.86	6.25	9	0.0					
Mar	56.1	42.4	49.3	5.49	3.65	6.58	11	0.0					
Apr	57.4	44.3	50.8	3.52	2.22	4.25	8	0.0					
May	59.8	47.9	53.9	1.49	0.64	1.81	4	0.0					
Jun	62.5	50.6	56.5	0.68	0.20	0.77	2	0.0					
Jul	63.5	52.8	58.1	0.16	0.04	0.16	0	0.0					
Aug	64.4	53.3	58.8	0.14	0.05	0.15	0	0.0					
Sep	64.4	50.8	57.6	0.78	0.21	0.91	2	0.0					
Oct	61.9	47.1	54.5	2.62	0.92	3.15	5	0.0					
Nov	58.2	43.3	50.8	4.52	3.17	5.37	9	0.0					
Dec	54.9	40.5	47.7	8.06	4.55	9.82	13	0.0					
Annual:					33.36	43.90							
Average	59.5	46.2	52.8	-	-	-	-	-					
Total	-	-	-	38.72			74	0.0					
GROWING SEASON DATES													
Years with missing data:	24 deg = 1	28 deg = 1	32 deg =										
rears with missing data.	24 deg – 1	20 deg - 1	32 deg - 1										
Years with no occurrence:	24 deg = 22	28 deg = 19	32 deg = 1										
Data years used:	24 deg = 22	28 deg = 22	32 deg = 22										
Probability	24 F or higher	28 F or higher	32 F or higher										
50 percent *	No occurrence	No occurrence	2/17 to 12/9: 295 days										
70 percent *	No occurrence	No occurrence	2/8 to 12/19: 314 days										
* Percent chance of the growing season occurring between the Beginning and Ending dates.													
STATS TABLE - total precipitation (inches)													
Yr	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annl
1886												9. 78	9.78
1887	8.86	9.00	2.28		3.51	1.92	0.06	0.07	0. 21	0. 55	2. 66	5. 43	34. 55
1888	12.95	1.98	4.09		0.76	4.66	0.44	0.00	0. 06	1. 15	3. 41	5. 93	35. 43
1889	4.25	1.93	5.91	1.40	7.27	0.37	0.15	0.13	0. 32	8. 36	3. 71	12. 88	45. 28
1890	18.26	13.88	11.57	1.43	1.71	0.90	0.08	0.02	0. 79	0. 44	0. 18	5. 48	54. 74
1891	3.33	9.81 2.53	5.83 5.32	6.37	1.55 3.63	1.53 0.45	0.28	0.31	1. 45	1. 64 2.	2. 72 8.	10. 97 6.	45. 79 33.
1892	3.29	6.27	10.59	2.99	2.43	0.45	0.00	0.09	0. 99 2.	90 4.	8. 19 9.	6. 55 6.	94 49.
1033	5.05	0.21	10.03	۷.33	2.40	0.00	0.00	0.00	39	33	9. 87	69	54

1894	12.38	6.13	7.46	M1.28	1.31	1.67	0.02	0.04	1. 84	3. 12	2. 03	12. 31	49. 59
1895	9.37	3.60	5.31	2.88	5.39	0.06	0.23	0.11	3. 14	0. 05	3. 88	7. 50	41. 52
1896	8.14	4.61	6.93	6.88	6.22	0.51	0.00	0.70	1. 60	2. 37	8. 00	9. 41	55. 37
1897	3.04	11.23	9.85	1.36	0.75	1.60	0.03	0.15	1. 05	2. 63	5. 44	6. 18	43. 31
1898	3.23	8.00	1.80	1.82	2.62	1.21	0.00	0.06	1. 48	2. 13	4. 43	3. 17	29. 95
