State Aquatic Resources Delineation

Humboldt Bay Offshore Wind Heavy Lift Marine Terminal

> New Navy Base Road Eureka, California

> > **Prepared for:**

Moffatt & Nichol

January 2024 022054.400

Phone: (707) 822-5785 Email: info@shn-engr.com Web: shn-engr.com • 1062 G Street, Ste. I, Arcata, CA 95521-5800

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1062 G St., Suite l Arcata, CA 95521 707-822-5785

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QA/QC: JLS___ Reference: 022054.400

Summary of Results

The purpose of this report is to document the presence and extent of potential aquatic resources protected by Section 401 of the Clean Water Act (CWA), the Porter-Cologne Water Quality Control Act, Sections 1600–1607 of the California Fish and Game Code (CFGC), and the California Coastal Act (CCA) for the Humboldt Bay Offshore Wind Heavy Lift Marine Terminal (Project).

The Humboldt Bay Offshore Wind Heavy Lift Marine Terminal is located on the western shore of Humboldt Bay on the Samoa Peninsula, west of the City of Eureka in Humboldt County, California. The Humboldt Bay Harbor, Recreation, and Conservation District and its partners proposes to redevelop an approximately 180-acre site on the Samoa Peninsula to provide a new multipurpose, heavy-lift marine terminal facility to support the offshore wind energy industry and other coastal-dependent industries.

For this project, 211.665 acres were surveyed; this area includes (1) the proposed 180-acre development footprint, (2) a potential mitigation area, and (3) a buffer area around the project for analysis of coastal resources and potential impact areas for ingress/egress and supporting infrastructure.

The following aquatic resources were documented within the project area for CWA Section 401, CFGC Sections 1600–1607, and the CCA and are summarized in Table 1.

- **CWA Section 401 and Porter-Cologne Water Quality Control Act:** A total of 1.915 acres of wetlands and 5.198 acres of non-wetland waters were identified in the survey area as potentially meeting the criteria of CWA Section 401 and waters of the state, under the jurisdiction of the Regional Water Quality Control Board (RWQCB; Appendix 1).
- **CFGC Sections 1600–1607:** There are no features identified in the survey area as potentially meeting the criteria of CFGC Sections 1600–1607, under the jurisdiction of the California Department of Fish and Wildlife.
- **CCA:** A total of 1.915 acres of wetlands, 5.977 acres of non-wetland waters (which includes 1- and 2- parameter coastal features), were identified in the survey area as potentially meeting the criteria of the CCA, under the jurisdiction of the California Coastal Commission (CCC; Appendix 1).

Aquatic Resource Type	Area within Study Area (acres)	Length within Study Area (linear feet)	401 (acres)	1600– 1607 (acres)	CCA (acres)
Wetlands					
Palustrine Forested Wetland	0.187	N/A	0.187	0	0.187
Palustrine Scrub-Shrub Wetland	0.297	N/A	0.297	0	0.297
Palustrine Emergent Wetland	0.066	N/A	0.066	0	0.066
Estuarine Wetland	0.813	N/A	0.813	0	0.813
Artificial Aquatic Features	0.552	N/A	0.552	0	0.552
Wetlands Subtotal	1.915	N/A	1.915	0	1.915
Non-Wetland Waters					
Estuarine Intertidal Shoreline	5.198	12,272	5.198	0	5.198
Other Waters of the State	0.780	N/A	0	0	0.780
Non-Wetland Waters Subtotal	5.977	12,272	5.198	0	5.977
Total Wetlands and Waters	7.892	12,272	7.113	0	7.892

Table 1. State Aquatic Resources Summary Table



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Abbreviations and Acronyms

Terms of Measurement

Term	Definition
°C	Celsius
°F	Fahrenheit
DBH	diameter at breast height

Additional Terms

Term	Definition	Term	Definition
AAD	Alpha-alpha dipyridyl	NHD	National Hydrography Dataset
CCA	California Coastal Act	NOAA	National Oceanic and
CCC	California Coastal Commission		Atmospheric Administration
CCR	California Code of Regulations	NRCS	Natural Resources Conservation
CDP	coastal development permit		Service
CFGC	California Fish and Game Code	NWI	National Wetlands Inventory
CWA	Clean Water Act	O&M	Operation and Maintenance
DI	drainage inlet	OBL	obligate-wetland plant species
EPA	U.S. Environmental Protection	OF	coastal feature
	Agency	OHWM	ordinary high water mark
ESHA	Environmentally Sensitive Habitat	Project	Humboldt Bay Offshore Wind
	Areas		Heavy Lift Marine Terminal
FAC	facultative plant species	RWQCB	Regional Water Quality Control
FACU	facultative-upland plant species		Board
FACW	facultative-wetland plant species	S&I	Staging and Integration
GPS	global positioning system	SWRCB	State Water Resources Control
LCP	local coastal program		Board
LSAA	Lake or Streambed Alteration	TNW	Traditional Navigable Waterway
	Agreements	TP	test pit
MF	Manufacturing/Fabrication	USACE	U.S. Army Corps of Engineers
MHHW	mean higher high water	USDA	U.S. Department of Agriculture
MLLW	mean lower low water	USFWS	U.S. Fish and Wildlife Service
NAD 83	North American datum, 1983	USGS	United States Geological Survey
NADM	North American Drought Monitor	WETS	Climate Analysis for Wetlands
NAVD88	North American vertical datum,		Tables
	1988	WMVC	Western Mountains, Valley, and
NDMC	National Drought Mitigation		Coast
	Center	WTD	Wind Turbine Device



1.0 Introduction

SHN has prepared this State Aquatic Resources Delineation for the Humboldt Bay Harbor, Recreation, and Conservation District to document the presence and extent of aquatic resources potentially protected by Section 401 of the Clean Water Act (CWA), the Porter-Cologne Water Quality Control Act, Sections 1600–1607 of the California Fish and Game Code (CFGC), and the California Coastal Act (CCA) within the study area of the Humboldt Bay Offshore Wind Heavy Lift Marine Terminal (Project) in Eureka, California (Figure 1). Fieldwork and reporting were performed by both an SHN senior soil scientist and an SHN senior wetland ecologist.

1.1 **Project Location**

The Project is located on the Samoa Peninsula, a narrow peninsula that separates Humboldt Bay from the Pacific Ocean (Figure 1). It is less than 1 mile west of the City of Eureka and is located on the west shore of Humboldt Bay, facing the City.

The project is in the Eureka Geological Survey (USGS) 7.5-minute quadrangle Sections 15, 16, and 21 Township 5 North, and Range 01 West (USGS, 2022a; Figure 1). The project extends from approximately 40.804109°, -124.190579° in the south to 40.824341°, -124.173410° in the north. The project area is accessed via multiple entry points off New Navy Base Road, which is accessed via State Route 255 from U.S. Highway 101 in Eureka from the south or Arcata from the north.

1.2 Study Area

The study area encompasses 211.665 acres of land located on the Samoa Peninsula and the western shore of Humboldt Bay. The majority of the study area has a long industrial history of forest product manufacturing that has resulted in significant grading, infilling, and expansion over previous intertidal and dune lands along the Humboldt Bay shoreline. Most of the study area has been previously developed with paved surfaces, foundations, drainageways and compacted soils remaining, following demolitions of structures and industrial facilities. Consequently, much of the site is dominated by non-native, ruderal species or is unvegetated, where concrete and asphalt remain. Natural vegetation still occurs within the study area, but it is sparse and intermittent, separated by large, formerly developed areas. Intact native vegetation occurs along the periphery of the study area, especially along Humboldt Bay in the northern portion of the study area and along Vance Avenue in the southwestern portion of the study area was not delineated due to a lack of permission to access. This area is shown on figures as not surveyed.

2.0 Project Description

The proposed project will include the redevelopment of the approximate 180-acre site on the Samoa Peninsula, which will provide a new multipurpose, heavy-lift marine terminal facility to support the offshore wind energy industry and other coastal-dependent industries.



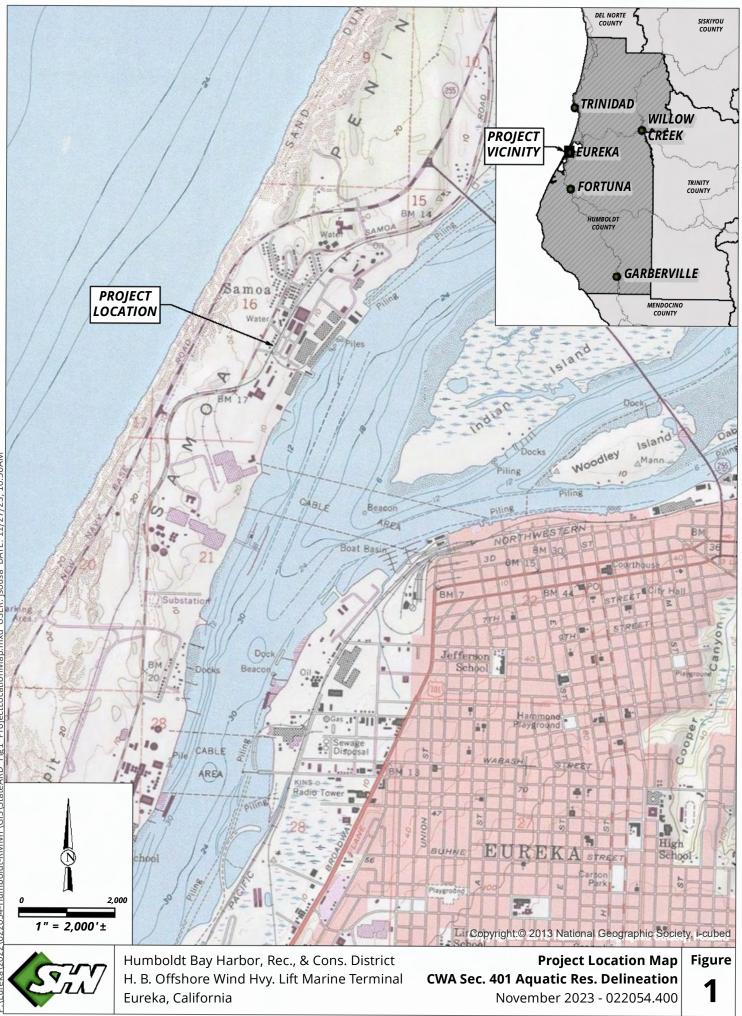


Fig1 ProjectLocationMap.mxd USER: jsousa DATE: 11/27/23, 10:50AM P:\Eureka\2022\022054-Humboldt-RMMT\GIS\StateARD The Project will include the facilities required to service the offshore wind industry, including:

- a. Onsite manufacturing/fabrication (MF) facilities that:
 - i. Receive deliveries of raw materials and large offshore wind components primarily via waterborne transport.
 - ii. Create larger components in the offshore wind supply chain, such as blades, towers, nacelles (turbine hubs), mooring lines, anchors, transmission cables, and/or floating foundations.
 - iii. Include a range of buildings, including manufacturing facilities, transit sheds, offices, and/or warehouse buildings.
 - iv. Provide space for storage of completed components.
- b. Staging and integration (S&I) facilities that include:
 - i. Wharf/terminal/yard facilities designed to receive, stage, and store offshore wind components, including ship-to-shore unloading capability, fixed position ring crane unloading capability, crawler crane unloading capability, and/or roll-on / roll-off capability.
 - ii. Heavy-lift wharfs with high-bearing capacities that can support large cranes capable of:
 - 1. Conducting the final assembly of floating foundations.
 - 2. Vertically integrating the various offshore wind components into deployment-ready, fully constructed, floating offshore Wind Turbine Devices (WTDs).
 - 3. Performing major maintenance on previously deployed WTDs that must be towed back to port for repairs that cannot otherwise be performed in the offshore wind area, such as replacement of a nacelle or blade.
 - 4. Decommissioning, disassembling, recycling, and disposing of WTDs that are at end of life.
 - iii. Berths adjacent to the heavy-lift wharfs within which:
 - 1. Floating foundations can be launched, potentially with a sinking basin.
 - 2. All components can be vertically integrated together on top of a floating foundation.
 - 3. WTDs can be repaired, maintained, and/or decommissioned.
 - 4. WTDs can be towed out of the bay and into the ocean.
- c. Operation and Maintenance (O&M) facilities that can serve as a base of wind farm operations with warehouses/offices, spare part storage, and marine facility to support vessel provisioning and refueling/charging for O&M vessels during the operational period of the offshore wind farm.
- d. Wet storage space in which floating foundations or WTDs can be temporarily moored to mitigate the risk of weather downtime, vessel traffic, entrance channel congestion, and other transportation risks. These will take two forms:
 - i. On-terminal wet storage occurs immediately offshore of the site and is accessed via small piers and gangways in which workers and small wheeled equipment can access floating turbines, typically fully integrated WTDs that are near-ready to deploy to the ocean.
 - ii. Off-terminal wet storage occurs away from the immediate site, but also outside of the Federal navigation channels.



In order to accomplish the above, the Project includes demolition of existing structures, site preparation, marine terminal construction, dredging, establishment of wet storage sites, and habitat restoration. Project activities that may impact wetlands documented in this report are described as:

Demolition and Construction Upland Development Subarea

The following activities may occur within the Upland Development Subarea, which is the 180-acre project area analyzed in this report.

- 1. Vegetation clearing and grubbing.
- 2. Demolition.
 - a. Demolish and remove existing buildings and structures.
 - b. Demolish existing asphalt, concrete, and remnant foundations of previously demolished buildings/structures. Some of these materials may be ground onsite and re-used as fill material. Unused material will be disposed of at an appropriately permitted location.
- 3. Remove, reuse, relocate, update, and/or modernize existing utilities including:
 - a. Water storage tanks.
 - b. Power poles and lines.
 - c. Underground industrial water lines.
 - d. Underground domestic water lines.
 - e. Underground baywater water lines.
 - f. Telecommunication lines.
 - g. Gas lines.
 - h. Sanitary sewer.
 - i. Stormwater systems.
- Cut, fill, and site regrading in anticipation of sea level rise to obtain final ground elevations between +13 to +17 feet North American vertical datum, 1988 (NAVD88; such as: +12.66 to +16.66 mean lower low water [MLLW]). Dredge material and/or upland sources may be used as imported fill.
- 5. Import and install compacted gravel throughout the site for a finished wear surface.
- 6. Asphalt roads and parking areas in certain discrete areas (for example, a 200-space parking lot and areas near buildings).
- 7. Construct approximately 650,000 square feet of building space for manufacturing, repairs, offices, restrooms, and storage.
- 8. Construct internal transportation network of paved and/or compacted gravel roads.
- 9. If needed, improve up to two intersections on New Navy Base Road and the intersection of Cookhouse Road and Vance Avenue (See Figures 2-14).
- 10. Install high mast terminal lighting (approximately 150 feet high) around the perimeter of the site and other, shorter lighting as needed.
- 11. Make drainage improvements for stormwater, which may include retention ponds, detention ponds, bioswales, and subsurface detention.



- 12. Install charging infrastructure for electric vehicles and electrified construction equipment such as forklifts.
- 13. Install fueling stations for land-based vehicles.
- 14. Install connection to electricity substation currently located directly south of the Project site.
- 15. Install solar panels on ash landfill and connect to substation.

Marine Development Subarea

The following activities may occur within the Marine Development Subarea.

- 1. Demolish an existing approximately 6-acre wooden dock at Terminal I and No Name Dock.
- 2. Construct up to three wharfs totaling a maximum of approximately 2,500 feet along the shoreline. The wharfs will consist of pile supported, vessel berth structures. This will include installation of steel and/or concrete piles. These wharfs could be discontinuous from one another or cojoined to one another.
- 3. Dredge berths between the newly constructed wharfs and the federal navigation channel to approximately -40 feet MLLW for deep draft cargo vessel access and WTD construction activities.
- 4. Dredge a sinking basin to approximately -60 feet MLLW to accommodate semi-submersible vessel operations for device float off.
- 5. Construct a pier and associated gangways to an on-terminal wet storage facility. An on-terminal wet storage berth will be dredged between the pier/gangways and the federal navigation channel to a depth of up to -40 feet MLLW. The pier and gangways will allow land-based access of workers and small wheeled equipment to these temporarily stored units.

3.0 Methods

3.1 Delineation Methods

The methods used to delineate potentially jurisdictional waters and wetlands in the study area were based on the following guidance documents:

- Corps of Engineers Wetland Delineation Manual (Environmental Laboratory, 1987)
- A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States (USACE, 2014)
- Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast (WMVC) Region (U.S. Army Corp of Engineers [USACE], 2010)
- USACE Regulatory Guidance Letter No. 05-05 (USACE, 2005)
- State Policy for Water Quality Control: State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (State Water Resources Control Board, 2021)
- California Coastal Commission's (CCC) *Definition and Delineation of Wetlands in the Coastal Zone* (California Coastal Commission [CCC], 2011)
- California Coastal Commission's Wetland Workshop Presentation: Technical Wetland Delineation Overview. (California Coastal Commission, April 2016)
- National Wetland Plant List: 2020 Wetland Ratings (USACE, 2020)



- Updated Map and Drawing Standards for the South Pacific Regulatory Program (USACE, 2016)
- California Native Plant Society's (CNPS) Vegetation Rapid Assessment Protocol (CNPS, 2007)
- California Department of Fish and Wildlife's (CDFW) and CNPS's *Protocol for the Combined Vegetation Rapid Assessment and Relevé Field Form* (CDFW and CNPS, 2023)

3.2 Data Sources

The following spatial data and literature were reviewed to determine the presence of potentially jurisdictional aquatic resources:

- Google Earth aerial imagery (Google Earth, 2022)
- National Hydrography Dataset (NHD) data from USGS (USGS, 2022b; Appendix 3)
- National Wetlands Inventory (NWI) data from the U.S. Fish and Wildlife Service (USFWS, 2022; Appendix 3)
- Natural Resources Conservation Service (NRCS) soil survey (USDA-NRCS, 2022a; Appendix 3)
- USGS 7.5-minute topographic quadrangle maps (Eureka; USGS, 2022a)

3.3 Regulatory Framework

This section discusses the laws associated with aquatic resources.

3.3.1 Clean Water Act Section 401 and Porter-Cologne Water Quality Control Act

The goal of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Under CWA Section 401, any project requiring a federal license or permit that may result in a discharge to a water of the United States must obtain a 401 Certification, which verifies that the project will be in compliance with State water-quality standards. These certifications are obtained from the appropriate Regional Water Quality Control Board (RWQCB).

According to Section II of *California's State Policy for Water Quality Control: State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*¹, the State Water Resources Control Board (SWRCB) defines an area as *wetlands* as follows:

"An area is wetland if, under normal circumstances,

- (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both;
- (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and
- (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation." (SWRCB, 2021)

Waters of the state are defined broadly in the Porter-Cologne Water Quality Control Act and include:

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

¹ The California Water Board's State Policy for Water Quality Control: State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State was adopted April 2, 2019, and revised April 6, 2021.



- 1. Natural wetlands,
- 2. Wetlands created by modification of a surface water of the state, and
- 3. Artificial wetlands..." (SWRCB, 2022)

Because the RWQCB accepts the USACE definition of wetlands, delineations from a final, USACE-verified aquatic-resource report can be used to determine the extent of wetlands and waters of the U.S. Any wetlands or waters not delineated in the USACE-verified report would be performed in a similar method to delineations of federal wetlands and waters. A federal aquatic resources delineation was conducted across the site for this project. Results are included within the Federal Resources Delineation Report (SHN, 2023).

This report groups waters of the state regulated under CWA Section 401 and Porter-Cologne Water Quality Control Act and refers to the group as *CWA Section 401 resources*.

3.3.2 California Fish and Game Code Sections 1600–1607

Under CFGC Sections 1600–1607, CDFW regulates activities that would alter the flow, bed, channel, or bank of streams and lakes by issuing Lake or Streambed Alteration Agreements (LSAAs). CDFW jurisdictional limits are usually delineated by the top of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Waters under USACE jurisdiction may or may not be included in the area covered by an LSAA. Additionally, marine intertidal areas are not jurisdictional under CFGC Sections 1600–1607.

3.3.3 California Coastal Act

The CCA of 1976 established the CCC to protect the coastline of California; policies include the protection, enhancement, and restoration of natural resources. The CCA also delegates to local governments the power to enact and implement their own local coastal programs (LCPs) on formal certification by the CCC. Any development within the Coastal Zone requires a coastal development permit (CDP) from either the CCC or the local government if an LCP is in place.

Wetlands, coastal waters, and streams are protected by the CCA (see §§ 30230–30233). The CCC also takes jurisdiction of riparian habitat associated with aquatic resources.

The CCC definition of wetlands differs from other agencies, such as the USACE. CCA Section 30121 defines wetlands as "lands within the Coastal Zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens."

Furthermore, California Code of Regulations (CCR) Section 13577(b) provides additional guidance regarding the definition of a wetland:

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



The protocols the USACE developed are used to delineate wetlands for the CCC. There are situations where one or more of the wetland parameters may be missing. In these circumstances, the area needs to be closely examined to determine if and why indicators are missing, and if the area is functioning as a wetland with evidence of wetland hydrology under normal circumstances.

The Humboldt Bay Area Plan is the LCP land use plan for the Humboldt Bay area including the project area (Humboldt County, 1982). Under this plan the following are considered sensitive habitats:

- 1. Wetlands and estuaries, including Humboldt Bay and the mouth of the Mad River.
- 2. Vegetated dunes along the North Spit to the Mad River and along the South Spit.
- 3. Rivers, creeks, gulches, sloughs and associated riparian habitats, including Mad River Slough, Ryan Slough, Eureka Slough, Freshwater Slough, Liscom Slough, Fay Slough, Elk River, Salmon Creek, and other streams.
- 4. Critical habitats for rare and endangered species listed on state or federal lists.

3.4 Delineation Field Work

The following subsections discuss the methods and equipment used to perform the wetland delineation fieldwork, wetland delineation personnel and dates, and delineation fieldwork limitations.

3.4.1 Delineation Field Work Methods

Surveyors conducted aquatic-resources delineation field surveys according to current state and federal guidelines to identify and map potential waters of the state to determine the extent of regulatory jurisdiction for the RWQCB, CDFW, and CCC:

- RWQCB jurisdiction includes all aquatic features under federal jurisdiction, including ephemeral, intermittent, and perennial streams as determined using ordinary high water mark (OHWM) indicators and three-parameter wetlands. In addition to federal aquatic resources, CWA Section 401 jurisdiction also includes isolated wetlands, riparian vegetation, isolated seeps and springs, and human-induced wetlands with natural conditions present.
- CDFW jurisdictional limits are usually delineated by the top of the stream or lake banks or the outer edge of riparian vegetation, whichever is wider. CDFW jurisdiction also includes wetlands that are connected to and immediately adjacent to any stream or lake.
- CCA jurisdiction includes all wetlands, waters, and streams. The CCA also takes jurisdiction of riparian habitat associated with aquatic resources, which are considered non-wetland Environmentally Sensitive Habitat Areas (ESHA).

Surveyors conducted pre-delineation investigations by walking transects across the entire study area, where accessible. Areas with hydrophytic vegetation dominance or suspected hydrology were noted and recorded using a resource-grade global positioning system (GPS) Trimble R1 antennae, with a Samsung tablet interface with sub-meter accuracy. Locations with potential wetland conditions documented during the pre-delineation surveys were revisited and delineated using current state guidelines to identify and map potential wetlands and waters of the state to determine the extent of regulatory jurisdiction for the RWQCB, CDFW, and CCC.



Paired datapoints were taken in all potential wetland areas with one point documenting wetland conditions and another documenting surrounding upland conditions to establish the edge of wetlands and conditions at the wetland edge. Data was collected to complete wetland determination data forms, documenting the presence or absence of the three wetland parameters: hydrophytic vegetation, hydric soil, and wetland hydrology. These forms provide the data and interpretation rationale that was used in determining the boundaries of agency jurisdiction and can be found in Appendix 4.

Delineators took photographs of all features mapped (aquatic resources and soil pits). Representative photographs of aquatic resources in the study area are included in Appendix 5. Where accessible and when GPS accuracy allowed, aquatic features, wetland boundaries, sampling points, and culvert locations were mapped using a sub-meter GPS unit. Wetlands were not mapped below the mean higher high water (MHHW). All potential waters of the U.S. were classified using the Cowardin classification system (Federal Geographic Data Committee, 2013). Many of the CCA features lacking three wetland parameters did not meet the classifications of the Cowardin system.

3.4.2 MHHW Delineation Field Methods

The MHHW contour for this site calculated in North American datum, 1983 (NAD 83) and North American vertical datum, 1988 (NAVD88; 2011) as 6.65 feet, as available from the Datums for 9418817, Samoa, Humboldt Bay CA (NOAA, 2023) within the vicinity of the project. A contour for this elevation was generated from light detection and ranging (LiDAR) elevation data (City of Eureka, 2019), and then edited to clean up extraneous line artifacts. Manual correction of the errors in the vicinity of the two piers was also performed. The location of the MHHW was verified in the field using a submeter GPS unit to compare the mapped MHHW with MHHW indicators within the study area.

3.4.3 Drought Conditions Wetland Hydrology

The National Oceanic and Atmospheric Administration (NOAA) and U.S. Department of Agriculture (USDA) National Drought Mitigation Center (NDMC) was reviewed prior to conducting fieldwork. The 2020 field work was conducted during a moderate drought, and the 2022 fieldwork was conducted during a severe drought (NDMC, 2022). Long-term drought conditions necessitate additional considerations for wetland hydrology indicators. If the wetland delineation is conducted within a region that is experiencing a prolonged extreme drought, the USACE manual (USACE, 2010) describes the follow change in methods for determining hydrology:

"c. Drought years. Determine whether the area has been subject to short or longterm drought. Droughts lasting two to several years in a row are common in the region, particularly in interior portions away from the Pacific coast. Drought periods can be identified by comparing annual rainfall totals with the normal range of annual rainfall given in WETS tables or by examining trends in drought indices, such as the Palmer Drought Severity Index (PDSI; Sprecher and Warne, 2000). If wetland hydrology indicators appear to be absent on a site that has hydrophytic vegetation and hydric soils, no significant hydrologic manipulation (for example, no dams, levees, water diversions, land grading, etc., and the site is not within the zone of influence of any drainage ditches or subsurface drains), and the region has been affected by drought, then the area should be identified as a wetland." (USACE, 2010)

Because the study area was located within a region that was experiencing a persistent, extreme drought during the 2022 fieldwork effort and in a "drier than normal" rainfall period during the April 2020 and August 2020 portion of the wetland delineation (see Section 4.2; Climate, and Table 3; Climate Analysis



for Wetlands Tables [WETS] rainfall data), every test pit (TP) with hydric soil indicators and hydrophytic vegetation was assumed to have wetland hydrology normally, even if it was not observed during the wetland delineation fieldwork. In addition, all TPs were excavated to at least 24 inches if no other hydrology indicators were met, to determine if the USACE hydrology "Dry-Season" Water Table (C2) indicator was present.

3.4.4 Delineation Personnel and Dates

SHN senior botanist/wetland ecologist Joseph Saler (MS biology, focus in wetland ecology), senior soil scientist Cindy Wilcox (MS Soil Science), and SHN senior soil scientist Sam Polly (MS Soil Science) conducted four rounds of surveys in the study area between April 2020 and August 2022. Table 2 provides a summary of the survey dates and the personnel who conducted the surveys.

Survey Dates	Personnel
April 28-June 4, 2020	Joseph Saler and Sam Polly
August 5-13, 2020	Joseph Saler and Sam Polly
April 29-May 20, 2022	Joseph Saler and Cindy Wilcox
July 29-August 2, 2022	Joseph Saler and Cindy Wilcox

Table 2.Survey Personnel and Dates

3.4.5 Delineation Field work Limitations

Climatic conditions were drier than normal during an extended period of drought for the 2022 delineation period, requiring additional scrutiny for hydrology. Additional methods to address the drought conditions are described in Section 3.4.3. The study area has a history of extensive industrial development, which has resulted in abnormal conditions throughout, including disturbed conditions, impenetrable soils, manipulated drainage and stormwater capture, and other artificial conditions.

4.0 Environmental Setting

This section describes the land use, climate, topography, hydrology, soils, and vegetation observed in the study area.

4.1 Land Use

The study area has a long history of industrial lumber production that has resulted in significant grading, infilling, and development of previous intertidal and dune lands along the Humboldt Bay shoreline. This included multiple lumber mill facilities operating concurrently and at different times across the study area. Portions of the study area were used for log storage, milling, lumber drying, and chip storage for pulp. Additionally, a wood-fired power plant supporting one of the mills existed in the northern portion of the study area. Railroad infrastructure including spur tracks, sidings, and mainlines occurred throughout the study area, as did a network of paved access roads, pipelines, overhead powerlines, and other supporting infrastructure. In addition, drains, culverts and other stormwater capture and conveyance infrastructure occurred throughout the site, reflecting the large expanses of pavement and other impermeable surfaces. Multiple dock facilities were constructed along the Humboldt Bay



waterfront for shipping finished products and receiving raw materials, as well as for water intake structures. The history of development and use has greatly influenced the number of wetlands and types of wetlands occurring within the study area.

Currently, the majority of the study area is comprised of vacant industrial land. Most of the lumber mill infrastructure has been demolished and removed, with large expanses of asphalt, concrete, foundations, drainageways, compacted soils, remnants of abandoned stormwater features, and supporting infrastructure remaining following demolitions of structures and industrial facilities. Some industrial log storage and sorting activity continues to occur within a portion of the study area, and mariculture activities occur at two of the remaining dock facilities. The other portions of the study area are minimally used with occasional limited light industrial activity and storage of equipment. The remaining vacant industrial buildings or structures located within the study area are in severe disrepair and several are slated for demolition in the near future.

4.2 Climate

The region along the north coast of California generally experiences wet, cool winters and moist, mild, foggy summers. Long-term climate data for the Eureka station, approximately 1.3 miles east of the study area, was reviewed for the climate averages of the study area (NOAA, 2022a; NOAA 2022b). The climate in the study area is characterized by mild year-round temperatures and long wet winters. The mean maximum temperature is 59.2 degrees Fahrenheit (°F)(15.1 degrees Celsius [°C]), ranging from 64.0°F (17.8°C) in August to 54.7°F (12.6°C) in December; the mean average low temperature is 46.0°F (7.8°C), ranging from 40.0°F (4.4°C) in December to 53°F (11.7°C) in August. The average annual precipitation is 40.4 inches, with precipitation falling entirely as rain, mostly between October and May, but with an average of at least 1 inch of rain every month except June (0.70 inch), July (0.18 inch), August (0.18 inch), and September (0.68 inch).

A method to evaluate current hydrologic conditions is to review precipitation for the three months prior to the wetland delineation field work and compare it to 30-year averages. The NRCS developed WETS, which compares the current 3-month precipitation data with the most recent 30-year precipitation average, collected at a nearby weather station (Woodley Island 1991-2020). If the current rainfall of each month is between 30 percent and 70 percent of the 30-year precipitation average, it is "normal" rainfall; if above 70 percent, it is ranked "wetter than normal" rainfall; if below 30%, it is ranked "drier than normal" rainfall. The procedure is explained in the NRCS Engineering Field Handbook starting at Step 6, using Option #1, with Figure 19-100 used for the calculation template (USDA-NRCS, 2021).

The procedure for weighting by time and wetness condition takes the monthly rainfall total and compares it to the values for the lower- and upper-30 percent boundaries for the month. Each month is assigned a description of wet, normal, or dry, and a corresponding numerical weight value. Wet is assigned a value of 3, normal a value of 2, and dry a value of 1. The most recent preceding month is also assigned a weight of 3, with the next preceding months assigned a weight of 2 and 1, reflecting the influence of each month's precipitation on hydrologic conditions at the time of the wetland delineation. The Condition Value and Weight are multiplied together to calculate the Product Value.

According to the WETS calculated data, drier than normal precipitation conditions were present in the study area during the April 28–May 15, 2020, and August 5–13, 2020, survey periods. Normal precipitation conditions were present during the May 16–June 4, 2020, April 29–May 15, 2022, and May 16–20, 2022, survey periods, and above-normal precipitation conditions were present during the



July 29–August 2, 2022, survey period (USDA-NRCS, 2022b). A summary of the WETS data can be found in Table 3.

Month	WETS Condition	<30%	> 70%	Rainfall received	Condition	Weight	Product
				(in.)	Value	Ū	Value
	April 28-	May 15, 2	2020 Test	Pit Excavat	ion		
April 2020	Dry	2.45	4.35	2.05	1	3	3
March 2020	Dry	3.92	6.86	3.69	1	2	2
February 2020	Dry	3.34	6.84	0.60	1	1	1
Total					Drier than	Normal ^a	6
	May 16	June 4, 2	020 Test l	Pit Excavati	on		
May 2020	Wet	0.72	2.02	4.73	3	3	9
April 2020	Dry	2.45	4.35	2.05	1	2	2
March 2020	Dry	3.92	6.86	3.69	1	1	1
Total						Normal ^a	12
	Augus	t 5-13, 20	20 Test Pi	t Excavatio	n		
July 2020	Dry	0.05	0.18	0.03	1	3	3
June 2020	Dry	0.22	0.81	0.20	1	2	2
May 2020	Wet	0.72	2.02	4.73	3	1	3
Total					Drier than	Normal ^a	8
	April 29-	May 15, 2	2022 Test	Pit Excavat	tion		
April 2022	Wet	2.45	4.35	4.57	3	3	9
March 2022	Dry	3.92	6.86	1.49	1	2	2
February 2022	Dry	3.34	6.84	0.51	1	1	1
Total						Normal ^a	12
		May 20, 2	022 Test	Pit Excavat	ion	_	
May 2022	Normal	0.72	2.02	1.36	2	3	6
April 2022	Wet	2.45	4.35	4.57	3	2	6
March 2022	Dry	3.92	6.86	1.49	1	1	1
Total						Normal ^a	13
		ugust 2,	2022 Test	Pit Excava			
July 2022	Wet	0.05	0.18	0.76	3	3	9
June 2022	Wet	0.22	0.81	1.53	3	2	6
May 2022	Normal	0.72	2.02	1.36	2	1	2
Total					Above	Normal ^a	17

Table 3.WETS Rainfall Data, 2020 and 2022, Hydrological AnalysisEureka, Humboldt County, California

^a A sum of 6-9 prior to site investigation is considered a drier than normal rainfall.

10-14 prior to site investigation is considered a normal rainfall.

15-18 prior to site investigation is considered a wetter than normal rainfall.

Sources: USDA-NRCS, 2022b; NOAA, 2022

In addition to reviewing the WETS table, there is also the consideration of normal hydrological conditions over an extended period of time. California has until recently experienced 2 years of drought. The NOAA and USDA have a North American Drought Monitor (NADM) that monitors drought. The north coast of California, including the study area, was in a moderate drought during the 2020 delineation



field effort, and a severe drought during the 2022 delineation field effort (NADM, 2022; Appendix 3). Drought conditions necessitated additional investigative efforts as described in Section 3.4.3.

4.3 Topography

Undeveloped lands on the Samoa Peninsula are typically undulating, reflecting the aeolian sand deposits (coastal dunes) that characterize the area. Within the study area and adjacent developed land, the surface has been leveled for industrial use and large areas are flat and capped by asphalt with slight slopes to facilitate drainage. Some remnant dune habitat exists in the northwest portion of the study area which contains the highest elevation within the study area, however the southern portion of the study area has the highest average elevation. The elevation in the study area ranges from 0 to approximately 50.5 feet above mean sea level on top of a remnant dune in the northwestern portion of the study area.

4.4 Site Hydrology

The primary sources of wetland hydrology in the study area are direct precipitation and runoff, surface water, tidal, and coastal fog. The study area is located within the Humboldt Bay/Eureka plain watershed (hydrologic unit code 18010102602; USGS, 2022b). During the delineation field work, marine intertidal waters of Humboldt Bay were observed in the study area. No streams occur within the study area, as the study area occurs on a peninsula of land less than a mile wide and is composed of well-drained aeolian soil.

Naturally occurring wetlands within the study area are typically salt marsh or deflation plain wetlands that exist on the leeward side of dunes as a result of wind-driven sand movement. A combination of topography, high water table, chemical bonding of sandy soils in deflation plains, and low evapotranspiration rates allow for the development of wetland conditions in these topographic low points. The majority of the deflation plain wetlands are isolated and do not have aboveground connectivity to Traditional Navigable Waterways (TNW). Additionally, anthropogenic disturbance has led to the establishment of additional wetlands through soil compaction, grading, asphalt, imported soil and concrete placement, and other means, which has resulted in artificial wetlands and artificially induced wetlands. These features are discussed in detail in the following chapter.

4.5 National Hydrography Dataset (NHD)

The NHD provides the water drainage network of the U.S. including rivers, streams, canals, lakes, ponds, coastline, dams, and stream gages (USGS, 2022b). It is the most comprehensive dataset for the nation; however, the data is designed to be used for general mapping because positional accuracy of aquatic features may vary due to the mapping scale.

The NHD shows the flow line for Humboldt Bay within the eastern portion of the study area and an isolated waterbody in the far eastern portion of the study area. It does not show any streams or additional features in the study area (Appendix 3).

NHD data is useful for pre-field reviews and assessing potential resources in the project area. However, field reviews are needed to determine the presence and extent of aquatic features within the study area, which may differ from the information provided by the NHD.



4.6 National Wetlands Inventory

The NWI provides geospatial data on wetlands and deepwater habitats in the U.S. with the Wetlands Mapper tool (USFWS, 2022). The maps are prepared from the analysis of aerial imagery, with wetlands identified based on vegetation, visible hydrology, and geography. A margin of error is inherent in the use of imagery. It cannot be used to delineate wetlands or non-wetland waters but can provide useful background information on features potentially within the vicinity.

