

Jurisdictional Wetland Delineation Report Foster Clean Power A & B Project November 2022



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EXECUTIVE SUMMARY

The purpose of this report is to provide an assessment of the type and extent of jurisdictional wetlands and waters that may be affected by the proposed Foster Clean Power A & B Project (Project). In June 2020, SHN prepared a Biological Resource Assessment and a Wetland and Other Waters Delineation Report for a cannabis cultivation project on the same properties as the proposed Project that was subsequently approved by Humboldt County. In August 2022, TransTerra prepared a Biological Resources Assessment for the Project. This report was subsequently prepared to identify and delineate jurisdictional resources that occur within areas of the Project study area that were not previously delineated by SHN. The presence and absence of jurisdictional resources that were evaluated include the following:

- Wetlands and non-wetland "waters of the U.S." regulated by the U.S. Army Corps of Engineers (USACE);
- "Waters of the State" regulated by the North Coast Regional Water Quality Control Board (NCRWQCB); and
- The bed, bank, and channel of all lakes, rivers, and/or streams (and associated riparian vegetation), as regulated by the California Department of Fish and Wildlife (CDFW).

The jurisdictional delineation work was performed by Holly Vadurro and Kale McNeil of TransTerra Consulting on July 27 and August 4, 2022, using the USACE Regional Supplement to the Corps of the Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0). Wetland features were identified based on the USACE's three-parameter approach in which wetlands are defined by the presence of hydrophytic vegetation, hydric soils, and presence of wetland hydrology indicators.

The 2020 SHN jurisdictional delineation study area was approximately 73.5 acres in total and included portions of the Project site and several adjacent properties¹; two wetlands were identified within the SHN study area, one of which is within the Project study area and measured 0.12 acre in size. The 2022 TransTerra jurisdictional delineation study area was approximately 20.9 acres and included portions of the two Project properties where proposed solar development would occur and the area along Foster Ave that were not included in the SHN study area². TransTerra identified and delineated two seasonal Palustrine Emergent wetlands, approximately 1.91 acres and 0.14 acre in size. The smaller of the two wetlands was the same feature identified by SHN so it was re-delineated, ultimately increasing its size by

¹ Note the APN numbers identified in the SHN for the properties delineated are not consistent with the County's GIS Parcel Map (10.3) for the study subject area. According to the SHN report description, portions of the following properties were included in the study area: APNs 503-231-004, 505-151-003, 505-151-004, 506-231-011, and 507-181-007; however, the current available County parcel data and GIS web map indicate the SHN study area included portions of the following properties: APNs 505-151-005-000, 505-151-011-000, 505-151-012-000, 506-231-004-000, 506-231-012-012-000, 506-231-012-000, 506-231-012-000, 506-231-012-012-000, 506-231-012-012-000, 506-231-0

² The TransTerra study area included portions of APNs 505-151-005-000, 505-151-012-000, 506-131-011-000, 506-231-012-000, and 506-231-019-000.

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0.02 acre. The wetlands appear to be hydrologically connected to Liscom Slough via man made ditches, falling within the jurisdiction of USACE, NCRWQCB, and CDFW. In addition, these wetlands must be considered for the Humboldt County Streamside Management Area policies, which require a 50-foot setback for seasonal wetlands.



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INTRODUCTION

This Jurisdictional Wetland Delineation Report and was prepared to provide data concerning the type and extent of wetlands under the jurisdiction of the U.S. Army Corps of Engineers (USACE), North Coast Regional Water Quality Control Board (NCRWQCB); and California Department of Fish and Wildlife (CDFW) that may be affected by the proposed Foster Clean Power A & B Project (Project). This report is based on the fieldwork performed on July 27 and August 4, 2022.

In the following report, the Project Area is defined as the area within the parcel(s) where direct impacts to the environment from Project activities may occur. On-site field assessments were completed within the Project Area.

A Wetlands and Other Waters Delineation Report was conducted by SHN in June of 2020 for the majority of the Project Area and adjacent areas for a proposed cannabis cultivation project that was subsequently approved by the County. This report relied on the findings of that report and delineation activities focused on areas to the south of the SHN study area that were not included in the SHN report; however, the SHN report findings were validated.

ENVIRONMENTAL SETTING

Project Location

The project is located in the "Arcata Bottoms" area at the intersection of Foster Avenue and Janes Road within unincorporated Humboldt County (County) (refer to Figure 1). The City of Arcata is located immediately south of the Project site on the southern side of Foster Avenue and to the east of the project site. Access to the site is provided by Foster Avenue/Jackson Ranch Road. The project is contained within three parcels (APNs 505-151-012-000, 506-231-019-000, and 506-231-022-000), of which approximately 30 acres would be developed for solar energy generation and storage. The project is located on the United States Geological Survey (USGS) Arcata North 7.5-minute Quadrangle, and within the Township 06 north, Range 01 east, and Sections 19, 20, 29, and 30 of the Humboldt Meridian.

The historical and present use of this area is agricultural production, which includes tilling and irrigation as well as harvesting. Sun Valley Floral farms uses a portion of APN 506-231-021 for flower production including greenhouses. Otherwise, the Project Area is vacant and generally zoned for agriculture and mixed-use commercial. Drainage ditches were installed to prevent surface water accumulation within and around the agricultural fields. The majority of these ditches are actively maintained.



Project Description

Renewable America LLC (RNA) proposes to construct and operate a two-phased community-scale solar and energy storage project referred to as: Foster Clean Power A (Phase I) and Foster Clean Power B (Phase II). Phase I would involve the construction of a 12-acre photovoltaic (PV) solar energy facility with associated inverters, fencing, and a 15-foot-wide access road that connects Foster Avenue to an equipment pad. The majority of the access road would follow an existing 15-foot-wide farm road. The equipment pad would be approximately 50 feet by 100 feet in size. Phase I would also include an energy storage (battery) system. Phase II would involve the construction of an additional 18-acre PV solar energy facility immediately north of the Phase I site and would utilize the same equipment pad area and adjoining access road. Refer to Figure 2.

Rows of solar panel arrays oriented north to south would be installed within the two development areas on a single-axis tracking system that would rotate from east to west throughout the day (approximately 60 degrees in each direction). The proposed solar arrays would have a height of approximately 15 feet. Each solar array row would be spaced approximately 14 feet apart. The tracking system would be installed on posts driven directly into the ground to a depth of approximately 6 feet. The solar facility and associated electrical equipment would be encompassed by a chain-link perimeter fence with three strands of barbed wire installed on top. Two separate areas would be fenced for Phases I and II.

The project would be designed to conform to existing topography and constructed in a manner that would minimize ground disturbance. Grading and the creation of impervious surfaces would be limited to the approximately 50-foot by 100-foot equipment pad. The project would maintain the existing site drainage patterns and would not result in a substantial increase in stormwater flow. Stormwater would continue to flow across the site in line with existing drainage patterns.

The project would deliver power to Pacific Gas and Electric Company's (PG&E's) existing distribution network via a primary service interconnection located on Foster Avenue. The solar facility would be positioned within previously tilled areas used for row crop production. The project site and properties are surrounded by agricultural and rural residential land uses.

The proposed solar facility would operate 24 hours a day, 7 days a week, and year-round, with the exception of down time for scheduled maintenance. The facility would be unmanned and managed remotely with security surveillance. Regular staff presence would not be required. Staff would on-site periodically to inspect and maintain the project facilities and maintain vegetation. It is anticipated that approximately two staff members would visit the project site approximately four times per year for regularly scheduled inspections and maintenance. In case of damages or non-functional equipment requiring replacement or repair, an appropriate number of staff will be on site and necessary deliveries will be made to address the issues. The site is expected to have deliveries for equipment replacement once every 10 years with the exception of unexpected events.