1899	6.50	5.03	8.53	1.91	1.73	0.75	0.00	0.42	0. 88	4. 28	14. 80	7. 05	51. 88
1900	6.63	6.04	3.42	4.43	2.08	1.70	Т	0.07	0. 21	7. 07	8. 01	5. 27	44. 93
1901	9.93	7.41	3.86	4.08	1.50	0.12	0.03	Т	4. 26	2. 46	3. 96	4. 43	42. 04
1902	1.95	19.49	7.85	4.56	2.70	0.27	0.25	T	0. 14	2. 34	10. 88	8. 33	58. 76
1903	16.07	3.80	7.42	1.23	0.70	0.57	0.06	0.53	0. 28	2. 42	10. 79	4. 03	47. 90
1904	5.24	16.10	19.05	5.14	1.02	0.55	0.75	Т	1. 36	2. 67	4. 41	8. 18	64. 47
1905	4.81	0.99	7.41	0.78	1.99	0.12	0.02	0.00	0. 38	1. 50	3. 93	4. 32	26. 25
1906	7.63	6.27	7.72	2.14	3.57	1.56	0.01	0.01	0. 76	0. 67	3. 13	7. 59	41. 06
1907	10.40	10.57	11.83	3.30	1.69	0.58	Т	2.66	0. 63	1. 48	2. 38	8. 59	54. 11
1908	7.23	6.59	2.82	0.85	2.57	0.19	Т	0.16	0. 02	5. 09	3. 97	3. 91	33. 40
1909	14.41	11.54	2.72	0.24	0.76	0.14	0.55	Т	0. 61	3. 78	12. 60	4. 29	51. 64
1910	7.26	7.33	1.97	0.83	0.64	0.49	0.00	0.00	0. 01	0. 82	6. 86	3. 43	29. 64
1911	8.63	3.75	1.45	3.39	3.52	0.23	Т	0.08	0. 29	1. 68	2. 09	4. 74	29. 85
1912	10.17	5.73	4.73	5.92	1.98	1.29	0.05	0.04	2. 40	1. 55	6. 86	5. 83	46. 55
1913	8.10	0.87	3.61	3.41	1.67	1.60	0.28	0.03	0. 48	0. 88	5. 29	7. 58	33. 80
1914	9.75	4.20	3.13	3.27	0.70	1.73	0.01	T	1. 82	3. 79	2. 42	7. 09	37. 91
1915	9.75	12.39	1.65	1.38	2.07	0.05	0.26	0.00	0. 11	0. 79	6. 15	5. 19	39. 79
1916	13.02	5.18	4.83	1.98	1.48	1.00	1.34	0.12	0. 38	0. 47	3. 13	5. 47	38. 40
1917	5.53	5.10	5.01	3.78	1.02	0.00	0.00	0.02	0. 66	0. 00	6. 43	1. 17	28. 72
1918	2.55	6.29	5.84	1.15	0.29	0.02	0.22	0.21	1. 42	1. 00	4. 74	4. 29	28. 02
1919	7.84	8.18	6.25	4.03	1.48	0.14	0.01	0.01	1. 52	0. 24	2. 99	4. 33	37. 02
1920	1.87	2.11	5.79	3.12	0.04	1.92	0.13	0.49	2. 47	4. 11	6. 35	10. 83	39. 23
1921	8.37	7.45	3.04	1.67	2.54	1.30	0.00	0.01	0. 27	1. 59	6. 21	4. 48	36. 93
1922	2.54	9.75	6.43	2.39	0.95	0.14	0.00	0.03	0. 37	3. 38	3. 32	7. 62	36. 92
1923	3.88	0.50	0.80	2.95	1.26	1.07	0.03	0.02	1. 54	2. 55	2. 86	4. 93	22. 39
1924	1.95	3.19	2.85	0.67	0.08	0.05	0.02	1.03	0. 41	6. 84	6. 37	4. 07	27. 53
1925	3.97	6.49	2.02	7.47	2.57	0.24	T	0.25	3. 56	0. 95	3. 71	4. 84	36. 07
1926	4.69	6.64	0.07	0.94	1.13	T	0.01	0.54	0. 43	3. 49	13. 65	6. 47	38. 06
1927	5.83	10.30	3.95	3.32	1.68	0.91	0.00	0.02	0. 86	1. 17	5. 89	3. 10	37. 03

1968													
1928	1928	3.40	2.78	7.01	5.86	0.12	0.32	0.02	0.05				
1930	1929	4.31	2.06	2.31	2.61	0.14	2.39	Т	0.01	0.	0.	7.	21.