Wetland habitats identified by the NWI are depicted in Appendix 3 and include approximately 0.0004 acre of Estuarine Subtidal Unconsolidated Bottom Sand Subtidal habitat, 2.420 acres of Estuarine Intertidal Aquatic Bed Rooted Vascular Irregularly Exposed habitat, 0.277 acre of Estuarine Intertidal Emergent Persistent Regularly Flooded habitat, 2.464 acres of Estuarine Intertidal Unconsolidated Shore Sand Regularly Flooded habitat, 0.155 acre of Palustrine Emergent Persistent Seasonally Flooded habitat, and 5.502 acres of Palustrine Scrub-Shrub Broadleaved Deciduous Temporarily Flooded habitat, for a total of approximately 10.8184 acres (Table 4).

Table 3. National Wetland Inventory Habitat Present in the Study Are	ea
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NWI Habitat Classification	Acreage
E1UB2L: Estuarine Subtidal Unconsolidated Bottom Sand Subtidal	0.0004
E2AB3M: Estuarine Intertidal Aquatic Bed Rooted Vascular, Irregularly Exposed	2.420
E2EM1N: Estuarine Intertidal Emergent Persistent Regularly Flooded	0.277
E2US2N: Estuarine Intertidal Unconsolidated Shore Sand Regularly Flooded	2.464
PEM1C: Palustrine Emergent Persistent Seasonally Flooded	0.155
PSS1A: Palustrine Scrub-Shrub Broadleaved Deciduous Temporarily Flooded	5.502
Total	10.8184

4.7 Soils Data

The NRCS web soil survey identifies six soil map units in the study area (USDA-NRCS, 2022a; Appendix 3). A summary of the characteristics of each soil map unit is provided in Table 4.

Soil % of Textural Drainage **Hydric** Minor Map Map Symbol Landform Study Class Criteria Class Components Unit Area Samoa: Somewhat Samoaexcessively Samoa: No Oxyaquic Clambeach drained 155 Sand Dunes udipsamments, 1.5 Clambeach: complex, 0-50 unvegetated Clambeach: Yes percent slopes very poorly drained

Table 4.Soil Map Units in the Study Area



Soil Map Unit	Map Symbol	Textural Class	Drainage Class	Landform	Minor Components	Hydric Criteria	% of Study Area	
1008	Hydraquents mucky silt loam, strongly saline, 0-1 percent slopes, very frequently flooded	Mucky silt loam to mucky silty clay loam	Very poorly drained	Tidal marshes	Hydraquents, low tidal, water, marine	Yes	0.2	
1009	Hydraquents- Wassents mucky silt loam, strongly saline, 0-3 percent slopes, very frequently flooded	Mucky silty clay loam	Very poorly drained	Tidal flats	Hydraquents, high tidal, water, marine	Yes	1.5	
1014	Urban land- Anthraltic Xerorthents association, 0-2 percent slopes	Gravelly loamy fine sand, sandy loam to sand	Moderately well drained	Fluviomarine terraces	Not Defined	No	94.4	
DWM	Water, marine	N/A	N/A	Tidal inlets	Wassents	Yes	2.4	

Table 4. Soil Map Units in the Study Area

Source: USDA-NRCS, 2022b

4.8 Vegetation

The study area has a long industrial history that greatly influences the vegetation communities and species composition. Most of the study area has been previously developed with paved surfaces, foundations, drainageways, concrete rubble, and compacted soils remaining following demolitions of structures and industrial facilities. Because of this, much of the study area is dominated by large expanses of unvegetated pavement, ruderal vegetation, and other areas with a mix of non-native and native vegetation. Several natural and sensitive vegetation communities occur within highly manipulated situations on compacted gravels or other formerly developed areas, while others occur as remnants of habitat that existed prior to development. These include areas along the periphery of the study area including salt marsh (low to high elevation), beach pine forest remnants, and sand dune remnants, among others. Vegetation communities and the acreages occupied by each vegetation community includes:

- Asphalt and pavement (mostly unvegetated): 109.59 acres
- Ruderal/non-native dominated: 48.99 acres
- Non-native grassland: 12.18 acres
- Coastal dune willow-Sitka willow thickets: 5.30 acres
- Wax myrtle scrub: 1.81 acres
- Mid-high elevation salt marsh: 1.26 acres



- Beach pine forest: 0.62 acres
- Pacific willow groves: 0.55 acres
- Dune mat: 0.44 acres
- Low elevation salt marsh: 0.37 acres
- Pickleweed mats: 0.12 acres
- Sand dune sedge marsh: 0.02 acres
- Pacific silverweed marsh: 0.01 acres

These vegetation communities are described in depth in the Terrestrial Biological Report (SHN, 2023). A complete list of plants observed in the study area can be found in Appendix 6.

4.8.1 Asphalt and Pavement (mostly unvegetated)

Unvegetated asphalt and concrete characterizes 109.59 acres of the study area. These areas represent former industrial development, including slab foundations, parking areas, log decks, wood chip storage, access roads, unvegetated concrete rubble along the shoreline, and other large expanses of asphalt. Vegetation cover is minimal and is restricted to cracks in the asphalt/concrete, in places where the asphalt/concrete has been removed or broken during the demolition process, or areas where soil has more recently been placed over the asphalt/concrete. Some of the more common non-native and invasive species include silver hairgrass (*Aira caryophyllea*), large quaking grass (*Briza maxima*), jubata grass (*Cortaderia jubata*), smooth cat's ear (*Hypochaeris glabra*), buck-horn plantain (*Plantago coronopus*), four-leaved allseed (*Polycarpon tetraphyllum* var. *tetraphyllum*), and Jersey cudweed (*Pseudognaphalium luteoalbum*), among others. These areas are upland and are designed to shed water, although there are some places where highly altered, artificially induced wetlands have developed.

4.8.2 Ruderal/Nonnative Species-Dominated

Ruderal/nonnative species dominate 48.99 acres of the study area. These areas represent former industrial development where impervious surfaces have been removed or buried during demolition, or locations where impervious surfaces were not installed for past development. Ruderal/nonnative-dominated areas are generally characterized by the dominance of a diverse flora of non-native and invasive species. Some of the more common non-native and invasive species in the study area include Himalayan blackberry (*Rubus armeniacus*), hairy vetch (*Vicia villosa* ssp. *villosa*), subterranean clover (*Trifolium subterraneum*), large quaking grass, yellow glandweed (*Parentucellia viscosa*), yellow bush lupine (*Lupinus arboreus*), iceplant (*Carprobrotus edulis* and *chilensis*), English plantain (*Plantago lanceolata*), buck-horn plantain, curly dock (*Rumex crispus*), dogtail grass (*Cynosurus echinatus*), English ivy (*Hedera helix*), soft chess (*Bromus hordeaceus*), and French broom (*Genista monspessulana*). Native species typically present in ruderal vegetation include coyote brush (*Baccharis pilularis* ssp. *consanguinea*), bee plant (*Scrophularia californica*), willow leaf dock (*Rumex salicifolius*), and California blackberry (*Rubus ursinus*). These areas are typically upland and well-drained; however, locations with depressions and compacted soils have developed artificially induced wetland conditions, often with some level of coast willow or Sitka willow growth.

4.8.3 Non-native Grassland

Nonnative grassland occupies 12.18 acres of the study area. These areas represent former industrial development where impervious surfaces have been removed or buried during demolition, or locations where impervious surfaces were not installed for past development. Nonnative grassland within the study area is regularly mowed, which prevents the establishment of the herbaceous and woody species more common in the ruderal/nonnative-dominated portions of the study area. Some of the more



common non-native and invasive species in the non-native grassland portions of the study area include sweet vernal grass (*Anthoxanthum odoratum*), velvet grass (*Holcus lanatus*), silver hair grass, large quaking grass, six weeks grass (*Festuca myuros*), wild oat (*Avena barbata*), dogtail grass, subterranean clover, sheep sorrel (*Rumex acetosella*), hairy cat's ear (*Hypochaeris radicata*), common catchfly (*Silene gallica*), soft chess, and rabbit foot clover (*Trifolium arvense*). Native species typically present in the nonnative grassland within the study area include annual lupine (*Lupinus bicolor*), butter 'n' eggs (*Triphysaria eriantha* ssp. *eriantha*), beach strawberry (*Fragaria chiloensis*), and narrowleaf owl's clover (*Castilleja attenuata*), all with very low cover. Non-native grasslands are upland and well-drained; however, some discrete locations with depressions and compacted soils have developed artificially induced wetland conditions.

4.8.4 Coastal Dune Willow-Sitka Willow Thickets

Coastal dune willow-Sitka willow thickets are the most abundant natural community within the study area (5.30 acres). This vegetation is dominated by either willow species singly or by a mix of these two willow species, with lesser dominance by wax myrtle. The coastal dune willow-Sitka willow thickets occupy both wetland and upland areas. Some of the common species within the understory of upland willow thickets include Himalayan blackberry, California blackberry, sweet vernal grass, English ivy, jubata grass, and yellow bush lupin, among others. In wetland locations, water parsley (*Oenanthe sarmentosa*), slough sedge (*Carex obnupta*), Himalayan blackberry, and velvet grass were common species, among others. This vegetation community was observed frequently in formerly developed areas such as cracks in asphalt, former foundations or former drainage features and most occurrences of the vegetation community date back to the cessation of industrial activity and demolition of infrastructure.

4.8.5 Wax Myrtle Scrub

Wax myrtle scrub occupies 1.81 acres of the study area. This vegetation community is dominated by wax myrtle with lesser dominance by willow species or shrubby species. The Wax myrtle scrub vegetation community occupies both wetland and upland areas. Understory conditions vary widely from bare and unvegetated to Himalayan blackberry or other non-native invasive species dominance. Dominant species observed within Wax myrtle scrub within the study area included wax myrtle, Himalayan blackberry, California blackberry, beach pine (*Pinus contorta* ssp. *contorta*), large quaking grass, and coyote brush, among others. This vegetation community was observed frequently in formerly developed areas, such as cracks in asphalt, former foundations, or former drainage features, and most occurrences of the vegetation community date back to the cessation of industrial activity and demolition of infrastructure.

4.8.6 Mid-High Elevation Salt Marsh

Mid-high elevation salt marsh occupies 1.26 acres of the study area. Mid-high salt marsh occupies brackish wetland areas below the MHHW of 6.65 feet, Estuarine Wetlands above the MHHW and upland areas immediately above the Estuarine Wetlands where it transitions into upland vegetation dominance. This vegetation community is characterized primarily by native brackish marsh-dependent herbaceous species; however, there is a non-native species component that becomes more prominent with increasing elevation. Some of the more common non-native and invasive species in the mid-high elevation salt marsh include marsh jaumea (*Jaumea carnosa*), annual pickleweed (*Salicornia depressa*), arrow grass (*Triglochin maritima*), perennial pickleweed (*Salicornia pacifica*), Brewer's rush (*Juncus breweri*), sweet vernal grass, dense-flowered cordgrass (*Spartina densiflora*), and salt grass (*Distichlis spicata*), among others. This vegetation community was observed in the northern portion of the study



area along Humboldt Bay and likely represents relictual habitat that has been minimally disturbed over the years, or areas where conditions have been less manipulated, allowing for the reestablishment of salt marsh habitat. The mid to high elevation salt marsh is extensive along the shores of Humboldt Bay, although invasive species and historical development have greatly impacted this vegetation community. It is estimated that diking and other development has reduced the extent of the mid-high elevation salt marsh by up to 90 percent.

4.8.7 Beach Pine Forest

Beach pine forest occupies 0.62 acres of the study area. This vegetation community is dominated by beach pine, with lesser dominance by wax myrtle and shrubby species, such as evergreen huckleberry (*Vaccinium ovatum*) and silk tassel (*Garrya elliptica*). The beach pine forest vegetation community occupies upland areas and is primarily remnant populations along the periphery of the study area; however, there is minor recruitment of beach pine in the northern portion of the study area. Understory conditions vary, but primarily have abundant shrubby cover or herbaceous cover where the canopy is denser. Dominant species include beach pine, evergreen huckleberry, silk tassel, Monterey pine (*Pinus radiata*), wax myrtle, and sweet vernal grass, among others. This vegetation community was observed primarily in the northwestern portion of the study area on remnant dune features or in well-drained formerly developed areas. Large intact stands occur outside of the study area.

4.8.8 Pacific Willow Groves

Pacific willow groves occupy 0.55 acres of the study area. This vegetation community is dominated by Pacific willow, with lesser dominance by wax myrtle, coast willow, Sitka willow, and shrubby species. The Pacific willow groves occupy stormwater detention features and other former industrial features. Understory vegetation is sparse; however, the Pacific willow grove edges are characterized by dense shrubby growth. Dominant species along the edges of this vegetation community included Himalayan blackberry, California blackberry, and jubata grass, among others.

4.8.9 Dune Mat

The dune mat vegetation community occupies 0.44 acres of the study area. The dune mat vegetation community occupies well-drained sandy upland areas. This vegetation community is characterized primarily by native dune-dependent herbaceous species; however, there is a sizeable non-native species component. Dominant species within the dune mat vegetation community include beach buckwheat (*Eriogonum latifolium*), large quaking grass, Idaho fescue (*Festuca idahoensis*), and sheep sorrel, among others. This vegetation community was observed in the western and northern portion of the study area on remnant dune features or other sandy areas in the periphery of the study area, and likely represent relict habitat. The dune mat vegetation community is extensive on the Samoa Peninsula, and large areas surrounding the study area support this vegetation community.

4.8.10 Low Elevation Salt Marsh

Low elevation salt marsh occupies 0.37 acres of the study area. Low salt marsh occupies tidal brackish wetland areas below the mid-high elevation salt marsh and the MHHW of 6.65 feet. The low elevation salt marsh is subject to regular tidal inundation and wave action and represents a transitional area between the more diverse mid-high elevation salt marsh and extensive unvegetated mud flats. This vegetation community is characterized primarily by invasive dense-flowered cordgrass and native saltwater tolerant salt grass, and to a lesser extent pickleweed species. There is evidence that this vegetation community is expanding around Humboldt Bay with the increasing cover by dense-flowered



cordgrass, which is more tolerant of inundation by brackish water, resulting in its colonization of mud flats adjacent to mid-elevation salt marsh.

4.8.11 Pickleweed Mat

The pickleweed mat vegetation community occupies 0.12 acres of the study area. The pickleweed mat vegetation community occupies mid-upper salt marsh in areas where the substrate is too altered to support the development of salt marsh. Consequently, it occurs in isolated locations throughout the concrete rubble-lined shoreline along Humboldt Bay. This vegetation community is characterized primarily by native pickleweed species, with low cover by invasive dense-flowered cordgrass. This vegetation community occurs at or below the MHHW in brackish wetlands.

4.8.12 Sand Dune Sedge Marsh

The sand dune sedge marsh community occupies 0.02 acres of the study area. Sand dune sedge marsh occurs in deflation plain wetlands west of the study area, but a small portion of this sand dune sedge marsh extends into the study area. Some of the more common non-native and invasive species in the sand dune sedge marsh community include sand dune sedge (*Carex pansa*), California blackberry, large quaking grass, creeping bentgrass (*Agrostis stolonifera*), and beach strawberry, among others. This vegetation community was observed in the far southwestern portion of the study area.

4.8.13 Pacific Silverweed Marsh

The Pacific silverweed marsh community occupies 0.01 acres of the study area. It occurs in small isolated freshwater wetlands in the central portion of the study area. Some of the more common nonnative and invasive species in the Pacific silverweed marsh community include bird's foot trefoil (*Lotus corniculatus*) and creeping bentgrass, among others. Native species typically present in the Pacific silverweed marsh within the study area include Pacific silverweed (*Potentilla anserina ssp. pacifica*), common horsetail (*Equisetum arvense*), spikerush (*Eleocharis macrostachya*), and coast willow, among others.

5.0 Results

This chapter documents potentially jurisdictional aquatic resources under CWA Section 401, CFGC Sections 1600–1607, and the CCA.

Potential state aquatic resources and associated non-wetland riparian habitat are summarized in Appendix 1. Figures of these resources are depicted in Appendix 2. Wetland determination data forms are contained in Appendix 4. Representative photographs for these features and riparian habitat areas are in Appendix 5. A wetland datapoint index table that categorizes upland or wetland status and associated features for each test pit with their location is in Appendix 7.

The following discussion provides a description of the aquatic resources delineated within the study area, as well as a preliminary determination of jurisdiction. These results and the mapped extent of delineated features depicted on the maps in Appendices 1 and 2 are subject to verification by the regulatory agencies.



5.1 Clean Water Act Section 401

CWA Section 401 jurisdiction includes all aquatic features under federal jurisdiction, including perennial, intermittent, and ephemeral streams, as determined using OHWM indicators and features with all three wetland parameters (that is, dominance or prevalence of hydrophytic vegetation, hydric soils, and wetland hydrology). It also includes isolated wetlands, wetland areas without vegetation, riparian vegetation, isolated seeps and springs, and human-induced wetlands with natural conditions present (Appendices A and J). Many small, degraded wetlands occur within the study area, reflecting the history of industrial use and subsequent abandonment, and the proximity to the coast which results in a high-water table and low evaporation rates. Wetlands within the study area are relatively abundant but are typically small in size and have developed as a result of past development such as building footprint depressions that collect and retain stormwater from surrounding expanses of impervious surfaces. In addition, naturally occurring wetlands occur along the periphery of the site including remnant deflation plain wetlands to the west of the study area and expansive estuarine wetlands associated with Humboldt Bay in the northern portion of the study area. No streams occur within the study area because the narrow Samoa spit is comprised of well-drained aeolian sand deposits, which does not contain enough area with well-defined watersheds to support stream flows.

5.1.1 Wetlands

A total of 57,157 square feet (1.312 acres) of three-parameter wetlands occur in the study area (Appendices 1 and 2), including isolated three-parameter wetlands with no continuous surface connection to a Traditional Navigable Waterway (TNW) and artificial aquatic features with semi-natural conditions. A total of 27 wetlands occur in the study area comprised of: Palustrine Forested Wetlands (4), Palustrine Scrub-shrub Wetlands (12), Palustrine Emergent Wetlands (3), Estuarine Wetlands associated with Humboldt Bay (5), and Artificial Aquatic features (3) (Appendix 1).

Palustrine Forested Wetlands are characterized by a forest overstory with greater than 30 percent cover and over 20 feet tall. Shrub and herbaceous stratums may or may not be prominent. In the study area, Palustrine Forested Wetlands have varied hydrologic conditions, a wide range of soil conditions and vegetation composition, and all have a history of human disturbance. A total of 8,150 square feet (0.187 acre) of Palustrine Forested Wetlands occur in the study area (Appendices 1 and 2). Palustrine Forested Wetland conditions throughout the study area are summarized below under *Palustrine Forested Wetlands*, including the vegetation composition, soil conditions, and hydrology indicators. Palustrine Forested Wetlands with unusual conditions are further described individually.

Palustrine Scrub-shrub Wetlands are characterized by an overstory less than 20 feet tall without appreciable tree cover. The shrub stratum is generally very dense, and the herbaceous stratum may or may not be prominent. In the study area, Palustrine Scrub-shrub Wetlands have varied hydrologic conditions and wide-ranging vegetation composition, and all but one have a history of human disturbance. A total of 12,934 square feet (0.297 acre) of Palustrine Scrub-shrub Wetlands occur in the study area (Appendices 1 and 2). Palustrine Scrub-shrub wetland conditions throughout the study area are summarized below under *Palustrine Scrub-shrub Wetlands*, including the vegetation composition, soil conditions, and hydrology indicators. Palustrine Scrub-shrub Wetlands with unusual conditions are further described individually.

Palustrine Emergent Wetlands are characterized by a stable well-developed herbaceous stratum and minimal tree or shrub cover. In the study area, all Palustrine Emergent Wetlands have a history of human disturbance and are artificially induced. Palustrine Emergent Wetlands have varied hydrologic conditions and wide-ranging vegetation composition. A total of 2,867 square feet (0.066 acre) of



Palustrine Emergent Wetlands occur in the study area (Appendices 1 and 2). Palustrine emergent wetland conditions throughout the study area are summarized below under *Palustrine Emergent Wetlands*, including the vegetation composition, soil conditions, and hydrology indicators. Palustrine Emergent Wetlands with unusual conditions are further described individually.

Estuarine Wetlands are characterized by tidal influence and brackish water incursion. In the study area, Estuarine Wetlands have a varied history of human disturbance and different levels of manipulation. All are associated with Humboldt Bay and have a range of vegetation composition reflecting elevation, past disturbances, and other factors. A total of 35,432 square feet (0.813 acre; Appendices 1 and 2) of Estuarine Wetlands occur in the study area. Estuarine Wetland conditions throughout the study area are summarized below under *Estuarine Wetlands*, including the vegetation composition, soil conditions, and hydrology indicators. Estuarine Wetlands with unusual conditions are further described individually.

Palustrine Forested Wetlands

There are four Palustrine Forested Wetlands in the study area (Wetlands 05, 06, 09, and 19; Appendices 1 and 2). These wetlands vary in size from 973 square feet to 3,314 square feet and have a wide range of hydrologic conditions and connectivity. All of the Palustrine Forested Wetlands within the study area have been significantly altered by human activities. Photographs 1 through 3 in Appendix 5 are representative of the Palustrine Forested Wetlands observed in the study area. All field data with details for each Palustrine Forested Wetland are included in Appendix 4. This section provides a summary of the conditions present within the Palustrine Forested Wetlands in the study area.

All Palustrine Forested Wetlands within the study area displayed hydrophytic vegetation dominance across the majority of the wetland; however, several of the Palustrine Forested Wetlands did have sparsely vegetated surfaces toward the center of the wetland where hydrology was more pronounced. The most common dominants within the Palustrine Forested Wetlands within the study area included California wax myrtle, coast willow, red alder, and Pacific willow in the tree stratum, Himalayan blackberry, California blackberry, and marsh baccharis (*Baccharis glutinosa*) in the shrub stratum, and slough sedge in the herb stratum. The average tree canopy was dense with approximately 103 percent cover, primarily California wax myrtle and coast willow. The shrub stratum was typically moderately dense and was absent in several wetlands to extremely dense in others; however, impenetrable Rubus-dominated thickets often surrounded forested wetland areas. Average shrub stratum cover in the Palustrine Forested Wetlands within the study area was approximately 33 percent. Herbaceous cover was low within Palustrine Forested Wetlands averaged 11 percent cover; conversely, average bare soil within Palustrine Forested Wetlands was 89 percent. Vegetation composition typically reflected wetland hydrologic conditions, forest and shaded conditions, and proximity to or history of disturbance.

The majority of Palustrine Forested Wetlands within the study area displayed prominent hydric soil indicators. The most common hydric soil indicators included Black Histic (A3) and a positive Alpha alphadipyridyl (AAD) reaction. Other hydric soil indicators included Sandy Redox (S5), 2cm Muck (A10), Depleted Below Dark Surface (A11), Histic Epipedon (A2), and Hydrogen Sulfide (A4). Prominent hydric soil indicators indicate stable wetland conditions, with the development of muck observed in three of the four Palustrine Forested Wetlands, indicating long-term stability, consistent saturation, and a high input of organic material from hydrophytic vegetation and canopy cover. All soils within the Palustrine Forested Wetlands were disturbed, typically fill soils from past development. Primary soil types encountered within the Palustrine Forested Wetlands under organic soils included loamy sand, silty loam, silty clay loam, and sand, among others, and many had woody debris, concrete, and brick remnants present.



Palustrine Forested Wetlands within the study area are supported by a range of hydrologic conditions. Three of the four Palustrine Forested Wetlands are seasonally flooded and continuously saturated, with one permanently flooded (Wetland 09). All four Palustrine Forested Wetlands in the study area had Saturation (A3) within 12 inches of the soil surface, which was the most common wetland hydrology indicator. Other common wetland hydrology indicators are High-Water Table (A2), Water-Stained Leaves (B9), Geomorphic Position (D2), and a vegetation community meeting the FAC-Neutral Test (D5). The persistent saturation is likely a primary driver of the development of organic wetland soils and hydrophytic vegetation dominance. A large portion of the wetland hydrology is driven by stormwater capture in geomorphic low points, as well as a high-water table due to proximity to tidal lands.

All Palustrine Forested Wetlands that have unusual or manipulated conditions are further described below as well as in the wetland data forms included in Appendix 4.

Wetland 05 is approximately 2,377 square feet and occurs within the northern portion of the study area in a swale trending west to east. This wetland has a continuous surface connection to Humboldt Bay, a TNW, and appears to be a result of a stormwater capture from the surrounding area, coupled with a high-water table associated with tidelands of Humboldt Bay. It is likely that exceptionally high-tide events introduce brackish water into the easternmost portions of the wetland, but this is probably infrequent. The surrounding area is elevated and well drained, and wetland conditions are restricted to the lowest elevations of the swale. This wetland occurs on fill placed over historic tidelands that were filled for industrial development, likely over a century ago. Normal conditions with semi-natural wetland characteristics have since become established; as such, this wetland is considered a naturally occurring but human-altered wetland. See Appendix 4 data forms for TPs 31 and 32 for wetland conditions and TPs 2, 33 and 34 for surrounding upland conditions.

Wetland 06 is approximately 1,486 square feet and occurs within the northern portion of the study area in a steep banked hollow. This wetland has no direct aboveground connectivity to any wetlands or other waters and is a hollow that intercepts the groundwater table, creating wetland conditions. The surrounding area is elevated and well drained, and wetland conditions are restricted to the lowest elevations of the hollow. This wetland occurs within a human-altered hollow. Normal conditions with natural wetland characteristics continue to persist despite historical disturbance and manipulation. See Appendix 4 data forms for TP37 for wetland conditions and TP38 for surrounding upland conditions.

Wetland 09 is approximately 973 square feet and occurs within the northern portion of the study area in an excavated swale/drainageway. This wetland has a continuous surface connection to Humboldt Bay, a TNW. Wetland hydrology appears to be a result of a stormwater capture from the surrounding area, coupled with a high-water table associated with tidelands of Humboldt Bay. Wetlands 07 and 08 flow into Wetland 09 through culverts and likely represent a former stormwater capture and conveyance system. A decayed weir made of wood and soil separate Wetland 09 from Humboldt Bay, preventing tidal incursion; however, a culvert through the weir allows high flows from Wetlands 07-09 to enter Humboldt Bay, and water is permanently pooled within Wetland 09 behind the weir when water levels drop below the elevation of the culvert. Permanently pooled water creates an unvegetated area that occupies most of the wetland. The surrounding area is elevated and well drained, and wetland conditions are restricted to the lower elevations of the swale/drainageway. This wetland occurs on fill placed over historic tidelands that were filled for industrial development, likely over a century ago. Normal conditions occur within the wetland and conditions have naturalized; however, the existing wetland conditions within Wetland 09 are a direct result of human activities, including excavation of the wetland feature and construction for stormwater capture and conveyance. Therefore, Wetland 09 is considered human-induced. See Appendix 4 data forms for TP43 for wetland conditions and TPs 4 and 44 for surrounding upland conditions.



Wetland 19 is approximately 3,314 square feet and occurs within the central portion of the study area in a shallow hollow. This wetland has no direct aboveground connectivity to any wetlands or other waters and is located within the foundation of a former warehouse. Hydrology is provided by stormwater, which collects in the depression from surrounding impervious surfaces and a high groundwater table influenced by nearby tidelands. The surrounding area is elevated, and large portions are impervious asphalt and concrete from previous industrial development, with wetland conditions restricted to the lowest elevations of the hollow. Normal conditions occur within the wetland and conditions have naturalized; however, the existing wetland conditions within Wetland 19 are a direct result of human activities, including excavation of the area for industrial infrastructure and placement of impervious surfaces in the surrounding area. Therefore, Wetland 19 is considered human-induced. See Appendix 4 data forms for TP15 for wetland conditions and TP74 for surrounding upland conditions.

Palustrine Scrub-shrub Wetlands

There are 12 Palustrine Scrub-Shrub Wetlands in the study area (Wetlands 02, 04, 07, 08, 10, 11, 14, 16, 20, 21, 22, and 24; Appendices 1 and 2). These wetlands vary in size from 71 square feet to 3,951 square feet and have a wide range of hydrologic conditions and connectivity. Eleven of the 12 Scrub-shrub Wetlands are human-induced wetlands, and one is naturally occurring. All field data with details for each palustrine scrub-shrub wetland are included in Appendix 4. Photographs 4 through 8 in Appendix 5 are representative of the Palustrine Scrub-shrub Wetlands observed in the study area. This section provides a summary of the conditions present in each of the Palustrine Scrub-shrub Wetlands occurring in the study area.

All Palustrine Scrub-shrub Wetlands within the study area displayed hydrophytic vegetation dominance across the majority of the wetland; however, several of the Palustrine Scrub-shrub Wetlands did have sparsely vegetated surfaces toward the center of the wetland where hydrology was more pronounced. The most common dominants within the Palustrine Scrub-shrub Wetlands within the study area included coast willow, California wax myrtle, Sitka willow, and Himalayan blackberry in the tree/shrub stratum, and velvet grass and bird's foot trefoil in the herb stratum. The average tree stratum displayed approximately 59 percent, primarily California wax myrtle and coast willow. Note "tree" is defined in the USACE wetlands delineation manual (Environmental Laboratory, 1987) as any woody species greater than 3 inches diameter at breast height (DBH) regardless of height; therefore, trees recorded on data forms are mapped as shrubs for Cowardin classification determination if less than 20 feet tall, as was the case for the majority of the vegetation in the Scrub-shrub Wetlands. The shrub stratum was typically moderately dense and was absent in several wetlands to extremely dense in others; however, impenetrable Rubus-dominated thickets often surrounded the scrub-shrub wetland areas. Average shrub stratum cover in the Palustrine Scrub-shrub Wetlands within the study area was approximately 30 percent. Herbaceous cover and diversity were much higher in the Scrub-shrub Palustrine Wetlands and average herbaceous cover averaged 51.5 percent cover. Conversely, average bare soil within Palustrine Scrub-shrub Wetlands was 46 percent. Vegetation composition typically reflected wetland hydrologic conditions, shaded conditions, and proximity to or history of disturbance.

The majority of the Palustrine Scrub-shrub Wetlands within the study area displayed prominent hydric soil indicators. The most common hydric soil indicators included Sandy Mucky mineral (S1), Depleted Below Dark Surface (A11), and a positive AAD reaction. Prominent hydric soil indicators within the Palustrine Scrub-shrub Wetlands indicate stable wetland conditions; however, muck development was less pronounced in the Scrub-shrub Wetlands, with 50 percent (6 of the 12) displaying some amount of muck development. Most muck layers were thin, reflecting the relatively recent development of wetland conditions after the demolition of industrial infrastructure. Primary soil types encountered within the



Palustrine Scrub-shrub Wetlands under organic soils were similar to those observed in the Forested Wetlands, including loamy sand and sand with varying degrees of organic material or gravel and woody debris, and concrete.

Palustrine Scrub-shrub Wetlands within the study area are supported by a range of hydrologic conditions. The most common wetland hydrology indicators within Palustrine Scrub-shrub Wetlands in the study area were Saturation (A3) within 12 inches of the soil surface, a vegetation community that meets the FAC-Neutral Test (D5), and a Geomorphic Position (D2). Other common wetland hydrology indicators included a High-Water Table (A2), Water-Stained Leaves (B9), and a Sparsely Vegetated Concave Surface (B8). The geomorphic position allowing for water to collect and pool and the persistent saturation are likely the primary drivers of the development of hydric soils and strong hydrophytic vegetation dominance. Similar to the forested wetlands, a large portion of the wetland hydrology is driven by stormwater capture in geomorphic low points, as well as a high-water table due to proximity to tidal lands.

All Palustrine Scrub-Shrub Wetlands are human-induced or manipulated conditions and are further described below, as well as in the wetland data forms included in Appendix 4.

Wetland 02 is approximately 71 square feet and occurs within an excavated swale in the northern portion of the study area immediately south of the State Route 255 bridge abutment. Wetland conditions extend west of the study area, and only a small portion of the wetland occurs within the study area. Wetland 02 has a continuous surface connection to Humboldt Bay, a TNW, through a culvert under Vance Avenue, which flows into Wetland 03, which is connected to Humboldt Bay via a culvert under the Railroad fill prism. The culvert under Vance Avenue has a duck bill-style tide gate, which prevents tidal influence and brackish water incursion into Wetland 02. Wetland hydrology is provided by rainwater capture from the surrounding area, coupled with a high-water table associated with tidelands of Humboldt Bay. The surrounding area is elevated and well drained, with the State Route 255 bridge abutment sloping steeply immediately north of the wetland. Wetland conditions are restricted to the lower elevations of the excavated swale. Normal conditions occur within the wetland and conditions have naturalized; however, the existing wetland conditions within Wetland 02 in the study area are a direct result of human activities, including excavation of the wetland feature and construction for stormwater capture and conveyance. Natural wetland conditions exist outside of the study area; therefore, the wetland is considered a naturally occurring, human-altered wetland. See Appendix 4 data forms for TP26 for wetland conditions and TP27 for surrounding upland conditions.

Wetland 04 is approximately 341 square feet and occurs within an excavated swale in the northern portion of the study area, west of the railroad fill prism and immediately south of Wetland 03. Wetland 04 has a continuous surface connection to Humboldt Bay, a TNW, through a culvert under the Railroad fill prism; however, the wetland elevation is above the elevation of tidal influence. Wetland hydrology is provided by a culvert draining the dredge dewatering basins, coupled with a high-water table associated with Wetland 03 and tidelands of Humboldt Bay. A berm separates Wetland 04 from Wetland 03; however, Wetland 04 appears to have been excavated. Wetland conditions are restricted to the lower elevations of the swale, which corresponds roughly to the elevation of wetland conditions in the southern end of Wetland 03. The surrounding area is elevated and well-drained sandy soils. Normal conditions within Wetland 04 in the study area are a direct result of human activities, including excavation of the wetland feature and installation of culverts. Therefore, Wetland 04 is considered to be human induced. Exploratory test pits were excavated within this wetland to confirm wetland conditions,



which were determined to be similar to those recorded at TPs 23 and 26. See Appendix 4 data forms TPs 23 and 26 for representative wetland conditions and TPs 24 and 27 for representative surrounding upland conditions.

Wetland 07 is approximately 702 square feet and occurs within the northern portion of the study area in a shallow depression, which drains into a drainage inlet (DI) during storm events. This wetland has a continuous surface connection to Humboldt Bay, a TNW, through a series of wetlands and culverts initially constructed for stormwater capture and conveyance. Wetland 07 drains through a culvert into Wetland 08, which in turn flows into a culvert into Wetland 09, which flows through a culvert into Humboldt Bay. Wetland hydrology appears to be the result of a stormwater capture from the surrounding area, coupled with extremely compacted soils that prevent infiltration. The slight depression and elevated DI allow water to pool. The surrounding area is elevated, level, and well drained, and wetland conditions are restricted to the lowest elevations of the depression. Normal conditions with semi-natural wetland characteristics have become established; however, the wetland was constructed for stormwater capture and conveyance; as such, this wetland is considered a human-induced wetland. See Appendix 4 data forms for TP39 for wetland conditions and TP40 for surrounding upland conditions.

Wetland 08 is approximately 983 square feet and occurs within the northern portion of the study area in a mostly linear excavated swale/channel. This wetland has a continuous surface connection to Humboldt Bay, a TNW, through a series of wetlands and culverts initially constructed for stormwater capture and conveyance. Wetland 08 flows through a culvert into Wetland 09, which flows through a culvert into Humboldt Bay. Wetland hydrology appears to be the result of a stormwater capture from the surrounding area, coupled with a high-water table associated with tidelands of Humboldt Bay. Pooled water from Wetland 09 backs into Wetland 08, which results in some perennially pooled water, but is mostly perennially saturated with the groundwater table just below the surface. The surrounding area is elevated, level, and well drained, and wetland conditions are restricted to the excavated swale/channel. Normal conditions with semi-natural wetland characteristics have become established; however, the wetland was constructed for stormwater capture and conveyance, as such, this wetland is considered a human-induced wetland. See Appendix 4 data forms for TP41 for wetland conditions and TP42 for surrounding upland conditions.

Wetland 10 is approximately 3,212 square feet and occurs within the northern portion of the study area in a shallow depression. This wetland has no direct aboveground connectivity to any wetlands or other waters. Wetland hydrology appears to be the result of a stormwater capture from the surrounding area, coupled with extremely compacted soils that prevent infiltration. The surrounding area is elevated, level, and well drained, and wetland conditions are restricted to the shallow depression. Normal conditions with semi-natural wetland characteristics have become established; however, the wetland is a result of grading and compaction of the area in the past. As such, this wetland is considered a human-induced wetland. See Appendix 4 data forms for TP60 for wetland conditions and TP61 for surrounding upland conditions.

Wetland 11 is approximately 204 square feet and occurs within the northern portion of the study area in a shallow depression. This wetland has no direct aboveground connectivity to any wetlands or other waters and is elevated over 3 feet above the MHHW of adjacent Humboldt Bay. Wetland hydrology appears to be the result of a stormwater capture from the adjacent access road, coupled with extremely compacted soils that prevent infiltration. The surrounding upland area is elevated and well drained, and wetland conditions are restricted to the shallow depression. This wetland occurs on fill placed over historic tidelands that were filled for industrial development, likely over a century ago.



Normal conditions with semi-natural wetland characteristics have become established; however, the wetland is a result of grading and compaction of the area in the past. As such, this wetland is considered a human-induced wetland. See Appendix 4 data forms for TP45 for wetland conditions and TP46 for surrounding upland conditions.