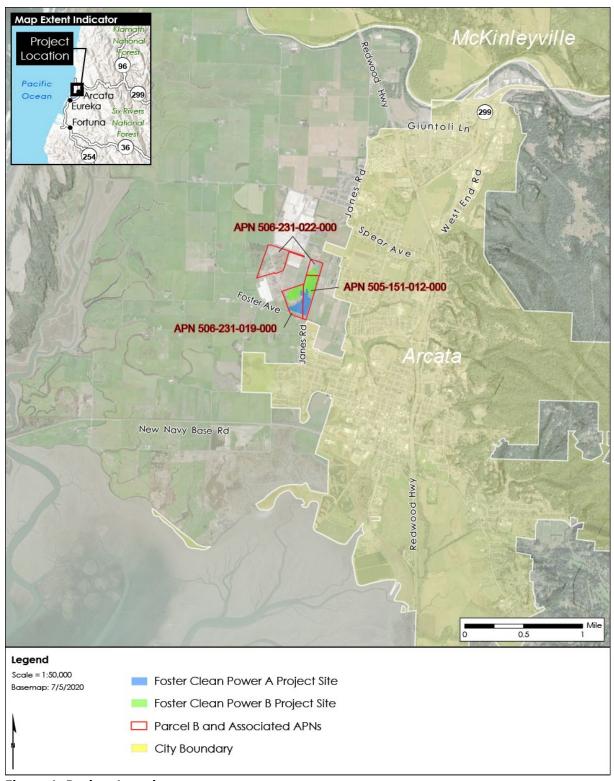


Figure 1. Project Location



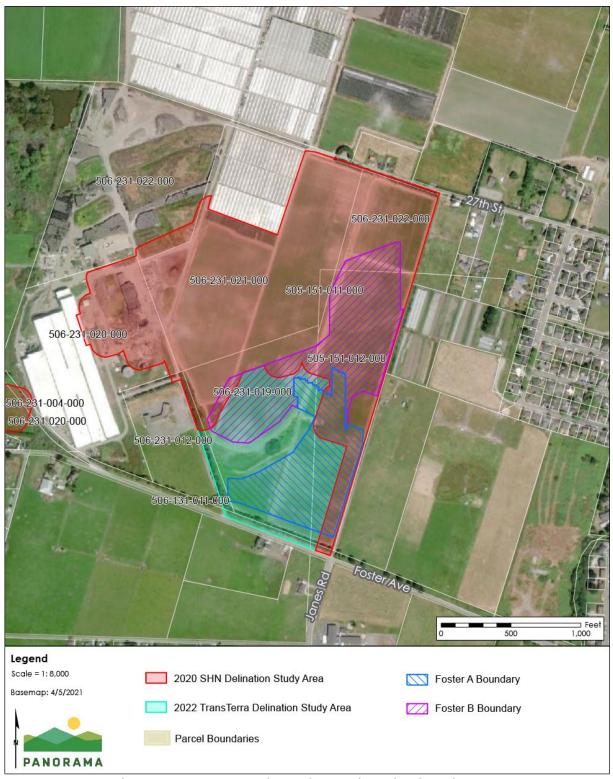


Figure 2. Proposed Project Footprint and Jurisdictional Wetland Study Area



Soils

The kinds of soils on a property will strongly influence whether or not sensitive natural communities or special status plants will be present. For example, hydric soils, which are seasonally or permanently saturated soils as found in wetlands, or soils that possess unique "edaphic characteristics" such as high serpentine content, provide the required substrate for the growth and survival of particular sensitive communities and plants. Soil types from the National Resources Conservation Service (NRCS) Web Soil Survey (https://websoilsurvey.sc.egov.usda.gov/) are listed below. These soil surveys are estimations of soils located on-site and are often not accurate at a fine scale.

The project site is located in the "Arcata Bottoms," a broad alluvial plain at the northern end of Humboldt Bay. Published geologic maps of the region indicate that native materials at the site consist of Quaternary aged alluvium (Kelley, 1984). Alluvium on the Arcata Bottoms is described as unconsolidated coarse- to fine-grained sand and silt, with gravel in channel areas; the alluvium may locally interfinger with marine terrace deposits. At least some of the alluvium on the Arcata Bottoms is inferred to be Holocene in age and appears to reflect deposition by the Mad River following the most recent sea level low stand.

Three soil types are mapped on the parcel including the USDA classification of Arlynda (133), Jollygiant (127), and Dungan (210). Arlynda soils are mapped along and among the drainage that flows northeast to southwest from the lower-central portion of the field to the access road and are considered hydric soils. The drainage along the access road on the southwest border of the property determined by SHN to be a wetland is mapped as Jollygiant soils. Areas towards the southeast and northwest of the drainage are mapped as Dungan soils. Soil classification was not confirmed during this study. Soils are likely impacted by agricultural activities such as plowing and tilling.



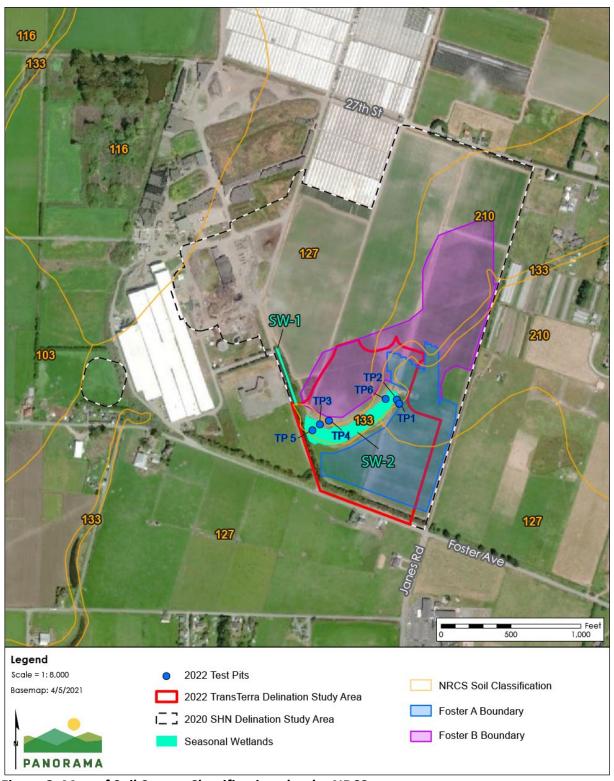


Figure 3. Map of Soil Survey Classifications by the NRCS



Table 1. Soils Mapped in the Project Area

Map Unit	Description	Hydric?
133—Arlynda, 0 to 9	Oi - 0 to 1 inches: slightly decomposed plant material	Y
percent slopes	Ap - 1 to 9 inches: silty clay loam	
	Bg1 - 9 to 22 inches: silty clay loam	
	Slope: 0 to 9 percent	
	Depth to restrictive feature: More than 80 inches	
	Natural drainage class: Very poorly drained	
	Depth to water table: About 0 to 4 inches	
	Frequency of flooding: Occasional	
	Frequency of ponding: Frequent	
	Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)	
	Available water storage in profile: High (about 10.3 inches)	
127—Jollygiant, 0 to 2	Ap - 0 to 16 inches: silty clay loam	N
percent slopes	Bg1 - 16 to 33 inches: silty clay loam	
	Slope: 0 to 2 percent	
	Depth to restrictive feature: More than 80 inches	
	Natural drainage class: Somewhat poorly drained	
	Depth to water table: About 10 to 20 inches	
	Custom Soil Resource Report 16	
	Frequency of flooding: Rare	
	Frequency of ponding: None Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)	
	Available water storage in profile: High (about 10.1 inches)	
210-Dungan, 0-2 percent	Typical profile	N
slopes	Ap1 - 0 to 3 inches: silt loam	
	Ap2 - 3 to 13 inches: silt loam	
	Bw - 13 to 29 inches: silt loam	
	Slope: 0 to 2 percent	
	Depth to restrictive feature: More than 80 inches	
	Natural drainage class: Well drained	
	Depth to water table: About 39 to 61 inches	
	Frequency of flooding: Rare	
	Frequency of ponding: None	
	Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)	
	Available water storage in profile: High (about 10.8 inches)	



Topography and Hydrology

The Project Area is located in the North Coast Ranges Subregion of the Northwestern California Region of the California Floristic Province (Jepson Flora Project, 2020). The climate classification for this area is Warm Temperate (Köppen, 1936), with moderate to warm temperatures on average and most precipitation occurring during winter months.

The property is within the Eureka Plain Planning Watershed. Elevations on the property range from approximately 20 feet to 30 feet. The Project Area is flat to flat to slightly sloping, with slopes of less than 10 percent. The property is designated as relatively stable (Humboldt County, 2020).

Wetlands and Streamside Management Areas

Wetlands, as defined by the USDA- NRCS, are areas that (1) have a predominance of hydric soils; and (2) are inundated or saturated by surface or groundwater at levels necessary to support hydrophytic vegetation that requires saturated soil conditions.

A Streamside Management Area (SMA) is a legally designated buffer zone along streams and aquatic habitats where extra precaution is required to protect water quality. Section 314-61.6 of the Humboldt County General Plan provides for the protection of SMAs along perennially and intermittent streams as well as other wet areas such as natural ponds, springs, vernal pools, marshes, and wet meadows.

A review of the NWI database and Humboldt GIS Web Portal showed Palustrine Emergent Wetlands (PEM) over a large portion of the Project Area. However, many of these areas did not delineate as wetlands in either the SHN study or current investigation.

Vegetation

The Project Area consists of an agricultural field that has historically used for agricultural purposes and is dominated by non-native grass and forb species, supporting cutleaf geranium (*Geranium dissectum*), orchard grass (*Dactylis glomerata*), wild radish (*Raphanus sativa*), velvet grass (*Holcus lanatus*), sweet vanilla grass (*Anthoxanthum odoratum*), and field mustard (*Brassica rapa*).

REGULATORY BACKGROUND

Clean Water Act Sections 404 and 401

Under Section 404 (33 U.S. Code (USC) 1344) of the Clean Water Act (CWA), as amended, the USACE retains primary responsibility for permits to discharge dredged or fill material into waters of the U.S. All discharges of dredged or fill material into jurisdictional waters of the U.S. that result in permanent or temporary losses of waters of the U.S. are regulated by the USACE. A permit from the USACE must be obtained before placing fill or grading in wetlands or other waters of the U.S., unless the activity is exempt from CWA Section 404 regulation (for example, certain farming and forestry activities).



The USACE defines wetlands as "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" (Environmental Laboratory, 1987). In other words, the USACE defines wetlands by the presence of all three wetland indicators: hydrophytic vegetation, hydric soils, and wetlands hydrology.