1931	1930	6.32	4.92	1.23	2.54	1.04	0.13	Т	T				24.
1938 7.04 M2.99 7.20 0.97 423 0.20 T 0.05 0.0	1931	4.09	2.39	3.35	1.61	0.49	1.33	0.01	0.01				30.
1933	1932	6.84	1.20	4.54	4.87	1.41	0.11	0.14	0.03				
1935	1933	7.04	M2.93	7.20	0.97	4.23	0.30	Т	0.05				
1936	1934	3.83	2.31	3.61	1.68	1.23	0.29	Т	0.01				
1937	1935	7.25	2.73	5.60	4.86	0.30	0.27	0.09	Т				
1938	1936	8.84	5.89	1.77	2.13	2.23	1.34	0.09	Т				
1939	1937	4.27	5.41	7.19	6.55	0.88	1.35	0.03	0.05				
1940	1938	6.28	13.94	13.97	2.23	0.31	0.01	Т	Т				
1941	1939	4.49	4.41	5.03	0.37	1.85	0.56	0.23	0.06				
1941	1940	4.37	9.62	7.47	0.81	2.54	0.32	0.00	0.00				
1943 5.23 3.51 5.83 3.23 4.25 0.47 0.04 0.21 0.0 4. 3. 1. 32. 1944 2.92 3.62 2.25 4.25 3.49 1.19 0.10 0.19 0.9 0.9 2.9 0.5 36. 1945 3.64 9.55 6.03 2.27 3.43 T T 0.10 1.1 3. 3. 0.9 9. 48. 1946 4.32 5.10 4.68 0.42 1.26 0.30 0.12 0.01 0.1 0.2 2. 4. 1. 1947 3.93 1.33 3.91 1.84 0.17 1.58 1.20 0.10 0.9 0.9 6.6 71 1948 8.23 5.20 6.16 6.53 2.16 0.77 0.25 0.13 1. 3. 3. 7. 3.5 1949 1.63 6.09 6.94 0.41 2.56 0.06 0.16 0.2 0.0 0. 2. 3. 49. 1950 13.79 4.61 7.71 1.93 1.30 1.03 0.05 0.07 0.13 3. 3. 5. 5. 1951 8.47 7.56 3.94 2.05 1.38 T 0.05 0.02 0.0 3. 7. 9. 48. 1952 10.67 6.22 3.78 1.34 1.77 1.98 T 0.01 0.0 0. 0. 1. 3. 9. 1953 12.63 3.44 5.95 3.18 5.83 1.24 T 0.01 0.0 0. 0. 1. 5. 9. 1954 11.78 3.29 3.76 2.78 0.16 2.57 0.04 1.24 0.7 1.5 9. 4. 1955 5.73 1.83 1.82 5.56 0.03 0.11 0.21 T 1. 2. 5. 1.1 3. 1956 11.51 7.47 2.36 0.31 1.58 1.71 0.06 T 0.3 5. 4. 7. 6. 8. 7. 1959 7.23 10.65 3.37 0.52 0.91 0.25 T 0.01 0.1 1. 3. 4. 7. 6. 8. 7. 1959 7.23 10.65 3.37 0.52 0.91 0.25 T 0.01 0.1 1. 0. 0. 0. 2. 1. 4. 4. 1960 3.87 7.48 8.13 2.92 6.05 T 0.02 0.04 0.1 1. 0. 0. 0. 2. 5. 4. 4. 1960 3.87 7.48 8.13 2.92 6.05 T 0.02 0.04 0.1 1. 0. 0. 0. 2. 5. 4. 4. 1961 4.54 7.53 7.90 3.49 3.97 0.50 0.03 0.00 0.0 0. 0. 2. 5. 3. 4. 7.	1941	11.37	6.68	4.31	4.49	3.61	1.52	0.06	0.18				
1944 2.92 3.62 2.25 4.25 3.49 1.19 0.10 0.19 0.10 0.19 79 11 92 0.2 0.36	1942	4.08	6.22	1.77	4.05	5.43	0.57	0.07	0.06				