Wetland 14 is approximately 434 square feet and occurs within the northern portion of the study area in a shallow depression. This wetland has no direct aboveground connectivity to any wetlands or other waters. Wetland hydrology appears to be the result of a stormwater capture from the adjacent impervious surfaces, coupled with extremely compacted soils that prevent infiltration. The surrounding upland area is elevated and well drained. Wetland conditions are restricted to the shallow depression, although some areas with hydrophytic vegetation dominance do extend beyond the depression. Normal conditions with semi-natural wetland characteristics have become established; however, the wetland is a result of grading and compaction of the area in the past. As such, this wetland is considered a humaninduced wetland. See Appendix 4 data forms for TPs 5 and 53 for wetland conditions and TPs 54, 55, and 56 for surrounding upland conditions.

Wetland 16 is approximately 3,951 square feet and occurs within the northwestern portion of the study area in an excavated channel and swale. This wetland was created for stormwater capture and retention along the western boundary of the study area and has no direct aboveground connectivity to any wetlands or other waters. Wetland hydrology appears to be the result of a stormwater capture from the adjacent impervious surfaces and roadways. The surrounding upland area is elevated with well-drained sandy soils and large expanses of asphalt, and wetland conditions are restricted to the excavated channel and swale. Normal conditions with semi-natural wetland characteristics have become established; however, the wetland is a result of excavation for stormwater capture and retention purposes. As such, this wetland is considered a human-induced wetland. See Appendix 4 data forms for TP7 for wetland conditions and TP66 for surrounding upland conditions.

Wetlands 20, 21, and 22 are all comparable and are described together on account of the similar conditions and proximity of the wetlands to each other within the central portion of the study area. Wetland 20 is approximately 169 square feet; Wetland 21 is approximately 2,504 square feet; and Wetland 22 is approximately 105 square feet. All three wetlands occur in shallow depressions resulting from previous industrial activity and subsequent demolition of the industrial infrastructure. Additional depressions occur within the vicinity of these wetlands but have not developed all three wetland parameters. Wetlands 20, 21, and 22 do not have direct aboveground connectivity to any wetlands or other waters and are isolated from each other. Wetland hydrology appears to be the result of a stormwater capture from the adjacent impervious surfaces, coupled with extremely compacted soils that prevent infiltration. The surrounding upland area is elevated with large areas of impervious surfaces, and wetland conditions are restricted to shallow depressions. Some areas with hydrophytic vegetation dominance do extend beyond the depressions as described in TPs 75, 76, and 77 in Appendix 4. Normal conditions with semi-natural wetland characteristics have become established in all three wetlands; however, these wetlands are a result of past industrial activity and compaction of the area in the past, as such, they are considered human-induced wetlands. See Appendix 4 data forms for TP17 for Wetland 20 conditions, TP18 for Wetland 21 conditions, TP79 for Wetland 22 conditions, and TPs 75, 78, and 80 for surrounding upland conditions.

Wetland 24 has approximately 258 square feet within the study area and occurs within a deflation plain basin between New Navy Base Road to the west, the railroad fill prism to the east, and LP Drive to the north. Extensive wetland conditions extend west of the study area, and only a small portion of the wetland occurs within the study area. Despite the surrounding road development, natural conditions



within the wetland are present with native species dominant, soils minimally disturbed, and uncommon deflation plain wetland habitat intact. This wetland is a naturally occurring, isolated deflation plain wetland, and as such, has no direct aboveground connectivity to any wetlands or other waters. Wetland hydrology appears to be the result of rainwater and a high-water table associated with tidelands of Humboldt Bay and the Pacific Ocean. Approximately half of the wetland is Palustrine Emergent Wetland dominated by herbaceous species, and the other half is Palustrine Scrub-shrub Wetland, including the portion of the wetland within the study area. The surrounding upland area is elevated with well-drained sandy soils and large expanses of asphalt associated with roadways and development. Wetland conditions are restricted to lower elevations of the deflation plain. This is a naturally occurring wetland with normal conditions present and some historical human disturbance for road and railroad development. No formal test pits were excavated in this wetland; however, exploratory test pits were excavated, which confirmed the presence of all three wetland parameters.

Palustrine Emergent Wetlands

There are three Palustrine Emergent Wetlands in the study area (Wetlands 12, 13, and 17; Appendices 1 and 2). These wetlands vary in size from 81 square feet to 2,284 square feet and have a range of hydrologic conditions and connectivity. All Palustrine Emergent Wetlands within the study area are considered human-induced and have a history of creation by human activities, specifically industrial development, and its subsequent demolition. Two of the three Palustrine Emergent Wetlands are temporarily flooded and seasonally saturated (Wetlands 12 and 13) and one is seasonally flooded and permanently saturated (Wetland 17). All field data with details for each Palustrine Emergent Wetland is included in Appendix 4. Photographs 9 and 10 in Appendix 5 are representative of the Palustrine Emergent Wetlands observed in the study area. This section provides a summary of the conditions present in each of the Palustrine Emergent Wetlands occurring in the study area.

Dominant species included creeping bentgrass, common horsetail, birds foot trefoil, salt grass, California blackberry, Himalayan blackberry, and coast willow. Hydric soil indicators were similar to those observed in the other wetlands throughout the study area with Depleted Below Dark Surface (A11), Sandy Gleyed Matrix (S4), positive AAD reaction, and 2cm Muck (A10) observed. Very gravelly course loamy sand was observed in every palustrine emergent wetland with all showing extensive soil disturbance and manipulation. As with the other wetlands observed in the study area, saturation within 12 inches of the soil surface and a Geomorphic Position (D2) were the most common wetland hydrology indicators and were present in all Palustrine Emergent Wetlands.

All Palustrine Emergent Wetlands are human-induced or manipulated conditions and are further described below, as well as in the wetland data forms included in Appendix 4.

Wetland 12 is approximately 502 square feet and occurs within the northern portion of the study area in a shallow depression. This wetland has no direct aboveground connectivity to a TNW but is connected to Wetland 13 via a culvert. Wetland hydrology appears to be the result of a stormwater capture from the adjacent impervious surfaces, coupled with extremely compacted soils that prevent infiltration. The surrounding upland area is elevated with compacted gravel and wetland conditions are restricted to the shallow depression, although some areas with hydrophytic vegetation dominance do extend beyond the depression as documented at TP58 in Appendix 4. This wetland occurs on fill placed over historic tidelands that were filled for industrial development likely over a century ago. Normal conditions with semi-natural wetland characteristics have become established; however, the wetland is a result of grading and compaction of the area in the past, as such, this wetland is considered a human-induced wetland. See Appendix 4 data forms for TP57 for wetland conditions and TPs 59 and 58 for surrounding upland conditions.



Wetland 13 is approximately 81 square feet and occurs within the northern portion of the study area in a shallow depression excavated for stormwater capture and infiltration. This wetland has no direct aboveground connectivity to a TNW but is connected to Wetland 12 via a culvert. Wetland hydrology appears to be the result of a stormwater capture from the adjacent impervious surfaces, coupled with extremely compacted soils that prevent infiltration. The surrounding upland area is elevated with compacted gravel, and wetland conditions are restricted to the excavated depression. This wetland occurs on fill placed over historic tidelands that were filled for industrial development, likely over a century ago. Normal conditions with semi-natural wetland characteristics have become established; however, the wetland is a result of excavation for stormwater capture. As such, this wetland is considered a human-induced wetland. See Appendix 4 data forms for TP47 for wetland conditions and TP48 for surrounding upland conditions.

Wetland 17 is approximately 2,284 square feet and occurs within the central portion of the study area in a shallow depression. This wetland has a continuous surface connection to Humboldt Bay, a TNW, through Estuarine Wetland 18 at TP72 in the south, and into a DI that connects to Humboldt Bay through a culvert without a tide gate. Connectivity between Wetland 17 and Wetland 18 appears to only occur during storm events as wetland conditions do not extend between the two wetland features and flows would only be transitory. Wetland hydrology appears to be the result of a stormwater capture from the adjacent impervious surfaces, coupled with extremely compacted soils that prevent infiltration. The surrounding upland area is elevated with compacted gravel, and wetland conditions are restricted to the shallow depression. This wetland occurs within the footprint of former industrial buildings that were demolished, leaving a depression. Normal conditions with semi-natural wetland characteristics have become established; however, the wetland is a result of past industrial development and subsequent demolition. As such, this wetland is considered a human-induced wetland. See Appendix 4 data forms for TP13 for wetland conditions and TP69 for surrounding upland conditions.

Estuarine Wetlands

There are five Estuarine Wetlands (Wetlands 01, 03, 15, 18, and 23; Appendices 1 and 2) representing over half of the CWA Section 401 jurisdictional wetland area present within the study area. These wetlands vary in size from 56 square feet to 23,957 square feet and all are tidally influenced with direct connectivity to Humboldt Bay and are defined as tidally influenced wetlands above the MHHW mark. Three of the five Estuarine Wetlands within the study area are naturally occurring with varying degrees of human disturbance and manipulation. The other two Estuarine Wetlands are considered human-induced, with Wetland 18 occurring as a result of tidewater incursion through a low-lying DI and Wetland 23 resulting from a culvert failure allowing tidal incursion. All field data with details for each Estuarine Wetland are included in Appendix 4. Photographs 11 through 15 in Appendix 5 are representative of the Estuarine Wetlands observed in the study area. This section provides a summary of the conditions present in each of the Estuarine Wetlands occurring in the study area.

Dominant species within the Estuarine Wetlands included salt grass, dense-flowered cordgrass, marsh jaumea, pickleweed, saltmarsh sand spurrey (*Spergula marina*), and Pt. Reyes bird's beak (*Chloropyron maritimum*), among others. Hydric soil indicators included Hydrogen sulfide (A4) and problematic soils with no direct indicators; however, additional hydric soil indicators are present throughout the Estuarine Wetlands not recorded on the data forms. Sand, mucky sand, loamy sand, and peat were observed within the Estuarine Wetlands in addition to clay in lower elevation marsh habitat. Soil manipulation and fill was evident in all of the Estuarine Wetlands. Wetland hydrology was pronounced within the Estuarine Wetlands as a result of the regular tidal inundation. This included periodic Surface Water (A1), a High



Water Table (A2), Saturation within 12 inches of the soil surface (A3), Water Marks (B1), Algal Mat or Crust (B4), Sparsely Vegetated Concave Surface (B8), Hydrogen Sulfide Odor (C1), and a number of secondary hydrology indicators.

All Estuarine Wetlands that have unusual or manipulated conditions are further described below as well as in the wetland data forms included in Appendix 4.

Approximately 23,957 square feet of Wetland 01 occurs within the northern portion of the study area along the shore of Humboldt Bay and, therefore, has a continuous surface connection to Humboldt Bay, a TNW. The wetland is measured from the MHHW of Humboldt Bay to the upper extent of wetland conditions, which is limited by the extent of tidal influence on hydric soil development and wetland hydrology. The landward side of Wetland 01 is bounded by elevated upland area with compacted gravel and other fill, likely limiting the historical extent of this wetland and other similar saltmarsh Estuarine Wetlands; however, additional wetland area extends north of the study area. Wetland 01 appears to be remnant saltmarsh and tidelands with a history of extensive manipulation and development. Wood pilings for docks and log rafts occur throughout the wetland and fill along the landward boundary of the wetland, limiting the extent of wetland conditions. Despite the historical disturbance, normal conditions occur, and well developed, intact saltmarsh habitat has become established that supports sensitive saltmarsh vegetation communities and special-status botanical species. As such, this wetland is considered a human-manipulated but naturally occurring wetland. See Appendix 4 data forms for TP23 for representative wetland conditions and TP24 for surrounding upland conditions.

Approximately 9,193 square feet of Wetland 03 occurs within the northern portion of the study area in a linear swale between Vance Avenue and the railroad fill prism, and additional wetland area extends north of the study area. This wetland is has a continuous surface connection to Humboldt Bay, a TNW, via a large culvert under the railroad fill prism north of the study area. The culvert does not have a tide gate, allowing for slightly muted tidal influence. The wetland is measured from the MHHW of Humboldt Bay to the upper extent of wetland conditions, which is limited by the extent of tidal influence on hydric soil development and wetland hydrology. The wetland is surrounded by elevated upland area with compacted gravel from the Vance Avenue and railroad fill prisms, consisting of manipulated developed conditions with limited habitat value. Wetland 03 appears to be remnant saltmarsh and tidelands with a history of extensive manipulation and development. The fill prisms on the east and west sides of Wetland 03 are steep and limit the saltmarsh vegetation community that would otherwise occupy the edges of this type of wetland. A small portion of intact saltmarsh vegetation, including two special-status species, occurs in the southern portion of Wetland 03, which is gradually sloping and appears to be a remnant of historical pre-development conditions. Normal conditions with remnant natural wetland characteristics occur; however, the wetland has been impacted by past development. As such, this wetland is considered a human-manipulated but naturally occurring wetland. See Appendix 4 data forms for TP23 for wetland conditions and TP24 for surrounding upland conditions.

Wetland 15 is approximately 704 square feet and occurs north of the wooden wharf along the shore of Humboldt Bay and is, therefore, directly connected to Humboldt Bay, a TNW. The wetland is measured from the MHHW of Humboldt Bay to the upper extent of wetland conditions, which is limited by the extent of tidal influence on hydric soil development and wetland hydrology. The landward side of Wetland 15 is bounded by elevated upland area with compacted gravel and other fill, likely limiting the historical extent of this wetland and other similar saltmarsh Estuarine Wetlands. Wetland 15 appears to be remnant saltmarsh and tidelands with a history of extensive manipulation and development. Wood pilings for docks and log rafts occur throughout the wetland and fill along the landward boundary of the wetland limits the extent of wetland conditions. Despite the historical disturbance, normal conditions



occur, and well developed, intact saltmarsh habitat has become established, which supports sensitive saltmarsh vegetation communities and special-status botanical species. As such, this wetland is considered a human-manipulated but naturally occurring wetland. See Appendix 4 data forms for TP23 for representative wetland conditions and TP50 for representative upland conditions.

Wetland 18 is approximately 1,522 square feet and occurs within the central portion of the study area in a shallow depression adjacent to a DI. The DI drains into a culvert that flows directly to Humboldt Bay and does not have a tide gate, allowing for tidewater intrusion during high tide events that pool in the lowest elevations around the DI. The irregular tidal influence has allowed for the growth and dominance by high salt marsh species such as salt grass and dense flowered cordgrass. The surrounding upland area is elevated with fill soils, and wetland conditions are restricted to the lowest elevation of the shallow depression around the DI. This wetland occurs within the footprint of former industrial buildings that were demolished, leaving exposed fill soils allowing for the growth of a mix of native and non-native grasses, ruderal species and trees and shrubs. Normal conditions have become established; however, the wetland is a result of past industrial development and subsequent demolition. As such, this wetland is considered a human-induced wetland. See Appendix 4 data forms for TP72 for wetland conditions and TP71 for surrounding upland conditions.

Wetland 23 is approximately 56 square feet and occurs within the central portion of the study area in a deep pit caused by the collapse of a culvert. The culvert flows directly to Humboldt Bay and does not have a tide gate, allowing for muted tidal influence within the lowest elevations of the pit. The surrounding upland area is elevated with compacted gravel, and wetland conditions are restricted to the deep pit. This wetland occurs within the footprint of former industrial buildings that were demolished, leaving a gravel area allowing for the growth of trees and shrubs, which are rooted at the soil surface, approximately 6 feet above the elevation of the wetland. Normal conditions have become established; however, the wetland is a result of past industrial development and subsequent demolition. As such, this wetland is considered a human-induced wetland. See Appendix 4 data forms for TP81 for wetland conditions and TP82 for surrounding upland conditions.

Artificial Aquatic Features

Several aquatic features occur in the study area that are primarily artificial, including the substrate and hydrologic conditions. These features were either constructed to hold, capture, or convey surface water and stormwater, or are the direct result of human disturbance and development activities and have little development of wetland habitat. Artificial aquatic features mapped in the study area include a rectangular concrete-lined foundation with willow growth in the north central portion of the study area, several rectangular depressions with gravelly soils between concrete foundations of former drying sheds in the north central portion of the study area, and a linear stormwater feature in the south-central portion of the study area (Appendix 1). The following paragraphs describe these features.

A concrete vault and foundation occur in the northwest portion of the study area (Photograph 16). The area was formerly developed with industrial infrastructure with a building occupying this location as shown in aerial imagery from 1990 (Google Earth, 2022). The structure and associated industrial infrastructure were demolished and removed, leaving the concrete foundation. A rectangular vault within the concrete foundation captures and holds stormwater from the surrounding impervious surface. The pooled water and associated pronounced hydrology have allowed for the development of hydric soils over time within the concrete vault followed by the growth of Pacific willow trees, which have accelerated soil development. This feature occupies approximately 667 square feet within the entirety of the concrete vault in the center of a concrete foundation within an otherwise upland area. While this area has all three wetland parameters present, the feature is entirely artificial nature and has limited



wetland habitat value. Furthermore, this feature is completely isolated and does not have connectivity to any other wetlands or other waters. See Appendix 4 data forms for TP64 for wetland conditions and TP65 for surrounding upland conditions.

Drying sheds historically occupied the north central portion of the study area (Appendix 5, Photographs 17 and 18). The area was formerly developed with lumber drying facilities including warehouses and lumber racks as shown in aerial imagery from 1990 (Google Earth, 2022). The industrial infrastructure was demolished and removed, leaving concrete foundations. Rectangular depressions with compacted gravel occur between the concrete foundations used for moving the lumber drying racks. The rectangular depressions capture and hold stormwater from the surrounding impervious surfaces. The seasonally pooled water and associated pronounced hydrology have allowed for the development of hydric soils over time within the compacted gravel soils followed by the growth of a mix of hydrophytic herbaceous species, which have further accelerated soil development. Twelve of the rectangular depressions have all three wetland parameters present and display similar hydrology, soil, and vegetation characteristics. The 12 features combined occupy approximately 15,398 square feet within the former drying shed foundations. While these features have all three wetland parameters present, they are entirely artificial and have limited wetland habitat value. Furthermore, these features are completely isolated and do not have connectivity to any other wetlands or other waters, although they may be attached to each other during rain events if pooled water is able to flow across the concrete surfaces that separate the depressions. See Appendix 4 data forms for TP9, TP10, and TP11 for wetland conditions and TP8 and 68 for surrounding upland conditions.

A large willow-dominated stormwater collection system occurs within the southern portion of the study area (Appendix 5, Photographs 19-22). The current configuration of this feature, comprised of three separate polygons connected by culverts, was created for the collection of stormwater from the extensive surrounding impervious surfaces associated with the former pulp mill and other lumber mills. A total of 15 culverts drain into this feature along its length resulting in substantial flows during storm events that have developed limited OHWM characteristics. Three weirs with stainless steel mesh filters exist between the stormwater feature and the outfall culvert, which passes through a large upland berm that separates the stormwater feature from Humboldt Bay. Although this feature captures stormwater from a large area, it has not developed all three wetland indicators; the absence of hydric soils indicates that wetland hydrology is not persistent and is likely closely tied to storm events. The stormwater feature has not been maintained since the closure of the pulp mill in 2008, and culverts and weirs are decaying, and willow growth has been pronounced. The stormwater feature including all three polygons occupies approximately 7,991 square feet. While this feature does have some OHWM indicator development, it is not believed to be jurisdictional due to the artificial hydrologic input, weirs, and managed nature of flows. This stormwater feature is connected to Humboldt Bay via an inverted culvert that passes through a berm. The culvert is elevated and only allows for stormwater flows to pass into Humboldt Bay after it has passed through the weirs and has reached a certain elevation. See Appendix 4 data forms for test pits TP20, TP21, and TP22 for wetland conditions and TP86, TP87, and TP88 for surrounding upland conditions. The entire feature as it currently exists is artificial and was constructed through upland for stormwater conveyance and lacks hydric soils and wetland habitat.

5.1.2 Non-Wetland Waters

In the study area, non-wetland waters include Estuarine Intertidal Shoreline below the MHHW. No streams occur within the study area because the narrow Samoa spit is comprised of well-drained aeolian sand deposits, which do not contain enough area with well-defined watersheds to support stream flows.



Estuarine Intertidal Shoreline

Estuarine Intertidal Shoreline includes the portion of the study area that occurs below the MHHW, which represents the upper bound of jurisdictional waters where wetlands do not extend beyond the MHHW. The MHHW is identified as 6.65 feet elevation at this location using the Datums for 9418817 tide station, Samoa, Humboldt Bay, California, which occurs within the study area footprint. Two Estuarine Intertidal areas exist in the study area with a total length of 12,272 feet (2.324 miles) along Humboldt Bay. A total of 226,415 square feet (5.198 acres) of Estuarine Intertidal Shoreline occurs within the study area (Appendices 1 and 2) and is discussed below. Photographs 23 through 26 in Appendix 5 are representative of the Estuarine Intertidal Shoreline observed in the study area.

MHHW 01 includes the MHHW of 6.65 feet elevation for approximately 1,394 linear feet and a total of 14,971 square feet (0.344 acre) below the MHHW at this location within the study area. This location represents portions of Estuarine Wetland 03 below the MHHW and is contained within the swale between Vance Avenue and the railroad fill prism as described in Section 5.1. 1 -Estuarine Wetlands. A large portion of this area is permanently flooded due to the culvert elevation preventing drainage during low tide and supports eelgrass (*Zostera marina*) and unvegetated mud and clay.

MHHW 02 includes the MHHW of 6.65 feet elevation for approximately 10,878 feet and a total of 211,444 square feet (5.198 acres) below the MHHW along Humboldt Bay within the study area (Appendices 1 and 2). Conditions below the MHHW 02 are characterized by past industrial development and the Estuarine Intertidal environment of Humboldt Bay. Most of the shoreline has been armored using a wide range of former industrial material including concrete, metal, brick, rock, and wood pilings. Intertidal habitat is limited in these locations. Armored portions of the Estuarine Intertidal Shoreline extend for approximately 7,848 feet or 72 percent of the shoreline within the study area. The northernmost portion of the shoreline within the study area is minimally armored and supports low saltmarsh dominated by dense-flowered cordgrass. This area corresponds to the area occupied by Wetland 01, which occurs above the MHHW (See Section 5.1.1- Estuarine Wetland). Minimally armored shoreline extends for approximately 3,030 feet or 28 percent of the shoreline within the study area and is primarily in the northernmost portion of the study area. Estuarine Intertidal Shoreline within the study area is protected from rough wave action by the estuarine conditions within Humboldt Bay; however, erosive hydrodynamics do occur throughout the year necessitating armoring where salt marsh is absent. Haphazard placement of armoring has resulted in unequal protection of the shoreline and erosion in places. Small areas of native saltmarsh vegetation have become established in relatively flat areas within the armoring; however, the extent of saltmarsh vegetation is limited. Mud flats extend from the base of the armoring toward the deeper channels of Humboldt Bay. Significant eelgrass beds occur in the lower elevations of the intertidal zone.

5.1.3 Non-Aquatic Resources

Non-aquatic resources include human-made infrastructure constructed in uplands and draining uplands for stormwater conveyance and management. Non-aquatic resources include roadside ditches, roadside culverts, culvert outfalls and associated erosion, and other roadway and asphalt-related stormwater features.

Roadside Ditches

Roadside ditches occur throughout the study area along paved roadways for the purpose of conveying stormwater away from the roadway. These roadside ditches were excavated in uplands to convey stormwater, are typically well drained in sandy soils or are asphalt or concrete lined, and have flows only during storm events. They typically drain into culverts or DIs that discharge to unknown locations, but



ultimately to Humboldt Bay. While these roadside ditches may be hydrologically connected to Humboldt Bay, they lack the OHWM indicators and wetland parameters that define wetlands and streams. Namely, they do not support hydrophytes and lack hydric soils and wetland hydrology due to the episodic nature of flows. Furthermore, these features do not have OHWM indicators because of the asphalt or concrete lining or well drained soils. For these reasons, roadside ditches are considered non-aquatic resources.

Culverts and Culvert Outfalls

Culverts occur throughout the study area for the purpose of conveying stormwater away from the large expanses of impervious surfaces associated with former industrial development. These culverts were installed in uplands and primarily drain asphalt which is dry for most of the year except during storm events. Culverts typically discharge to upland areas or wetlands, or Humboldt Bay, and often represent the hydrologic connectivity between non-aquatic impervious surfaces and wetlands and Humboldt Bay in the study area. Several of the culvert inlet and outfall locations are mapped in the study area; however, this mapping is not comprehensive.

5.2 California Fish and Game Code Sections 1600–1607

Under CFGC Sections 1600–1607, CDFW regulates activities that would alter the flow, bed, channel, or bank of streams and lakes by issuing LSAAs. CDFW jurisdictional limits are usually delineated by the top of the stream or lake banks or the outer edge of riparian vegetation—whichever is wider. Waters under USACE jurisdiction may or may not be included in the area covered by an LSAA. No lakes, streams, or riparian habitat occur within the study area; therefore, no features jurisdictional under CFGC Sections 1600–1607 exist within the study area.

5.2.1 Jurisdictional Features

No lakes or streams occur within the study area because the narrow Samoa spit is comprised of welldrained aeolian sand deposits and does not contain enough area with well-defined watersheds to support stream flows; therefore, no features jurisdictional under CFGC Sections 1600–1607 occur within the study area. Additionally, no riparian habitat occurs within the study area due to a lack of supporting lake or streams.

5.2.2 Non-Jurisdictional Features

All wetland and other waters that occur in the study area are not jurisdictional under CFGC Sections 1600–1607, including marine intertidal areas, isolated wetlands or wetlands with connectivity, as well as features that were constructed to hold, capture, or convey surface water and stormwater and supporting infrastructure. All features were determined to be non-jurisdictional because they are not associated with lakes, streams, or riparian areas. Additionally, marine intertidal areas are not jurisdictional under CFGC Sections 1600–1607.

5.3 California Coastal Act

Wetlands, coastal waters, and streams are protected by the CCA (see CCA Sections 30230–30233). The CCC also takes jurisdiction of riparian habitat associated with aquatic resources that are considered non-wetland ESHA.

The CCC definition of *wetlands* differs from other agencies, such as the USACE or SWRCB. CCA Section 30121 defines wetlands as "lands within the Coastal Zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed



brackish water marshes, swamps, mudflats, and fens." This definition encompasses all CWA Section 401 and CFGC Section 1600–1607 jurisdictional features described in Section 5.1 and Section 5.2 of this report, as well as 18 additional features. All features described in Appendix 1 are considered jurisdictional under the CCA.

5.3.1 Jurisdictional Features

A total of 47 distinct CCA jurisdictional features exist within the study area (Appendices 1 and 2). These include 4 Palustrine Forested Wetlands, 12 Palustrine Scrub-shrub Wetlands, 3 Palustrine Emergent Wetlands, 5 Estuarine wetlands, 2 Estuarine Intertidal areas, 3 artificial aquatic features, and 18 aquatic coastal features.

Twenty-nine (29) of these features are described in Section 5.1.1 of this report, including a summary of conditions, connectivity, wetland indictors, or vegetation community, and other pertinent information. In addition, all features are included in Appendix 1 and are described in the field data included in Appendices 3, 4, and 7.

A total of 18 aquatic coastal features are not CWA Section 401 or CFGC Section 1600–1607 jurisdictional and were not described in the above sections of this report. These coastal aquatic features are described below.

5.3.2 Other Aquatic Coastal Features

Other aquatic coastal features may be regulated as wetlands under the CCA, pending verification. They are areas that exhibit only one or two of the three parameters required by the USACE and have normal conditions present, though they are all human induced. These areas may have functions related to wetlands or are areas in which the CCA may require further investigation.

Coastal feature OF 01 is approximately 2,379 square feet and occurs north of and immediately adjacent to Wetland 05. This feature is slightly elevated above the three-parameter wetland area and does not display evidence of wetland hydrology due to its raised and gently sloping nature (Appendix 5, Photographs 27 and 28). Hydric soils or hydrophytic vegetation dominance were observed; however, hydric soil development and hydrophytic vegetation dominance were sporadic. Only one parameter was present at any given exploratory test pit throughout the feature, indicating that hydrophytic vegetation dominance is not directly related to hydric soil development. It is likely that hydric soil development and the hydrophytic vegetation dominance are a result of the location of this feature adjacent to a threeparameter wetland, which may support deeper rooted willow and wax myrtle growth and deep but persistent soil saturation in certain locations. This feature occurs on fill placed over historic tidelands that were filled for industrial development, likely over a century ago. Normal conditions occur within the feature and conditions have naturalized; however, the existing conditions within OF 01 are a direct result of human activities. This feature does not have conditions present that meet the criteria of a Cowardin class because of its lack of hydrology. It is protected as a potential wetland ESHA feature because of the presence of two potential wetland parameters. No wetland test pit data was collected from within this feature, although five exploratory test pits were excavated throughout the feature to investigate for wetland hydrology indicators and to determine the relationship between the hydric soil development and hydrophytic vegetation. See Appendix 4 data forms TP31 and TP32 for adjacent threeparameter wetland conditions, and TP 34 for surrounding upland conditions. TP2 records conditions within an adjacent area with weak hydrophytic vegetation dominance.



Coastal feature OF 02 is approximately 167 square feet and occurs southwest of and immediately adjacent to Wetland 08. This feature is elevated above the three-parameter wetland area and does not display evidence of wetland hydrology or hydric soil development due to its raised and sloping nature (Appendix 5, Photographs 27 and 28). Strong hydrophytic vegetation dominance was observed extending from within the three-parameter wetland up the slope. The hydrophytic vegetation dominance likely reflects the rhizomatous growth of small-fruited bulrush (Scirpus microcarpus) supported by the wetland hydrology within Wetland 08. No hydric soil indicators or wetland hydrology indicators were observed. This feature occurs on fill placed over historic tidelands that were filled for industrial development, likely over a century ago. Normal conditions occur within the feature and conditions have naturalized; however, the existing conditions are a direct result of human activities. This feature does not have conditions present that meet the criteria of a Cowardin class because of its lack of hydrology and hydric soils. It is protected as a potential wetland ESHA feature because of the presence of hydrophytic vegetation associated with an adjacent three-parameter wetland. No wetland test pit data was collected from within this feature, although two exploratory test pits were excavated within the feature to investigate for hydric soil and wetland hydrology indicators. See Appendix 4 data form TP41 for adjacent three-parameter wetland conditions and TP 42 for surrounding upland conditions.

Coastal feature OF 03 is approximately 518 square feet and occurs north of and immediately adjacent to Wetland 10 (Appendix 5, Photographs 27 and 28). This feature is within the same shallow depression that contains Wetland 10 and had weak wetland hydrology indicators present. Hydric soils and hydrophytic vegetation dominance were not present, possibly indicating transitory wetland hydrology, but more likely reflecting past disturbance, such as gravelly fill soils and pronounced growth of disturbance dependent species such as coyote brush, Himalayan blackberry, California blackberry, and pampas grass, among others. This feature occurs on fill placed over historic tidelands that were filled for industrial development, likely over a century ago. Normal conditions occur within the feature and conditions have naturalized; however, the existing conditions are a direct result of human activities. This feature does not have conditions present that meet the criteria of a Cowardin class because of its lack of hydric soils and a hydrophytic vegetation community. It is protected as a potential wetland ESHA feature because of the presence of wetland hydrology which may lead to hydric soil development and hydrophytic vegetation dominance over time. No wetland test pit data was collected from within this feature, although an exploratory test pit was excavated within the feature to investigate for hydrophytic vegetation dominance, hydric soil, and wetland hydrology indicators. See Appendix 4 data form TP60 for adjacent three-parameter wetland conditions and TP61 for surrounding upland conditions.

Coastal feature OF 04 is approximately 447 square feet and occurs southwest of and immediately adjacent to Wetland 10. This feature is within the same shallow depression that contains Wetland 10 and OF 03 and had weak wetland hydrology indicators present with conditions nearly identical to those observed in OF 03 (Appendix 5, Photographs 27 and 28). Hydric soils and hydrophytic vegetation dominance were not present, possibly indicating transitory wetland hydrology, but more likely reflecting past disturbance, such as gravelly fill soils and pronounced growth of disturbance dependent species such as coyote brush, Himalayan blackberry, California blackberry, and pampas grass, among others. This feature occurs on fill placed over historic tidelands that were filled for industrial development, likely over a century ago. Normal conditions occur within the feature and conditions have naturalized; however, the existing conditions are a direct result of human activities. This feature does not have conditions present that meet the criteria of a Cowardin class because of its lack of hydric soils and a hydrophytic vegetation community. It is protected as a potential wetland ESHA feature because of the presence of wetland hydrology which may lead to hydric soil development and hydrophytic vegetation dominance over time. No wetland test pit data was collected from within this feature, although an



exploratory test pit was excavated within the feature to investigate for hydrophytic vegetation dominance, hydric soil, and wetland hydrology indicators. See Appendix 4 data form TP60 for adjacent three-parameter wetland conditions and TP61 for surrounding upland conditions.

Coastal feature OF 05 is approximately 668 square feet and occurs south of and immediately adjacent to Wetland 12. This feature is slightly elevated above the three-parameter wetland area but is still within a shallow depression with hydrophytic vegetation dominance and wetland hydrology (Appendix 5, Photographs 29–31). No hydric soil indictors were observed, likely because of the compacted gravelly nature of the fill soils at this location and the slightly raised position of OF 05, which leaves the water table at too great a depth to create hydric soil indicators in the upper soil horizons such as those observed within Wetland 12. Dominant species within this feature included marsh foxtail (Alopecurus geniculatus) and toad rush (Juncus bufonius var. bufonius). Wetland hydrology was evident with the primary indicator of saturation within 12 inches of the soil surface. This feature occurs on fill placed over historic tidelands that were filled for industrial development, likely over a century ago. Normal conditions occur within the feature and conditions have naturalized; however, the existing conditions are a direct result of human activities. This feature does not have conditions present that meet the criteria of a Cowardin class because of its lack of hydric soil; however, it most closely resembles a Palustrine Emergent Wetland. It is protected as a potential wetland ESHA feature because of the presence of two wetland parameters. See Appendix 4 data form TP58 for conditions within this twoparameter feature and TP 59 for surrounding upland conditions. TP57 records conditions within adjacent Wetland 12.

Coastal feature OF 06 is approximately 731 square feet and occurs north of and immediately adjacent to Wetland 14. This feature is elevated above the three-parameter wetland area and does not display evidence of wetland hydrology or hydric soil due to its raised and sloping nature (Appendix 5, Photographs 29–31). Strong hydrophytic vegetation dominance was observed extending from within the three-parameter wetland up the slope. The hydrophytic vegetation dominance likely reflects the rhizomatous growth of dune rush (*Juncus lescurii*) and deeper-rooted Sitka willow and coast willow. Normal conditions occur within the feature and conditions have naturalized; however, the existing conditions are a direct result of human activities. This feature does not have conditions present that meet the criteria of a Cowardin class because of its lack of hydrology and hydric soils. It is protected as a potential wetland ESHA feature because of the presence of hydrophytic vegetation associated with an adjacent three-parameter wetland. See Appendix 4 data form TP54 for conditions within OF 06 and TP 55 for surrounding upland conditions. TP5 and TP53 record conditions within adjacent Wetland 14.

Coastal feature OF 07 is approximately 2,934 square feet and is an isolated feature within a relatively flat gravelly area dominated by upland non-native grasses (Appendix 5, Photographs 29–31). This feature occurs within a shallow depression within extremely compacted gravels that prevent stormwater infiltration resulting in persistent pooled water during and after storm events. Both hydrophytic vegetation dominance and wetland hydrology was observed; however, no evidence of hydric soils was observed. The wetland hydrology indicators of an Algal Mat or Crust (B4), a Geomorphic Position (D2) and a vegetation community meeting the FAC-Neutral Test (D2) was observed, which are indicative of irregular stormwater dependent hydrology. This may explain the absence of hydric soils. Dominant species within this feature were non-native and invasive species including pennyroyal (*Mentha pulegium*), Italian ryegrass (*Festuca perennis*), and curly dock (*Rumex crispus*). This feature occurs on fill placed over historic tidelands that were filled for industrial development, likely over a century ago. Normal conditions occur within the feature and conditions have naturalized; however, the existing conditions are a direct result of human activities. This feature does not have conditions present that meet the criteria of a Cowardin class because of its lack of hydric soil; however, it most closely resembles a



Palustrine Emergent Wetland. It is protected as a potential wetland ESHA feature because of the presence of two wetland parameters. See Appendix 4 data forms TP6 and TP49 for conditions within this two-parameter feature and TP 50 for surrounding upland conditions.

Coastal feature OF 08 is approximately 351 square feet and is an isolated feature within a relatively flat gravelly area dominated by upland non-native grasses (Appendix 5, Photographs 29–31). This feature occurs within a shallow depression on top of what may be a historic burn pile or burn waste dump, as soil beneath the 10-inch topsoil horizon resembled slag from a hot fire. Both hydrophytic vegetation dominance and wetland hydrology were observed; however, no evidence of hydric soils was observed, and wetland hydrology indicators indicate weak hydrologic conditions. The secondary wetland hydrology indicators of a Geomorphic Position (D2) and a vegetation community meeting the FAC-Neutral Test (D2) were observed, which likely represent the historic disturbance of the site rather than wetland hydrology, as no evidence of primary wetland hydrology indicators were observed. This may explain the absence of hydric soils. Dominant species within this feature were primarily non-native and invasive species including creeping bentgrass (Agrostis stolonifera), creeping buttercup (Ranunculus repens), Himalayan blackberry, and some cover by mowed coast willow. Normal conditions occur within the feature, and conditions have naturalized; however, the existing conditions are a direct result of human activities. This feature does not have conditions present that meet the criteria of a Cowardin class because of its lack of hydric soil and weak hydrologic conditions; however, it most closely resembles a Palustrine Emergent Wetland. It is protected as a potential wetland ESHA feature because of the presence of two wetland parameters. See Appendix 4 data form TP51 for conditions within this 2parameter feature and TP52 for surrounding upland conditions.