Waters of the U.S. are defined at 33 Code of Federal Regulations (CFR) Part 328. They include traditional navigable waters; relatively permanent, non-navigable tributaries of traditional navigable waters; and certain wetlands. Following recent court cases, the U.S. Environmental Protection Agency (EPA) and USACE published a memorandum entitled Clean Water Act Jurisdiction (USACE/EPA, 2008) to guide the determination of jurisdiction over waters of the U.S., especially for wetlands. The applicability of Section 404 permitting over discharges to wetlands is, therefore, a two-step process: 1) determining the areas that are wetlands, and 2) where a wetland is present, assessing the wetland's connection to traditional navigable waters and non-navigable tributaries to determine whether the wetland is jurisdictional under the CWA. A wetland is considered jurisdictional if it meets certain specified criteria.

The USACE is required to consult with the USFWS and/or National Marine Fisheries Service (NMFS) under Section 7 of the federal Endangered Species Act (FESA) if the action subject to CWA permitting could result in "take" of federally listed species or an adverse effect to designated critical habitat. The project is within the jurisdiction of the Sacramento District of the USACE.

Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the U.S. to obtain a certification from the state in which the discharge originates or would originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the affected waters at the point where the discharge originates or would originate, that the discharge will comply with the applicable effluent limitations and water quality standards (EPA, 2002). A certification obtained for the construction of any facility must also pertain to the subsequent operation of the facility. The responsibility for the protection of water quality in California rests with the State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCB). The project is within the jurisdiction of the North Coast RWQCB.

Porter-Cologne Water Quality Control Act

The state and RWQCB also maintain independent regulatory authority over the placement of waste, including fill, into waters of the State under the Porter-Cologne Water Quality Control Act. Waters of the State are defined by the Porter-Cologne Water Quality Control Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The SWRCB protects all waters in its regulatory scope but has special responsibility for isolated wetlands and headwaters (State Water Resource Control Board, 1969). These water bodies might not be regulated by other programs, such as Section 404 of the CWA. Waters of the State are regulated by the RWQCBs under the State Water Quality Certification Program, which regulates discharges of dredged and fill material under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require an USACE permit,



or fall under other federal jurisdiction, and have the potential to impact waters of the State are required to comply with the terms of the Section 401 Water Quality Certification Program. If a proposed project does not require a federal license or permit but does involve activities that may result in a discharge of harmful substances to waters of the State, the RWQCBs have the option to regulate such activities under their state authority in the form of Waste Discharge Requirements (WDRs) or certification of WDRs.

California Fish and Game Code Section 1600

Streams, lakes, and riparian vegetation serving as habitat for fish and other wildlife species, are subject to jurisdiction by the CDFW under Sections 1600-1616 of the CFGC. Any activity that will do one or more of the following: 1) substantially obstruct or divert the natural flow of a river, stream, or lake; 2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or 3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake generally require a Lake or Streambed Alteration Agreement (LSAA).

The term "stream," which includes creeks and rivers, is defined in the CCR as follows: "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life." This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation (14 CCR 1.72).

In addition, the term "stream" can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. Riparian is defined as "on, or pertaining to, the banks of a stream;" therefore, riparian vegetation is defined as, "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself" (CDFW, 1994). Removal of riparian vegetation also requires a LSAA from the CDFW.

Humboldt County Streamside Management Area Ordinance

Riparian and wetland habitats receive protection under Humboldt County's Streamside Management Area Ordinance (SMAO); as defined in Title 3, Section 314-61.1 of the Humboldt County Code. Development and work within Streamside Management Areas (SMAs) requires a special permit from the County, if those activities are not exempt. SMAs are identified and modified as follows:

- Areas specifically mapped as SMA and Wetland (WR) Combining Zones, subject to verification and adjustment pursuant to site-specific biological reporting and review procedures.
- For areas along streams not specifically mapped as SMA and Wetland (WR) Combining Zones, the outer boundaries of the SMA shall be defined as:
 - One hundred (100) feet, measured as the horizontal distance from the top of bank or edge of riparian drip-line whichever is greater on either side of perennial streams.
 - o Fifty (50) feet, measured as the horizontal distance from the top of bank or edge of riparian drip-line whichever is greater on either side of intermittent streams.
- Development standards for wetlands shall be consistent with the standards for streamside management areas, as applicable except that the widths of the SMA for wetlands are 50 feet for



seasonal wetlands and 150 feet for perennial wetlands. The setback begins at the edge of the delineated wetland. Buffers may be reduced based on site-specific information and consultation with the California Department of Fish and Wildlife. No buffer shall be required for manmade wetlands except wetlands created for mitigation purposes.

No mapped SMAs, unmapped streams that qualify as SMAs, or riparian vegetation is present. Seasonal wetlands were identified and mapped within the study area and a 50-foot setback has been identified from the edge of the delineated features.

METHODS

TransTerra staff conducted a wetlands delineation focused on identifying wetlands that meet the definition of the USACE. Holly Vadurro and Kale McNeil, associate Biologists of TransTerra Consulting conducted the wetland delineation on July 27 and August 4, 2022. Holly is certified in wetland delineation and collectively has experience delineating wetlands in Humboldt and Del Norte Counties. The wetlands delineation followed the USACE criteria (three-parameter approach) from the Corps of Engineers Wetlands Delineation Manual³ and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (Version 2.0) ⁴ as well as the CCC one-parameter approach.

The investigation was conducted after abnormally dry, severe drought conditions⁵ and 1.53 inches of rain in the month of June 2022 (Table 2). Conditions were partly cloudy throughout the day. TransTerra staff used a combination of existing data to stratify and delineate wetland polygons, including outstanding green vegetated areas, unvegetated areas, and visible inundation prior to fieldwork. Watercourses and nearby wetland areas were identified through the Humboldt GIS Portal⁶ and the National Wetlands Inventory (NWI)⁷. Anthropogenic and natural disturbance patterns were evaluated using historical aerial imagery. This information was used to assess proper transect location. The field is frequently irrigated and was irrigated before the August 4 field visit.

Vegetation and soil data were collected at two transects across the presumed wetland boundaries with two pits in total (upland/wetland). Soil pits were dug to approximately 15 inches with no restrictive layers present. Data on soil color, texture, redoximorphic features, and hydrologic conditions were collected. The upland areas and wetland ditch area identified by SHN vegetation and hydrology were investigated visually to confirm findings, however additional soil pits were not dug in these locations.

³ Corps of Engineers Wetlands Delineation Manual, 1987. (Accessed via https://www.lrh.usace.army.mil/Portals/38/docs/USACE%2087%20Wetland%20Delineation%20Manual.pdf)

⁴ USACE Regional Supplement to the Corps of the Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0) (Accessed via https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1046494.pdf)

⁵ https://www.drought.gov/drought/states/california

⁶ https://webgis.co.humboldt.ca.us/HCEGIS2.0/

⁷ https://www.fws.gov/wetlands



Vegetation data collection consisted of listing the dominant species at each plot. The species were classified as to whether or not they are wetlands indicators, using the most current standard references for plant wetland indicators: State of California 2018 Wetland Plant List⁸ and the USACE 2018 National Wetland Plant List for WMVC⁹. The lists classify plants based on the probability that they would be found in wetlands, ranging from Obligate (almost always in wetlands), Facultative/wet (67% to 99% in wetlands), Facultative (34% to 66% in wetlands), Facultative/up 1% to 33% in wetlands) to Non-indicator (less than 1% in wetlands). Plants not listed are included in the uplands category. If 50% or greater of the dominant plant species at each plot were classified as either Obligate (OBL), Facultative/wet (FACW), or Facultative (FAC), the vegetative mix was determined to be hydrophytic (wetland plants).

A determination of the wetland boundary was made based on soil, hydrology (if present), and vegetative parameters (*i.e.*, a three-parameter approach). Once wetland and upland characteristics were determined for each transect, data points were collected on the wetland boundary. Transect points along the wetland boundary were mapped using Avenza Global Positioning System (GPS) tracking system and Google Earth Pro (v.7.3) aerial imagery. Polygons were created using ArcMap 10.8., 2020 aerial imagery and remote sensing.

Table 2. Precipitation and Temperatures for the July and August Survey Period¹⁰

Date		Tempera	ture (f)		Drosinitation
	Maximum	Minimum	Average	Departure	Precipitation
7/5/2022	64	56	60.0	2.9	0.35
7/6/2022	64	56	60.0	2.8	Т
7/7/2022	65	55	60.0	2.8	0.00
7/8/2022	63	54	58.5	1.2	0.00
7/9/2022	67	55	61.0	3.6	0.00
7/10/2022	65	57	61.0	3.6	0.00
7/11/2022	69	53	61.0	3.5	0.00
7/12/2022	63	55	59.0	1.4	0.00
7/13/2022	63	53	58.0	0.4	0.00
7/14/2022	60	53	56.5	-1.2	0.00
7/15/2022	66	51	58.5	0.8	0.00
7/16/2022	65	54	59.5	1.7	0.01
7/17/2022	63	53	58.0	0.1	0.00
7/18/2022	64	49	56.5	-1.4	0.00
7/19/2022	62	52	57.0	-1.0	0.00

State of California 2016 Wetland Plant List (Accessed via http://wetland-plants.usace.army.mil/nwpl_static/data/DOC/lists_2016/States/pdf/CA_2016v1.pdf)

⁹ USACE NWPL 2018 (Accessed via https://cwbi-app.sec.usace.army.mil/nwpl static/v34/home/home.html)

¹⁰ National Weather Service Forecast Office-Eureka, CA (Eureka, CA. Accessed via https://w2.weather.gov/climate/xmacis.php?wfo=eka)