1945 3.64 9.55 6.03 2.27 3.43 T T 0.10 1.3 3. 47 93 89 89 1946 4.32 5.10 4.68 0.42 1.26 0.30 0.12 0.01 0. 0. 2. 4. 1. 2. 2. 2. 2. 2. 2. 2	1943	5.23	3.51	5.83	3.23	4.25	0.47	0.04	0.21				
1946	1944	2.92	3.62	2.25	4.25	3.49	1.19	0.10	0.19				
1947 3.93 1.33 3.91 1.84 0.17 1.58 1.20 0.10 0.5 6.0 72 0.99 96 1948 8.23 5.20 6.16 6.53 2.16 0.77 0.25 0.13 1. 3. 3. 7. 45. 0.10 0	1945	3.64	9.55	6.03	2.27	3.43	T	Т	0.10				
1948	1946	4.32	5.10	4.68	0.42	1.26	0.30	0.12	0.01				
1949	1947	3.93	1.33	3.91	1.84	0.17	1.58	1.20	0.10				
1950	1948	8.23	5.20	6.16	6.53	2.16	0.77	0.25	0.13				
1951 8.47 7.56 3.94 2.05 1.38 T 0.05 0.02 0. 3. 7. 9. 45	1949	1.63	6.09	6.94	0.41	2.56	0.06	0.16	0.02				
1952 10.67 6.22 3.78 1.34 1.77 1.98 T 0.01 0. 0. 0. 0. 1. 41	1950	13.79	4.61	7.71	1.93	1.30	1.03	0.05	0.07				
1953 12.63 3.44 5.95 3.18 5.83 1.24 T 0.41 0. 3. 9. 3. 50. 1954 11.78 3.29 3.76 2.78 0.16 2.57 0.04 1.24 0. 1. 5. 9. 42. 1955 5.73 1.83 1.82 5.56 0.03 0.11 0.21 T 1. 8. 64 77 63 51. 1956 11.51 7.47 2.36 0.31 1.58 1.71 0.06 T 0. 5. 0. 7. 38. 1957 4.22 4.36 8.77 1.96 3.42 0.30 0.34 0.02 1. 6. 4. 5. 40. 1958 8.57 10.80 6.09 3.67 1.26 0.71 0.05 T 0. 1. 3. 4. 40. 1959 7.23 10.65 3.37 0.52 0.91 0.25 T 0.01 1. 0. 0. 3. 29. 1960 3.87 7.48 8.13 2.92 6.05 T 0.02 0.04 0. 1. 9. 5. 44. 1961 4.54 7.53 7.90 3.49 3.97 0.50 0.03 0.30 0. 2. 5. 3. 40. 10	1951	8.47	7.56	3.94	2.05	1.38	T	0.05	0.02				
1954 11.78 3.29 3.76 2.78 0.16 2.57 0.04 1.24 0. 1. 5. 9. 42. 42. 436 8.77 1.96 8.70 1.958 1.958 8.57 10.80 6.09 3.67 1.26 0.71 1.959 7.23 10.65 3.37 0.52 0.91 1.960 3.87 7.48 8.13 2.92 6.05 T 0.02 0.03 0.04 0.02 0.04 0.1 1. 9. 5. 44. 1.961 1.961 4.54 7.53 7.90 3.49 3.97 0.50 0.03 0.03 0.30 0. 2. 5. 3. 40	1952	10.67	6.22	3.78	1.34	1.77	1.98	Т	0.01				
1955 5.73 1.83 1.82 5.56 0.03 0.11 0.21 T 1. 2. 5. 11. 36. 1956 11.51 7.47 2.36 0.31 1.58 1.71 0.06 T 0. 3.3 47 49 18 47 1957 4.22 4.36 8.77 1.96 3.42 0.30 0.34 0.02 1. 6. 4. 5. 40. 37 00 44 69 89 1958 8.57 10.80 6.09 3.67 1.26 0.71 0.05 T 0. 1. 3. 4. 40	1953	12.63	3.44	5.95	3.18	5.83	1.24	T	0.41				