Coastal feature OF 09 is approximately 1,083 square feet and is an isolated feature within a shallow swale at the base of a slope between the town of Samoa and large expanses of concrete and asphalt (Appendix 5, Photograph 32). Both hydrophytic vegetation dominance and pronounced wetland hydrology was observed; however, no evidence of hydric soils was observed, although the presence of a thin layer of mucky peat indicates that hydric soils are developing. The wetland hydrology primary indicators of a High-Water Table (A2), Saturation (A3), secondary indicators of a Geomorphic Position (D2), and a vegetation community meeting the FAC-Neutral Test (D2) were observed, which indicate that long-term wetland conditions have developed at this location. It is likely that hydric soils will continue to develop over time in the absence of major disturbance. Dominant species within this feature included a mix of native and non-native hydrophytes. Normal conditions occur within the feature and conditions have naturalized; however, the existing conditions are a direct result of human activities and the swale was likely excavated in the past for stormwater conveyance. This feature does not have conditions present that meet the criteria of a Cowardin class because of its lack of hydric soils; however, it most closely resembles a Palustrine Emergent Wetland. It is protected as a potential wetland ESHA feature because of the presence of two wetland parameters. See Appendix 4 data form TP67 for conditions within this two-parameter feature and TP 68 for surrounding upland conditions.

Coastal feature OF 10 is comprised of four rectangular polygons with nearly identical conditions that occupy a combined area of approximately 7,963 square feet. Both hydrophytic vegetation dominance and weak wetland hydrology were observed; however, no evidence of hydric soils was observed. The four rectangular features exist within the foundations of former drying sheds and are shallow depressions with compacted gravel surrounded by concrete. Twelve of these features have three wetland parameters present and are described in Section 5.1.1 under the heading "Artificial Aquatic Features." These additional four depressions do not have the more pronounced wetland hydrology displayed in the 12 similar features with three parameters. As such, hydric soils have not developed and hydrophytic vegetation dominance is less pronounced and comprised of non-native species. Normal



conditions occur within these features and conditions have naturalized; however, they are entirely artificial and have limited wetland habitat value. Furthermore, these features are completely isolated and do not have connectivity to any other wetlands or other waters. These features do not have conditions present that meet the criteria of a Cowardin class because of its lack of hydric soils and their completely artificial conditions. It is protected as a potential wetland ESHA feature because of the presence of two wetland parameters. See Appendix 4 data forms TP9, TP10 and TP11 for adjacent three-parameter wetland conditions and TP8 and TP68 for surrounding upland conditions.

Coastal feature OF 11 is approximately 176 square feet and occurs southeast of and immediately adjacent to Wetland 17 (Appendix 5, Photograph 33). This feature is on the edge of the same depression that contains Wetland 17 and is elevated above the three-parameter wetland area. No wetland hydrology or hydric soil indicators were observed; however, strong hydrophytic vegetation dominance was observed extending from within the three-parameter wetland up the slope. The hydrophytic vegetation dominance reflects the stoloniferous growth of pacific silverweed (*Potentilla anserina* ssp. *pacifica*) and deeper-rooted willows supported by the wetland hydrology within Wetland 17. Normal conditions occur within the feature and conditions have naturalized; however, the existing conditions are a direct result of human activities. This feature does not have conditions present that meet the criteria of a Cowardin class because of its lack of hydrology and hydric soils. It is protected as a potential wetland ESHA feature because of the presence of hydrophytic vegetation associated with an adjacent three-parameter wetland. No wetland test pit data was collected from within this feature, although an exploratory test pit was excavated within the feature to investigate for hydric soil and wetland hydrology indicators. See Appendix 4 data form TP13 for adjacent three-parameter wetland conditions and TP 69 for surrounding upland conditions.

Coastal feature OF 12 is approximately 2,382 square feet and occurs east of and immediately adjacent to Wetland 18 (Appendix 5, Photograph 34). This feature occurs at a slightly elevated position above the three-parameter Wetland 18 (within a shallow depression with two large DIs that provide connectivity to Humboldt Bay during extremely high tides or during storm events that fill the depression and drain into the DIs. Both hydrophytic vegetation dominance and wetland hydrology were observed; however, no evidence of hydric soils was observed. The wetland hydrology primary indicator of saturation (A3), which appears to be associated with the adjacent three-parameter wetland, and secondary indicators of Geomorphic Position (D2) and a vegetation community meeting the FAC-Neutral Test (D2) were observed, which are more indicative of irregular stormwater dependent hydrology rather than longterm wetland conditions. This may explain the absence of hydric soils. Dominant species within this feature were non-native and invasive species including dense flowered cordgrass, Italian rye grass, creeping bentgrass, red fescue (Festuca rubra), and birds-foot trefoil (Lotus corniculatus). Additionally, native high salt marsh indicator species were present at lower cover including coastal gumweed (Grindelia stricta), Pacific silverweed, pickleweed (Salicornia pacifica), and salt grass. This feature occurs on fill placed over historic tidelands that were filled for industrial development, likely over a century ago. Large industrial buildings occupied this location until demolition sometime in the past. Normal conditions occur within the feature and conditions have naturalized; however, the existing conditions are a direct result of human activities. This feature does not have conditions present that meet the criteria of a Cowardin class because of its lack of hydric soil; however, it most closely resembles an Estuarine Intertidal Emergent Wetland. It is protected as a potential wetland ESHA feature because of the presence of two wetland parameters and presence of high salt marsh indicator species. See Appendix 4 data forms TP14 and TP73 for conditions within this two-parameter feature, TP 71 for surrounding upland conditions, and TP72 for three-parameter conditions in adjacent Wetland 18.



Coastal feature OF 13 is the largest two-parameter feature within the study area and is approximately 10,894 square feet. This feature surrounds Wetland 19 on three sides and occurs at a slightly higher elevation than the three-parameter wetland. Both OF 13 and Wetland 19 exist within a large shallow depression that has no outlet. Hydrophytic vegetation dominance and hydric soils were observed; however, no evidence of wetland hydrology was observed during the wetland delineation fieldwork in 2020 or 2022, likely reflecting the elevated nature above the three-parameter wetland. Hydric soil indicators Sandy Redox (S5) and 2cm Muck (A10) were observed with varying degrees of prominence and depth. Dominant species included wax myrtle, coast willow, and pacific willow with little to no vegetation in the understory. Deeper-rooted willow and wax myrtle may not reflect wetland conditions as they are able to intercept and access the water table associated with Wetland 19. Hydric soil development may reflect the deeply shaded forested conditions that contribute abundant organic material to the surface as well as stormwater flows from adjacent impervious surfaces. Stormwater flows from large expanses of adjacent impervious surfaces are directed into this feature. This may lead to transitory pulses of wetland hydrology as stormwater passes through OF 13 and makes its way downslope to Wetland 19, rather than persistent long-term wetland hydrology. Large industrial buildings occupied this location until demolition sometime in the past, and the depression likely reflects a former structure footprint. Normal conditions occur within the feature and conditions have naturalized; however, the existing conditions are a direct result of human activities. This feature does not have conditions present that meet the criteria of a Cowardin class because of its lack of wetland hydrology; however, it most closely resembles a Palustrine Forested Wetland. It is protected as a potential wetland ESHA feature because of the presence of two wetland parameters and presence of wax myrtle scrub and coast dune willow-Sitka willow thicket. No wetland test pit data was collected from within this feature, although six exploratory pits were excavated throughout the feature to investigate for wetland hydrology indicators and to determine the relationship between the hydric soil development and hydrophytic vegetation. See Appendix 4 data form TP15 for conditions within adjacent Wetland 19 and TP 74 for surrounding upland conditions. Additionally, TP 70 records upland conditions nearby where hydric soils are present without hydrophytic vegetation dominance or wetland hydrology indicators.

Coastal feature OF 14 is approximately 297 square feet and occurs northwest of and immediately adjacent to Wetland 20 (Appendix 5, Photograph 35). It occurs within the same depression that contains Wetland 20 but is elevated above the three-parameter wetland area. Hydrophytic vegetation dominance and wetland hydrology indicators were present; however, no hydric soil indicators were observed. The hydrophytic vegetation dominance reflects the rhizomatous growth of common spikerush (*Eleocharis macrostachya*) and deeper-rooted willows supported by the wetland hydrology within Wetland 20. Wetland primary hydrology indicator, Water Marks (B1) and secondary wetland hydrology indicators of Water-Stained Leaves (B9) and Geomorphic Position (D2) were observed, which suggest temporary stormwater related flooding. Normal conditions occur within the feature, and conditions have naturalized; however, the existing conditions are a direct result of human activities. This feature does not have conditions present that meet the criteria of a Cowardin class because of its lack of hydric soils; however, it most closely resembles a Palustrine Scrub-shrub Wetland. It is protected as a potential wetland ESHA feature because of the presence of hydrophytic vegetation associated with an adjacent three-parameter wetland. See Appendix 4data form TP75 for conditions within this feature and TP 17 for conditions within adjacent Wetland 20.

Coastal feature OF 15 is approximately 315 square feet and is an isolated feature within a relatively flat gravelly area dominated by upland non-native grasses and other ruderal species (Appendix 5, Photograph 36). This feature occurs on a gentle slope with willow and slough sedge cover over sandy fill soils with brick and other fill chunks present. Hydrophytic vegetation dominance and hydric soils were



observed; however, no evidence of wetland hydrology was observed. The sloping nature and lack of a geomorphic position in which to hold water prevents wetland hydrology from developing. Hydric soil indicators Histic Epipedon (A2), Black Histic (A3), and Depleted Below a Dark Surface (A11) were present with varying degrees of prominence and depth. Dominant species included coast willow, coyote brush (Baccharis pilularis ssp. consanguinea), and slough sedge. Deeper-rooted willow may not reflect wetland conditions as they are able to intercept and access the water table. Hydric soil development may reflect the shaded conditions and slough sedge cover that contribute abundant organic material to the surface as well as stormwater flows from adjacent impervious surfaces. Stormwater flows from large expanses of adjacent impervious surfaces are directed over this feature. This may lead to transitory pulses of wetland hydrology as stormwater passes through OF 15 and makes its way downslope, rather than persistent wetland hydrology. This is similar to what was observed at OF 13. Normal conditions occur within the feature and conditions have naturalized; however, the existing conditions are a direct result of human activities. This feature does not have conditions present that meet the criteria of a Cowardin class because of its lack of wetland hydrology; however, it most closely resembles a Palustrine Scrubshrub Wetland. It is protected as a potential wetland ESHA feature because of the presence of two wetland parameters. See Appendix 4 data form TP76 for conditions within this two-parameter feature and TP 80 for surrounding upland conditions.

Coastal feature OF 16 is approximately 419 square feet and is an isolated feature within a relatively flat gravelly area dominated by upland non-native grasses and other ruderal species (Appendix 5, Photograph 37). Hydrophytic vegetation dominance and wetland hydrology indicators were present; however, no hydric soil indicators were observed. Hydrophytic vegetation dominance and wetland hydrology indicators are restricted to a shallow depression that holds stormwater from adjacent impervious surfaces. Wetland primary hydrology indicator Sediment Deposits (B2) and secondary wetland hydrology indicators of a Geomorphic Position (D2) and a vegetation community that meets the FAC-Neutral Test were observed, which suggest temporary stormwater related flooding. Sediment deposits observed within this feature appear to be from an adjacent dirt/gravel road being used for adjacent construction activities. Normal conditions occur within the feature and conditions have naturalized; however, the existing conditions are a direct result of human activities. This feature does not have conditions present that meet the criteria of a Cowardin class because of its lack of hydric soils. It is protected as a potential wetland ESHA feature because of the presence of two wetland parameters. See Appendix 4 data form TP77 for conditions within this feature and TP80 for surrounding upland conditions.

Coastal feature OF 17 is approximately 188 square feet and occurs south of and immediately adjacent to Wetland 21 (Appendix 5, Photograph 38). This feature is slightly elevated above the three-parameter wetland area and does not display evidence of hydrophytic vegetation dominance or wetland hydrology. Hydric soil development is likely related to wetland hydrology in adjacent Wetland 21. OF 17 is too elevated for wetland hydrology and does not support hydrophytes. Wetland hydrology from adjacent Wetland 21 has led to the development of Sandy Redox (S5) and Depleted Below a Dark Surface (A11) hydric soil indicators within OF 17. Normal conditions occur within the feature, and conditions have naturalized; however, the existing conditions are a direct result of human activities that led to the development of a Cowardin class because of its lack of hydrophytic vegetation dominance and wetland hydrology. It is protected as a potential wetland ESHA feature because of the presence of hydric soils associated with an adjacent three-parameter wetland. See Appendix 4 data form TP78 for conditions within OF 17 and TP 80 for surrounding upland conditions. TP18 records conditions within adjacent Wetland 21.



Coastal feature OF 18 is approximately 2,047 square feet and is an isolated feature within an excavated basin. The excavated basin occurs on a slope within a former fly ash dump dating back to industrial use of the area (Appendix 5, Photograph 39). This location may have been excavated as a stormwater collection basin; however, the origins are unknown. Both hydrophytic vegetation dominance and wetland hydrology were observed, however no evidence of hydric soils was observed. The wetland hydrology indicators indicate weak hydrologic conditions that reflect past disturbance rather than ongoing wetland conditions. The secondary wetland hydrology indicators of a Geomorphic Position (D2) and a vegetation community meeting the FAC-Neutral Test (D2) were observed. The geomorphic position is a direct result of fly ash dumping and excavation which has facilitated the growth of willow and Rubus species. No evidence of primary wetland hydrology indicators was observed, which may explain the absence of hydric soils. Dominant species within this feature included coast willow, Pacific willow, Himalayan blackberry, and California blackberry. Normal conditions occur within the feature, and conditions have naturalized; however, the existing conditions are a direct result of human activities. This feature does not have conditions present that meet the criteria of a Cowardin class because of its lack of hydric soil and weak hydrologic conditions, but it somewhat resembles a Palustrine Forested or Scrubshrub Wetland. It is protected as a potential wetland ESHA feature because of the presence of two wetland parameters. See Appendix 4 data form TP84 for conditions within this two-parameter feature and TP82 for surrounding upland conditions.

5.3.3 Non-Jurisdictional Features

Several features in the study area are not considered to be CCA jurisdictional features. These include the features described in Section 5.1.3 as well as several locations in the study area that have isolated hydrophytic vegetation dominance without hydric soils or wetland hydrology. The majority of these features consist of weak hydrophytic vegetation dominance, although two locations displayed hydric soil indicators with no evidence of wetland hydrology or hydrophytic vegetation dominance. These one-parameter hydrophytic vegetation features exhibit no hydrologic connectivity to any streams or wetlands in the study area and, for the most part, occur randomly throughout the study area and appear to reflect past disturbance, random species establishment, or industrial use of the site. In places where these features are near a wetland, evidence of hydrologic influence or connectivity were specifically searched for using sub-surface test pit investigations to determine whether adjacent hydrologic conditions were supporting hydrophytic vegetation dominance. Six test pits (TP2-TP4, TP35, TP56, and TP86) and several exploratory pits were excavated in areas with hydrophytic vegetation dominance that did not have hydric soil indicators or wetland hydrology indicators. These hydrophytic vegetation-dominated areas without wetland hydrology or hydric soils were determined to be non-coastal features, and hydrophytic species were determined to be functioning as non-hydrophytes.

Hydrophytic vegetation dominance was determined to be a poor indicator of wetland habitat within the study area. As mentioned in Section 4.2, the study area receives an average of more than 40 inches of annual rainfall and average high temperatures are 59.2°F (15.1°C), resulting in low evapotranspiration rates. Furthermore, measurable rainfall occurs year-round, and the close proximity of the study area to the Pacific Ocean results in persistent fog cover and high humidity levels, which maintain moist conditions throughout the study area, even in upland locations. This is reflected in portions of the study area where hydrophytes are dominant where no wetland hydrology conditions or hydric soil indicators are present, as recorded in five TPs (TP2-TP4, TP35, TP56, and TP86).

Himalayan blackberry (facultative plant species [FAC]) was the most common of the weak hydrophytes observed in upland locations and was a dominant in TP2-TP4, TP35, and TP86. Other common dominants included coast willow (facultative-wetland plant species [FACW]), Sitka willow (FACW), Pacific



willow (FACW), California wax myrtle (FACW), and California blackberry (facultative-upland plant species [FACU]). Lesser dominants included canary reedgrass (*Phalaris arundinacea* [FACW]), jubata grass (FACU), Italian ryegrass (FAC), creeping bent grass (FAC), dune rush (FACW), pacific aster (FAC), English ivy (Hedera helix [FACU]), and slough sedge (obligate-wetland plant species [OBL]) among others.

Woody species, such as the Salix species and California wax myrtle are common throughout the study area and are an example of hydrophytic species that can become established in many conditions, regardless of wetland conditions at such close proximity to the coast. The occurrences of these species throughout the study area seem to reflect past disturbance and subsequent disuse of the site rather than wetland conditions in many cases, although they are certainly common within wetland areas as well. Woody species are able to support themselves through drier periods with well-established root systems that are able to reach moist soils even when the surface is dry and wetland hydrology is not present.

All of the native hydrophytic herbaceous species commonly found growing in upland areas within the study area are rhizomatous and capable of growing extensive root networks that can support the plants through relatively dry periods. Furthermore, species such as dune rush (FACW) and slough sedge (OBL) have fibrous root systems that are capable of obtaining soil moisture from the soil surface or deep in the soil profile. This reflects these species' adaptation to growing at the edge of wetlands, where hydrologic conditions may fluctuate. The study area is in an area with abundant, year-round precipitation and substantial fog drip, which allows these species to thrive in otherwise upland conditions without the input of wetland hydrology and are, therefore, not always suitable indicators of wetland conditions at this location. Canary reedgrass, pennyroyal, creeping bentgrass, and creeping buttercup are opportunist invasive species and are not suitable indicators of wetland conditions within the study area.

In all circumstances, soils were non-hydric and well drained fill with varying degrees of compaction and soil textures. Additionally, none of these locations had wetland hydrology indicators present, nor evidence of past hydrology. Typically, the hydrophytic vegetation-dominated areas not mapped as wetlands were elevated and without a geomorphic position to catch stormwater and were incapable of supporting or developing wetland hydrology. Because of this, and the climatic reasons described above, the hydrophytic vegetation at these locations are not functioning as hydrophytes. Therefore, these locations are not considered coastal wetlands and are not mapped as such.

Two one-parameter test pits (TP70 and TP78) were found to have hydric soils without hydrophytic vegetation dominance or wetland hydrology. These were areas with hydric soils that had normal conditions present and no recent disturbance but were without hydrophytic vegetation dominance or wetland hydrology indicators and were determined to be relictual soils or a result of the extensive manipulation of the site and not a reflection of wetland conditions. Hydric soil indicators were observed: Depleted Below a Dark Surface (A11) and Sandy Redox (S5). Soils were sandy fill soils at both locations, and both were in flat or slightly elevated locations. Hydric soil indicators might be relictual from past conditions or were moved as fill material; however, it is also possible that hydric soils are developing in situ at both locations. It could be the result of irregular stormwater dependent hydrology rather than long term wetland conditions as observed at other locations, or it could be saturation resulting from poor drainage of flat graded fill. If this were the case, it would be expected that hydrophytic vegetation would become established, which has not happened. These locations were determined to be upland because wetland habitat is not present, and no evidence of wetland hydrology was observed.



Every attempt was made to determine the potential occurrence of coastal wetlands, as observed by evidence of wetland hydrology and other indicators. It is the best professional judgement of the wetland scientist and soil scientist completing this work that the hydrophytic vegetation-dominated areas without hydric soils or wetland hydrology and the locations with hydric soil without wetland hydrology or hydrophytic vegetation are not coastal wetland features for the reasons described above. Therefore, these features were not mapped and are considered upland.

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Potential Wetland Waters of the U.S. in the Study Area

Waters of the State in the Study Area

Aquatic Resource Nameª	Cowardin Code/Name ^b	Centroid Location (latitude, longitude) Datum WGS 84	Aquatic Resource Area (square feet)	Aquatic Resource Length (linear feet)	401 Jurisdictional Area (square feet)	Area	CCA Jurisdictional Area (square feet)
	Poten	tial Wetland \	Naters of	f the Stat	e in the Stu	dy Area	
		Palu	ustrine For	ested Wetl	and		
Wetland 05	PFO1Es0n	40.820908°, -124.177560°	2,377	N/A	2,377	0	2,377
Wetland 06	PFO3E0n	40.821393°, -124.17954658°	1,486	N/A	1,486	0	1,486
Wetland 09	PFO1Hx+h0n	40.819948°, -124.178740°	973	N/A	973	0	973
Wetland 19	PFO1Es0n	40.814307°, -124.185636°	3,314	N/A	3,314	0	3,314
Palustri	Palustrine Forested Wetland Subtotal ^c			N/A	8,150 (0.187 acre)	0	8,150 (0.187 acre)
		Palus	trine Scrub	o-Shrub We	etland		
Wetland 02	PSS3F+Dx0+3n	40.824092°, -124.174216°	71	N/A	71	0	71
Wetland 04	PSS1Bx0n	40.822749°, -124.175590°	341	N/A	341	0	341
Wetland 07	PSS1Cx0n	40.820672°, -124.178977°	702	N/A	702	0	702
Wetland 08	PSS4Ex0n	40.820253°, -124.178992	983	N/A	983	0	983
Wetland 10	PSS1+4Bs0n	40.819808°, -124.179274°	3,212	N/A	3,212	0	3,212
Wetland 11	PSS1A+Bs+x0n	40.819633°, -124.179077°	204	N/A	204	0	204
Wetland 14	PSS1Bs0n	40.819467°, -124.180612°	434	N/A	434	0	434
Wetland 16	PSS1Cx0n	40.818528°, -124.184824°	3,951	N/A	3,951	0	3,951



Aquatic Resource Nameª	Cowardin Code/Name ^ь	Centroid Location (latitude, longitude) Datum WGS 84	Aquatic Resource Area (square feet)	Aquatic Resource Length (linear feet)	401 Jurisdictional Area (square feet)	1600–1607 Jurisdictional Area (square feet)	CCA Jurisdictional Area (square feet)	
Wetland 20	PSS1Cs0n	40.814230°, -124.187096°	169	N/A	169	0	169	
Wetland 21	PSS1Cs0n	40.814050°, -124.187968°	2,504	N/A	2,504	0	2,504	
Wetland 22	PSS1Cs0n	40.813890°, -124.188198°	105	N/A	105	0	105	
Wetland 24	PSS/EM1B0n	40.809907°, -124.195697°	258	N/A	258	0	258	
Palustrine Scrub-shrub Wetland Subtotal ^c			12,934 (0.297 acre)	N/A	12,934 (0.297 acre)	N/A	12,934 (0.297 acre)	
Palustrine Emergent Wetland								
Wetland 12	PEM1A+Bs0n	40.819388°, -124.179667°	502	N/A	502	0	502	
Wetland 13	PEM1A+Bx0n	40.819189°, -124.179666°	81	N/A	81	0	81	
Wetland 17	PEM1Es0n	40.815370°, -124.185282°	2,284	N/A	2,284	0	2,284	
Palustrine Emergent Wetland Subtotal ^c			2,867 (0.066 acre)	N/A	2,867 (0.066 acre)	N/A	2,867 (0.066 acre)	
Estuarine Wetland								
Wetland 01	E2EM1N3g	40.822387°, -124.175569°	23,957	N/A	23,957	0	23,957	
Wetland 03	E2US+EM1N3n	40.823083°, -124.175129°	9,193	N/A	9,193	0	9,193	
Wetland 15	E2US+EM1N3n	40.817998°, -124.181074°	704	N/A	704	0	704	
Wetland 18	E2EM1Px3n	40.814823°, -124.185240°	1,522	N/A	1,522	0	1,522	
Wetland 23	E2FO3Nx3n	40.811575°, -124.187987°	56	N/A	56	0	56	



Aquatic Resource Nameª	Cowardin Code/Name ^b	Centroid Location (latitude, longitude) Datum WGS 84	Aquatic Resource Area (square feet)	Aquatic Resource Length (linear feet)	401 Jurisdictional Area (square feet)	1600–1607 Jurisdictional Area (square feet)	CCA Jurisdictional Area (square feet)
	Estuarine Wetland Subtotal ^c			N/A	35,432 (0.813 acres)	0	35,432 (0.813 acres)
		Art	tificial Aqu	atic Featu	res		
Concrete Vault and Foundation	PFO1Erx0n	40.819480°, -124.183669°	667	N/A	667	0	667
Drying shed Foundations	PEM1Brx0n	40.816284°, -124.186059°	15,398	N/A	15,398	0	15,398
Stormwater Collection System (3 polygons)	N/A	40.806902°, -124.191117°	7,991	N/A	7,991	0	7,991
Artificial Aquatic Features Subtotal			24,056 (0.552 acres)	N/A	24,056 (0.552 acres)	N/A	24,056 (0.552 acres)
	Wetland Waters Total ^c			N/A	83,439 (1.915 acres)	0	83,439 (1.915 acres)
Potential Non-wetland Waters of					tate in the S	tudy Area	
		Estu	arine Inter	tidal Shor	eline		
MHHW 01	E2US3N, E2AB3N	40.823699°, -124.174337°	14,971	1,394	14,971	0	14,971
MHHW 02	E2US3N, E2AB3N	40.814588°, -124.184641°	211,444	10,878	211,444	0	211,444
Estuarine Intertidal Subtotal			226,415 (5.198 acres)	12,272 (2.324 miles)	226,415 (5.198 acres)	0	226,415 (5.198 acres)
				s of the Sta			
OF 01	N/A		2,419	N/A	0	0	2,419
OF 02	N/A		167 E19	N/A	0	0	167 E19
OF 03 OF 04	N/A N/A		518 447	N/A N/A	0	0	518 447
OF 04 OF 05	N/A N/A		668	N/A N/A	0	0	668
OF 05	N/A		731	N/A	0	0	731
OF 07	N/A		2,934	N/A	0	0	2,934
OF 08	N/A		351	N/A	0	0	351
OF 09	N/A		1082	N/A	0	0	1082



Aquatic Resource Nameª	Cowardin Code/Name ^ь	Centroid Location (latitude, longitude) Datum WGS 84	Aquatic Resource Area (square feet)	Aquatic Resource Length (linear feet)	401 Jurisdictional Area (square feet)	1600–1607 Jurisdictional Area (square feet)	CCA Jurisdictional Area (square feet)
OF 10 (4 polygons)	N/A		7,963	N/A	0	0	7,963
OF 11	N/A		176	N/A	0	0	176
OF 12	N/A		2,382	N/A	0	0	2,382
OF 13	N/A		10,894	N/A	0	0	10,894
OF 14	N/A		297	N/A	0	0	297
OF 15	N/A		315	N/A	0	0	315
OF 16	N/A		419	N/A	0	0	419
OF 17	N/A		188	N/A	0	0	188
OF 18	N/A		2,047	N/A	0	0	2,047
Oth	Other Waters of the State Subtotal			12,272 (2.324 miles)	0	0	33,998 (0.780 acre)
	Non-Wetland Waters Total			12,272 (2.324 miles)	226,415 (5.198 acres)	0	260,413 (5.978 acres)

Sources: Cowardin et al. 1979; Federal Geographic Data Committee 2019

^a Data forms were collected for some of these features as shown on the maps in Appendix 2.

^b Cowardin Codes:

E2AB3N	Estuarine Intertidal Aquatic Bed Rooted Vascular Regularly Flooded
E2EM1N3g	Estuarine Intertidal Emergent Persistent Regularly Flooded Brackish wetland with organic soils
E2EM1Px3n	Estuarine Intertidal Emergent Persistent Irregularly Flooded Excavated Brackish wetland with mineral soils
E2FO3Nx3n	Estuarine Intertidal Forested Broad-leaved Evergreen Regularly Flooded Excavated Brackish wetland with mineral soils
E2US+EM1N3n	Estuarine Intertidal unconsolidated shore to Emergent Persistent regularly Flooded Brackish wetland with mineral soils
E2US3N	Estuarine Intertidal Unconsolidated Shore Mud Regularly Flooded
PEM1A+Bs0n	Palustrine Emergent Persistent Temporarily Flooded to Seasonally Saturated spoils Freshwater wetland with mineral soils
PEM1A+Bx0n	Palustrine Emergent Persistent Temporarily Flooded to Seasonally Saturated Excavated Freshwater wetland with mineral soils
PEM1Brx0n	Palustrine Emergent Persistent Seasonally Saturated artificial substrate Excavated Freshwater wetland with mineral soils
PEM1Es0n	Palustrine Emergent Persistent Seasonally Flooded/Saturated spoils Freshwater wetland with mineral soils
PFO1Erx0n	Palustrine Forested Broad-leaved Deciduous Seasonally Flooded/Saturated Artificial Substrate Excavated Freshwater wetland with mineral soils
PFO1Es0n	Palustrine Forested Broad-leaved Deciduous Seasonally Flooded/Saturated spoils Freshwater wetland with mineral soils
PFO3E0n	Palustrine Forested Broad-leaved Evergreen Seasonally Flooded/Saturated Freshwater wetland with mineral soils



PFO1Es0n	Palustrine Forested Broad-leaved Deciduous Seasonally Flooded/Saturated Spoils Freshwater wetland with mineral soils
PFO1Hx+h0n	Palustrine Forested Broad-leaved Deciduous Permanently Flooded Excavated, diked, and impounded Freshwater wetland with mineral soils
PSS1A+Bs+x0n	Palustrine Scrub-shrub Broad-leaved Deciduous Temporarily Flooded/Seasonally Saturated spoils and Excavated Freshwater wetland with mineral soils
PSS1Bs0n	Palustrine Scrub-shrub Broad-leaved Deciduous Seasonally Saturated Spoils Freshwater wetland with mineral soils
PSS1+4Bs0n	Palustrine Scrub-shrub Broad-leaved Deciduous and needled-leaved Evergreen Seasonally Saturated Spoils Freshwater wetland with mineral soils
PSS1Bx0n	Palustrine Scrub-shrub Broad-leaved Deciduous Seasonally Saturated Excavated Freshwater wetland with mineral soils
PSS1Cs0n	Palustrine Scrub-shrub Broad-leaved Deciduous Seasonally Flooded Spoils Freshwater wetland with mineral soils
PSS1Cx0n	Palustrine Scrub-shrub Broad-leaved Deciduous Seasonally Flooded Excavated Freshwater wetland with mineral soils
PSS3F+Dx0+3n	Palustrine Scrub-shrub Broad-leaved Evergreen semi-Permanently to continuously Saturated Excavated Freshwater to Brackish wetland with mineral soils
PSS4Ex0n	Palustrine Scrub-shrub needle-leaved Evergreen Seasonally Flooded/Saturated Excavated Freshwater wetland with mineral soils
PSS/EM1B0n	Palustrine Scrub-shrub/Emergent Persistent Seasonally Saturated Freshwater wetland with mineral soils.

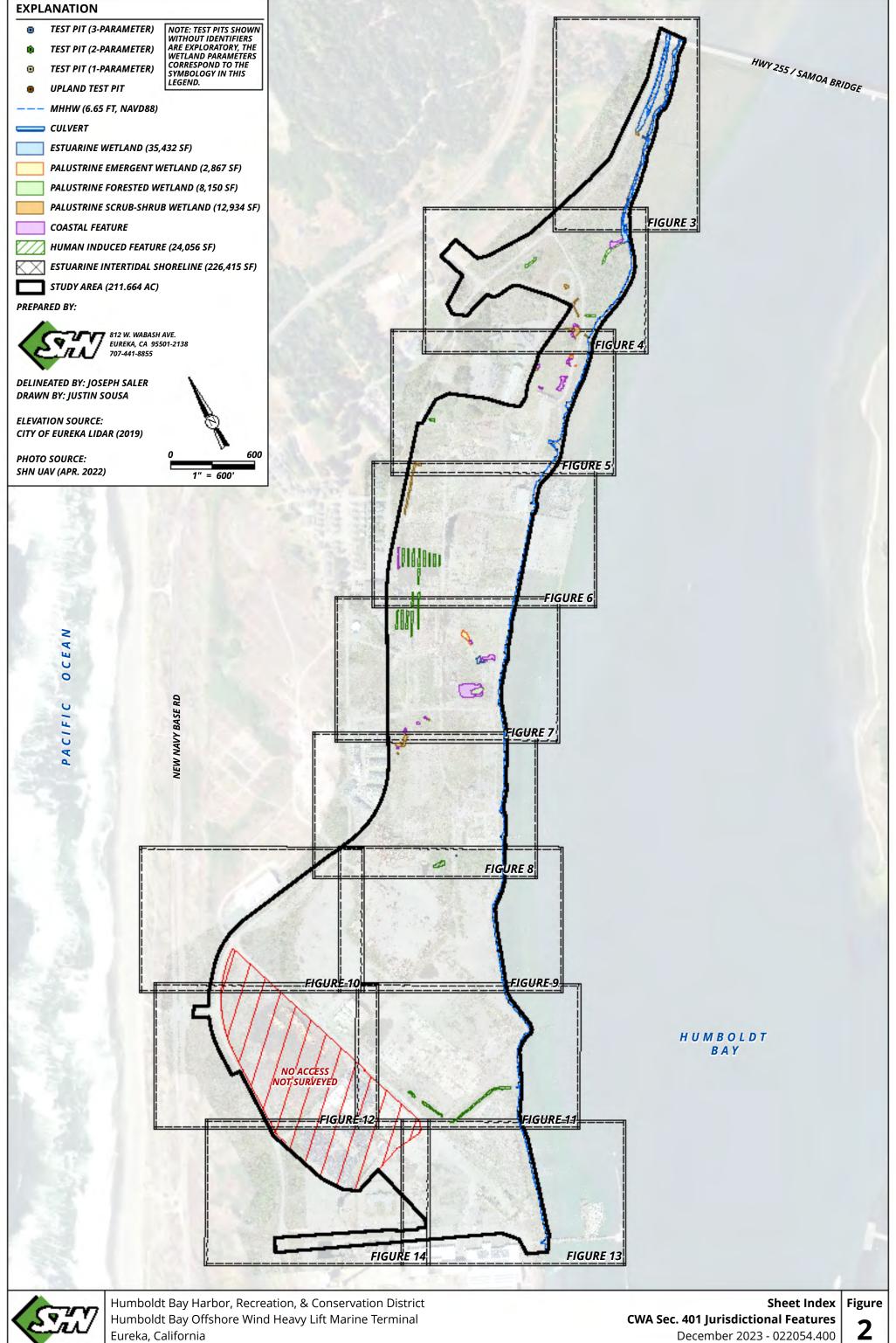
^c Square footage presented in the table was rounded to the nearest whole number. Due to this the total acreage and square footage do not always match in the "Total" rows.