Date		Tempera	ture (f)		Drocinitation
	Maximum	Minimum	Average	Departure	Precipitation
7/20/2022	61	52	56.5	-1.5	0.00
7/21/2022	63	53	58.0	-0.1	0.01
7/22/2022	63	55	59.0	0.9	0.00
7/23/2022	63	54	58.5	0.3	Т
7/24/2022	61	51	56.0	-2.2	0.00
7/25/2022	58	51	54.5	-3.8	0.00
7/26/2022	63	51	57.0	-1.3	0.00
7/27/2022	62	51	56.5	-1.8	0.00
7/28/2022	66	53	59.5	1.1	0.00
7/29/2022	63	56	59.5	1.1	Т
7/30/2022	67	56	61.5	3.1	Т
7/31/2022	67	57	62.0	3.5	0.00
8/1/2022	66	57	61.5	3.0	0.00
8/2/2022	64	55	59.5	5	0.00
8/3/2022	64	55	59.5	5	0.00
8/4/2022	64	54	59.5		0.00

RESULTS AND DISCUSSION

The area of investigation contained 2.44 acres of jurisdictional wetland. The wetlands include two areas of seasonal PEM wetlands, approximately 2.3 acres and 0.14 acre in size. These wetlands appear to be hydrologically connected to Liscom Slough via man made ditches, falling within the jurisdiction of USACE, NCRWQCB, and CDFW. In addition, these wetlands must be considered for the Humboldt County SMA policies. (Figure 3)

Water was not present in the wetlands as standing water, saturation, and water table. Along with lower recent rainfall, severe drought conditions are also currently present for this region.

The location of wetland observation pits were chosen based upon obvious hydrological indicators. Field Forms are attached to this document (Appendix C).



Table 3. Summary of Wetland Pit Observations

Pit No.	Vegetation	Soils	Hydrology	Wetland Status
TP1	Hydrophytic (Dominance Test)	Hydric-Redox Dark Surface (F6)	Oxidized Rhizospheres (C3)	Seasonal Wetland- PEM
TP2	Hydrophytic (Dominance Test)	Not Hydric	No Indicators	Upland
TP3	Hydrophytic (Dominance Test)	Hydric-Redox Dark Surface (F6)	Oxidized Rhizospheres (C3)	Seasonal Wetland- PEM
TP4	Hydrophytic (Dominance Test)	Not Hydric	No Indicators	Upland
TP5	Hydrophytic (Dominance Test)	Hydric-Redox Dark Surface (F6)	Oxidized Rhizospheres (C3), Inundation Visible Aerial (B7)	Seasonal Wetland- PEM
TP6	Hydrophytic (Dominance Test)	Hydric-Redox Dark Surface (F6)	Saturation (A3)	Seasonal Wetland- PEM



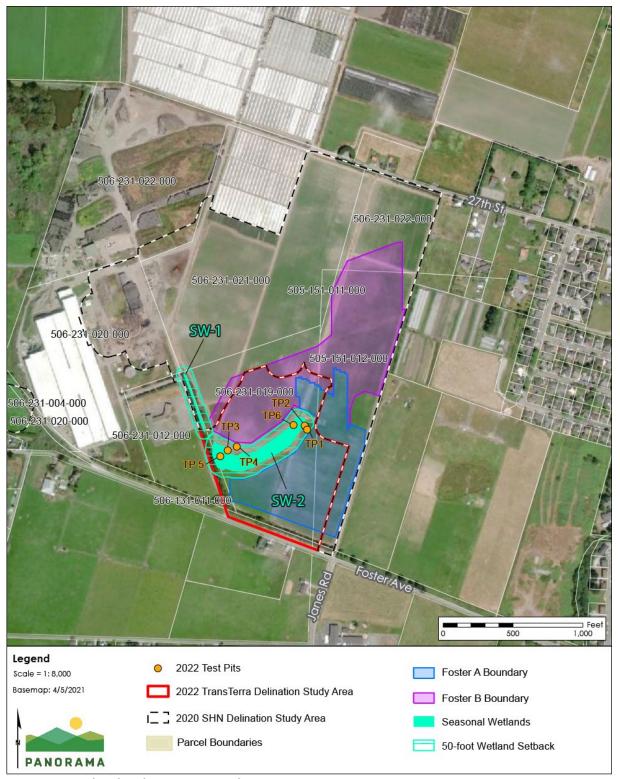


Figure 4. Wetland Delineation Results



RECOMMENDATIONS

Follow all recommendations outlined by existing agency policies for minimizing impacts to natural resources and begin technical assistance to determine the possible extent of impacts to listed resources and appropriate mitigation measures. Recommendations for the project site include the following measures:

- Provide a fifty (50) foot buffer around wetlands and avoid impacts to any buffer areas.
- If impacts to wetlands are expected (either directly or indirectly by working inside or prescribed buffers), develop a Mitigation and Monitoring Plan to minimize disturbance to the area. Numerous seeps provide evidence of shallow groundwater in this area, and additional disturbance, clearing, and road cuts would likely modify existing groundwater and surface water patterns. Additional disturbance to this area could also potentially impact aquatic species.
- To avoid wetland impacts, place temporary fencing or otherwise demarcate wetlands and or prescribed buffers prior to construction.
- Install and maintain temporary erosion and sediment control measures and best management practices (BMPs) to reduce sediment entering the wetland and traveling to waters.

Please contact me with any comments or concerns regarding this memorandum or future work required for your project. I can be reached at tami@trans-terra.com or (707) 840-4772. I have included our qualifications as an attachment to this memorandum as it is often requested by agency personnel reviewing work of this nature. (Appendix B)



REFERENCES

- Arcata Fish and Wildlife Office. (2006). Transmittal of Guidance: Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelet in Northwestern California. U.S. Fish and Wildlife Service. https://www.fws.gov/arcata/es/birds/MM/documents/MAMU-NSO%20Harassment%20Guidance%20NW%20CA%202006Jul31.pdf
- Baldwin, B. G., Goldman, D. H., Keil, D. J., Patterson, R., & Rosatti, T. J. (Eds.). (2012). The Jepson Manual: Vascular Plants of California (Second Edition). University of California Press.
- CDFW California Department of Fish and Wildlife. (2018). Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (p. 12). California Department of Fish and Wildlife.
- CDFW California Department of Fish and Wildlife. (2019). California Sensitive Natural Communities. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153609&inline
- CDFW California Department of Fish and Wildlife. (2020a). Natural Communities. https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities
- CDFW California Department of Fish and Wildlife. (2020b). Survey and Monitoring Protocols and Guidelines. https://wildlife.ca.gov/conservation/survey-protocols
- CNPS California Native Plant Society. (2001). CNPS Botanical Survey Guidelines. https://cnps.org/wp-content/uploads/2018/03/cnps survey guidelines.pdf
- CNPS California Native Plant Society. (2020). Manual of California Vegetation, 2nd Edition (online). http://vegetation.cnps.org/
- Cowardin, L. M., Carter, V., Golet, F. C., & LaRoe, E. T. (1979). Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service. https://www.fws.gov/wetlands/Documents/Classification-of-Wetlands-and-Deepwater-Habitats-of-the-United-States.pdf
- Holland, R. F. (1986). Preliminary descriptions of the terrestrial natural communities of California (p. 156). California Department of Fish and Game.
- Humboldt County. (2020). Humboldt GIS Portal, Geographic Information System (GIS) Web Applications. Humboldt County, California's Redwood Coast. https://humboldtgov.org/1357/Web-GIS
- Jepson Flora Project. (2020). Jepson eFlora, California Floristic Province. https://ucjeps.berkeley.edu/eflora/geography.html
- Kelsey, H. M. (1978). Earthflows in Franciscan melange, Van Duzen River basin, California. Geology, 6, 361–364.



Köppen, W. (1936). Das geographische System der Klimate (The Geographic System of Climate). Verlag von Gebrüder Brontraeger.



APPENDIX A—Site Photographs



Photo 1. TP1



Photo 3. TP3



Photo 2. TP2



Photo 4. TP4



APPENDIX A—Site Photographs



Photo 5. TP5



Photo 7. View of wetland from Northeast edge



Photo 6. TP6



Photo 8. View of wetland from the south



APPENDIX B—Qualifications

Tami Camper-Owner-Principal Biologist

Tami is the founder of TransTerra Consulting LLC. She obtained a Bachelor of Science in Environmental Science from Western Washington University and Master of Science. in Biology from Calpoly Humboldt. She has worked on publications including a rare plant guide for timberlands of Mendocino County published by MCRCD. She has worked as a professional biologist and conducted wetland delineations for 20 years, specializing in wetland/stream surveys, wildlife/vegetation mapping, rare species surveys, biological assessments, impact assessments, mitigation and monitoring plans, CEQA/NEPA and land-use planning. Tami received the Richard Chinn Wetland Delineation 40-hour certification in 2002.

Holly Vadurro-Biologist/Botanist

Holly earned a Bachelor of Science degree in Biology from College of Charleston, in 1996. She has performed various biological field surveys including botanical, fishery, mollusk, amphibian, bryophyte and migratory birds. She has over a decade of experience working as an Environmental Scientist and has conducted wetland delineations, botanical surveys, vegetation mapping and collected and analyzed water quality data. Holly received the Richard Chinn Wetland Delineation 40-hour certification in 2004.