1956 11.51 7.47 2.36 0.31 1.58 1.71 0.06 T 0.0 5. 0.0 7. 38. 47 49 18 47 1957 4.22 4.36 8.77 1.96 3.42 0.30 0.34 0.02 1. 6. 4. 5. 40. 1958 8.57 10.80 6.09 3.67 1.26 0.71 0.05 T 0. 1. 3. 4. 40. 1959 7.23 10.65 3.37 0.52 0.91 0.25 T 0.01 1. 0. 0. 3. 29. 1960 3.87 7.48 8.13 2.92 6.05 T 0.02 0.04 0. 1. 9. 5. 44. 1961 4.54 7.53 7.90 3.49 3.97 0.50 0.03 0.30 0. 2. 5. 3. 40.	1954	11.78	3.29	3.76	2.78	0.16	2.57	0.04	1.24				
1957 4.22 4.36 8.77 1.96 3.42 0.30 0.34 0.02 1. 6. 4. 5. 40.	1955	5.73	1.83	1.82	5.56	0.03	0.11	0.21	T				
1958 8.57 10.80 6.09 3.67 1.26 0.71 0.05 T 0. 1. 3. 4. 40. 4	1956	11.51	7.47	2.36	0.31	1.58	1.71	0.06	Т				
1959 7.23 10.65 3.37 0.52 0.91 0.25 T 0.01 1. 0. 0. 3. 29. 54 74 28 64 14 1960 3.87 7.48 8.13 2.92 6.05 T 0.02 0.04 0. 1. 9. 5. 44. 61 31 87 08 78 1961 4.54 7.53 7.90 3.49 3.97 0.50 0.03 0.30 0. 2. 5. 3. 40.	1957	4.22	4.36	8.77	1.96	3.42	0.30	0.34	0.02				
1960 3.87 7.48 8.13 2.92 6.05 T 0.02 0.04 0. 1. 9. 5. 44. 0.01 31 87 08 78 1961 4.54 7.53 7.90 3.49 3.97 0.50 0.03 0.30 0. 2. 5. 3. 40.	1958	8.57	10.80	6.09	3.67	1.26	0.71	0.05	Т				
1961 4.54 7.53 7.90 3.49 3.97 0.50 0.03 0.30 0. 2. 5. 3. 40.	1959	7.23	10.65	3.37	0.52	0.91	0.25	T	0.01				
	1960	3.87	7.48	8.13	2.92	6.05	Т	0.02	0.04				
	1961	4.54	7.53	7.90	3.49	3.97	0.50	0.03	0.30				

1962	3.26	6.08	4.04	2.62	0.60	0.11	T	1.92	0. 71	6. 49	6. 77	2. 58	35. 18
1963	1.70	4.74	6.28	10.68	1.74	0.33	0.11	0.07	0. 68	5. 41	6. 91	3. 20	41. 85
1964	11.13	1.20	5.91	0.67	1.59	0.72	0.83	0.03	0. 07	1. 82	12. 11	10. 96	47. 04
1965	5.82	1.36	1.23	5.60	0.44	0.35	Т	0.36	Т	0. 70	5. 20	5. 22	26. 28
1966	9.44	3.12	6.57	1.34	0.06	0.30	0.25	0.50	1. 33	1. 02	9. 86	6. 52	40. 31
1967	8.87	1.47	7.44	5.29	1.52	0.32	0.00	Т	1. 32	2. 15	4. 40	4. 34	37. 12
1968	7.59	2.93	3.85	0.40	1.04	0.20	0.04	1.98	0. 60	2. 81	5. 88	8. 32	35. 64
1969	13.92	7.82	1.56	3.22	1.01	0.34	0.05	Т	0. 36	3. 20	3. 49	9. 60	44. 57
1970	12.46	3.15	2.70	1.54	1.38	0.29	Т	Т	0. 32	2. 11	13. 20	10. 24	47. 39
1971	5.41	3.28	7.91	2.92	1.28	1.51	0.16	0.55	2. 08	0. 92	6. 36	6. 38	38. 76