Aquatic Resources Delineation Maps

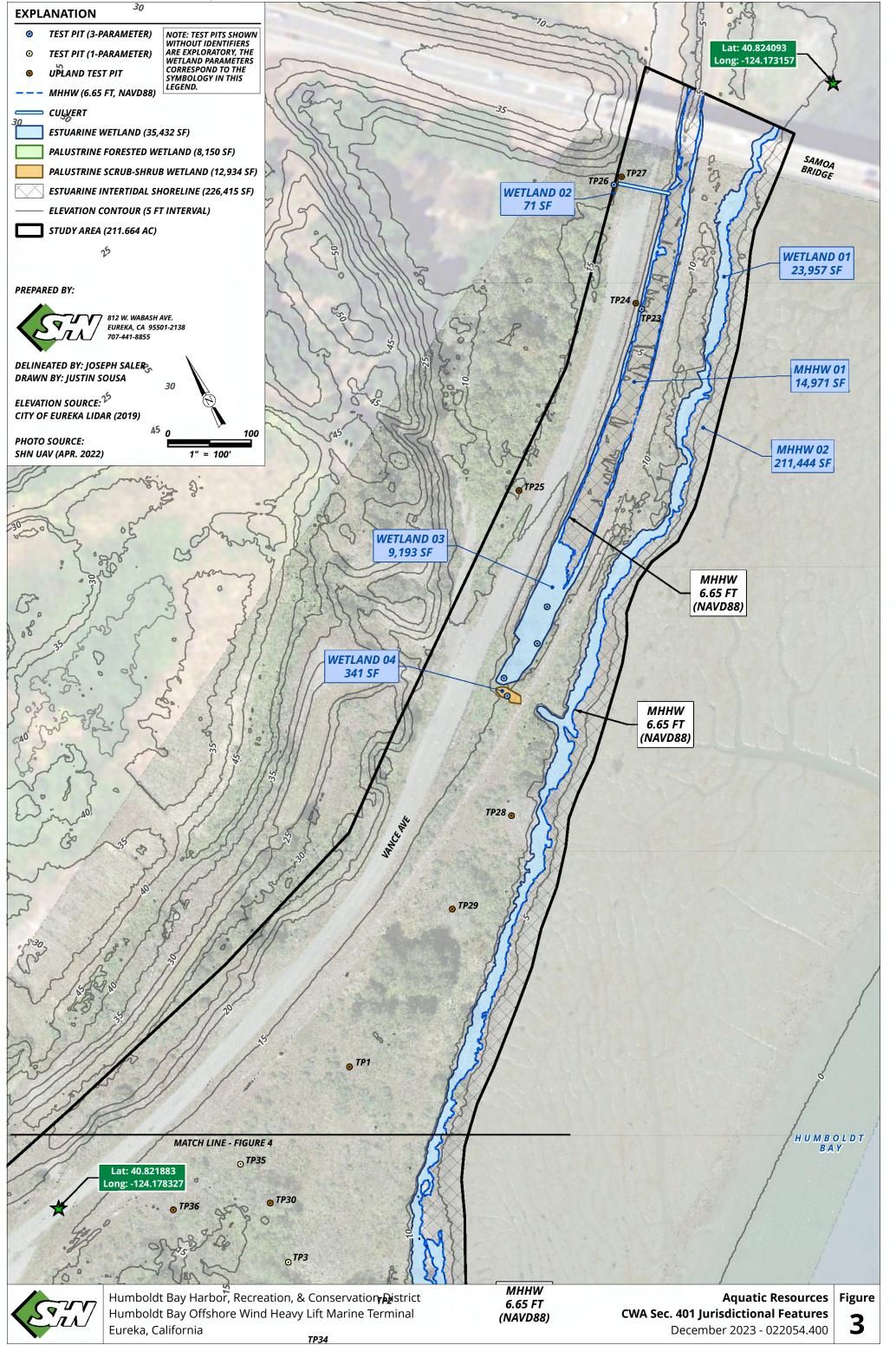


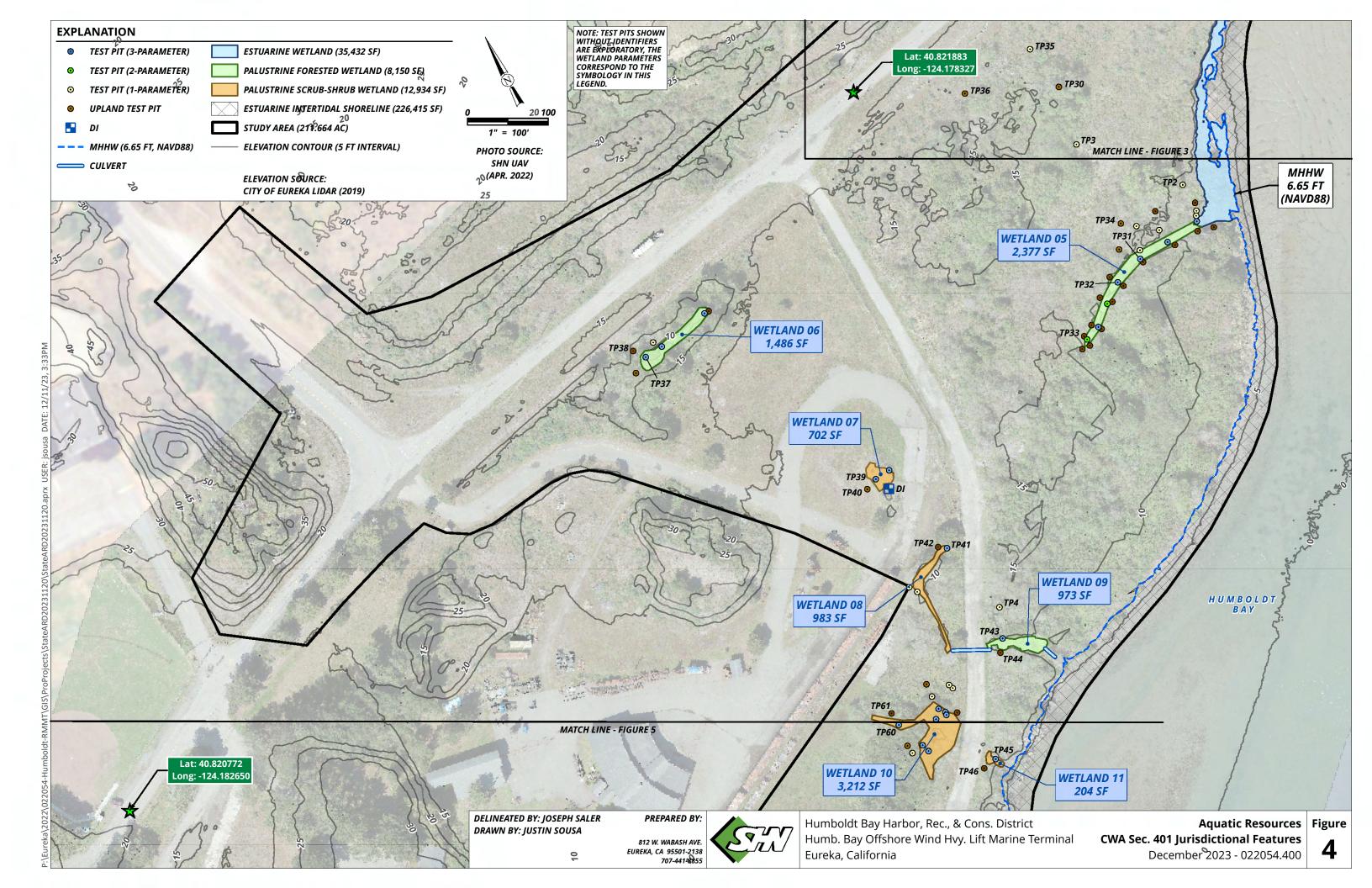
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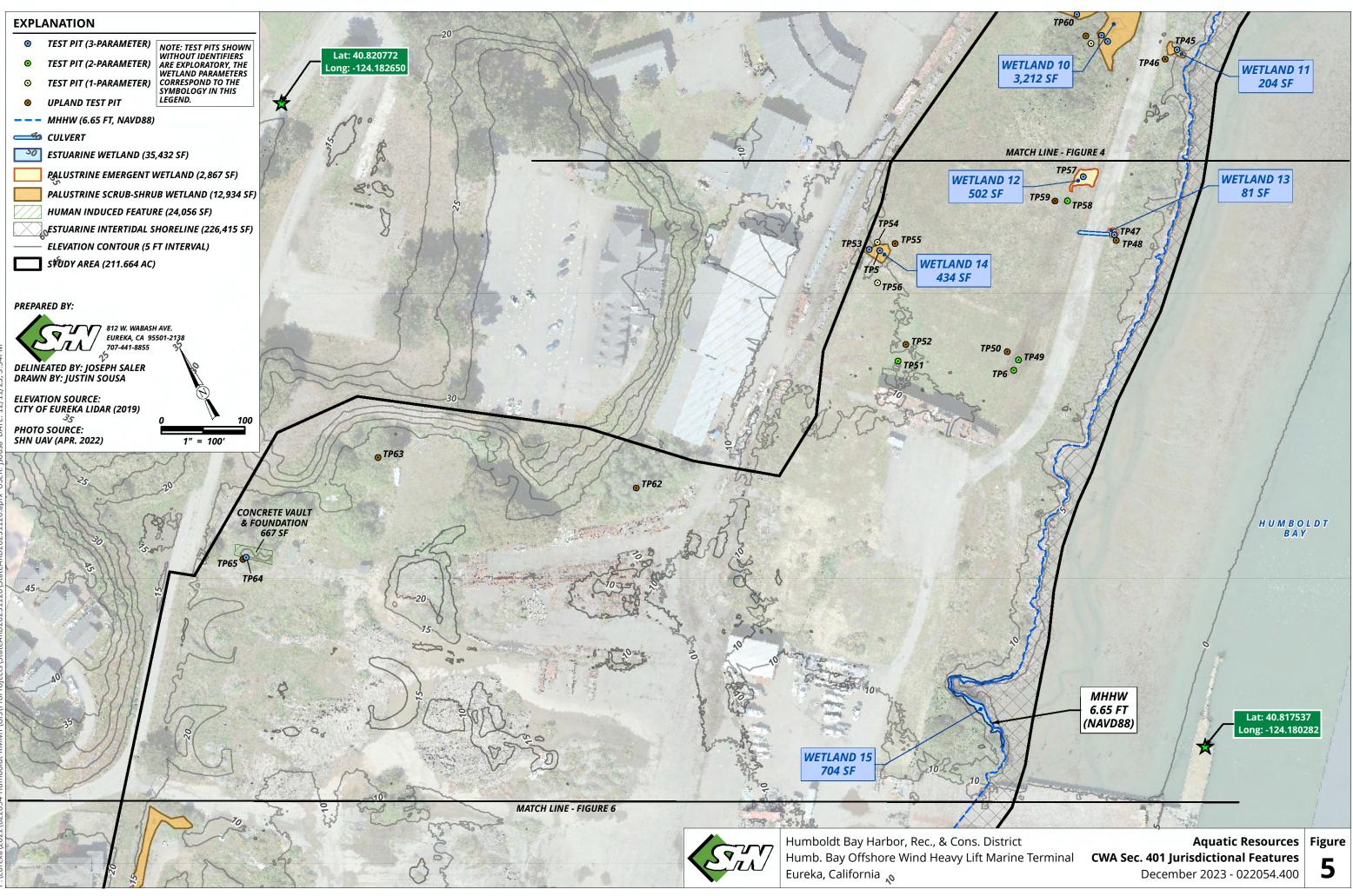


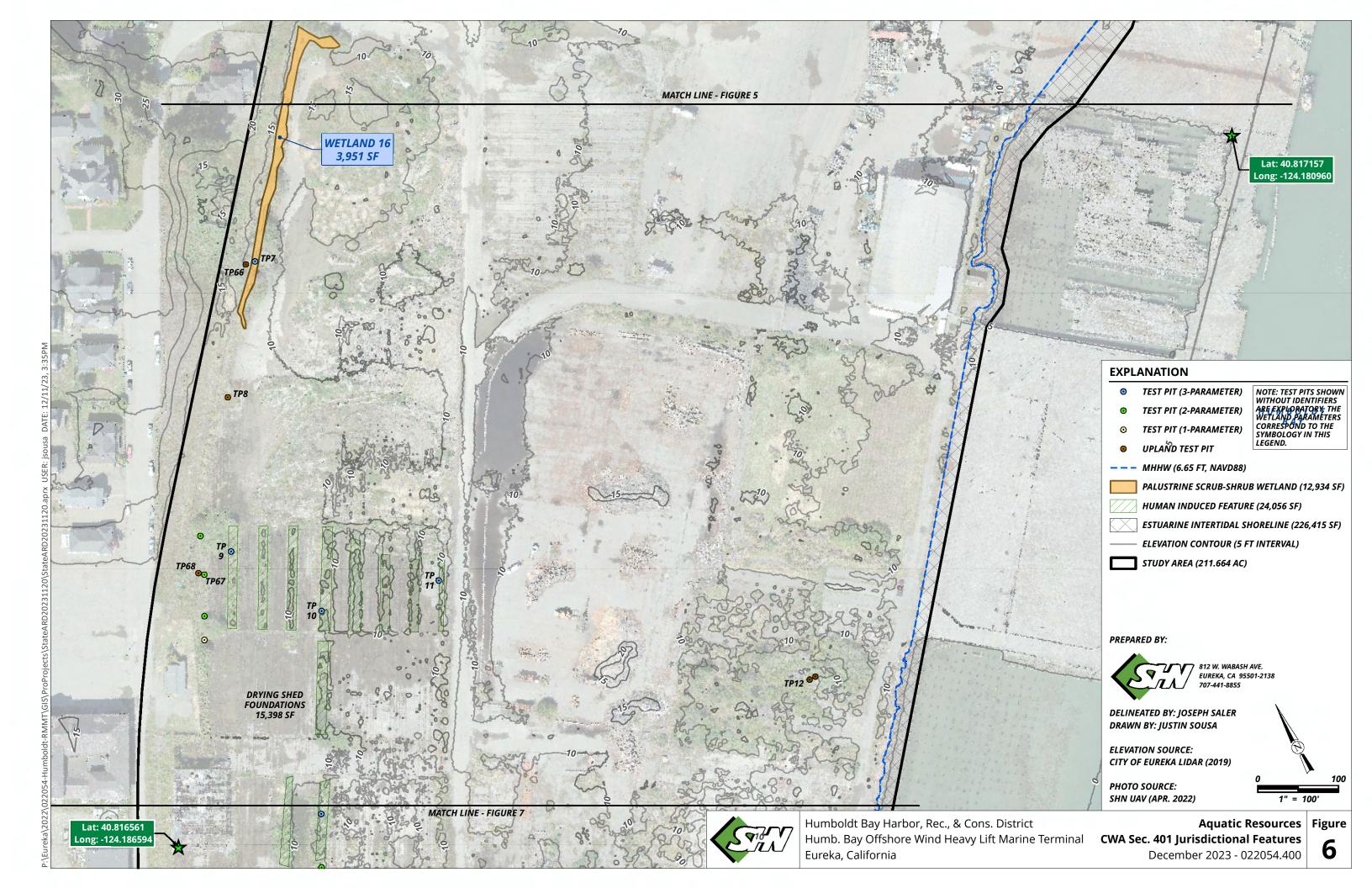
December 2023 - 022054.400

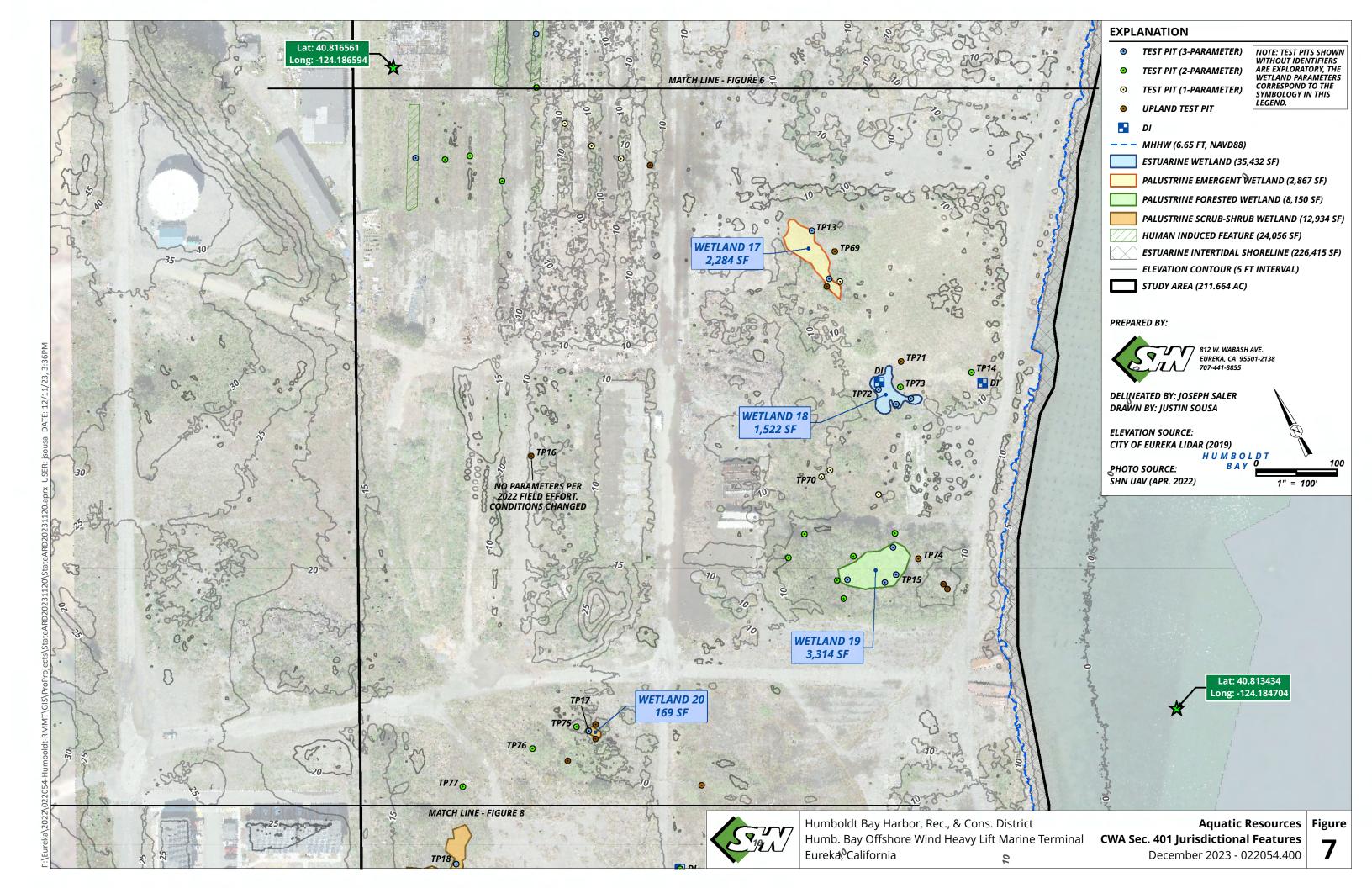
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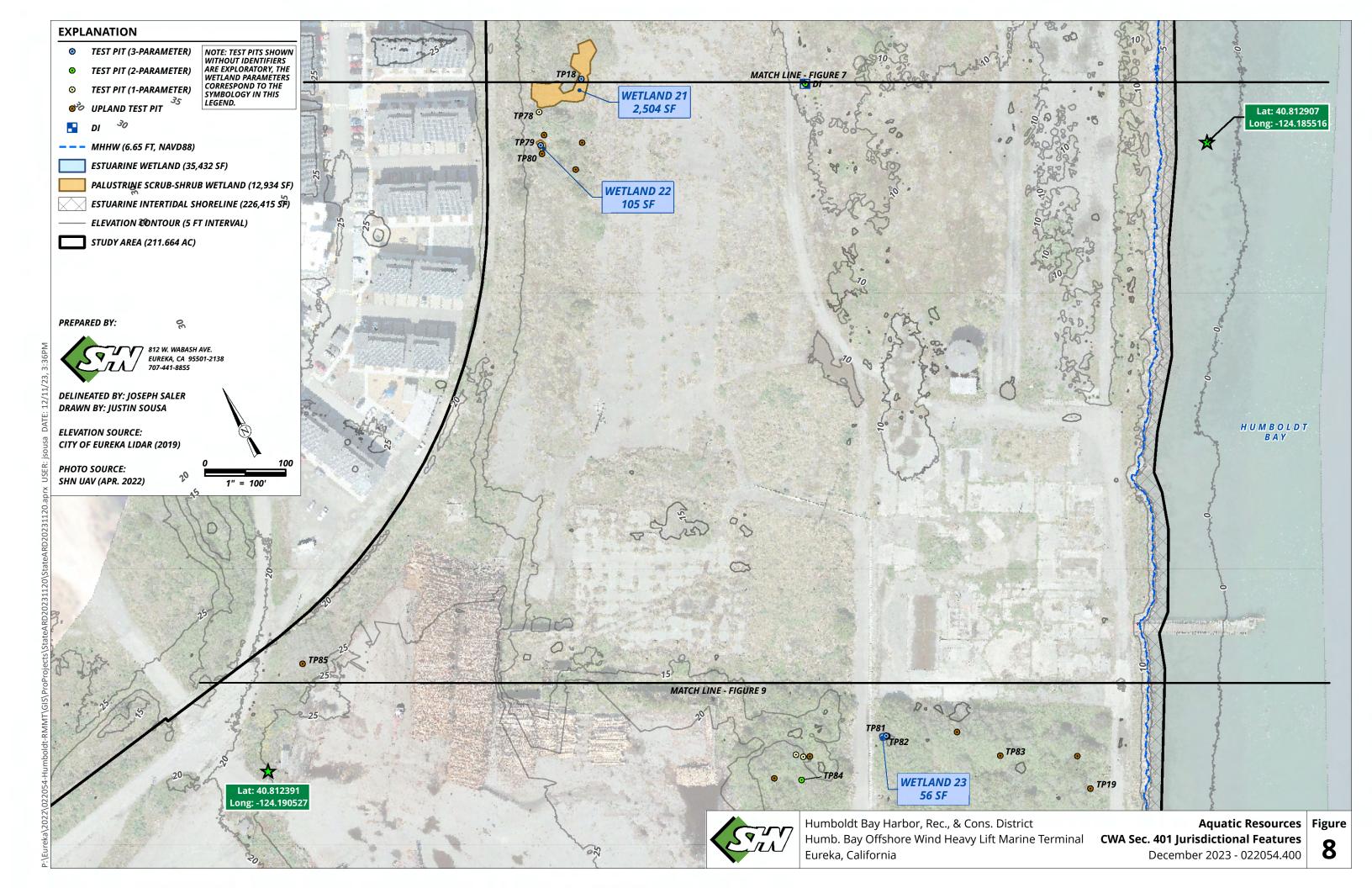


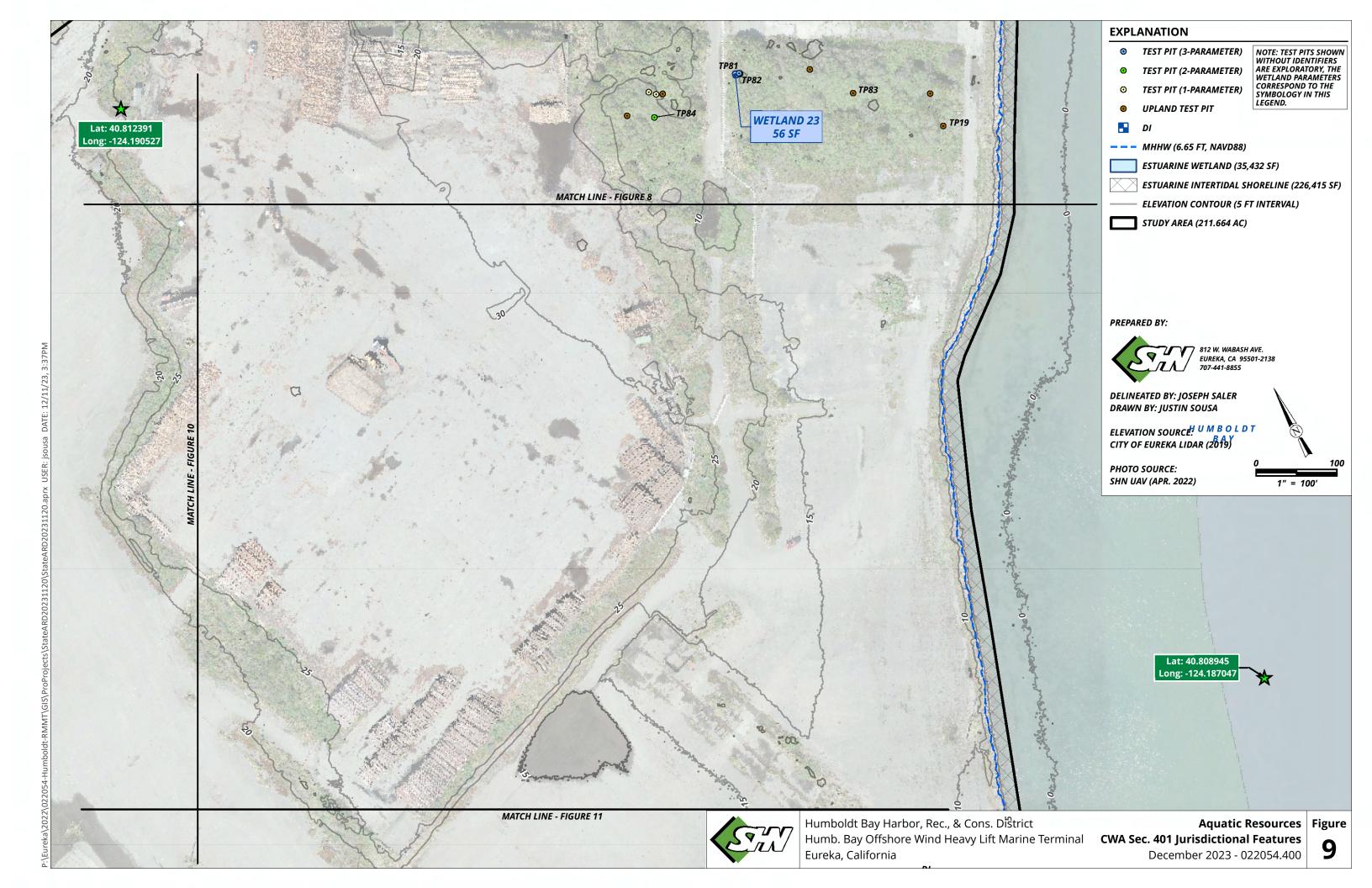


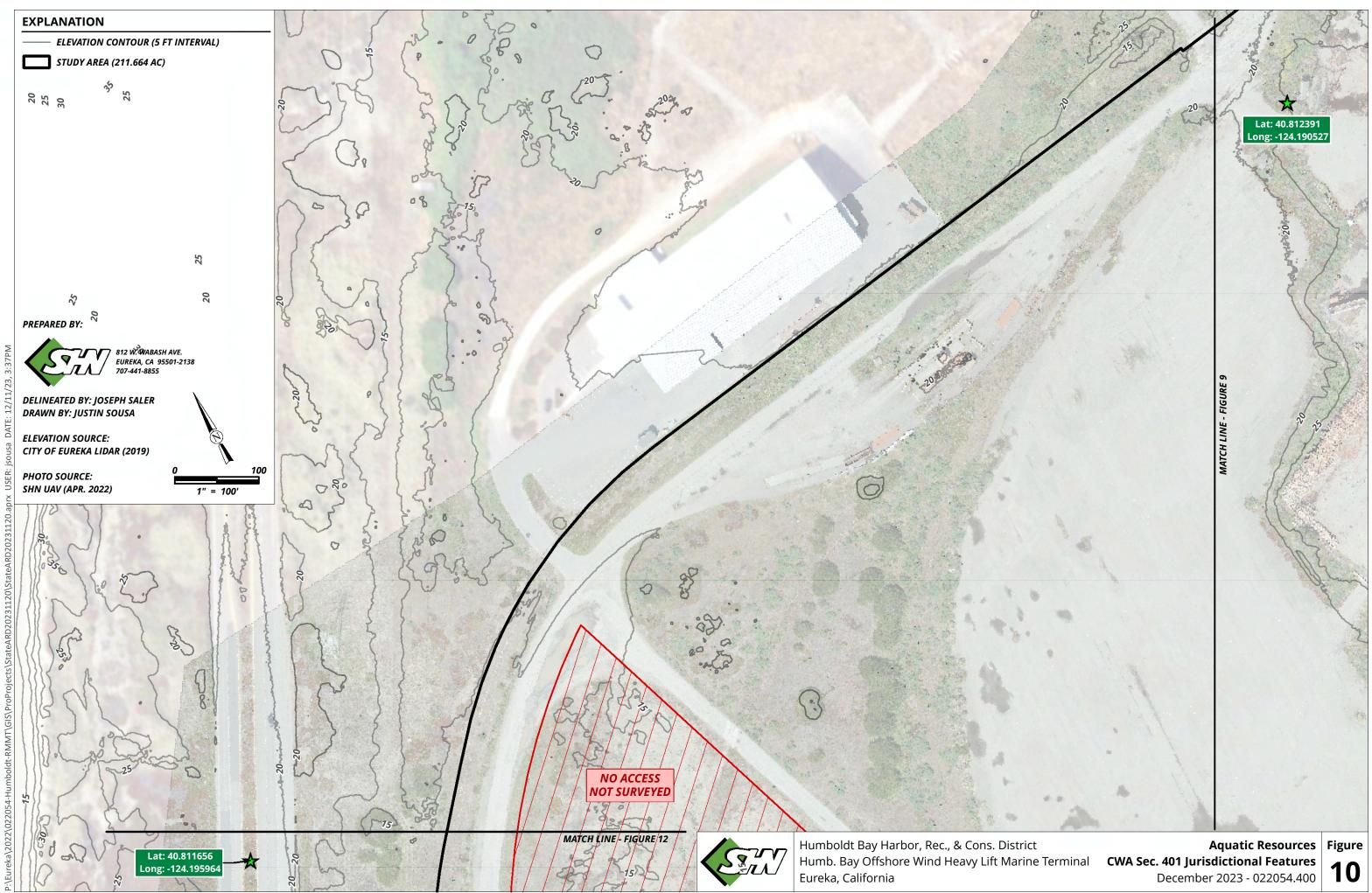


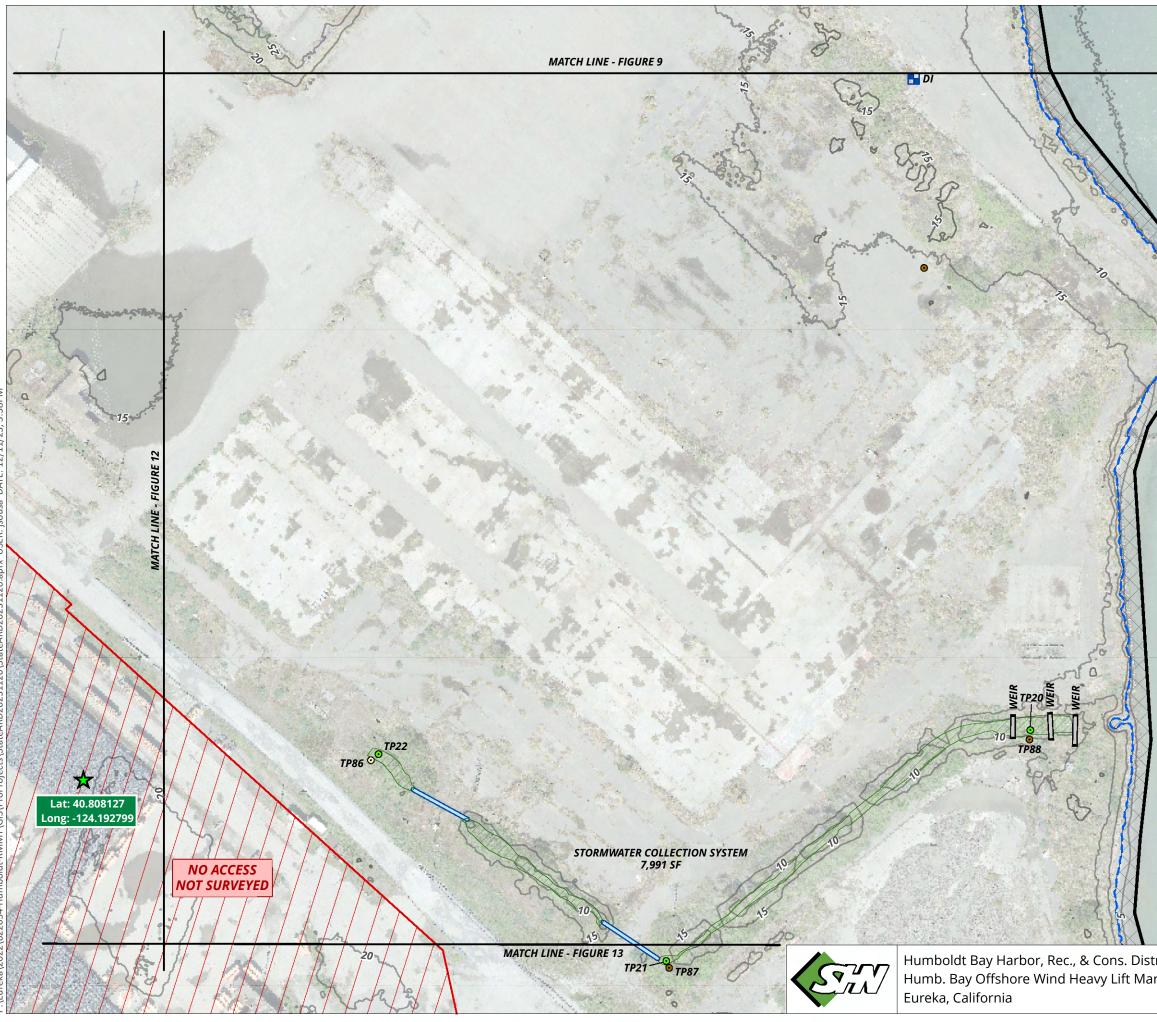




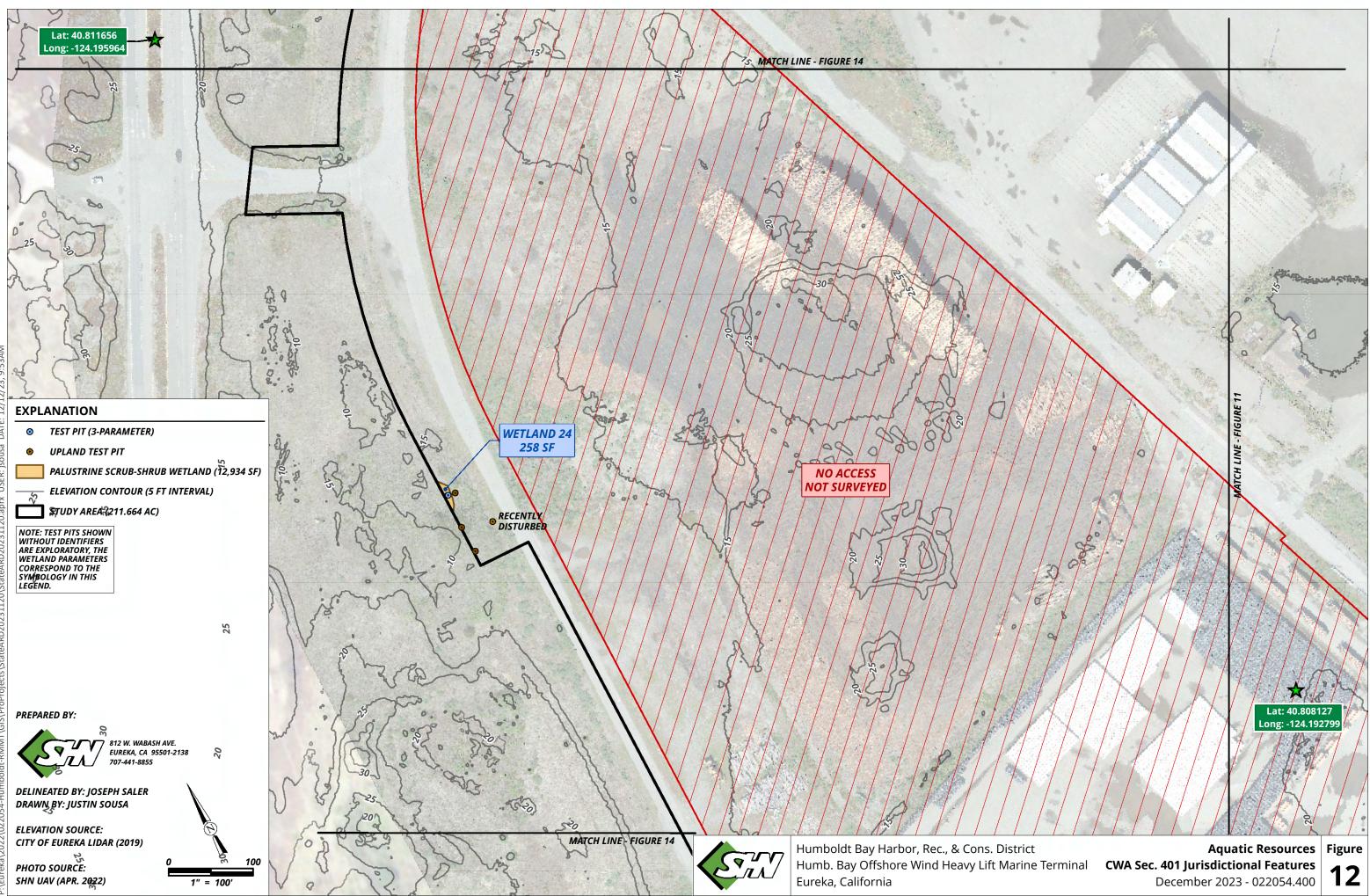


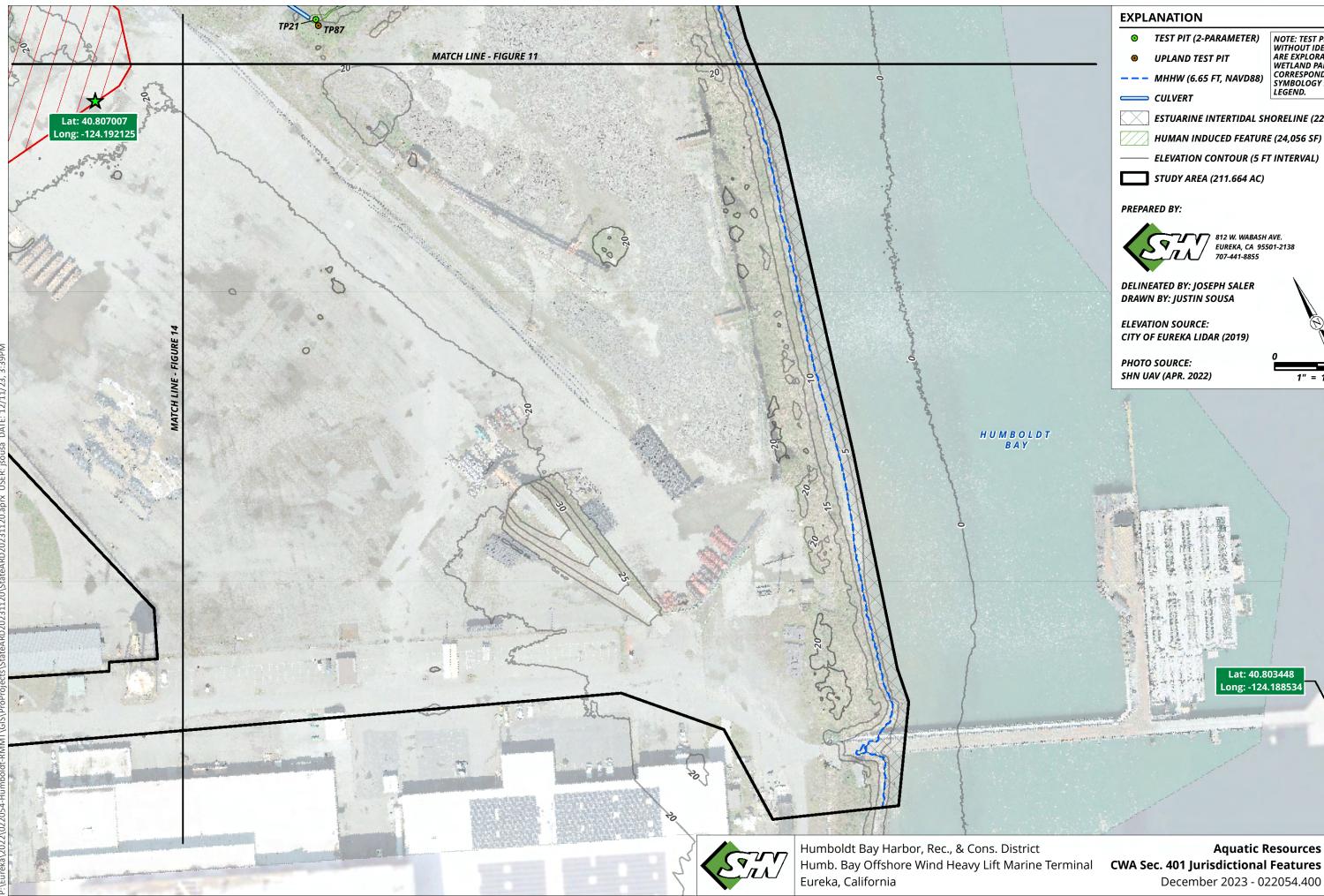


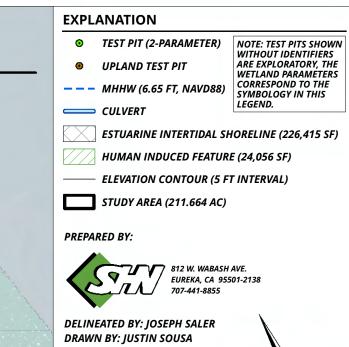




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	PREPARED BY: B12 W. WABASH / EUREKA, CA 9551 707-441-8855	
	DELINEATED BY: JOSEPH SALER DRAWN BY: JUSTIN SOUSA ELEVATION SOURCE:	Ð
	CITY OF EUREKA LIDAR (2019) PHQJO SOURCE: SHN UAV (APR. 2022)	0 100
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ELEVATION SOURCE: CITY OF EUREKA LIDAR (2019)