Kale McNeil-Botanist

Kale holds Bachelor of Science Degree in Botany from Humboldt State University (now Calpoly Humboldt), has over years of experience conducting botanical surveys and is currently pursuing a Master of Science Degree in Biology.





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_ Histosol (A1)	Sandy Redox (S5) Stripped Matrix (S6)	Red Parent Material (TF2)
_ Histic Epipedon (A2)	Loamy Mucky Mineral (F1) (except MLRA	Very Shallow Dark Surface (TF12)
Black Histic (A3)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
_ Hydrogen Sulfide (A4)	Depleted Matrix (F3)	
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_ Thick Dark Surface (A12)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	unless disturbed or problematic.
Sandy Gleyed Matrix (S4)		
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Wetland Hydrology Indicators: Primary Indicators (minimum of one requirement) 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 Imager Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes Gincludes capillary fringe) Describe Recorded Data (stream gauge	wired; 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LF) y (B7) Other (Explain in Remarks) ice (B8) No Depth (inches): No Depth (inches): 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) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) s (C6) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (minimum of one requirement) 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 Imager Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes Gincludes capillary fringe) Describe Recorded Data (stream gauge	wired; 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LF) y (B7) Other (Explain in Remarks) toe (B8) No Depth (inches): 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 (CS) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) s (C6) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No

2



WETLAND DETERMINATION DAT	TA FORM	/I – Western Mou	ntains, Valleys, and	Coast Region
Project/Site: Goster	(city/County: Accat	& Humboldt	Sampling Date: 7-27-2
Applicant/Owner: Panorama (Client)	`		State: CA	
		Section, Township, Ra	nge.	odmpinig Foliti.
Landform (hillslope, terrace, etc.): + RITECP Pra	ine	Local relief (concave.	convex. none): $+/a$	Slope (%):
				Datum:
Soil Map Unit Name: Accesta North	US	GS		tion: in on HUM WE
Are climatic / hydrologic conditions on the site typical for this	time of year	r? Yes No		
Are Vegetation, Soil, or Hydrology signs of the sign of the s				esent? Yes No
Are Vegetation, Soil, or Hydrology na			eded, explain any answers	
SUMMARY OF FINDINGS - Attach site map s				
Hydrophytic Vegetation Present? Yes No		ounipining point is	Joan Jis, transcots,	important reatures, etc.
Hydric Soil Present? Yes No		is the Sampled	Area	
Wetland Hydrology Present? Yes No		within a Wetlar	d? Yes	No_
Remarks: (Pivere drovant			wound	next to
Arge increased A/A)	1/1	1	Cabino	Con the
VEGETATION – Use scientific names of plant	a) na	u con	ranuve	Chorin
VEGETATION – Ose scientific names of plant		Deminent Indicates	Daninana Tashuada	h4
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test works Number of Dominant Sp	
1			That Are OBL, FACW, o	r FAC: (A)
2.			Total Number of Domina	nt 🤝
3.			Species Across All Strate	a: (B)
Sapling/Shrub Stratum (Plot size:)		= Total Cover	Percent of Dominant Spe That Are OBL, FACW, o	
1			Prevalence Index work	sheet:
2.			Total % Cover of:	Multiply by:
3.				x1 =
4			FACW species	x 2 =
5			The state of the s	x4=
Herb Stratum (Plot size: 20)		= Total Cover		x 5 =
1. Holcus anatus	35	FAC	the same of the sa	(A) (B)
2. Trifolium repens	35	Y FAC	Prevalence Index	= B/A =
3. Trifalium prateinse	5	N FACU	Hydrophytic Vegetation	n Indicators:
5. Rumex casous	3	N FACU	1 - Rapid Test for H	
6. Lettor comp to Carolina tos		INO	2 - Dominance Test	
7. Lestuca perenne	5	N FAC	3 - Prevalence Index	daptations ¹ (Provide supporting
8. Agrostis stolunifora	5	NTAC		or on a separate sheet)
9. Compleves arreass	1	~ UPL	5 - Wetland Non-Va	
10.				hytic Vegetation ¹ (Explain)
11	95	Total Cover	be present, unless distur	and wetland hydrology must bed or problematic.
Woody Vine Stratum (Plot size:)	- 10	- Total Cover		
1			Hydrophytic	
2			Vegetation Present? Yes	No
% Bare Ground in Herb Stratum		= Total Cover	163	
Remarks: This test pit is	rial	A on 4	re wetla	nd boundary
in the rest pit is	8			2. 500. 819. 9



ile Description: (Describe to the dep	th needed to document the indicator of commit	
oth Matrix	Redox Features	
hes) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture
15 754P312 100		Silty clay
15 1.0 1K 9/2 100)
pe: C=Concentration, D=Depletion, RM	=Reduced Matrix, CS=Covered or Coated Sand G	irains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
dric Soil Indicators: (Applicable to all	LRRs, unless otherwise noted.)	
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2) Very Shallow Dark Surface (TF12)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (11 12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	³ Indicators of hydrophytic vegetation and
Thick Dark Surface (A12)	Redox Dark Surface (F6)	wetland hydrology must be present,
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
strictive Layer (if present):		
Type:		
Donth (inches):	; no redox; more bro	Hydric Soil Present? Yes No
Depth (inches):emarks:	; no redox; more bro tilled	
Depth (inches):emarks:	; no redox; more bro tilled	
Depth (inches):emarks:	tilled	own (not black)
Depth (inches):emarks:	red; check all that apply)	Secondary Indicators (2 or more required)
Depth (inches):emarks:	red; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2
Depth (inches):emarks:	red; 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, 2 4A, and 4B)
Depth (inches):emarks:	red; 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, 2 4A, and 4B) Drainage Patterns (B10)
Pepth (inches):emarks:	red; 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, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Pepth (inches):emarks:	red: 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)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C
Pepth (inches):emarks:	red: 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)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CRoots (C3) Geomorphic Position (D2)
Pepth (inches):emarks:	red: 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)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C
Pepth (inches):	red; 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 Recommendation	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3)
Pepth (inches):	red; 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 F — Presence of Reduced Iron (C4) — Recent Iron Reduction in Tilled Soils (Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CR Roots (C3) — Geomorphic Position (D2) Shallow Aquitard (D3) (C6) — FAC-Neutral Test (D5)
Depth (inches):emarks: POROLOGY Settland Hydrology Indicators: rimary Indicators (minimum of one requirement of the settlement	red; 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 Researce of Reduced Iron (C4) — Recent Iron Reduction in Tilled Soils (Called Standard Conditions)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Depth (inches):emarks:	red; 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 F — Presence of Reduced Iron (C4) — Recent Iron Reduction in Tilled Soils (— Stunted or Stressed Plants (D1) (LRF	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CROOTS) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5)
Depth (inches):emarks: POROLOGY Fetland Hydrology Indicators: rimary Indicators (minimum of one requirement) 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 Sparsely Vegetated Concave Surface	red; 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 F — Presence of Reduced Iron (C4) — Recent Iron Reduction in Tilled Soils (— Stunted or Stressed Plants (D1) (LRF	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Pepth (inches):	red; 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 Filled Presence of Reduced Iron (C4) — Recent Iron Reduction in Tilled Soils (C4) — Stunted or Stressed Plants (D1) (LRF) (B7) — Other (Explain in Remarks)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Popth (inches):	red; 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 F — Presence of Reduced Iron (C4) — Recent Iron Reduction in Tilled Soils (— Stunted or Stressed Plants (D1) (LRF (B7)) — Other (Explain in Remarks) — (B8) — No — Depth (inches):	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Popth (inches):	red; 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 Figure (C4) — Recent Iron Reduction in Tilled Soils (C4) — Stunted or Stressed Plants (D1) (LRF (C5)) — Other (Explain in Remarks) — No — Depth (inches):	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) RA) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Pepth (inches):	red; 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 Figure (C4) — Recent Iron Reduction in Tilled Soils (C4) — Stunted or Stressed Plants (D1) (LRF (C5)) — Other (Explain in Remarks) — No — Depth (inches):	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Depth (inches):	red; 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 Figure (C4) — Recent Iron Reduction in Tilled Soils (C4) — Stunted or Stressed Plants (D1) (LRF (C5)) — Other (Explain in Remarks) — No — Depth (inches):	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Roots (C3) — Geomorphic Position (D2) Shallow Aquitard (D3) (C6) — FAC-Neutral Test (D5) R A) — Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Depth (inches):	red; 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 Figure (C4) — Recent Iron Reduction in Tilled Soils (C4) — Stunted or Stressed Plants (D1) (LRF (C5)) — Other (Explain in Remarks) — No — Depth (inches):	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Roots (C3) — Geomorphic Position (D2) Shallow Aquitard (D3) (C6) — FAC-Neutral Test (D5) R A) — Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Permarks: PROLOGY Settland Hydrology Indicators: rimary Indicators (minimum of one required by 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 Sparsely Vegetated Concave Surface Soirface Water Present? Yes Saturation Present? Yes Satu	red; 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 Figure 1 and 1	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Roots (C3) — Geomorphic Position (D2) Shallow Aquitard (D3) (C6) — FAC-Neutral Test (D5) R A) — Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Permarks: PROLOGY Petland Hydrology Indicators: rimary Indicators (minimum of one requi 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 Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Water Table Present? Yes Saturation Present? Yes Includes capillary fringe) Describe Recorded Data (stream gauge	red; 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 Figure 1 and 1	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Roots (C3) — Geomorphic Position (D2) Shallow Aquitard (D3) (C6) — FAC-Neutral Test (D5) R A) — Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)