1972	7.96	5.93	5.08	2.27	1.11	0.88	0.01	0.07	1. 06	1. 97	5. 41	7. 42	39. 17
1973	6.47	3.85	7.10	0.35	0.85	0.23	Т	0.08	2. 35	4. 14	16. 58	7. 02	49. 02
1974	6.02	5.98	6.98	3.15	0.42	0.33	0.11	0.32	Т	1. 76	2. 75	6. 40	34. 22
1975	5.20	7.68	10.73	3.29	1.05	0.58	0.10	0.58	0. 01	6. 77	4. 72	5. 38	46. 09
1976	1.88	7.51	3.12	2.80	0.54	0.14	0.20	1.70	0. 04	0. 28	2. 98	0. 52	21. 71
1977	1.90	2.24	4.33	1.20	2.10	0.07	Т	0.20	3. 35	2. 79	4. 51	6. 60	29. 29
1978	4.52	6.06	2.88	4.10	0.82	0.34	0.03	0.59	2. 72	0. 04	2. 39	1. 16	25. 65
1979	3.82	6.26	1.70	3.94	2.25	0.05	0.31	0.13	1. 15	6. 14	6. 19	3. 75	35. 69
1980	3.19	4.67	6.14	4.18	1.70	0.42	Т	0.07	0. 14	1. 38	2. 49	6. 10	30. 48
1981	7.67	3.72	4.64	0.71	2.02	0.57	Т	0.01	0. 97	3. 71	9. 39	9. 88	43. 29
1982	4.75	5.76	7.06	5.97	0.07	0.78	80.0	0.03	0. 62	4. 89	7. 83	10. 30	48. 14
1983	8.48	9.18	10.73	5.47	1.12	0.65	0.89	3.42	0. 87	1. 87	10. 40	14. 13	67. 21
1984	0.76	5.18	4.70	2.76	2.51	1.07	0.03	0.05	0. 55	3. 67	15. 15	4. 27	40. 70
1985	0.66	3.69	4.68	0.45	1.14	0.89	0.15	0.52	1. 06	4. 07	2. 98	2. 78	23. 07
1986	7.19	10.08	6.12	1.46	2.34	0.21	0.02	Т	2. 70	1. 75	1. 85	3. 83	37. 55
1987	6.48	3.38	6.10	1.15	0.41	0.26	0.20	0.06	0. 02	1. 05	4. 23	10. 92	34. 26
1988	7.13	0.54	1.18	2.06	2.70	2.22	0.05	Т	0. 12	0. 41	8. 93	6. 26	31. 60
1989	4.71	2.88	7.63	2.01	1.67	0.21	0.08	0.13	0. 85	2. 90	1. 60	0. 80	25. 47
1990	7.20	4.50	3.30	1.41	3.74	0.32	0.22	0.71	0. 19	1. 73	3. 07	2. 91	29. 30
1991	1.65	2.75	6.94	2.52	2.16	0.26	1.13	0.37	Т	1. 06	1. 95	2. 36	23. 15
1992	3.99	3.80	3.51	2.42	0.06	1.27	0.25	0.01	0. 33	2. 08	2. 21	9. 33	29. 26
1993	7.15	5.93	4.72	5.94	4.44	1.23	0.37	0.54	0. 03	0. 56	1. 35	7. 12	39. 38
1994	5.09	7.12	2.06	3.30	1.10	0.71	0.08	T	0. 06	0. 54	8. 21	7. 00	35. 27
1995	12.74	1.40	11.18	7.47	1.21	1.85	0.08	0.22	0. 69	0. 53	2. 26	11. 56	51. 19

1996	10.74	8.11	3.51	4.64	2.40	0.05	0.03	Т	1. 21	3. 50	5. 16	21. 26	60. 61
1997	8.81	2.55	2.73	3.06	0.90	1.25	Т	0.84	2. 05	2. 73	7. 39	4. 73	37. 04
1998	13.42	13.95	7.83	2.23	3.12	0.33	0.16	0.01	0. 08	3. 06	14. 09	5. 40	63. 68