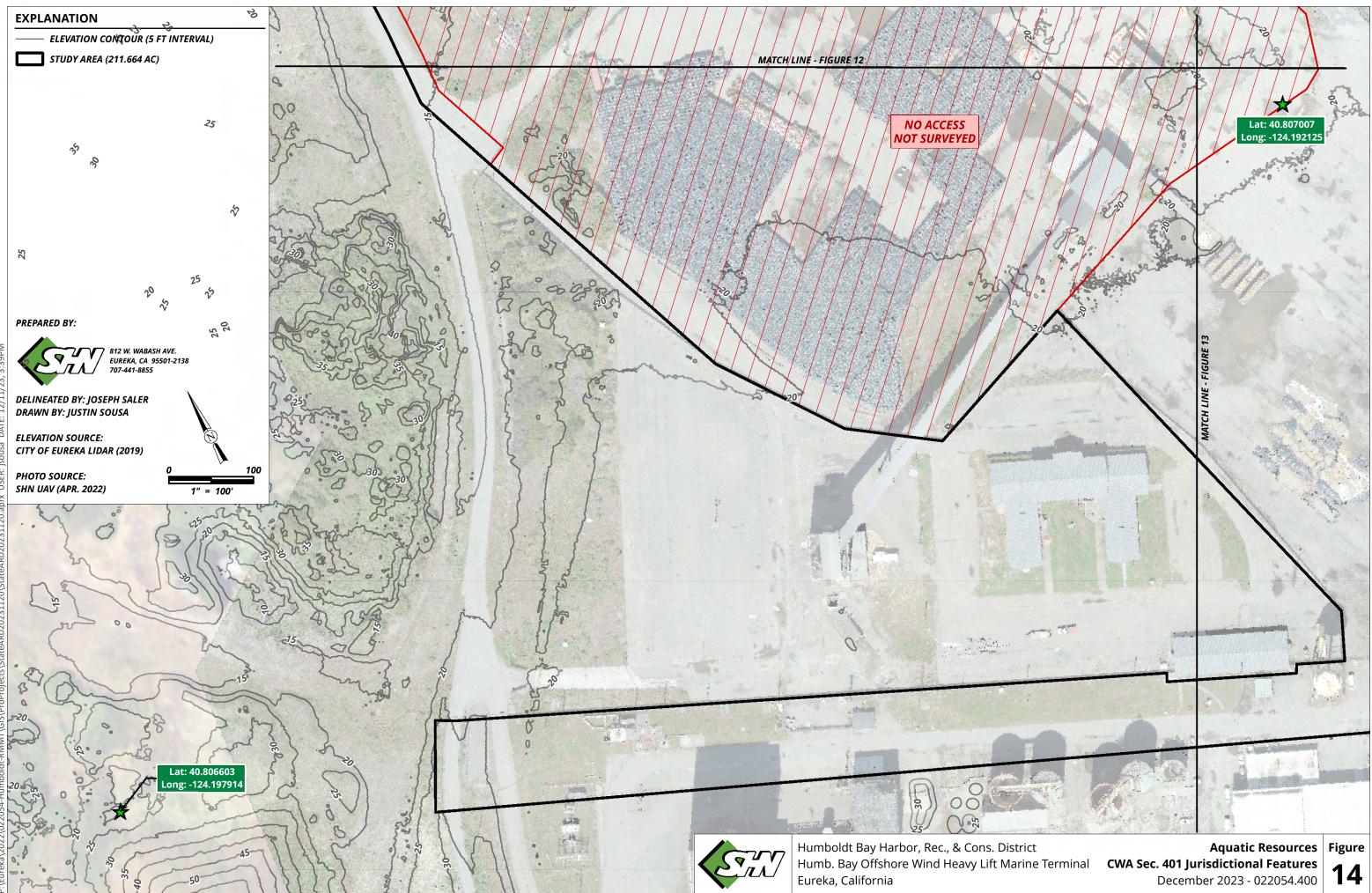
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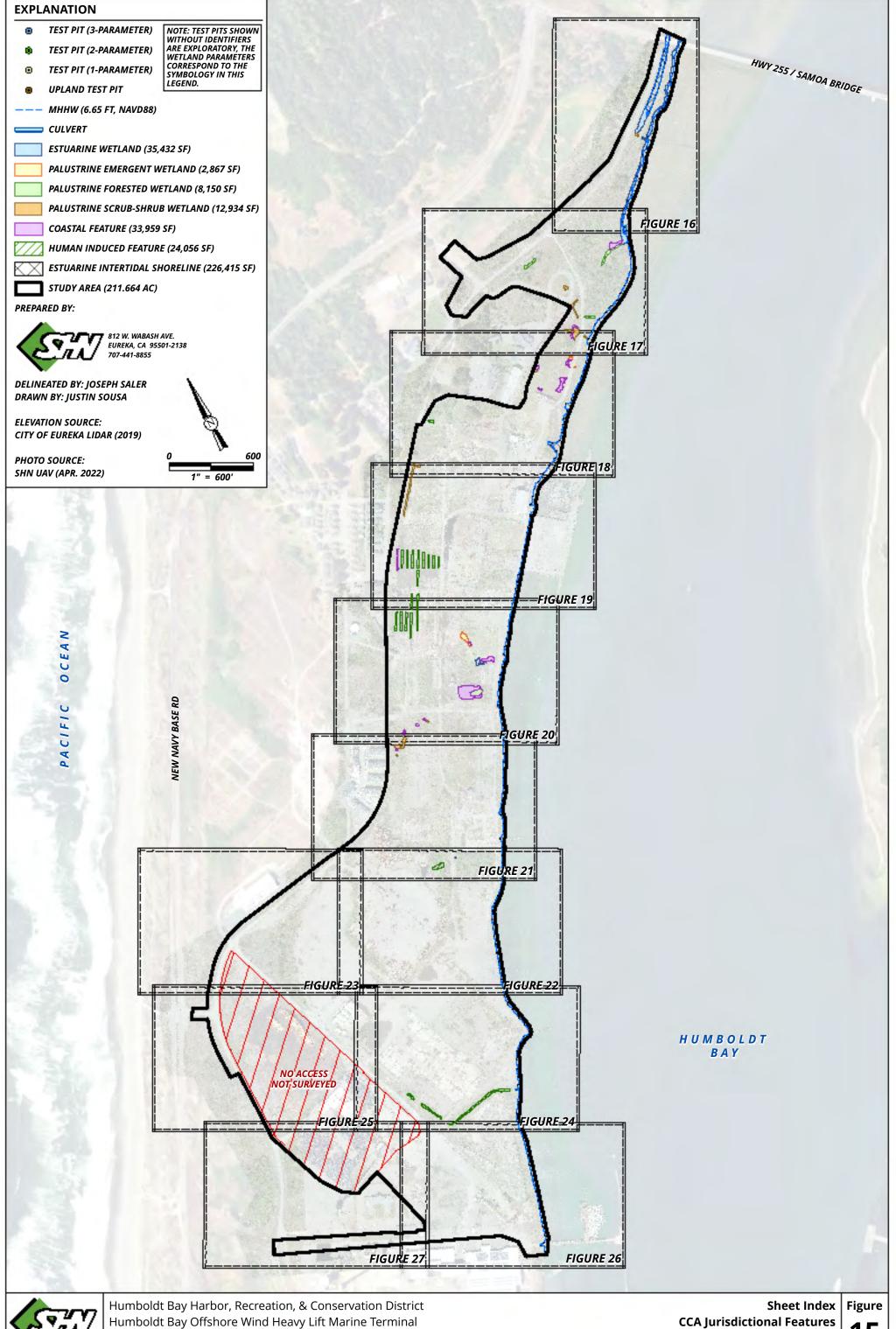


Aquatic Resources | Figure December 2023 - 022054.400

13



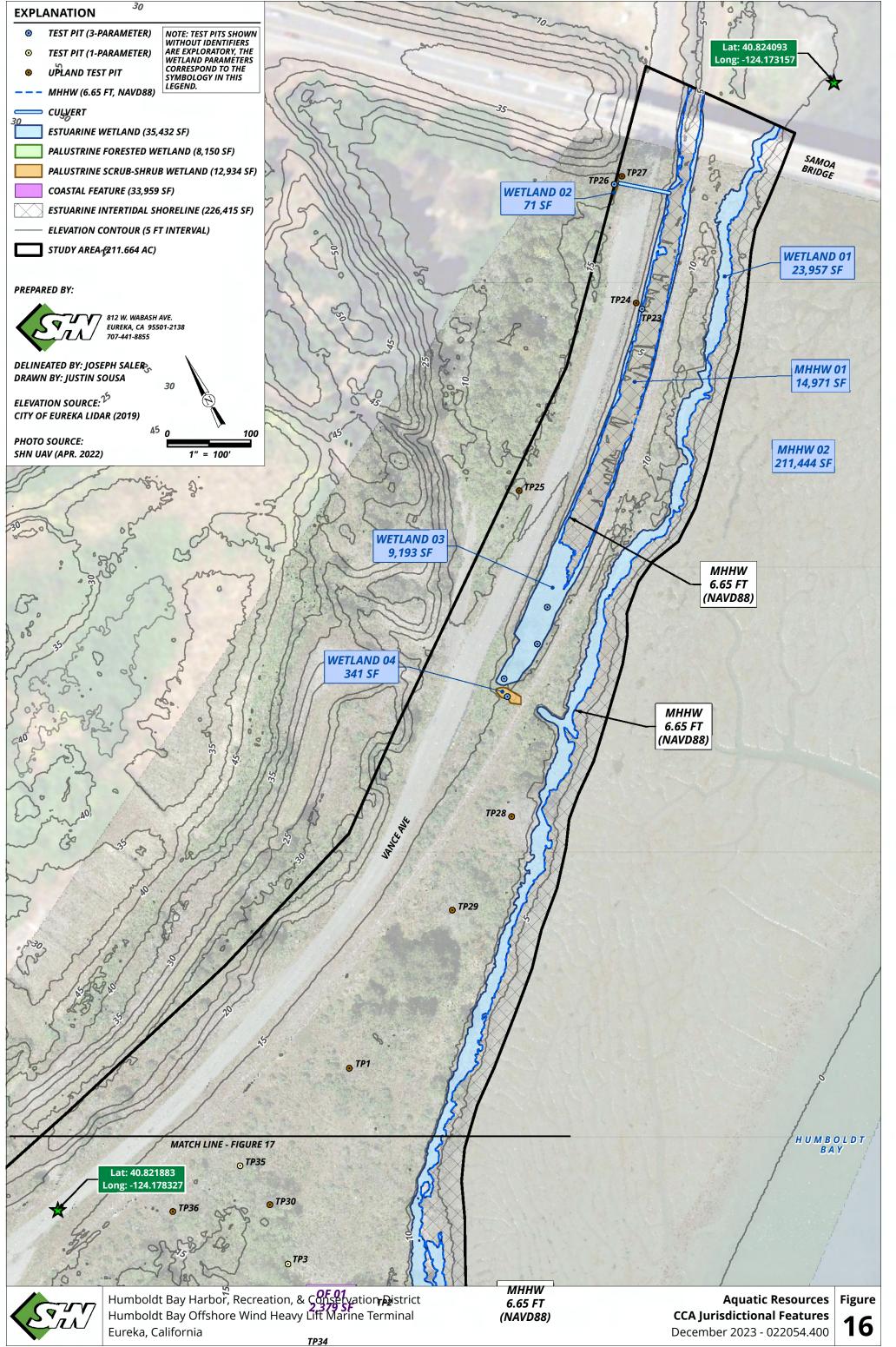
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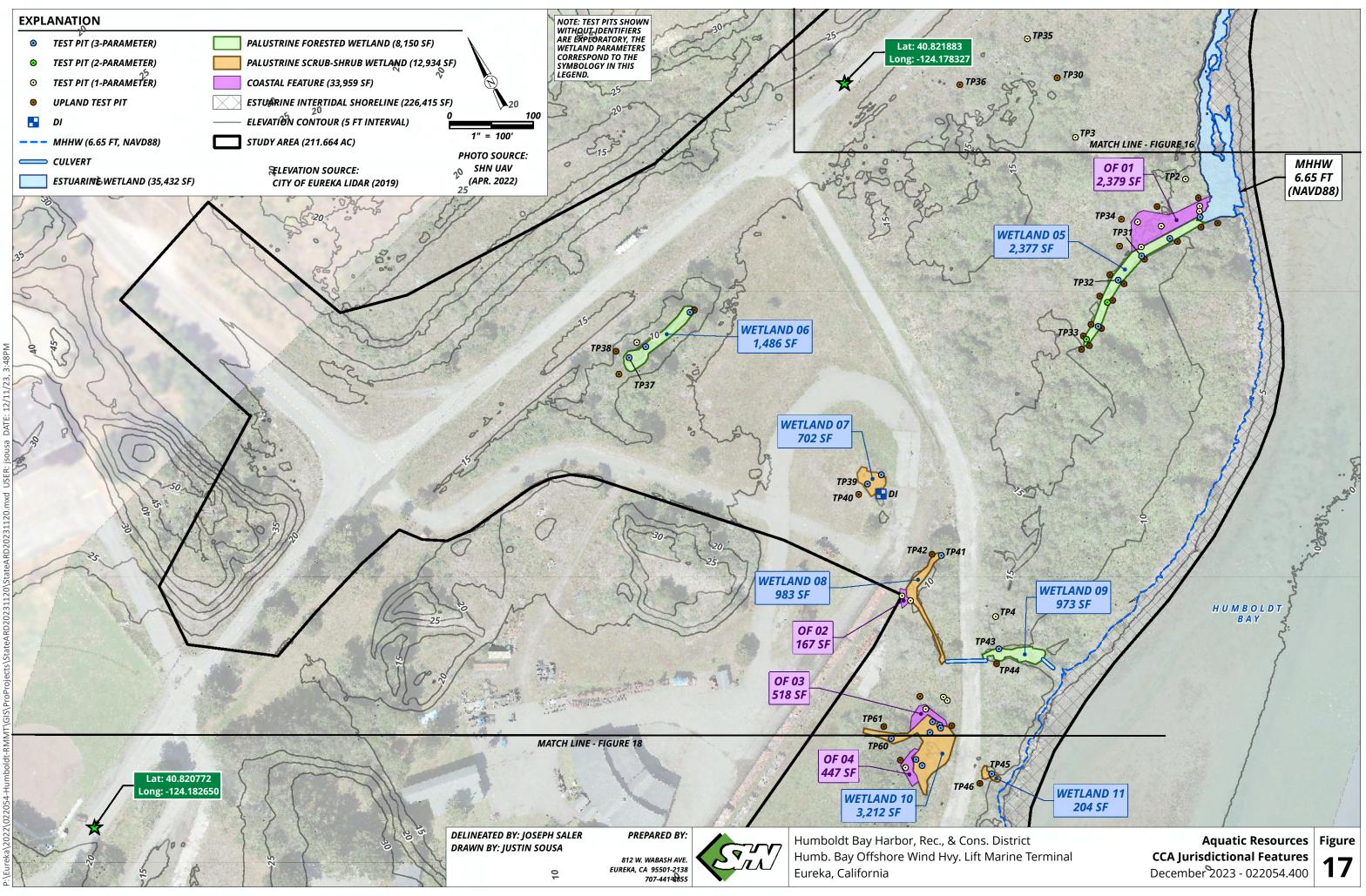


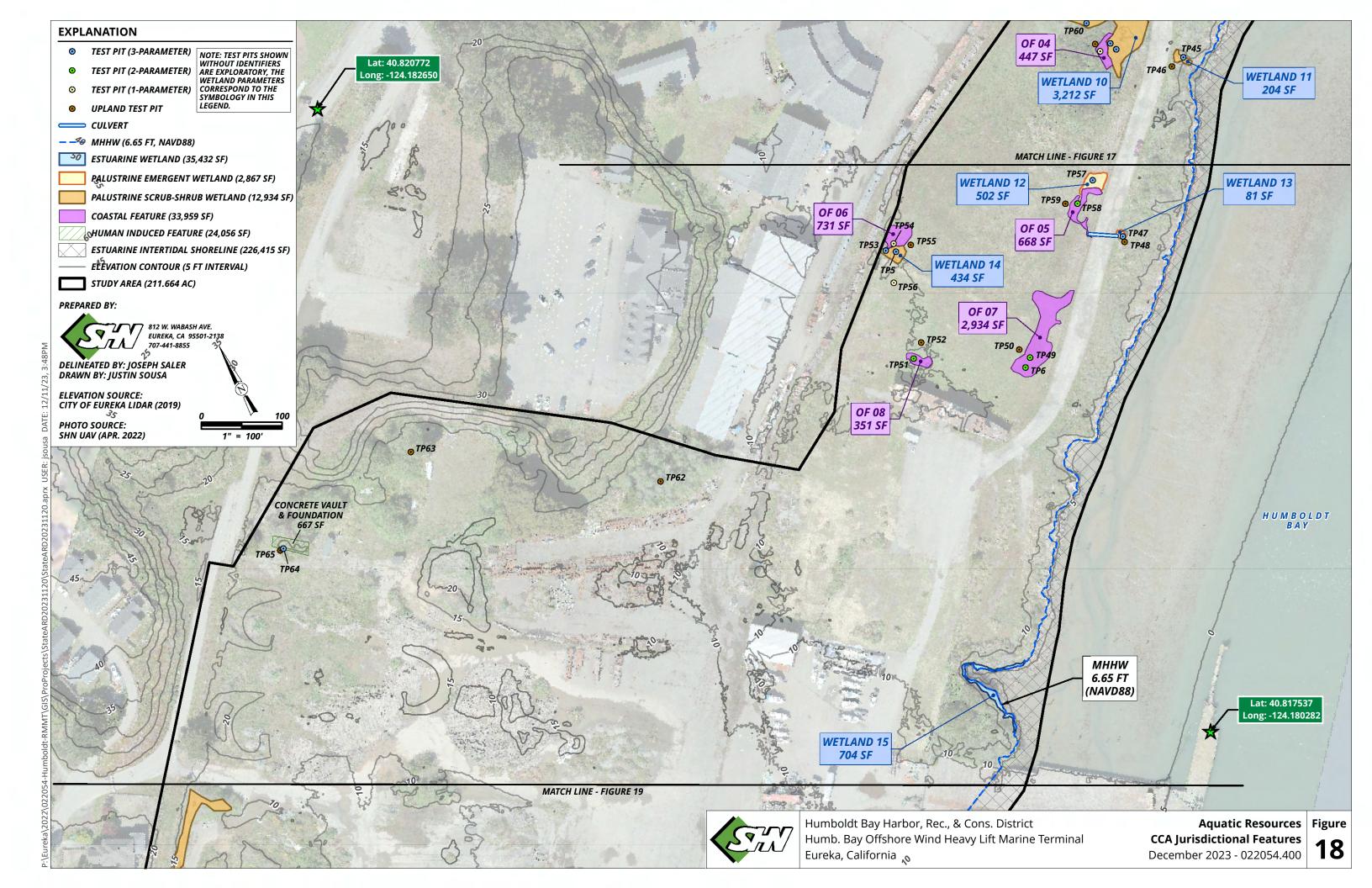
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Eureka, California

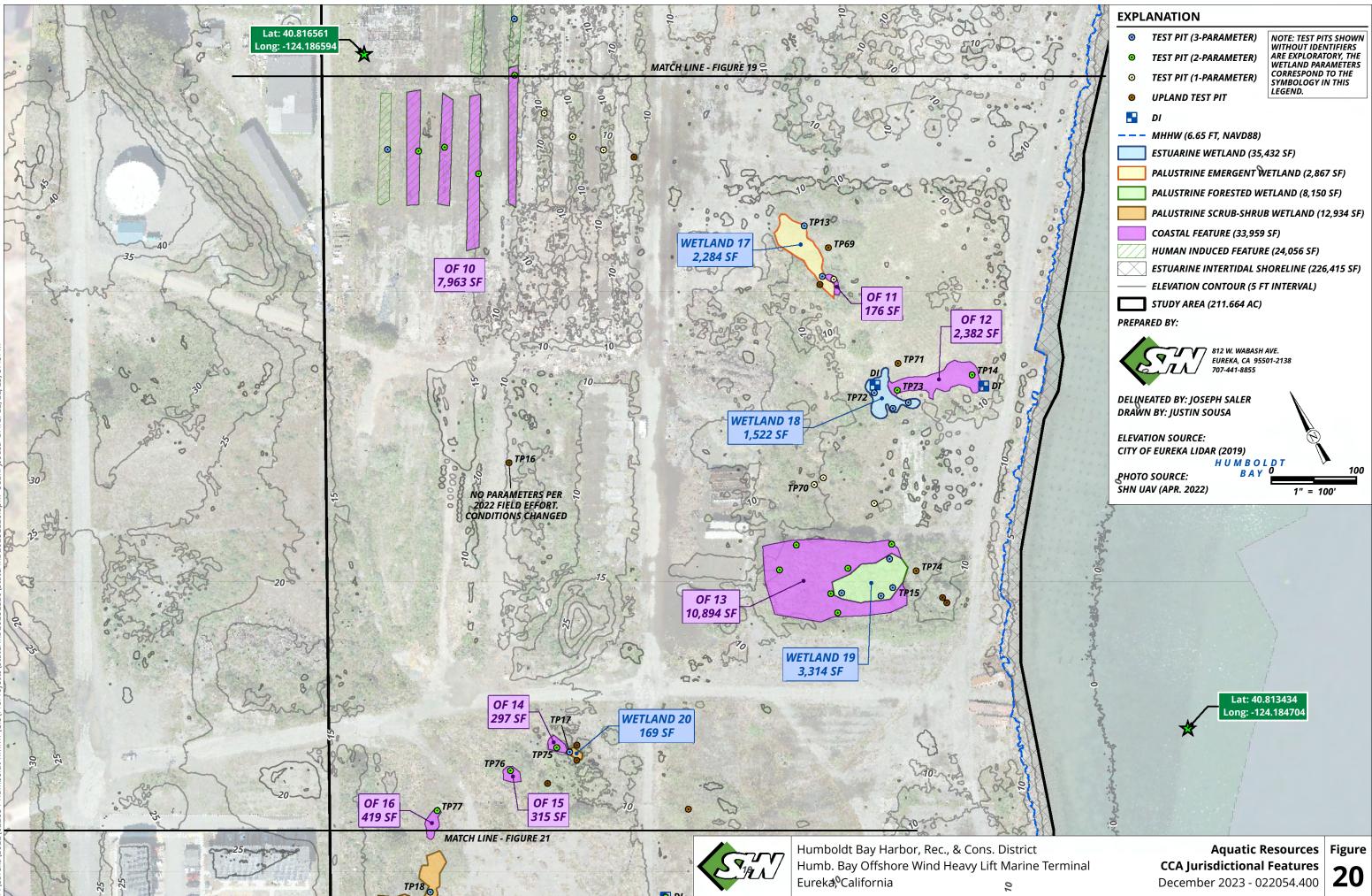
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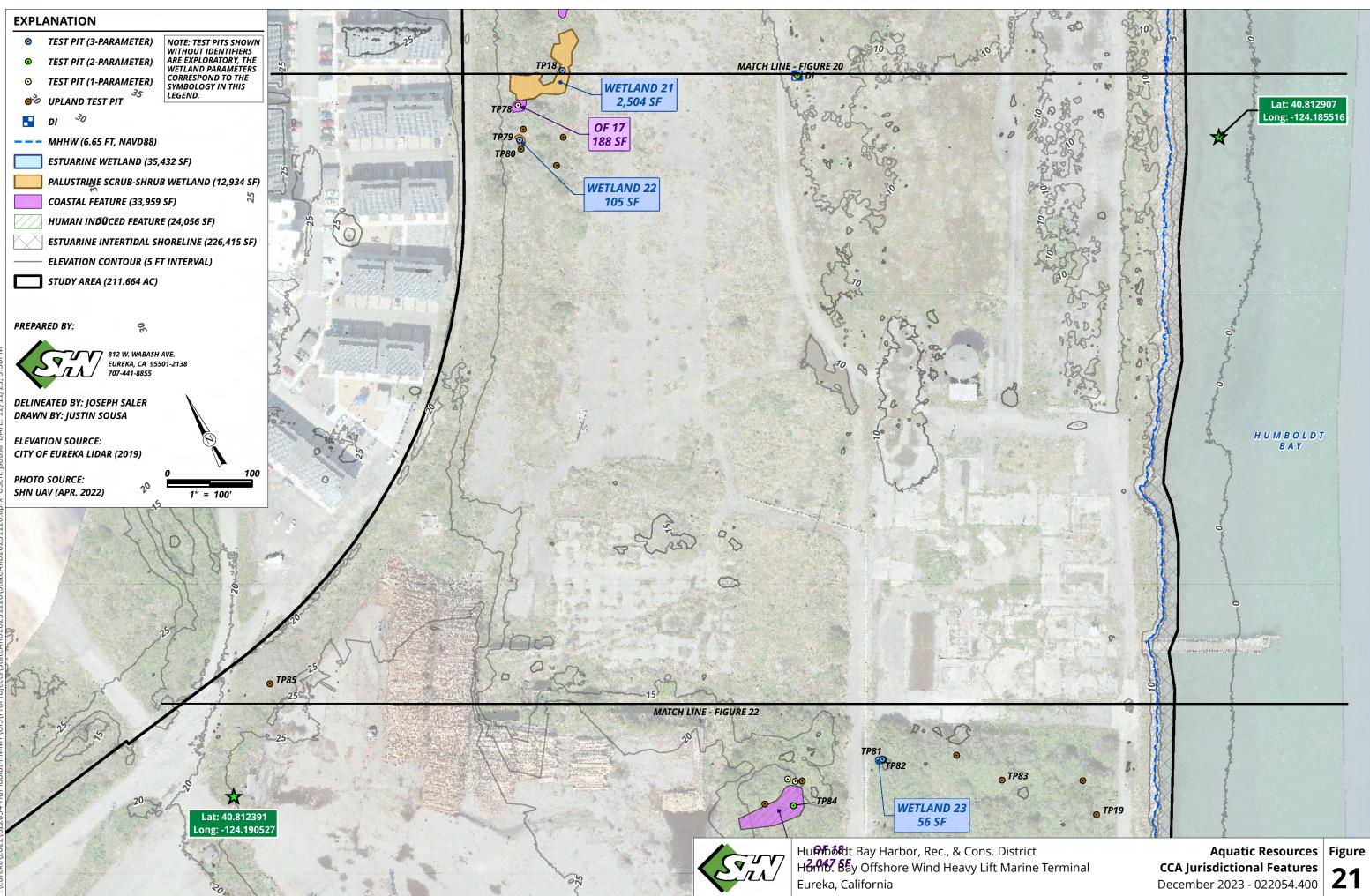