ject/Site:	Ci	ty/County: Accent	Aundoth Sampling Date: 7-27-
Dicant/Owner: Panarama (chest			State: CA Sampling Point: TP3
olicanibowner.	M	ection, Township, Rar	
estigator(s):	1000	ection, Township, Rai	ige.
dform (hillslope, terrace, etc.):	aific	ocal relief (concave, o	convex, none):
region (LRR):	_ Lat:	C / E	Long: Datum:
Map Unit Name: Arcats North	V.		NWI classification: In an HUMW
climatic / hydrologic conditions on the site typical for thi	is time of year		
Vegetation, Soil, or Hydrology s	significantly d	isturbed? Are "	Normal Circumstances" present? Yes No
Vegetation, Soil, or Hydrology r	naturally prob	lematic? (If ne	eded, explain any answers in Remarks.)
			ocations, transects, important features, etc
		sampling point i	ocations, transcots, important reatures, etc
	10	Is the Sampled	∆rea .
	10	within a Wetlar	
etland Hydrology Present? Yes N	10		
emarks:			
	-4-		
GETATION – Use scientific names of plar			Barrier Tank wantahank
ee Stratum (Plot size:)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet:
CO STATUTE (1.1816)			Number of Dominant Species That Are OBL, FACW, or FAC: (A)
			Total Number of Dominant
			Species Across All Strata: (B)
			Descript of Descriptors Chapter
		= 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 =
			FACU species x 4 =
erb Stratum (Plot size:)		= Total Cover	UPL species x 5 =
Dissacus Filonum	25	Y FAC.	Column Totals: (A) (B)
Daves carpta	10	FACU	Prevalence Index = B/A =
Holay, lanetus	10	FAC	Hydrophytic Vegetation Indicators:
Helminthothers echinal	E1 9	H FAG	1 - Rapid Test for Hydrophytic Vegetation
Convolvulus armensis	5	N UPL	2 - Dominance Test is >50%
Agrostis Stoleniters	9	N FAC	3 - Prevalence Index is ≤3.0 ¹
16.	9 10	7 UPL	4 - Morphological Adaptations (Provide supporting
Vicia tetrasperm		1 174	data in Remarks or on a separate sheet)
	1	N NIT	
Geranium dissectum	1	N FAC	5 - Wetland Non-Vascular Plants ¹
Geranium dissictum Lotus curniculatus O. Sonchus olereacus	1	N FAC N VPL	5 - Wetland Non-Vascular Plants Problematic Hydrophytic Vegetation¹ (Explain)
Germin dissiction Lotus cornectatus o. Souchus otercacus	1 2 1 8	N FAC N UPL N FAC	5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must
Geranium dissictum Lotus corniculatus O. Sonchus olercacus 1. Destuca perennis	1 2 1 8	= Total Covers	5 - Wetland Non-Vascular Plants Problematic Hydrophytic Vegetation¹ (Explain)
O. Sonchus of reacus 1. Destuce perchasis	1 2 1 8		5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
O. Sonchus of reacus 1. Destuce percentis	1 2 1 8	= Total Covers	5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic
O. Sonchus of reacus 1. Destuca perennis	1 2 1 8	= Total Covers	5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.



tile Description: (Describe to the den	th needed to document the indicator o	confirm the absence	e of indicators.)
	Redox Features		
pth Matrix ches) Color (moist) %	Color (moist) % Type ¹	Loc ² Texture	Remarks
VIVIOUDUIZ SO	10/84/6 12 0	M siltu	clau
14 1016 1/2 08	10/1/10 100	30 110	
- 1 -			
,			
			1
aile			
pe: C=Concentration, D=Depletion, RM	=Reduced Matrix, CS=Covered or Coated	Outra Oranie.	_ocation: PL=Pore Lining, M=Matrix.
dric Soil Indicators: (Applicable to all	LRRs, unless otherwise noted.)	Indica	ators for Problematic Hydric Soils':
Histosol (A1)	Sandy Redox (S5)	2	cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	R	led Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except	MLRA 1) V	ery 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)		ators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	We	etland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	ur	less disturbed or problematic.
estrictive Layer (if present):			
Type:		The same of the sa	*
		Handala 6	soil Present? Yes V No
		HVarics	Soli Present: Tes NO
Depth (inches):) , , , , , , , , , , , , , , , , , , ,	area do	minded by Potent
emarks: Just south of the and its well		area do	minoted by Potent
emarks: Just south of ly @ of its well entirely		area do	minoted by Potent
PROLOGY JUST South For the work of the wor	n darken bet looke	area do similar	minoted by Potent
emarks: Just south of ly @ of its well entirely	n darken bet looke	area do similar	minded by Potent
PROLOGY JUST South For the work of the wor	n darken bet looke	area do s similar	minoted by Potent
PROLOGY Toronto Indicators: Trimary Indicators (minimum of one required)	adarker but looks	area do s similar	minded by Potent
PROLOGY Petland Hydrology Indicators: rimary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2)	red; check all that apply) Water-Stained Leaves (B9) (e	area do s similar	econdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
PROLOGY /PROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3)	red; check all that apply) — Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) — Salt Crust (B11)	area do s similar	econdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
PROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	red; check all that apply) — Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13)	area do s similar	econdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
PROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	red; check all that apply) — Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1)	seen de	econdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
PROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	red: check all that apply) — Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along	Sexcept	econdary Indicators (2 or more required) 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)
PROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	red: check all that apply) — Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along — Presence of Reduced Iron (C-	Sexcept	econdary Indicators (2 or more required) 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)
PROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requir 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)	red; check all that apply) — Water-Stained Leaves (B9) (e	Sexcept	econdary Indicators (2 or more required) 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)
PROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requir 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)	red; check all that apply) — Water-Stained Leaves (B9) (e	Sexcept	econdary Indicators (2 or more required) 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) Raised Ant Mounds (D6) (LRR A)
PROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requir 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	red; check all that apply) Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (Compared in the compared in	Sexcept	econdary Indicators (2 or more required) 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)
PROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one require 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 Sparsely Vegetated Concave Surface	red; check all that apply) Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (Compared in the compared in	Sexcept	econdary Indicators (2 or more required) 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) Raised Ant Mounds (D6) (LRR A)
PROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one require 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 Sparsely Vegetated Concave Surface rield Observations:	red; check all that apply) Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (Compared in the compared in	Sexcept	econdary Indicators (2 or more required) 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) Raised Ant Mounds (D6) (LRR A)
PROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one require 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 Sparsely Vegetated Concave Surface	red; check all that apply) Water-Stained Leaves (B9) (e	Sexcept	econdary Indicators (2 or more required) 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) Raised Ant Mounds (D6) (LRR A)
PROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one require 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 Sparsely Vegetated Concave Surface rield Observations:	red; check all that apply) Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (Compared in the compared in	Similar Similar Similar Living Roots (C3) _ 4 d Soils (C6) _ 11) (LRR A)	econdary Indicators (2 or more required) 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) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
PROLOGY Petland Hydrology Indicators: rimary Indicators (minimum of one required by the 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 Sparsely Vegetated Concave Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Water Present? Ves Saturation Present? Ves Saturation Present?	red; check all that apply) Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (Compared to the compared to	Similar Similar Similar Living Roots (C3) _ 4 d Soils (C6) _ 11) (LRR A)	econdary Indicators (2 or more required) 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) Raised Ant Mounds (D6) (LRR A)
PROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requir 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 Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Ves Saturation Present? Yes Saturation Present? Yes Includes capillary fringe)	red; check all that apply) — Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along — Presence of Reduced Iron (C- — Recent Iron Reduction in Tille — Stunted or Stressed Plants (D (B7) — Other (Explain in Remarks) e (B8) No — Depth (inches): No — Depth (inches): No — Depth (inches):	Sexcept Living Roots (C3) 4) d Soils (C6) 11) (LRR A)	econdary Indicators (2 or more required) 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) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
PROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requir 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 Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Ves Saturation Present? Yes Saturation Present? Yes Includes capillary fringe)	red; check all that apply) Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (Compared to the compared to	Sexcept Living Roots (C3) 4) d Soils (C6) 11) (LRR A)	econdary Indicators (2 or more required) 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) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
PROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requir 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 Sparsely Vegetated Concave Surface rield Observations: Surface Water Present? Ves Staturation Present? Ves Saturation Present? Ves Saturation Present? Ves Sincludes capillary fringe) Describe Recorded Data (stream gauge,	red; check all that apply) — Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along — Presence of Reduced Iron (C- — Recent Iron Reduction in Tille — Stunted or Stressed Plants (D (B7) — Other (Explain in Remarks) e (B8) No — Depth (inches): No — Depth (inches): No — Depth (inches):	Sexcept Living Roots (C3) 4) d Soils (C6) 11) (LRR A)	econdary Indicators (2 or more required) 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) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
PROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requir 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 Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Ves Saturation Present? Yes Saturation Present? Yes Includes capillary fringe)	red; check all that apply) — Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along — Presence of Reduced Iron (C- — Recent Iron Reduction in Tille — Stunted or Stressed Plants (D (B7) — Other (Explain in Remarks) e (B8) No — Depth (inches): No — Depth (inches): No — Depth (inches):	Sexcept Living Roots (C3) 4) d Soils (C6) 11) (LRR A)	econdary Indicators (2 or more required) 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) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
PROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requir 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 Sparsely Vegetated Concave Surface rield Observations: Surface Water Present? Ves Staturation Present? Ves Saturation Present? Ves Saturation Present? Ves Sincludes capillary fringe) Describe Recorded Data (stream gauge,	red; check all that apply) — Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along — Presence of Reduced Iron (C- — Recent Iron Reduction in Tille — Stunted or Stressed Plants (D (B7) — Other (Explain in Remarks) e (B8) No — Depth (inches): No — Depth (inches): No — Depth (inches):	Sexcept Living Roots (C3) 4) d Soils (C6) 11) (LRR A)	econdary Indicators (2 or more required) 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) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)