1999	4.37	10.32	8.94	1.79	1.62	0.15	0.04	0.30	0. 05	1. 60	7. 36	3. 02	39. 56
2000	9.71	7.00	2.81	2.15	1.86	0.54	0.04	Т	0. 55	2. 99	3. 51	1. 97	33. 13
2001	3.79	3.60	2.45	2.54	0.71	0.69	0.20	0.21	0. 28	1. 00	7. 71	11. 56	34. 74
2002	6.37	5.76	4.32	2.42	0.55	0.28	0.03	0.01	0. 06	0. 06	2. 66	23. 31	45. 83
2003	5.51	3.84	4.91	11.25	1.74	0.04	0.02	0.49	0. 35	0. 55	5. 78	11. 35	45. 83
2004	6.29	8.12	2.38	1.68	1.37	0.06	0.06	0.43	0. 68	5. 71	1. 87	9. 43	38. 08
2005	5.91	2.41	6.24	4.70	3.90	3.08	0.05	0.07	0. 08	2. 40	8. 52	12. 72	50. 08
2006	12.09	6.34	11.11	4.08	1.03	0.35	0.04	Т	0. 09	0. 58	7. 41	7. 09	50. 21
2007	1.86	11.86	2.51	2.72	0.86	0.46	0.97	0.08	0. 60	4. 92	2. 33	7. 30	36. 47
2008	9.70	2.73	3.16	2.12	0.04	0.24	0.02	0.47	0. 05	0. 93	4. 05	6. 66	30. 17
2009	1.58	6.20	5.45	1.23	2.93	0.18	0.06	0.02	1. 03	1. 95	4. 15	4. 17	28. 95
2010	9.29	4.20	6.06	7.76	3.51	2.31	0.04	0.15	1. 39	4. 26	4. 69	10. 08	53. 74
2011	2.23	3.62	11.88	4.07	1.43	1.29	0.17	0.04	0. 37	4. 21	3. 86	2. 22	35. 39
2012	7.76	2.63	12.02	4.76	0.77	2.00	0.67	0.07	0. 04	2. 72	6. 36	10. 97	50. 77
2013	2.57	1.78	3.09	2.44	1.17	0.43	0.00	0.08	3. 14	0. 05	1. 29	0. 56	16. 60
2014	1.35	6.09	6.25	1.37	0.58	0.35	0.02	0.02	3. 09	4. 74	3. 89	9. 75	37. 50
2015	1.36	5.04	3.21	2.57	0.07	0.04	0.15	0.41	0. 27	1. 18	4. 88	14. 66	33. 84
2016	12.06	2.98	8.11	2.84	0.76	0.02	0.54	0.04	0. 01	10. 92	6. 98	7. 87	53. 13
2017	10.51	11.10	7.97	5.46	1.31	0.59	0.07	0.05	1. 01	1. 64	7. 40	1. 94	49. 05
2018	7.86	2.87	8.50	5.02	0.79	0.70	0.03	0.05	0. 19	0. 85	4. 94	4. 95	36. 75
2019	6.67	14.43	4.79	2.51	2.61	0.00	0.00	0.18	1. 92	1. 51	1. 75	7. 63	44. 00
2020	7.50	0.60	3.69	2.05	4.73	0.20	0.03	0.08	0. 74	0. 41	2. 55	3. 96	26. 54
2021	7.10	4.32	3.93	0.71	0.25	1.06	0.21	0.03	1. 24	4. 02	2. 85	7. 25	32. 97
2022	1.90	0.51	1.49	4.57	M1.28								9.75
Notes: Data missing in any													

Notes: Data missing in any month have an "M" flag. A "T" indicates a trace of precipitation.

Data missing for all days in a month or year is blank.

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