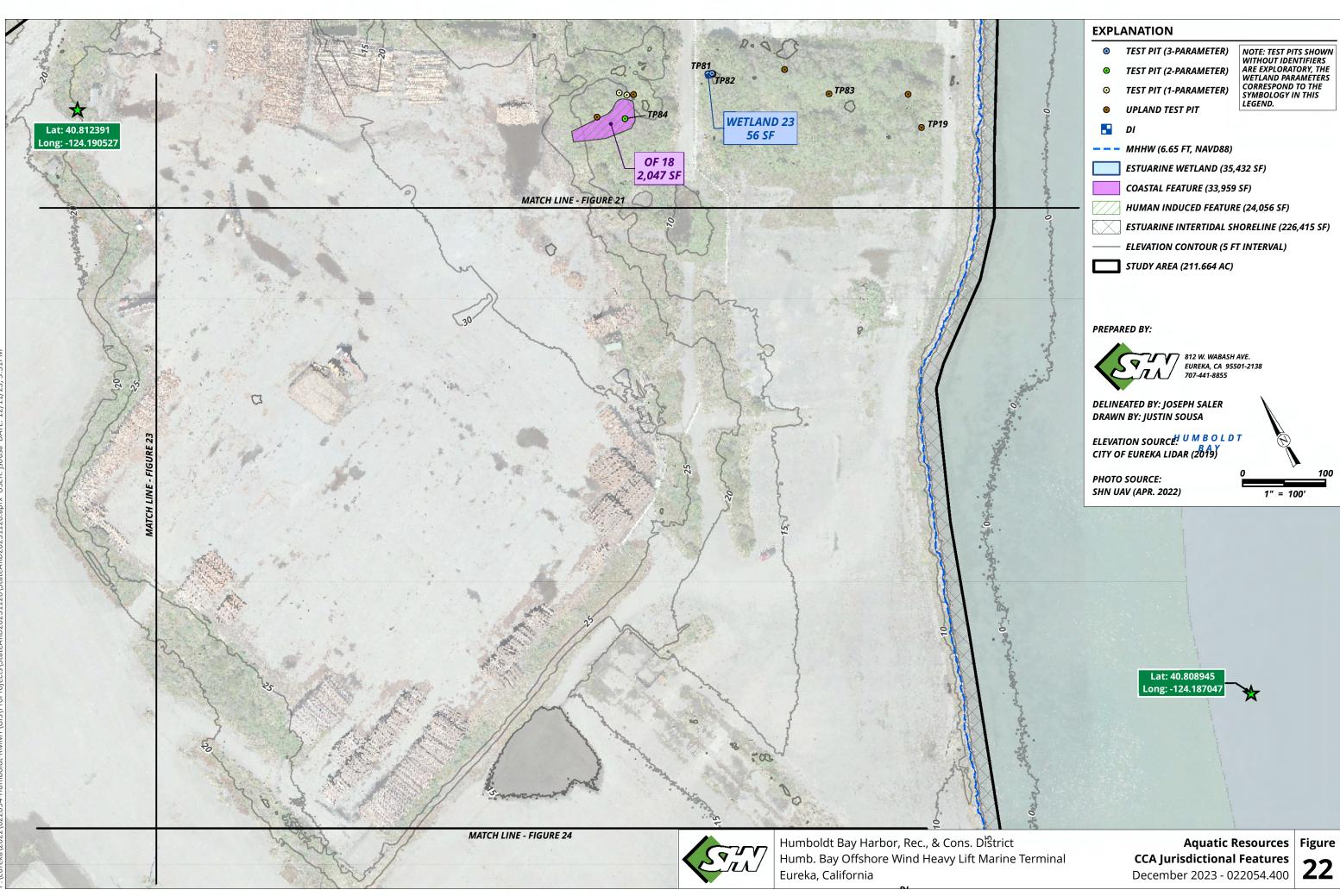


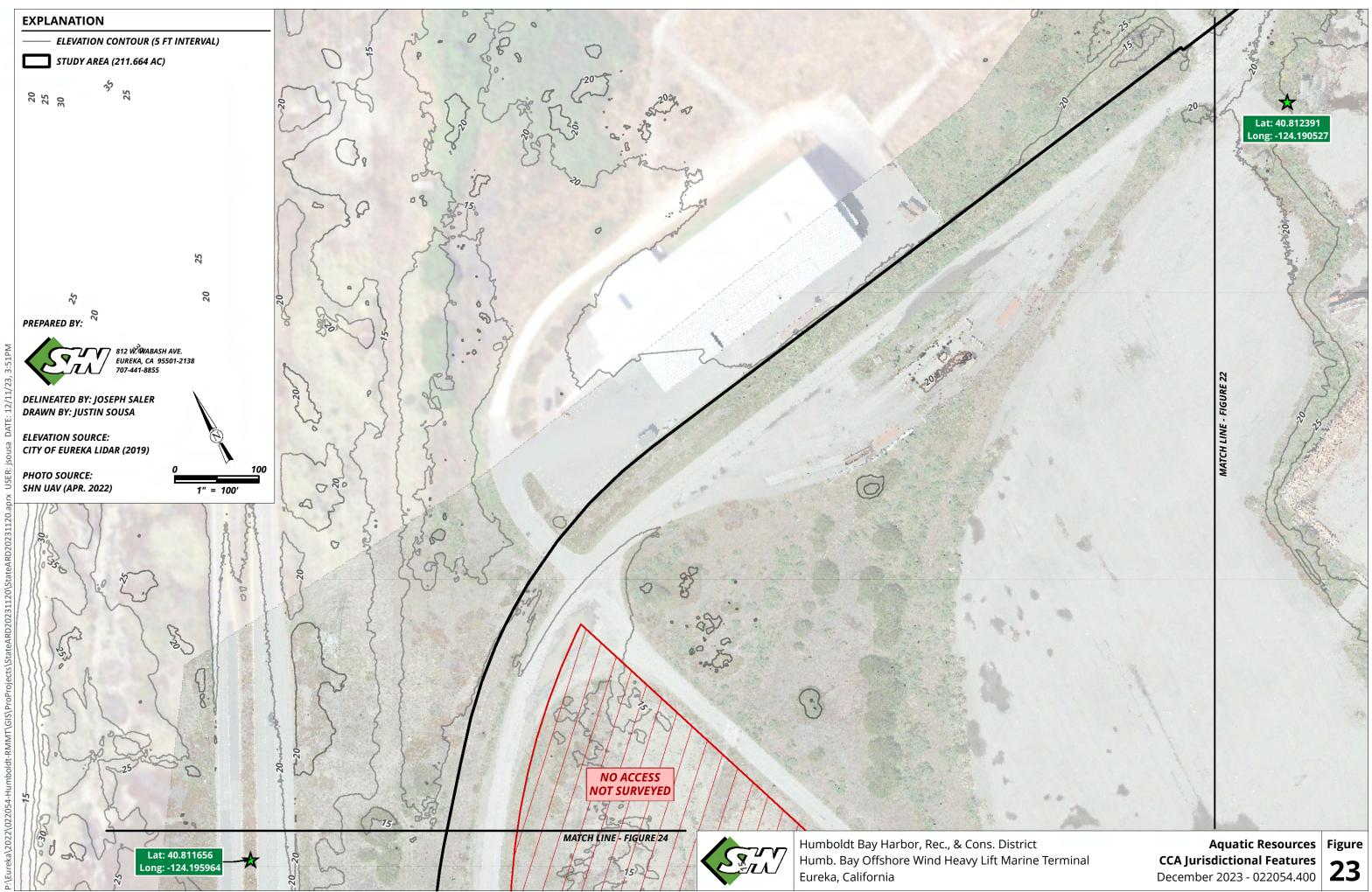


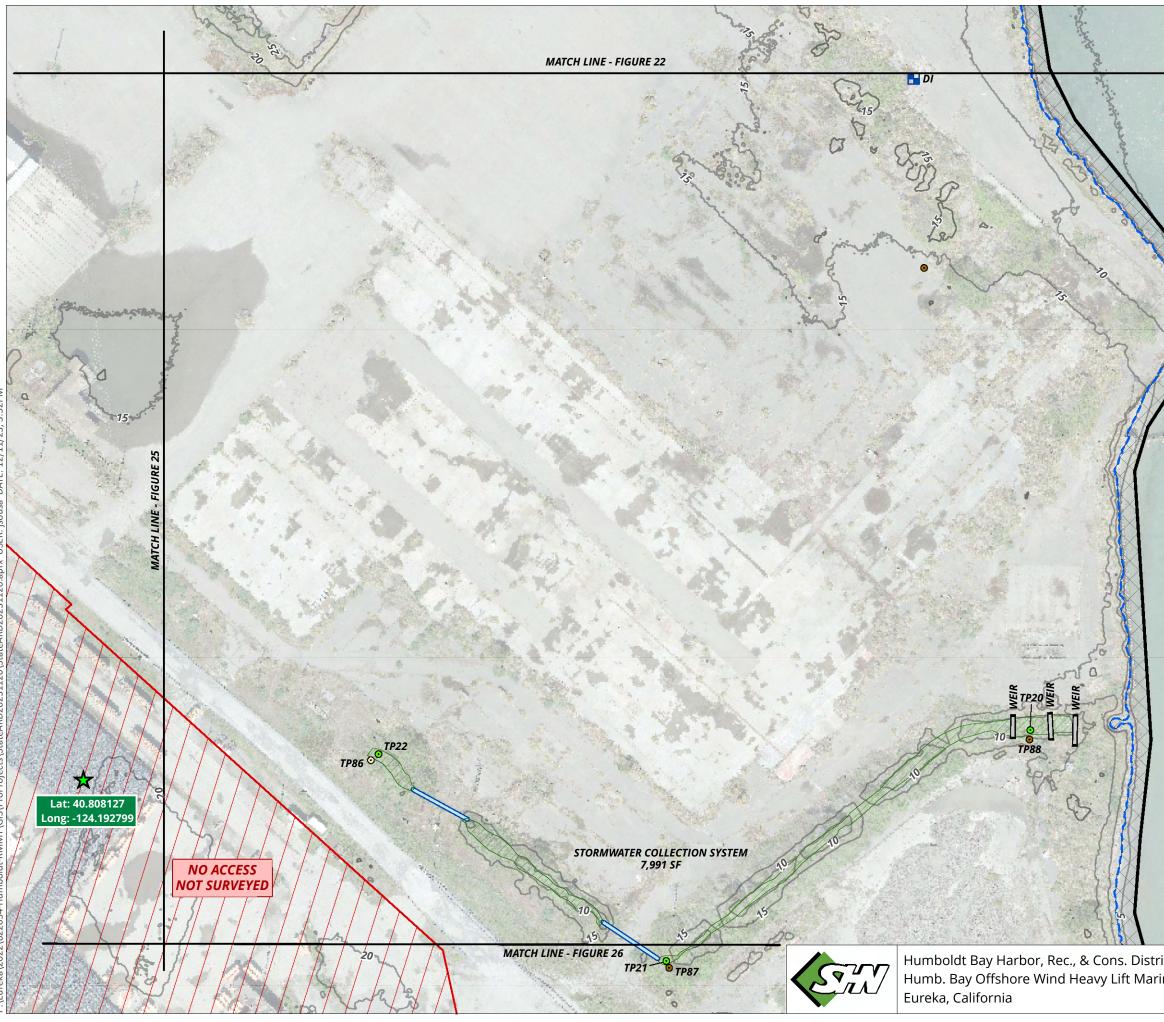




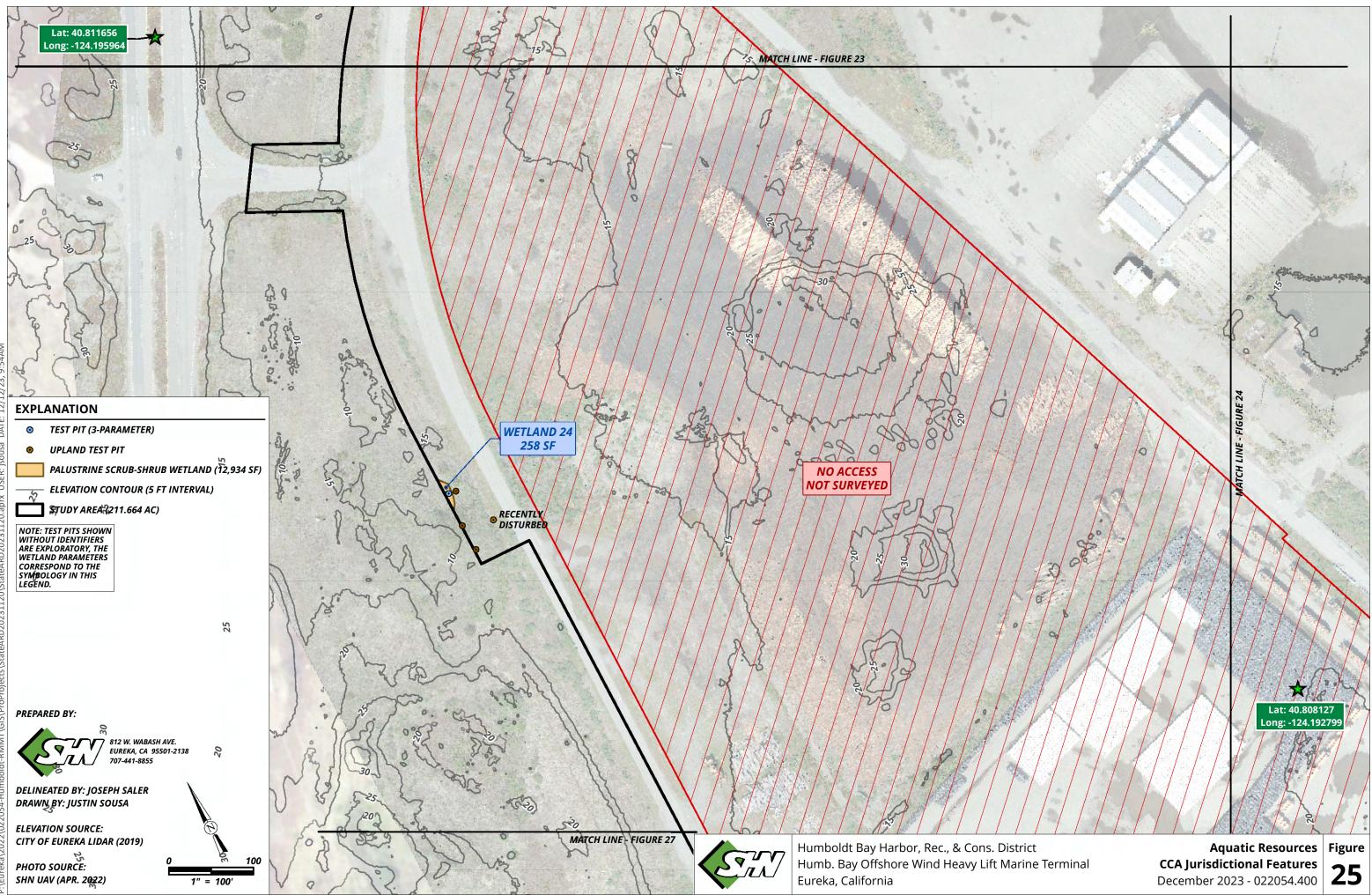


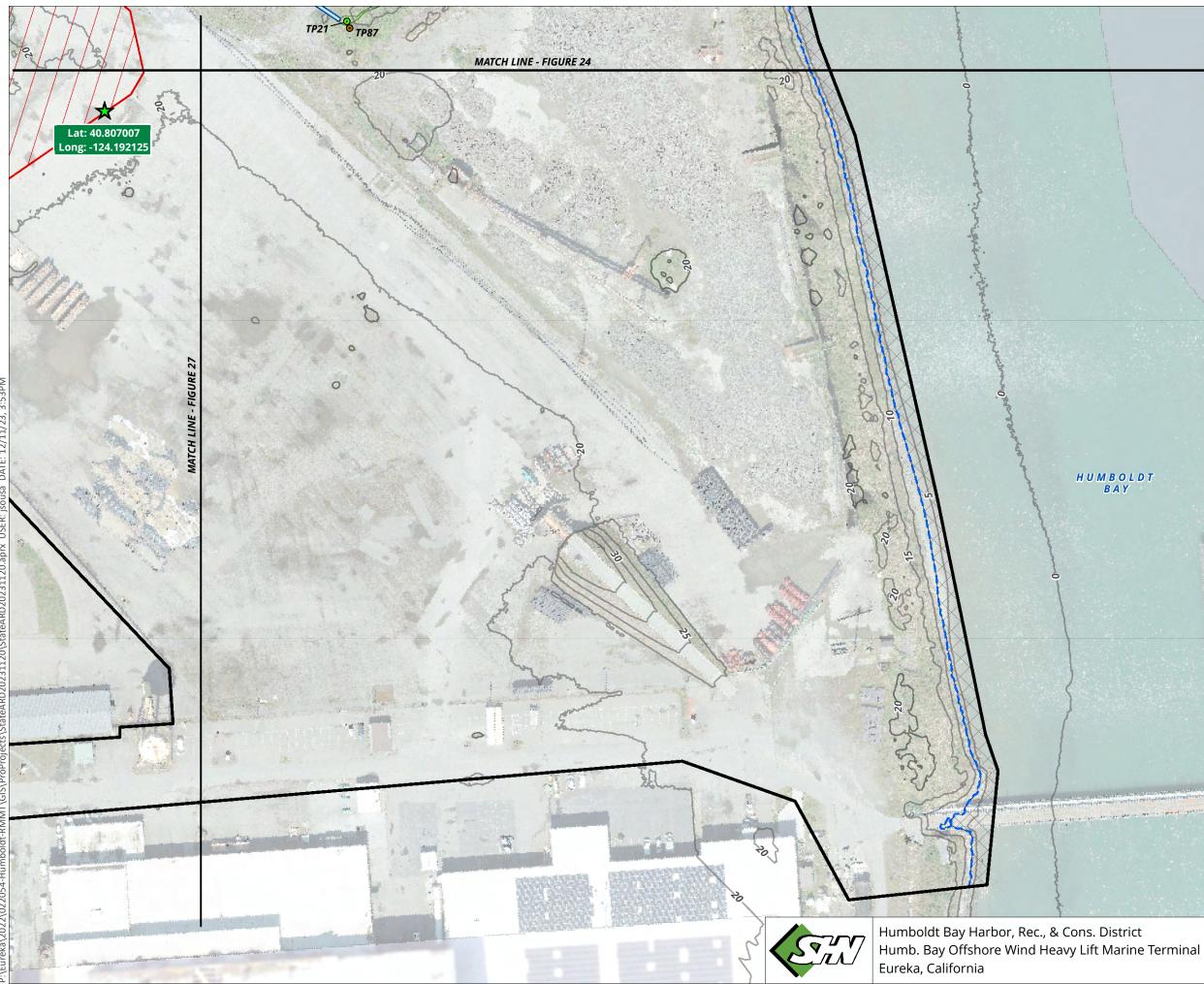


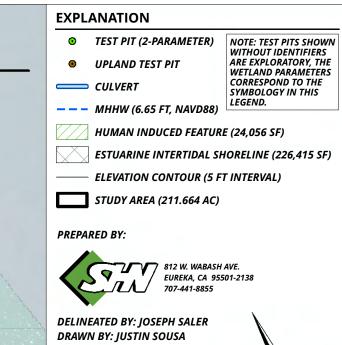




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	PREPARED BY: B12 W. WABASH, EUREKA, CA 955 707-441-8855	
	DELINEATED BY: JOSEPH SALER DRAWN BY: JUSTIN SOUSA	
	ELEVATION SOURCE: CITY OF EUREKA LIDAR (2019)	E N
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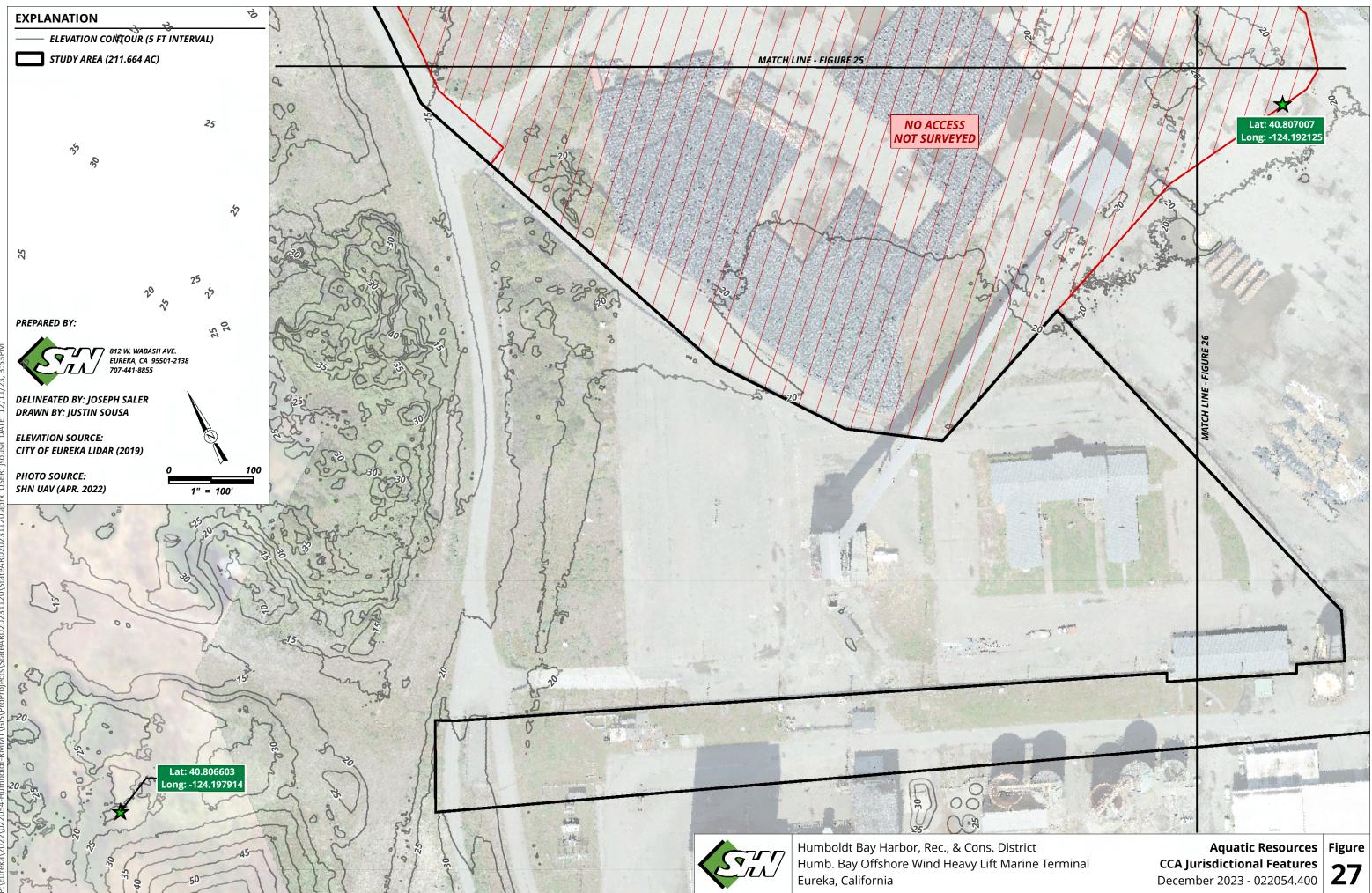
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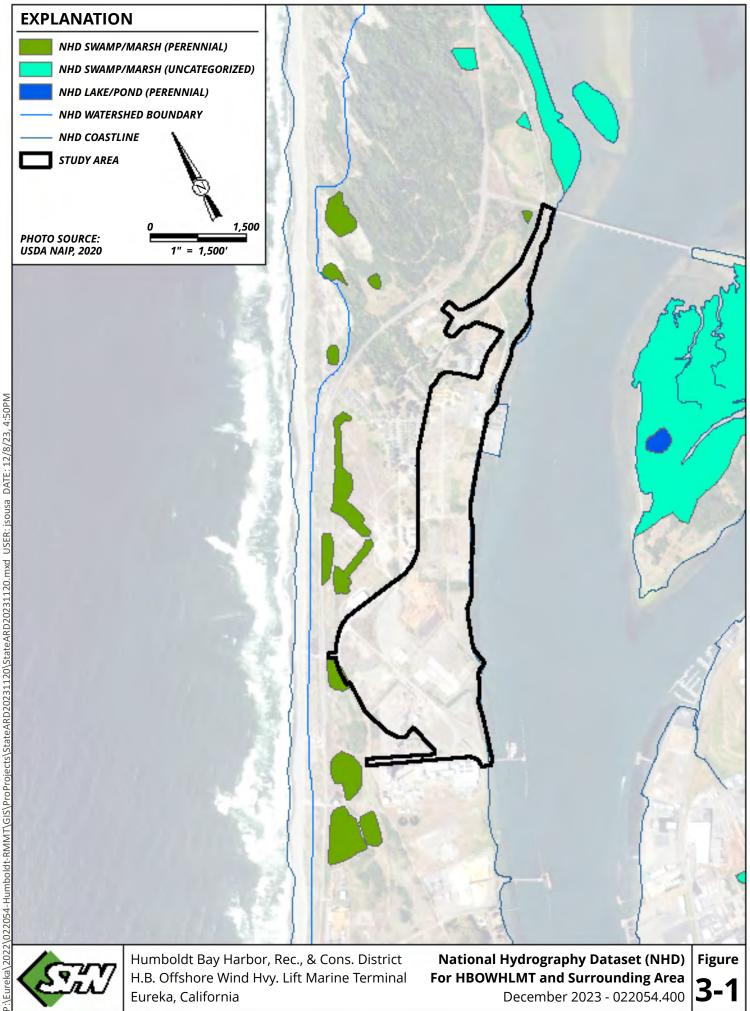
Aquatic Resources | Figure **CCA Jurisdictional Features** December 2023 - 022054.400

26



National Hydrography Dataset, National Wetland Inventory, Soil, and Drought Monitoring Maps

5

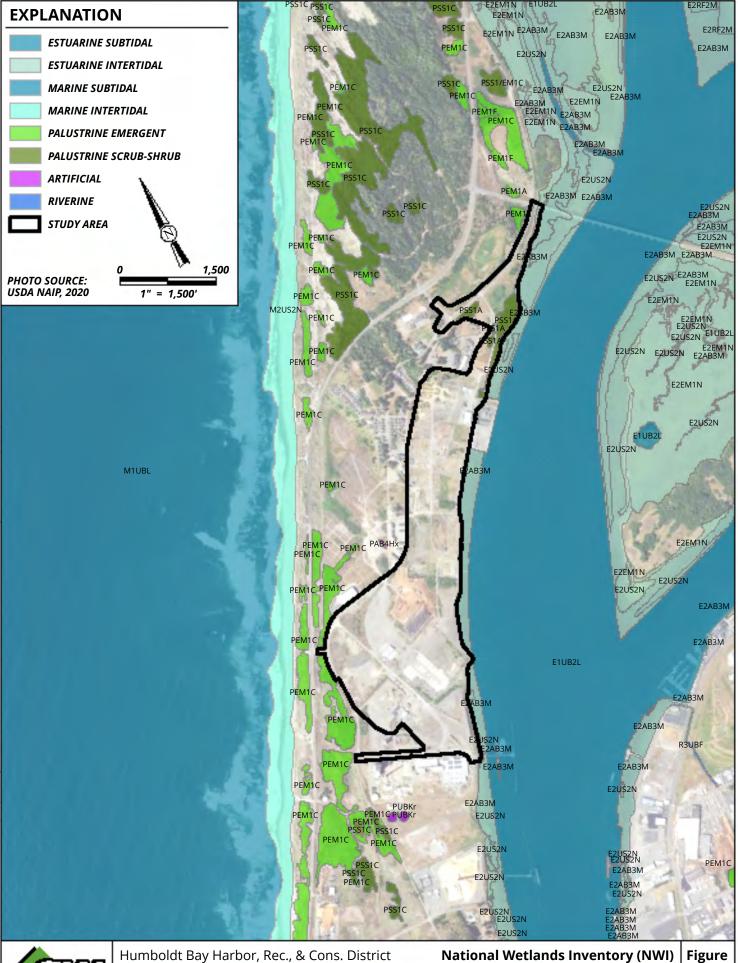




Humboldt Bay Harbor, Rec., & Cons. District H.B. Offshore Wind Hvy. Lift Marine Terminal Eureka, California

National Hydrography Dataset (NHD) For HBOWHLMT and Surrounding Area December 2023 - 022054.400

Figure 3



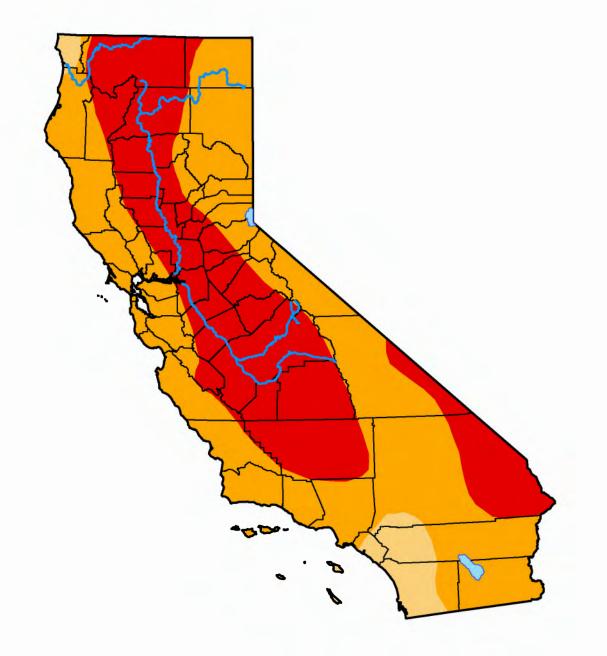


Humboldt Bay Harbor, Rec., & Cons. District H.B. Offshore Wind Hvy. Lift Marine Terminal Eureka, California National Wetlands Inventory (NWI) For HBOWHLMT and Surrounding Area December 2023 - 022054.400

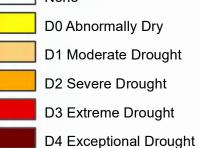
U.S. Drought Monitor California

April 26, 2022

(Released Thursday, Apr. 28, 2022) Valid 8 a.m. EDT



Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

Author:

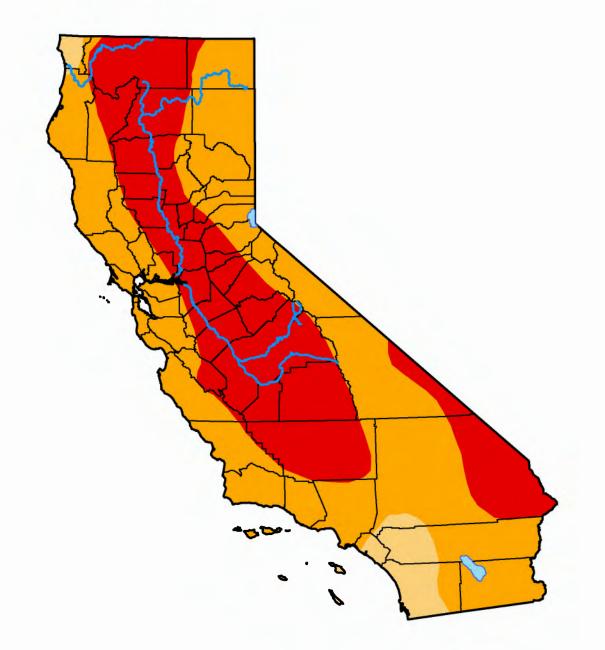
Brad Rippey U.S. Department of Agriculture



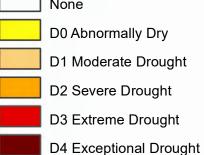
droughtmonitor.unl.edu

U.S. Drought Monitor California

May 3, 2022 (Released Thursday, May. 5, 2022) Valid 8 a.m. EDT



Intensity:



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Author:

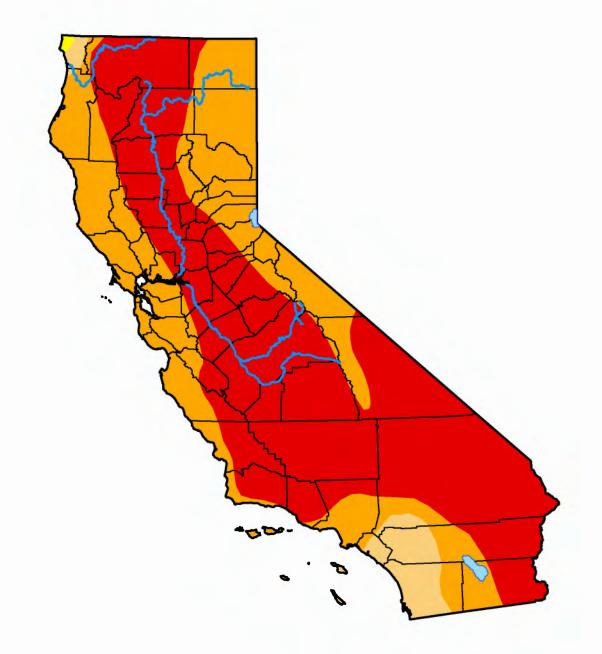
David Simeral Western Regional Climate Center



droughtmonitor.unl.edu

U.S. Drought Monitor California

May 10, 2022 (*Released Thursday, May. 12, 2022*) Valid 8 a.m. EDT







The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

Author:

David Simeral Western Regional Climate Center



droughtmonitor.unl.edu

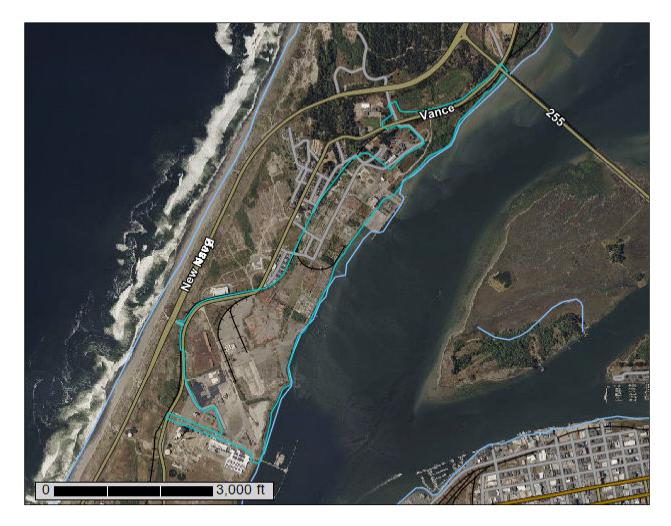


United States Department of Agriculture

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

Custom Soil Resource Report for Humboldt County, Central Part, California

Humboldt RMMT Soils Report



Preface

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

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

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

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

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

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

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

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



А

MAP LEGEND		MAP INFORMATION	
Area of Interest (AOI) Area of Interest (AOI)	Spoil AreaStony Spot	The soil surveys that comprise your AOI were mapped at 1:24,000.	
Soils Soil Map Unit Polygons Soil Map Unit Lines	 Very Stony Spot Wet Spot 	Please rely on the bar scale on each map sheet for map measurements.	
Soil Map Unit Points Special Point Features	△ Other✓ Special Line Features	Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)	
 Blowout Borrow Pit Clay Spot Closed Depression 	Water Features Streams and Canals Transportation Rails	Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.	
Gravel Pit Gravelly Spot	 Interstate Highways US Routes Major Roads Local Roads 	This product is generated from the USDA-NRCS certified data as of the version date(s) listed below. Soil Survey Area: Humboldt County, Central Part, California	
 Lava Flow Marsh or swamp Mine or Quarry 	Background Aerial Photography	Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.	
 Miscellaneous Water Perennial Water 		Date(s) aerial images were photographed: Jun 1, 2022—Jun 19, 2022	
 Rock Outcrop Saline Spot Sandy Spot 		The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.	
 Severely Eroded Spot Sinkhole Slide or Slip 			
🧭 Sodic Spot			

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
155	Samoa-Clambeach complex, 0 to 50 percent slopes	0.2	0.1%
1008	Hydraquents mucky silt loam, strongly saline, 0-1 percent slopes, very frequently flooded	0.0	0.0%
1009	Hydraquents-Wassents mucky silt loam, strongly saline, 0-3 percent slopes, very frequently flooded	2.5	1.2%
1014	Urban land-Anthraltic Xerorthents association, 0 to 2 percent slopes	205.1	96.9%
DWM	Water, marine	3.8	1.8%
Totals for Area of Interest		211.7	100.0%

Map Unit Legend

Map Unit Descriptions

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

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

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

components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

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

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

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

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

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

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

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

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

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

Humboldt County, Central Part, California

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

Map Unit Setting

National map unit symbol: hs2h Elevation: 0 to 70 feet Mean annual precipitation: 35 to 80 inches Mean annual air temperature: 50 to 55 degrees F Frost-free period: 275 to 330 days Farmland classification: Not prime farmland

Map Unit Composition

Samoa and similar soils: 65 percent Clambeach and similar soils: 30 percent Minor components: 5 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Samoa

Setting

Landform: Dunes Landform position (two-dimensional): Summit, backslope, shoulder Landform position (three-dimensional): Tread Down-slope shape: Convex, linear Across-slope shape: Linear, convex Parent material: Eolian and marine sand derived from mixed sources

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material A - 1 to 6 inches: sand AC - 6 to 18 inches: sand C - 18 to 63 inches: sand Properties and qualities

Slope: 2 to 50 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6e Hydrologic Soil Group: A Ecological site: F004BI100CA - Fluventic, salt-affected, rarely flooded, alluvial floodplains Hydric soil rating: No

Description of Clambeach

Setting

Landform: Deflation basins Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread Down-slope shape: Concave, linear Across-slope shape: Linear, concave Parent material: Eolian and marine sand derived from mixed sources

Typical profile

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

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 0 to 4 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 5w Hydrologic Soil Group: A/D Ecological site: R004BA206CA - Deflation basins Hydric soil rating: Yes

Minor Components

Oxyaquic udipsamments, unvegetated

Percent of map unit: 5 percent Landform: Beaches Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread Down-slope shape: Linear Across-slope shape: Linear Ecological site: R004BA206CA - Deflation basins Hydric soil rating: No

1008—Hydraquents mucky silt loam, strongly saline, 0-1 percent slopes, very frequently flooded

Map Unit Setting

National map unit symbol: 2t14z Elevation: 0 to 10 feet Mean annual precipitation: 35 to 80 inches Mean annual air temperature: 50 to 55 degrees F Frost-free period: 275 to 365 days Farmland classification: Not prime farmland

Map Unit Composition

Hydraquents, high tidal, and similar soils: 85 percent *Minor components:* 15 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Hydraquents, High Tidal

Setting

Landform: Tidal marshes Landform position (three-dimensional): Talf Down-slope shape: Linear Across-slope shape: Linear Parent material: Mucky, silty, and clayey estuarine deposits

Typical profile

Az - 0 to 13 inches: mucky silt loam Cg1 - 13 to 37 inches: mucky silty clay loam Cg2 - 37 to 51 inches: mucky silty clay loam Cgse - 51 to 79 inches: mucky silt loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: 0 inches to salic; 20 to 79 inches to sulfuric
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 2.00 in/hr)
Depth to water table: About 0 to 16 inches
Frequency of flooding: Very frequent
Frequency of ponding: None
Maximum salinity: Strongly saline (30.0 to 80.0 mmhos/cm)
Sodium adsorption ratio, maximum: 75.0
Available water supply, 0 to 60 inches: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 8 Hydrologic Soil Group: C/D *Ecological site:* R004BA205CA - Marshlands *Hydric soil rating:* Yes

Minor Components

Hydraquents, low tidal

Percent of map unit: 10 percent Landform: Channels Landform position (three-dimensional): Talf Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: Yes

Water, marine

Percent of map unit: 5 percent *Landform:* Channels

1009—Hydraquents-Wassents mucky silt loam, strongly saline, 0-3 percent slopes, very frequently flooded

Map Unit Setting

National map unit symbol: 2t150 Elevation: 0 to 10 feet Mean annual precipitation: 35 to 80 inches Mean annual air temperature: 50 to 55 degrees F Frost-free period: 275 to 365 days Farmland classification: Not prime farmland

Map Unit Composition

Hydraquents, low tidal, and similar soils: 50 percent *Wassents and similar soils:* 40 percent *Minor components:* 10 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Hydraquents, Low Tidal

Setting

Landform: Tidal flats Landform position (three-dimensional): Talf Down-slope shape: Linear Across-slope shape: Linear Parent material: Mucky, silty, and clayey estuarine deposits

Typical profile

Czg1 - 0 to 9 inches: mucky silty clay loam Cg2 - 9 to 16 inches: mucky silty clay loam Cg3 - 16 to 26 inches: mucky silty clay loam Cg4 - 26 to 39 inches: mucky silty clay loam Cg5 - 39 to 59 inches: mucky silty clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 0 inches to salic; 20 to 79 inches to sulfuric
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.01 to 0.06 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Very frequent
Frequency of ponding: None
Maximum salinity: Strongly saline (30.0 to 80.0 mmhos/cm)
Sodium adsorption ratio, maximum: 75.0
Available water supply, 0 to 60 inches: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 8 Hydrologic Soil Group: D Ecological site: R004BA205CA - Marshlands Hydric soil rating: Yes

Description of Wassents

Setting

Landform: Tidal flats Landform position (three-dimensional): Talf Down-slope shape: Linear Across-slope shape: Linear Parent material: Mucky, silty, and clayey estuarine deposits

Typical profile

Asez - 0 to 6 inches: mucky silt loam Cg1 - 6 to 14 inches: mucky silty clay loam Cg2 - 14 to 31 inches: mucky silty clay loam Cg3 - 31 to 59 inches: mucky silty clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: 0 inches to salic; 0 inches to sulfuric
Drainage class: Subaqueous
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Very frequent
Frequency of ponding: Frequent
Maximum salinity: Strongly saline (30.0 to 80.0 mmhos/cm)
Sodium adsorption ratio, maximum: 75.0
Available water supply, 0 to 60 inches: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 8 Hydrologic Soil Group: D Ecological site: R004BA205CA - Marshlands Hydric soil rating: Yes

Minor Components

Hydraquents, high tidal

Percent of map unit: 5 percent Landform: Tidal marshes Landform position (three-dimensional): Talf Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: Yes

Water, marine

Percent of map unit: 5 percent Landform: Channels

1014—Urban land-Anthraltic Xerorthents association, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2w91f Elevation: 0 to 10 feet Mean annual precipitation: 41 to 43 inches Mean annual air temperature: 50 to 55 degrees F Frost-free period: 275 to 330 days Farmland classification: Farmland of statewide importance

Map Unit Composition

Urban land, industrial: 80 percent *Anthraltic xerorthents and similar soils:* 20 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Urban Land, Industrial

Setting

Landform: Fluviomarine terraces

Properties and qualities

Slope: 0 to 2 percent Depth to water table: About 24 inches Frequency of ponding: Frequent

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 8 Hydric soil rating: No

Description of Anthraltic Xerorthents

Setting

Landform: Fluviomarine terraces

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Coarse-loamy fluviomarine deposits and/or coarse-loamy dredge spoils

Typical profile

A - 0 to 6 inches: gravelly loamy fine sand

^C1 - 6 to 13 inches: sandy loam

^C2 - 13 to 19 inches: sandy loam

^C3 - 19 to 24 inches: sandy loam

^C4 - 24 to 31 inches: sandy loam

^C5 - 31 to 43 inches: gravelly sand

C6 - 43 to 65 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): 3s Land capability classification (nonirrigated): 3s Hydrologic Soil Group: A/D Hydric soil rating: No

DWM—Water, marine

Map Unit Setting

National map unit symbol: 2t14y Elevation: -50 to 0 feet Mean annual precipitation: 35 to 80 inches Mean annual air temperature: 50 to 55 degrees F Frost-free period: 365 days

Map Unit Composition

Water, marine: 86 percent *Minor components:* 14 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Water, Marine

Setting

Landform: Tidal inlets

Minor Components

Wassents

Percent of map unit: 14 percent Landform: Shoals Landform position (three-dimensional): Talf Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: Yes

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Wetland Determination Data Forms



WETLAND DETERMINATION DATA FORM -	Western Mountains, Valleys, and Coast Region
RMT1	County: Humboldt Sampling Date: 3/5/20
Applicant/Owner: Humboldt Bay Harbor Distri	
Investigator(s): J. Saler, S. Polly Section	ion, Township, Range: Secs. 15, 6+21, T5N, R1W, HBM
Landform (hillslope, terrace, etc.): Day Side fill Loca	al relief (concave, convex, none): None Slope (%):
Subregion (LRR): AMLKA-4B	21879 Long: -124. 76923 Datum: W6584
Soil Map Unit Name: 1014 - Urban Land - Arthrattic X	lecorthents won UZNWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes, No X (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distu	rbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soll, or Hydrology naturally problem	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sar	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No	is the Sampled Area
Wetland Hydrology Present? Yes No X	within a Wetland? Yes No
Remarks: WEB data dher than normal	
	•
VEGETATION – Use scientific names of plants.	