WETLAND DETERMINATION DAT	TA FORM	VI - Western Mou	intains, Valleys, and Coast Region
Project/Site: TosAcs Au		City/County:	datumod Sampling Date: 7/27/2
Applicant/Owner: Pan prawa'a	V -00 Ti		State: Sampling Point: TP4
nvestigator(s): Holly V, Kale N	A	Section, Township, Ra	
			convex, none): Slope (%):
			Long: Datum:
oil Map Unit Name:	_ Lat		NWI classification:
re climatic / hydrologic conditions on the site typical for this	time of ve	and Van Na	
re Vegetation, Soil, or Hydrology si	_		
are Vegetation, Soil, or Hydrology na			eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map s	showing	sampling point l	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		to the Control of	
Hydric Soil Present? Yes No		Is the Sampled within a Wetlan	
Wetland Hydrology Present? Yes No		Within a World	10310
Remarks: Sevelle drought			
0			
(COETATION LIBERIA (CONTRACTOR)			
/EGETATION – Use scientific names of plant		Deminant Indicator	Daminana Tasturakakasti
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet: Number of Dominant Species
1			That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant
3			Species Across All Strata: (B)
4			Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)		= Total Cover	That Are OBL, FACW, or FAC: (A/B)
1.			Prevalence Index worksheet:
2.	190		Total % Cover of: Multiply by:
3.			OBL species x 1 =
4.	<u> </u>	14/10/	FACW species x 2 = FAC species x 3 =
5.	10.1.1		FACU species x 4 =
Herb Stratum (Plot size:)		= Total Cover	UPL species x 5 =
1. Plantago las ceolato	39	Y FACE	Column Totals: (A) (B)
2. Davers Chata	8	N FACU	
3. Festuca permis	10	N. FAC	Prevalence Index = B/A =
4. Trifolium repens	18	Y: FAC	1 - Rapid Test for Hydrophytic Vegetation
5. Itelminthothoen echioides	3	N TAC	2 - Dominance Test is >50%
6. Trifolium gratense	_5_	~ ACU	3 - Prevalence Index is ≤3.0 ¹
7.		^/ -AC	4 - Morphological Adaptations¹ (Provide supporting
8. Lysingthia arvens		TAL TALL	data in Remarks or on a separate sheet)
9. Legatodor Saxaxilis	5	V FACO	5 - Wetland Non-Vascular Plants Problematic Hydrophytic Vegetation (Explain)
10. Hullus knotus	1	N FACU	¹Indicators of hydric soil and wetland hydrology must
and Lacille	90	= Total Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	Y	18/42	
1			Hydrophytic
2.			Vegetation Present? Yes No
% Bare Ground in Herb Stratum		= Total Cover	
Remarks:	(Mo	und rec	ently but Plants
didn't Pilal	0		



- file Description: (Describe to the d		
oth Matrix	Redox Features Color (moist)	Texture Remarks
ches) Color (moist) %	The state of the s	Silt-loam
-14 104R 3/2 100		off (Sd)-C
THE RESERVE TO SERVE THE PARTY OF THE PARTY		
	The state of the s	Grains. ² Location: PL=Pore Lining, M=Matrix.
pe: C=Concentration, D=Depletion, F	RM=Reduced Matrix, CS=Covered or Coated Sand G	Indicators for Problematic Hydric Soils ³ :
dric Soil Indicators: (Applicable to	all LRRs, unless otherwise noted.)	2 cm Muck (A10)
Histosol (A1)	Sandy Redox (S5)	Red Parent Material (TF2)
Histic Epipedon (A2)	Stripped Matrix (S6)	
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1	Very Shallow Dark Surface (1712)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	3. It is a standard butto vogotation and
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.
estrictive Layer (if present):		
Type:		
		Hydric Soil Present? Yes No
Depth (inches):	a but no redox	Hydric Soil Present? Yes No
Depth (inches):	a but no redox	Hydric Soil Present? Yes No
Depth (inches): emarks:		Hydric Soil Present? Yes No
Depth (inches):	sed historically	
Depth (inches): emarks:	quired; check all that apply)	Secondary Indicators (2 or more required)
Depth (inches):	sed historically	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2
Depth (inches):	quired; check all that apply)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
Depth (inches):emarks:	quired; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10)
Pepth (inches):	quired; 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, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Depth (inches):	muired: 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)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C
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Popth (inches): Pemarks: POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one recognized process) 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 Image Sparsely Vegetated Concave Surficient (B4) Surface Water Present? Ves_ Water Table Present?	muired; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Suffide Odor (C1) Oxidized Rhizospheres along Living F Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils is Stunted or Stressed Plants (D1) (LRF ery (B7)) Tace (B8) No Depth (inches):	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) RA) Raised Ant Mounds (D6) (LRR A)
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Section, Township, Range:	x, none): Slope (%): S
poplicant/Owner: Part of an all Cover Section, Township, Range: vestigator(s):	State: Sampling Point: Slope (%): Slope (%): Datum: Datum: NWI classification: (If no, explain in Remarks.) all Circumstances" present? Yes No explain any answers in Remarks.) ions, transects, important features, etc. Yes No
vestigator(s): vestigator(s):	Slope (%): Datum: NWI classification: (If no, explain in Remarks.) al Circumstances" present? Yes No explain any answers in Remarks.) ions, transects, important features, etc. Yes No One No No Ininance Test worksheet: mber of Dominant Species
ndform (hillslope, terrace, etc.): Local relief (concave, convertibregion (LRR): Local relief (concave, convertibregion (Concave): Local relief (concave, convertibregion): Local relief (concave	sk, none):
bregion (LRR): Lat: Lon il Map Unit Name: e climatic / hydrologic conditions on the site typical for this time of year? Yes No se vegetation, Soil, or Hydrology significantly disturbed? Are "Norm to Vegetation, Soil, or Hydrology naturally problematic? (If needed JMMARY OF FINDINGS — Attach site map showing sampling point locate structure of the sampled Area within a Wetland? Is the Sampled Area within a Wetland? Wetland Hydrology Present? Yes No Is the Sampled Area within a Wetland? Bemarks: Absolute Dominant Indicator Species? Status Total Cover FA	NWI classification:
Map Unit Name:	NWI classification:
e climatic / hydrologic conditions on the site typical for this time of year? Yes No	(If no, explain in Remarks.) al Circumstances" present? Yes No explain any answers in Remarks.) ions, transects, important features, etc. Yes No (plowed programme features) minance Test worksheet: mber of Dominant Species
Vegetation, Soil, or Hydrology significantly disturbed? Are "Norm Vegetation, Soil, or Hydrology naturally problematic? (If needed JMMARY OF FINDINGS - Attach site map showing sampling point locat ydrophytic Vegetation Present?	explain any answers in Remarks.) ions, transects, important features, etc. Yes No Divided May
Vegetation, Soil, or Hydrology naturally problematic? (If needed IMMARY OF FINDINGS - Attach site map showing sampling point located Vegetation Veg	explain any answers in Remarks.) ions, transects, important features, etc. Yes No (planted, hardinary states and interest worksheet: inber of Dominant Species
MMARY OF FINDINGS – Attach site map showing sampling point locate displayed by drophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Wetland Hydrology Present? Yes No Dominant Indicator Species? Absolute % Cover Species? Status Total Cover That Species? Appling/Shrub Stratum (Plot size: Present Species) Appling/Shrub Stratum (Plot size: Present Species) Attach site map showing sampling point locate No Dominant Indicator Species? Absolute % Cover Species? Status Number Species? Fig. 1. Total Cover Species Present Present Species Present P	Yes No
ydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Wetland Hydrology Present? Yes No Within a Wetland? Wetland Hydrology Present? Yes No Dominant Indicator Species? Status The Species? Status Total Cover The FA	Yes No (plowed hay invisation minance Test worksheet: mber of Dominant Species
Absolute Dominant Indicator Nous Species? Status Nous Posenting Present Presen	NoNo
Wetland Hydrology Present? Yes No within a Wetland? Wetland Hydrology Present? Absolute Dominant Indicator Species? Status Null The Species? Sapling/Shrub Stratum (Plot size: Present Sapling/Shrub Shrub Shr	No
EGETATION – Use scientific names of plants. ree Stratum (Plot size:)	minance Test worksheet: mber of Dominant Species
EGETATION – Use scientific names of plants. Tree Stratum (Plot size:)	minance Test worksheet: mber of Dominant Species
Absolute Dominant Indicator Species? Status Null The Sapling/Shrub Stratum (Plot size:	mber of Dominant Species
Absolute Dominant Indicator Species? Status Null The Sapling/Shrub Stratum (Plot size:	mber of Dominant Species
ree Stratum (Plot size:)	mber of Dominant Species
The Total Cover Program of FA FA FA FA FA	
Total Cover apling/Shrub Stratum (Plot size:) = Total Cover Pre FA FA FA FA FA FA FA FA FA F	it Are OBL, FACVV, or FAC:(A)
spling/Shrub Stratum (Plot size:) = Total Cover	
= Total Cover Per That Cover Pre That Cover FA FA FA FA FA	al Number of Dominant cicles Across All Strata: (B)
apling/Shrub Stratum (Plot size: = Total Cover	
OB FA FA FA	cent of Dominant Species at Are OBL, FACW, or FAC: (A/B)
OB FA FA FA FA	valence Index worksheet:
FA FA FA FA	Total % Cover of: Multiply by:
= Total Cover FA	L species x 1 =
= Total Cover	CW species x 2 =
= Total Cover	C species x 3 =
	CU species x 4 =
elb Stratum (1 lot size.	L species x 5 = umn Totals: (A) (B)
Charles spend tera 40 7 FAC HV	Prevalence Index = B/A =
The same of the sa	drophytic Vegetation Indicators:
Rumex crispus 3 N FAC	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 ¹
- It-	Problematic Hydrophytic Vegetation¹ (Explain) dicators of hydric soil and wetland hydrology must
	present, unless disturbed or problematic.
Voody Vine Stratum (Plot size:)	
Hy	
Pr	drophytic
= Total Cover	getation
% Bare Ground in Herb StratumRemarks:	



		Sampling Point:
L - plant and the control	h needed to document the indicator or confi	rm the absence of indicators.)
ofile Description: (Describe to the dept	h needed to document the malacter of	
epth Matrix	Redox Features Color (moist)	
ches) Color (moist) %	Color (moist)	Silty clas loam
-5"104K312 100	- W 0 M	attle alt ham
-1411 Die312 93	75 KHL 7 C P	STITL CLAY STORY
14 IVIRGIA D	1. 10	
	The second secon	
D=Depletion RM	=Reduced Matrix, CS=Covered or Coated Sand	Grains. ² Location: PL=Pore Lining, M=Matrix.
ydric Soil Indicators: (Applicable to al	I RRs. unless otherwise noted.)	
	Sandy Redox (S5)	2 cm Muck (A10)
_ Histosol (A1)	Stripped Matrix (S6)	Red Parent Material (TF2)
Histic Epipedon (A2)	Stripped Matrix (88) Loamy Mucky Mineral (F1) (except MLRA	Very Shallow Dark Surface (TF12)
Black Histic (A3)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
_ Hydrogen Sulfide (A4)	Depleted Matrix (F3)	
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
_ Thick Dark Surface (A12)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	unless disturbed or problematic.
Sandy Gleyed Matrix (S4)	Redox Bepressions (i. 1)	
Restrictive Layer (if present): Ma		
Type:		Hydric Soil Present? Yes No
Depth (inches):	hows area plo	
Pomarke'.	hows area plo	4.1
Pomarke'.	hous area plo	
Remarks: maging 5	hous area plo	old historically
IYDROLOGY Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi	red; check all that apply)	Secondary Indicators (2 or more required)
AYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi	red; check all that apply) Water-Stained Leaves (B9) (excep	Secondary Indicators (2 or more required)
AYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2)	red; check all that apply) Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B)	Secondary Indicators (2 or more required) t Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2) Saturation (A3)	red; check all that apply) Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Secondary Indicators (2 or more required) t
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Wetland Hydrology Indicators: Primary Indicators (minimum of one requi 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)	red; check all that apply) — Water-Stained Leaves (B9) (excep 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 (B7) — Other (Explain in Remarks)	Secondary Indicators (2 or more required) t
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Project/Site: FoAc A.C.		City/County: Aca	ta I them applit sampling Date: 8/4/
Applicant/Owner:		City/County:	CA Sampling Bate.
11.00 1/	-		State: Sampling Point:
nvestigator(s):		Section, Township, Ra	ange:
andform (hillslope, terrace, etc.):			
Subregion (LRR):	Lat:		Long: Datum:
			NWI classification:
Are climatic / hydrologic conditions on the site ty	pical for this time of ye	ear? Yes No _	(If no, explain in Remarks.) givere draw
Are Vegetation, Soil, or Hydrolog	gy significantly	/ disturbed? Are	"Normal Circumstances" present? Yes No/
Are Vegetation, Soil, or Hydrolog	gy naturally pr	oblematic? (If no	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach	site map showing	g sampling point l	locations, transects, important features, e
Hydrophytic Vegetation Present? Yes	No		
Hydric Soil Present? Yes	No	Is the Sample	
Wetland Hydrology Present? Yes	No	within a Wetla	nd? Yes No
Remarks: Mays ago th	re entire	- Arcota Bo	Homs" were westland!
post construction of	H.W Y 10		was significanty aftered
		de	1 ad cotilled 0
/EGETATION – Use scientific name	The same of the sa		a hiterany mentions between inches
Tree Stratum (Plot size:)		Dominant Indicator Species? Status	
1. Sality problems			Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant Species Across All Strata: (B)
4.			
		_ = Total Cover	Percent of Dominant Species That Are OBL. FACW, or FAC:
Sapling/Shrub Stratum (Plot size:		V FACILIA	Prevalence Index worksheet:
1. Salix hooderiana 2. Salix lastolepis	4	- THEN	Total % Cover of: Multiply by:
3.	D	Trevo	OBL species x 1 =
4			FACW species x 2 =
5.	. A last.		FAC species x 3 =
	2.0	= Total Cover	FACU species x 4 =
Herb Stratum (Plot size:)	1-	- 1 -10	UPL species x 5 =
1. hanimalus repens	75	- +++	Column Totals: (A) (E
2. Agnostis stilonite	10	TAC	Prevalence Index = B/A =
3. Holas lanatus		N TACL	Hydrophytic Vegetation Indicators:
	- 1.7	- NI OBI	1 - Rapid Test for Hydrophytic Vegetation
	num 4	N TA	2 - Dominance Test is >50%
7. Typha sig	3	N 061	3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporti
8	and the state of the		data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants ¹
10	<u> </u>	No. of the second	Problematic Hydrophytic Vegetation¹ (Explain)
11	100	NAME OF BRIDE OF BRIDE	¹ 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
			Present? Yes No
% Bare Ground in Herb Stratum		= Total Cover	



ofile Description: (Describe to the	ne depth needed to document the indicator or confirm	in the absolute of management,
epth Matrix	Redox Features	Texture Remarks
Cites)	70 Odici (molet)	51 ty clay loam
-12 104K211 1	00	714
	Agency Control of the	
1000		
174		
		(for a contract of the contrac
		2 1
	The state of the s	Grains. ² Location: PL=Pore Lining, M=Matrix.
ype: C=Concentration, D=Depletion	on, RM=Reduced Matrix, CS=Covered or Coated Sand C	Indicators for Problematic Hydric Soils ³ :
ydric Soil Indicators: (Applicable	e to all LRRs, unless otherwise noted.)	2 cm Muck (A10)
_ Histosol (A1)	Sandy Redox (S5)	Red Parent Material (TF2)
_ Histic Epipedon (A2)	Stripped Matrix (S6)Loamy Mucky Mineral (F1) (except MLRA 1	
Black Histic (A3)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
_ Hydrogen Sulfide (A4) Depleted Below Dark Surface (A		
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.
	Ja Ta	
	90	
Type:		Hydric Soil Present? Yes No
Depth (inches):		
YDROLOGY		
Wetland Hydrology Indicators:	e required: check all that apply)	Secondary Indicators (2 or more required)
Netland Hydrology Indicators: Primary Indicators (minimum of one		
Netland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1)	Water-Stained Leaves (B9) (except	
Netland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 2
Netland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
Netland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leaves (B9) (except 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)
Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Leaves (B9) (except 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 (C
Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (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 Living F	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Roots (C3) Geomorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat 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 Living F 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 (C Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one 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)	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 Fersence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5)
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Wetland Hydrology Indicators: Primary Indicators (minimum of one 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 Im	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 Fersence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRR 1999) 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 (C Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5)
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Wetland Hydrology Indicators: Primary Indicators (minimum of one 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 Im Sparsely Vegetated Concave : Field Observations:	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 F Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRF alagery (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 (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one 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 Im Sparsely Vegetated Concave : Field Observations: Surface Water Present?	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 F Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRR 1) agery (B7) Other (Explain in Remarks) 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 (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A)
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 Im Sparsely Vegetated Concave : Field Observations: Surface Water Present? Yes	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 F Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRF) lagery (B7) Other (Explain in Remarks) Surface (B8) 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 (C3 Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) RA) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one 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 Im Sparsely Vegetated Concave: Field Observations: Surface Water Present? Water Table Present? Saturation Present?	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 F Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRF along) Surface (B8) No Depth (inches): 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 (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one 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 Im Sparsely Vegetated Concave : Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Saturation Present?	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 F Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRF) lagery (B7) Other (Explain in Remarks) Surface (B8) 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 (C Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one 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 Im Sparsely Vegetated Concave : Field Observations: Surface Water Present? Water Table Present? Yesturation Present? Saturation Present? Yesturation Present? Secribe Recorded Data (stream general)	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 F Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRF) surface (B8) No Depth (inches): 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 (C Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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