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:	(A)
23		<u> </u>		Total Number of Dominant Species Across All Strata:	(B)
4	1	= Total Co	· · ·	Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index worksheet:	(A/B)
1. Kupus Nrsinus		<u></u>	FACU	Total % Cover of: Multiply	by:
2				OBL species x 1 =	
3				FACW species x 2 =	
4				FAC species x 3 =	
5				FACU species x4 =	
Herb Stratum (Plot size: 544)		= Total Co	veг	UPL species x 5 =	
1. Anthe Xanthum addratum	82	\checkmark	FACU	Column Totals: (A)	
2. Holeus lan atus	- 8		FAC	Prevalence Index = B/A =	
3. Achillea millefolium	3		FACU	Hydrophytic Vegetation Indicators:	
4. Plantago lanceolata	1		FACU	1 - Rapid Test for Hydrophytic Vegetat	tion
5. Cirsium Vulgare	3		FACU	2 - Dominance Test is >50%	
6. Qaullus cuprota	1		FACU	3 - Prevalence Index is ≤3.0 ¹	
7. Lotus corniculatus	1		FAC	4 - Morphological Adaptations ¹ (Provid	e supporting
8				data in Remarks or on a separate s 5 - Wetland Non-Vascular Plants ¹	neet)
9					Evel-i-1
10				Problematic Hydrophytic Vegetation ¹ (
11	98.	- 7-1-1 0-1	49	¹ Indicators of hydric soil and wetland hydro be present, unless disturbed or problematic	
Woody Vine Stratum (Plot size:)	_10/	= Total Co	A.G		
1				Hydrophytic	1
2				Vegetation	
% Bare Ground in Herb Stratum 2.7.*	-	= Total Co	ver	Present? Yes No	<u> </u>
Remarks:					
Lifter					

Frome Description. (Describe to the del	oth needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-6 10 yr 2/2 100		JL
6-12 2.5,31 60	2.5 V3/3 40 C M	Les
12-15 2.53/1 50	2.5 13 3, 50 C M	LS
15-73 2.5N 90	25425410 C PL	GrLS
23-74-1018 3/3 60	10VR4/1 30 D M	7(
41, 10 11 -12 - 00	ASUDEL TO THE	₩
	L. JY L. J/1 10 C M	
¹ Type: C=Concentration, D=Depletion, RM	=Reduced Matrix, CS=Covered or Coated Sand Gra	ains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to al		Indicators for Problematic Hydric Solis ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Thick Dark Surface (A12)	Depleted Matrix (F3) Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		×
Туре:		
Depth (inches):		Hydric Soil Present? Yes No 🔨
Remarks:		
Wetland Hydrology Indicators:		
Wetland Hydrology Indicators: Primary Indicators (minimum of one require		Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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) Drainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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 require	 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 (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one require	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) s (C3) Geomorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) 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 Root Presence of Reduced Iron (C4) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) s (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) 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 Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) s (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) 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)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) s (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) 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 (B	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) s (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) 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)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) s (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one regulated in the indicators (minimum of one regulated indicators) 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) Inunctation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface 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 Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) B7) Other (Explain in Remarks) (B8)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) s (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) 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 (B Sparsely Vegetated Concave Surface 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 Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) B9	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) s (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary 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) Inunctation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table 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 Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) (B9) No No Depth (inches): NA Depth (inches): NA Depth (inches): NA No	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) (B8) No Depth (inches): NA Depth (inches): NA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) (B9) No No Depth (inches): NA Depth (inches): NA Depth (inches): NA No	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) (B8) No Depth (inches): NA Depth (inches): NA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one regulated in the integration of the second of of th	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) (B8) No Depth (inches): NA Depth (inches): NA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) (B8) No Depth (inches): NA Depth (inches): NA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one require	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) (B8) No Depth (inches): NA Depth (inches): NA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) (B8) No Depth (inches): NA Depth (inches): NA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

WETLAND DETERMINATION DA	TA FORM -	Western Mou	ntains, Valleys, and Coast Region
Project/Site: RMT 1	City/f	County: Humbo	Sampling Date: 8/5/20
Applicant/Owner Humbold Bay Harbor d		Joanty. 1101 10	State: CA Sampling Point: TP 2
Investigator(s): San Polly, Joseph Jaler		on, Township, Ra	nge: SeLs. 15, 16,+21, TSN, R1W, HBM
Landform (hillslope, terrace, etc.): Bayside fill			convex, none): NOP Slope $(\%): ()-1$
Subregion (LRR): A. MLRA, 4B	Lat: 40.8		Long: ~129.177423 Patum: WG584
Soil Map Unit Name: 1014 - Urban Land - Anthral			0-2% NWI classification: PS51C
Are climatic / hydrologic conditions on the site typical for thi			
Are Vegetation, Soil, or Hydrology		•	Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology I			eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing sam	npling point le	ocations, transects, important features, etc.
	lo		,
Hydric Soil Present? Yes N		Is the Sampled	Area 🖌
	lo <u>×</u>	within a Wetlan	nd? Yes No
Remarks: WETS data drier than n # 2022 updated gps equipment 40.	ormal	10.01.01	
# 2022 updated gosequipment 40.	821107-124.	11100	
	4		
VEGETATION – Use scientific names of plan			Device Testanda t
Tree Stratum (Plot size: 30++	Absolute Don % Cover Spe	cies? Status	Dominance Test worksheet: Number of Dominant Species
1. Morella Californica	50 L	FACW	That Are OBL, FACW, or FAC:
2. Satix lasiandra	50 V	- FACW	Total Number of Dominant
3			Species Across All Strata: (B)
4	100% = To	tal Cover	Percent of Dominant Species 001
Sapling/Shrub Stratum (Plot size: 5++		tal Cover	That Are OBL, FACW, or FAC: 100/ (A/B)
1. Eyons as Menacus	<u>60 V</u>	FAC	Prevalence Index worksheet:
2. Kibus Unsinus	10	- FACY	<u>Total % Cover of:</u> <u>Multiply by:</u> OBL species <u>x</u> 1 =
3			FACW species x 2 =
4			FAC species x 3 =
	70 = TO	tal Cover 35	FACU species x 4 =
Herb Stratum (Plot size: 54)	20	14	UPL species x 5 =
1. Caret Obrupta	10 -	OBL	Column Totals: (A) (B)
2			Prevalence Index = B/A =
3			Hydrophytic Vegetation Indicators:
5			1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
6			3 - Prevalence Index is <3.0 ¹
7			4 - Morphological Adaptations ¹ (Provide supporting
β			data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants ¹
10	·		Problematic Hydrophytic Vegetation ¹ (Explain)
11	20 % = Tota		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	= lota	al Cover	
1			Hydrophytic
2	<u> </u>		Vegetation Present? Yes No
% Bare Ground in Herb Stratum	= Tota	al Cover	
Remarks:] . L			
* Litter			

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Profile Descript	tion: (Describe	to the dep	th needed to docum	ent the	Indicator	or confirm	the absence	of Indicators.)
Depth	Matrix			Feature				
(inches)	Color (moist)	- 100	Color (moist)	%	Type ¹	_Loc ²	Texture	Remarks
0-9 10	JVR 2/1	00					SL	
9-11 10	5 Y.R. 3/1	100		-	-		LS	
11-20+1	0YR 2/1	95	7.5 VR 2.5/3	5	C	PL	VGrLS	Very Compacted
1 ev t	on epi	10				1E	TOLES	
·								
				-				
					·			·
				-				
1Tune: 0=0ana	entration D=Do		=Reduced Matrix, CS	Couero	d or Coate			cation: PL=Pore Lining, M=Matrix.
			LRRs, unless other			a sand Gra		ors for Problematic Hydric Soils ³ :
Histosol (A1			Sandy Redox (S		,			m Muck (A10)
Histic Epipe			Stripped Matrix (d Parent Material (TF2)
Black Histic			Loamy Mucky M		1) (excep	t MLRA 1)		y Shailow Dark Surface (TF12)
Hydrogen S	• •		Loamy Gleyed N			1		er (Explain in Remarks)
	elow Dark Surfac	e (A11)	Depleted Matrix					
	Surface (A12)		Redox Dark Sur					ors of hydrophytic vegetation and
	ky Mineral (S1)		Depleted Dark S		-			and hydrology must be present,
	red Matrix (S4)		Redox Depressi	ons (F8)			Unle	ss disturbed or problematic.
Restrictive Lay	er (If present):							
Туре:								X
Depth (inche	is):						Hydric Sol	I Present? Yes No
Remarks:								
						1.1		
HYDROLOG	/							
	logy indicators		d; check all that apply				Seco	ondary Indicators (2 or more required)
		one reguire			(D0) (1	Water-Stained Leaves (B9) (MLRA 1, 2,
Surface Wa	• •		Water-Stair			except		4A, and 4B)
	Table (A2)				and 4B)			Drainage Patterns (B10)
Saturation (Salt Crust (no /P13)			Dry-Season Water Table (C2)
Water Mark	eposits (B2)		Hydrogen \$					Saturation Visible on Aerial Imagery (C9)
Drift Depos	• • •					Living Roo		Geomorphic Position (D2)
	r Crust (B4)		Presence of	-	-	_	1 /	Shallow Aquitard (D3)
Alganiviatio						+) ed Soils (C6	1	FAC-Neutral Test (D5)
· ·	il Cracks (B6)					01) (LRR A)		Raised Ant Mounds (D6) (LRR A)
	Visible on Aerial	Imagery (B						Frost-Heave Hummocks (D7)
	egetated Concav				omanay			
Field Observat			<u></u>			1		
Surface Water F		Yes	No Z Depth (inc	thes)	N/A			
Water Table Pro		Yes	No Depth (inc		I/A	_		11
			No Depth (inc		N/A	Moth	and Hudrolov	gy Present? Yes No 📈
Saturation Pres (includes capilla		Yes	No C Debru (inc		11/1	- "	ana nyaroroj	gy reacher real no
Describe Recor	ded Data (stream	n gauge, m	onitoring well, aerial p	ihotos, p	revious in	spections),	if available:	
Remarks:								

WETLAND DETERMINATION D	ATA FORM -	Western Mou	ntains, Valleys, ar	d Coast Region
Project/Site:RMT_1	Gity/C	County: Hum	boldt	_ Sampling Date: _ 8/5/20
	listrict	Journy.	State: CA	Sampling Point: TP 3
Investigator(s): Josph Jaler Som Poly		on, Township, Ra	nge: Secs. 15,16+	
Landform (hillslope, terrace, etc.): Bayside Fil		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	convex, none): Nor	
Subregion (LRR): A, MLRA, 4B	Lat: 40.	3213890	Long: -124.15	77534° Datum: WGS 84
	altic Xerort		0-2 % NWI classif	
Are climatic / hydrologic conditions on the site typical for th	nis time of year? Y	res No	🧵 (If no, explain in	Remarks.)
Are Vegetation, Soil, or Hydrology	significantly distur	bed? Are	'Normal Circumstances"	present? Yes 🔀 No 🔜
Are Vegetation, Soil, or Hydrology	naturally problem	atic? (If ne	eded, explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing san	npling point k	ocations, transect	s, important features, etc.
	No	In the Country		V
Hydric Soil Present? Yes		Is the Sampled within a Wetlar		No
Wetland Hydrology Present? Yes Remarks: 0				
Phalans dominates a lorge		HETPU	ith shullar cond	itions
Wets data drier than				
VEGETATION – Use scientific names of pla		ninant Indicator	Dominana Testura	lahaata
Tree Stratum (Plot size:)	<u>% Cover</u> Spe		Dominance Test wor Number of Dominant	
1			That Are OBL, FACW	
2		<u> </u>	Total Number of Domi	inant 3
3			Species Across All Str	rəta: (B)
	= To	etal Cover	Percent of Dominant S That Are OBL, FACW	
Sapling/Shrub Stratum (Plot size: 244_)	7		Prevalence Index wo	
1. Rybys american	- 7	TAC	Total % Cover of:	21 ¥ 25 A (32 C) 2
2. 100000 000000		TACUL	OBL species	x 1 =
4			FACW species	x 2 =
5			FAC species	x 3 =
5GL	2_= To	tal Cover		× 4 =
1. Phalacis arund in gela	100	/ EACH	Column Totals:	x 5 = (A) (B)
2. Vicia satasperna	5	NI		
3. Galium aparine	- <u>1</u> -	FACU	Prevalence Inde Hydrophytic Vegetat	x = B/A =
4. Anthox anthum odoration	3	FACU		Hydrophytic Vegetation
5. Holcus langtus		FAC	2 - Dominance Te	
6			3 - Prevalence Ind	dex is ≤3.0 ¹
7			4 - Morphological	Adaptations ¹ (Provide supporting
8			5 - Wetland Non-V	ks or on a separate sheet)
9			and the second sec	ophytic Vegetation ¹ (Explain)
11				oil and wetland hydrology must
	112 = Tot	tal Cover	be present, unless dis	turbed or problematic.
Woody Vine Stratum (Plot size:)		22.4		
1			Hydrophytic	\vee
۲	- Tal	al Cover	Vegetation Present? Y	es 🔼 No
% Bare Ground in Herb Stratum	= 10			
Remarks:				

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Profile Description: (Describe to the de	pth needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-13 10YR2/2 100		SL
13-21 2.54 3/2 60	2.5 Y 4/4 35 C M	LS
	INVR 2/1 5 C M	
1:05 NO 51 05	2.5Y 4/4 10 C M	1 C Fillwith Neved dands
21-23+ 12-21 03		LS till with Mixed debris
	2.5Y312 > D M	+ Word
AND DEVELOPMENT OF A DEVE		
	M=Reduced Matrix, CS=Covered or Coated Sand Gr	ains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: (Applicable to a		
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10) Ped Perent Material (TE2)
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) Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Rilleved Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:		× ×
Depth (inches):		Hydric Soil Present? Yes No
Remarks:		
	1	
HYDROLOGY	1	,
	1	,
Wetland Hydrology Indicators:	red; check all that apply)	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requi		
Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	— Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	 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 required)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rot 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) 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) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rol Presence of Reduced Iron (C4) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requited) 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) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rom Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (CI Stunted or Stressed Plants (D1) (LRR A	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Dts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requination of the equination of the equinat	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A (B7) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requited)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A (B7) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Dts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requited) 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:	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 Rou Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A (B7) Other (Explain in Remarks) e (B8)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) FAC-Neutral Test (D5) a) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requited) 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-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rot Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (CI Recent Iron Reduction in Tilled Soils (CI Stunted or Stressed Plants (D1) (LRR A (B7) Other (Explain in Remarks) e (B8) No Depth (inches): NA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) FAC-Neutral Test (D5) a) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requited)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rou Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (CI Stunted or Stressed Plants (D1) (LRR A (B7) Other (Explain in Remarks) e (B8) No Depth (inches): NA Depth (inches): NA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one reduit	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 Rou Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (CI Stunted or Stressed Plants (D1) (LRR A (B7) Other (Explain in Remarks) e (B8) No Depth (inches): NA Depth (inches): NA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) FAC-Neutral Test (D5) a) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requited) 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? Yes Water Table Present? Yes Saturation Present? Yes Gincludes capillary fringe) Yes	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rom Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (CI Stunted or Stressed Plants (D1) (LRR A (B7) Other (Explain in Remarks) e (B8) No Depth (inches): NA Depth (inches): NA Wet	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturatin Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requited) 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? Yes Water Table Present? Yes Saturation Present? Yes Gincludes capillary fringe) Yes	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rou Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (CI Stunted or Stressed Plants (D1) (LRR A (B7) Other (Explain in Remarks) e (B8) No Depth (inches): NA Depth (inches): NA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturatin Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rom Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (CI Stunted or Stressed Plants (D1) (LRR A (B7) Other (Explain in Remarks) e (B8) No Depth (inches): NA Depth (inches): NA Wet	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturatin Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requited) 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? Yes Water Table Present? Yes Saturation Present? Yes Gincludes capillary fringe) Yes	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rom Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (CI Stunted or Stressed Plants (D1) (LRR A (B7) Other (Explain in Remarks) e (B8) No Depth (inches): NA Depth (inches): NA Wet	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturatin Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rom Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (CI Stunted or Stressed Plants (D1) (LRR A (B7) Other (Explain in Remarks) e (B8) No Depth (inches): NA Depth (inches): NA Wet	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturatin Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rom Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (CI Stunted or Stressed Plants (D1) (LRR A (B7) Other (Explain in Remarks) e (B8) No Depth (inches): NA Depth (inches): NA Wet	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturatin Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rom Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (CI Stunted or Stressed Plants (D1) (LRR A (B7) Other (Explain in Remarks) e (B8) No Depth (inches): NA Depth (inches): NA Wet	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturatin Visible on Aerial Imagery (C9)

WETLAND DETERMINATION DA	TA FORM -	- Western Mou	ntains, Valleys, and Coast Region
Project/Site: RMT 1	Citv	County: Hum	sampling Date: 8-5-20
Applicant/Owner: Humboldt Bay Harbor Dis	strict	, <u>, , , , , , , , , , , , , , , , , , </u>	State: CA Sampling Point: TP 4
Investigator(s): J. Saler, 5. Polly		tion, Township, Rar	
Landform (hillslope, terrace, etc.): Bayside Fill	Loc	al relief (concave, o	convex, none); Con Cave Slope (%); 2
Subregion (LRR): A, MLRA-48	Lat: 40.	3200920	Long: -124, 178753 Datum: W6584
	ic Xeror	Hents Asso	0-2% NWI classification: PSS1C
Are climatic / hydrologic conditions on the site typical for this	and the second second		(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologys			Normal Circumstances" present? Yes 📈 No
Are Vegetation, Soil, or Hydrology n			eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing sa	mpling point lo	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	•X	is the Sampled within a Wetlan	
Remarks: WETS data driver than how	rmal		
VEGETATION – Use scientific names of plan	ts.		
Tree Stratum (Plot size: 30 ff)		ominant Indicator	Dominance Test worksheet:
1. Frangula purshian a	% Cover Sp	Status	Number of Dominant Species 3 (A)
2 Morelly Californics	23	FACW	
3. Julix hookering	12	FACW	Total Number of Dominant Species Across All Strata:
4. Salix lasiandra var. lasiandra	4 60	FACW	EDUI
ELT.	101 =1	otal Cover 50.5	Percent of Dominant Species That Are OBL, FACW, or FAC:
Sapling/Shrub Stratum (Plot size: 54+) 1. Rubus armen: a Cus	8	/ ENC	Prevalence Index worksheet:
		Z IAC	Total % Cover of: Multiply by:
3			OBL species x 1 =
4			FACW species x 2 =
5			FAC species x 3 =
5(+	8 =1	otal Cover	FACU species x 4 =
Herb Stratum (Plot size: 241)	Lk	/ FACIL	UPL species x 5 =
1. Corta deria jubata	1-1	<u> +ACU</u>	Column Totals: (A) (B)
2			Prevalence Index = B/A =
3		ii	Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is >50%
7			3 - Prevalence Index is ≤3.0 ¹
8			4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants ¹
10			Problematic Hydrophytic Vegetation ¹ (Explain)
11			¹ Indicators of hydric soil and wetland hydrology must
5[+	= T	otal Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 5(+))	10	Charles	
I. TICKO 9 HOIM		r thuy	Hydrophytic Vegetation
2	70 = T		Vegetation Present? Yes No
% Bare Ground in Herb Stratum	=	otal Cover	
Remarks:			

SOIL

SOIL		Sampling Point: TP 4
Profile Description: (Describe to the dep	th needed to document the indicator or confirm	
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-4 7.5YR 2.5/4 100		O Organic Matter
4-7 10482/1 100		SI.
7-17 1019 2/1 100		VGr SL Shell converte depris cremin
TTTT UN LIL		The second secon
17-24+ 107K3/2 100		0 Decomposing Wood
¹ Type: C=Concentration, D=Depletion, RM	=Reduced Matrix, CS=Covered or Coated Sand Gr	rains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all	LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:		
Depth (inches):		Hydric Soil Present? Yes No
Remarks: Soils are hydrop	habic	
HYDROLOGY		

HYDE

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1) Water-Stained Leaves (B9) (excell High Water Table (A2) MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1)	pt Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Indidation visible on Aenal Imagery (67) Other (Explain in Remarks)	
Field Observations:	1
Surface Water Present? Yes No X Depth (inches): NA Water Table Present? Yes No X Depth (inches): NA Saturation Present? Yes No X Depth (inches): NA (includes capillary fringe) Yes No X Depth (inches): NA	Wetland Hydrology Present? Yes No X
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:
Remarks:	4 A

WETLAND DETERMINATION DA	TA FORM -	Western Mour	ntains, Valleys, and Coast Region		
Project/Site: RMT 1	Citv/C	county Samoa	Humbold Sampling Date: 4/30/20		
Applicant/Owner: Humbold Bay Horbor Dis.			State: A Sampling Point: TP 5		
Investigator(s): Joseph Salet, Sam Poly	Secti	on, Township, Ran	nge: Sec. 15, 16+21, TSN, R1W, HBM		
Landform (hillslope, terrace, etc.): Coastal till	Loca	I relief (concave, c	convex, none): Concave Stope (%): 0-		
Subregion (LRR): A MLRA-4B	_ Lat: 40.8	1 1	Long: -124. 180 709° Datum: W65 84		
			NWI classification: NONE		
Are climatic / hydrologic conditions on the site typical for th					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes 👗 No					
Are Vegetation, Soil, or Hydrology			eded, explain any answers in Remarks.)		
SUMMARY OF FINDINGS – Attach site map	showing san	npling point lo	ocations, transects, important features, etc.		
	No	is the Sampled	Area (/		
	No	within a Wetlan	A		
Remarks: WETS data drier than norm	Al				
& 2022 updated gps equipment =	40.819471/	-124.180605	0		
VEGETATION – Use scientific names of plan		ninent Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: 30 ++)		ninant Indicator cies? Status	Number of Dominant Species		
1. Salix hookei and	-25_1	FACW	That Are OBL, FACW, or FAC: (A)		
2			Total Number of Dominant		
3 4			Species Across All Strata: (B)		
E (L	25 = TO	otal Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:		
Sapling/Shrub Stratum (Plot size: 5-5-5-) 1. Rupe armeniacus	15 1	/ FAC.	Prevalence Index worksheet:		
2		_ 110	Total % Cover of: Multiply by:		
3	1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -		OBL species x 1 = FACW species x 2 =		
4			FAC species x 3 =		
5		tai Cover	FACU species x 4 =		
Herb Stratum (Plot size:)		100	UPL species x 5 =		
1. Potestilla asonina	- 15	OBL	Column Totals: (A) (B)		
2. Lotur corniculation 3. Anthoxanthum Odoration		- fac	Prevalence Index = B/A =		
4. Tritolium repas	30 -	FAC	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation		
5. ROMANUN CODON	1	FAC	2 - Dominance Test is >50%		
6 Festuca armidinacea	-4	- tac	3 - Prevalence Index is ≤3.0 ¹		
7. How another 8. Symphysocichum, chilese	-4-	FAC	 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 		
3. Eleochate martastachya	1	* NLCOB	5 - Wetland Non-Vascular Plants ¹		
10. Agrostis Stolonitera	5	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)		
11. Treglockin Maritimum	- <u>T</u>	tal Cover \$3.5	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
Woody Vine Stratum (Plot size:)	107 = To	tal Cover 21.4			
1			Hydrophytic		
2			Vegetation Present? Yes No		
% Bare Ground in Herb Stratum		tal Cover			
Remarks: & Eleochen's macrostachya 13 Species in the North Coast regi	i not lister	in Aster	E menual; however obs. of this		
species in the North Coast regi	ion suggeo	FACWORD	BL designation & is theated is		
such.			*		

US Army Corps of Engineers

the second	the absence of indicators.)
Depth Matrix Redox Features	
(inches) <u>Color (moist)</u> % <u>Color (moist)</u> % <u>Type</u> ' Loc ²	Texture Remarks
0-5 10YK 2/1 100	- CMT
5-16 10Y 2.5/1 R5 7.5VR 2.5/2 10 C PL	LS
~ ~ OVR3/1 5 C M	
16t Rock	Rock Roch + Brick
	took ban biller
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Gra	ains, ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1) X Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2) Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Depleted Matrix (F3)	
Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and
X Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8)	wetland hydrology must be present, unless disturbed or problematic.
Restrictive Layer (if present):	unicas diatorbed or problematic.
Depth (inches):	Hydric Soil Present? Yes No
Remarks:	
Nonheiros.	
HYDROLOGY	
Wetland Hydrology Indicators:	
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
Primary Indicators (minimum of one required; check all that apply)	The second se
Primary Indicators (minimum of one required; check all that apply)	Water-Stained Leaves (B9) (MLRA 1, 2,
Primary Indicators (minimum of one required; check all that apply)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Primary Indicators (minimum of one required; check all that apply)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Primary Indicators (minimum of one required: check all that apply)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Secomorphic Position (D2)
Primary Indicators (minimum of one required: check all that apply)	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)
Primary Indicators (minimum of one required: check all that apply)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Primary Indicators (minimum of one required: check all that apply)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one required: check all that apply)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Primary Indicators (minimum of one required: check all that apply)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one required: check all that apply)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one required: check all that apply)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one required: check all that apply)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Saturation (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Primary Indicators (minimum of one required: check all that apply)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one required: check all that apply)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C9) (C9) (C9) Shallow Aquitard (D3) (C9) (C9) Shallow Aquitard (D3) (C9) (
Primary Indicators (minimum of one required: check all that apply)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C9) (C9) (C9) Shallow Aquitard (D3) (C9) (C9) Shallow Aquitard (D3) (C9) (
Primary Indicators (minimum of one required: check all that apply)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C9) (C9) (C9) Shallow Aquitard (D3) (C9) (C9) Shallow Aquitard (D3) (C9) (
Primary Indicators (minimum of one required: check all that apply)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C9) (C9) (C9) Shallow Aquitard (D3) (C9) (C9) Shallow Aquitard (D3) (C9) (
Primary Indicators (minimum of one required: check all that apply)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C9) (C9) (C9) Shallow Aquitard (D3) (C9) (C9) Shallow Aquitard (D3) (C9) (
Primary Indicators (minimum of one required: check all that apply)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C9) (C9) (C9) Shallow Aquitard (D3) (C9) (C9) Shallow Aquitard (D3) (C9) (
Primary Indicators (minimum of one required: check all that apply)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C9) (C9) (C9) Shallow Aquitard (D3) (C9) (C9) Shallow Aquitard (D3) (C9) (

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region			
Project/Site: RMT1 Applicant/Owner: Hunbolat Bay Harbor District	State: CA Sampling Point: TP 6		
Investigator(s): Sam Polly , Jacob Salar Section			
Subregion (LRR): A, MURA, 4B			
	A.S. 0-2% NWI classification: None		
Are climatic / hydrologic conditions on the site typical for this time of year? Yes Are Vegetation X, Soil X, or Hydrology significantly disturbed			
Are Vegetation, Soil, or Hydrology significantly disturble Are Vegetation, Soil, or Hydrology naturally problemati	a second and a second state where the second s		
SUMMARY OF FINDINGS – Attach site map showing same			
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No	s the Sampled Area vithin a Wetland? Yes No X wolland devition		
Remarks: Comparted industrial site. Heavily Manpuble gravel. Asphatt under Hirshert seil /fill.	d. Mowed. Woody debis and iver un WETS data drier than normal		
VEGETATION - Use scientific names of plants.			
Tree Stratum (Plot size:) Absolute Domin 1.	Dominance Test worksheet: 282 Status Number of Dominant Species That Are OBL, FACW, or FAC:		
2	Total Number of Dominant		
3	Species Across All Strata: (B)		
* = Tota	Cover Percent of Dominant Species 100% (A/B)		
Sapling/Shrub Stratum (Plot size:)	Prevalence Index worksheet:		
2	Total % Cover of: Multiply by:		
3	OBL species x 1 =		
4	FACW species x 2 =		
5	FAC species x 3 = FACU species x 4 =		
Herb, Stratum (Plot size: 54) = Tota	Cover UPL species x 5 =		
1. Alestra pulegium 25	OBL Column Totals: (A) (B)		
2. testuca porenais 25 V	Prevalence Index = B/A =		
3. <u>Rumex (hispw</u> 4. Cyperus erator ostis <u>3</u>	Hydrophytic Vegetation Indicators:		
5 Platago Incedera 2	- The Provide Action Ac		
6 Briza Maxima 1 5	FACU X 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.01		
7. (eponium dissection 1	4 - Morphological Adaptations ¹ (Provide supporting		
8. Tritolium subterraneum 6	data in Remarks or on a separate sheet)		
9. LIDVW breve	5 - Wetland Non-Vascular Plants ¹		
10. I rolepis cernica 3	Problematic Hydrophytic Vegetation' (Explain)		
<u>75</u> = Total	Cover 37.5 be present, unless disturbed or problematic.		
	מ		
1	Hydrophytic Vegetation		
	Brosont2 Ves A No		
% Bare Ground in Herb Stratum 30%			

Profile Description: (Describe to the dep	th needed to document the indicator or confirm	the absence of indicators.)
Depth <u>Matrix</u>	Redox Features	
(inches) Color (moist) %	<u>Color (moist)</u> <u>%</u> <u>Type</u> ¹ <u>Loc</u> ²	Texture Remarks
0-15 10YR 2/1 100		VGr60 See below
<u>15-17+ 10 yr 4/1 100</u>		Rock River run Cubble, + Brich
Hydric Soil Indicators: (Applicable to all	 Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except MLRA 1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) 	Indicators for Problematic Hydric Solls ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present): Type: Depth (inches):	_	Hydric Soil Present? Yes No
Decomposed wood Mater HYDROLOGY Wetland Hydrology Indicators:		
Primary Indicators (minimum of one require		Secondary Indicators (2 or more required)
 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 (B Sparsely Vegetated Concave Surface 		5) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Field Observations:	V	
Surface Water Present? Yes	No Depth (inches):	
Water Table Present? Yes Saturation Present? Yes	No X Depth (inches): Wet	land Hydrology Present? Yes 📈 No
(includes capillary fringe) Describe Recorded Data (stream nauge m	nonitoring well, aerial photos, previous inspections),	if available:
Seconde Recorded Data (Siream gouye, II	intering their benar protocy protocol inopactorial	
Remarks:		

		Western Mour	Humbold Sampling Date: 5/28/20
Applicant/Owner: Humboldt Bay Horbor Investigator(s): Sampoly, Juseph Siler	District Secti	on, Township, Rar	state: CA Sampling Point: TP 7 nge: Secs, 15, 16, 121, T5N, R1W, HBM
Landform (hillslope, terrace, etc.): Bayside, Industr Subregion (LRR): A, MLRA - 4B Soil Map Unit Name: 014 - Arbon Land - Arthon	Lat: 40.8	18232	Convex, none): <u>Canvave</u> Slope (%): <u>0-1</u> Long: <u>124.185142</u> Datum: <u>W6584</u> 0-27 NWI classification: <u>None</u>
Are climatic / hydrologic conditions on the site typical for th		and the second sec	
Are Vegetation, Soil, or Hydrology			Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology			eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map		npling point lo	ocations, transects, important features, etc.
Hydric Soil Present? Yes	No No No	is the Sampled within a Wetlan	~
Remarks: Wotland Condition Lave formed in a Aboregrand Connectivity pussible	an excavate	dswale. B	of bestiled as PSS1Cx0g.
VEGETATION - Use scientific names of pla			
Tree Stratum (Plot size: 30ft)	Absolute Dor % Cover Spe	ninant Indicator cies? Status	Dominance Test worksheet: Number of Dominant Species
1. Salix lasiantra var lasiantra	-50-2	- THEW	That Are OBL, FACW, or FAC: (A)
2. Sall Sitchasis		Them	Total Number of Dominant Species Across All Strata:(B)
4			
Sapling/Shrub Stratum (Plot size: 54)	<u> (00 </u> = To	ital Cover 🧩	Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
1. Rubus armeniacus	15 V	FAC	Prevalence Index worksheet:
2			Total % Cover of:Multiply by:
3			OBL species x 1 = FACW species x 2 =
4			FAC species x 3 =
ð	15 - Ta	tal Cover	FACU species x 4 =
Herb Stratum (Plot size: 54+			UPL species x 5 =
1. Scirpus Microcorpus	-4-+	OBL	Column Totals: (A) (B)
2. Equisition organse 3. Ronunculus repars		- FAC	Prevalence Index = B/A =
4. Cortadoria jubota	- 15 -	Z FAC	Hydrophytic Vegetation Indicators:
5			1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
6			$3 - \text{Prevalence index is } \le 3.0^{1}$
7			 4 - Morphological Adaptations¹ (Provide supporting
Β			data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants ¹
10 11		······································	Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must
	- 44 = TO	tal Cover 22	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		8.8	
1			Hydrophytic
2		hal Cause	Vegetation Present? Yes No
% Bare Ground in Herb Stratum		tal Cover	
Remarks:			
L L L L L L L L L L L L L L L L L L L			

Profile Description: (Describe to the de	pth needed to document the indicator or confirm	m the absence of indicators.)
DepthMatrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type Loc ²	Texture Remarks
0-9 10 YR2/12 100		MS CLOSED 104R2/1.S
4-24+10 12511.07	2.512.5/1 3 RM PL	5
1-1-1016:1-1-	Site Production	
		· · · · · · · · · · · · · · · · · · ·
		1. 1. 1. 1. T.
		+
¹ Type: C=Concentration D=Depletion RM	I=Reduced Matrix, CS=Covered or Coated Sand G	arains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to al		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Mucky Mineral (ST)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		princes distance of providinate.
		1
Туре:		
Depth (inches):		Hydric Soll Present? Yes No
HYDROLOGY Wetland Hydrology Indicators:		*
Wetland Hydrology Indicators:	ed; check all that apply)	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requin		Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one requin Surface Water (A1)	Water-Stained Leaves (B9) (except	X Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requin 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) Drainage Pattems (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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 Pattems (B10) Dry-Season Water Table (C2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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 Pattems (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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 Ro 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Pattems (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Toots (C3)
Wetland Hydrology Indicators: Primary 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)	 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 Ro Presence of Reduced Iron (C4) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Ceomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) 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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Pattems (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requin 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)	 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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 4) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Pattems (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)
Wetland Hydrology Indicators: Primary 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 (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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 4 B7) Other (Explain in Remarks)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Pattems (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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PMTT	C (11 1 1)	Flagho
Project/Site: NINI L	City/County: JOMPA / Humboldt Sam	pling Date: 3/20/00
Applicant/Owner: Humbold Bay Horbor District	State: <u>CA</u> Sam	pling Point: TP8
Investigator(s): Juseph Sale, Sam Polly	Section, Township, Range: Secs. 15, 642, 1	SN, RIW, HBM
Landform (hillslope, terrace, etc.): Bayside industrial fill	Local relief (concave, convex, none): None	Slope (%): 5
Subregion (LRR): A, MLRA-4B	0.817876 Long: -124.18550	9 Datum: WG-5 84
Soil Map Unit Name: 1014 - Urban Land - Arthratic Xer	or thents Ason. 0-2% NWI classification:	None
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No (If no, explain in Remarl	ks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstances" preser	nt? Yes 🔨 No
Are Vegetation, Soit, or Hydrology naturally pro	blematic? (If needed, explain any answers in F	Remarks.)

SUMMARY OF FINDINGS - A	Attach site map showing sampling	point locations, transects,	, important features, etc.
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Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No Yes No Yes No	Is the Sampled Area within a Wetland? Yes No
Remarks: Former Indu	trial area, at edge	of pacement earth Railroad bed.

VEGETATION - Use scientific names of plants.

Tees Oberhum (Click single	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant 7
3				Species Across All Strata: (B)
4	~			
564	1	= Total Co	ver	Percent of Dominant Species 50% (A/B)
Sapling/Shrub Stratum (Plot size: 5ff)	10	1	FAC	Prevalence Index worksheet:
1. Rubus armaniacus				Total % Cover of:Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5	10	= Total Co		FACU species x 4 =
Herb Stratum (Plot size: 541)		- Total Co	in the second	UPL species x 5 =
1. Anthoxanthum adoration	50	~	FACU	Column Totals: (A) (B)
2. BOZA Maxima	10		NL	Prevalence index = B/A =
3. Bromin hordeaceus	1		FACU	Hydrophytic Vegetation Indicators:
4. Holcus longtus	10		FAC	1 - Rapid Test for Hydrophytic Vegetation
5. JUNCIN REFUSIS	2		FACW	
6. Cortadoria jubata	15		FACIL	2 - Dominance Test is >50%
7. Trifelium republi	15-		EAC	3 - Prevalence Index is ≤3.0 ¹
	2		FAC	4 - Morphological Adaptations ¹ (Provide supporting
8. Lotus corniciplatus			FAC	data in Remarks or on a separate sheet)
9. Fourseting devigation	<u> </u>		FACW	5 - Wetland Non-Vascular Plants
10. Vidia sotiva	2		UPL	Problematic Hydrophytic Vegetation ¹ (Explain)
11,				¹ Indicators of hydric soil and wetland hydrology must
	98	= Total Cov	er 49	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	0		19.6	
1				Hydrophytic
2				Vegetation
0.1		= Total Cov	er	Present? Yes No
% Bare Ground in Herb Stratum 2%	1			
Remarks;				

	th needed to document the indicator or confirm	
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-24+ 512.5/2 00		<u>LS</u>
· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·
		· · · · · · · · · · · · · · · · · · ·
	Reduced Matrix, CS=Covered or Coated Sand Gr	ains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all	LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		1
Туре:		X
Depth (inches):		Hydric Soil Present? Yes No
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:		
Wetland Hydrology Indicators: Primary Indicators (minimum of one require	d; check all that apply)	Secondary Indicators (2 or more required)
and the second se	d; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
Primary Indicators (minimum of one require		
Primary Indicators (minimum of one require Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Primary Indicators (minimum of one require 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, 4A, and 4B)
Primary Indicators (minimum of one require 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) Drainage Patterns (B10)
Primary Indicators (minimum of one require 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) Saturation Visible on Aerial Imagery (C9)
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Primary Indicators (minimum of one require 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 Roc	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Primary 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)	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 Roc Presence of Reduced Iron (C4)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Primary 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)	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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WETLAND DETERMINATION DA		/ – Western Mou	ntains, Valleys, and Coast Region
Project/Site: RMT 1	_	City/County: Humb	stat Sampling Date: 05/28/2
	strict	ity/County: 7 (01-14	
Investigator(s): Som Poly, Tosen Soler		Postian Taun-bi- Da	State: <u>C- A</u> Sampling Point. <u>IP9</u> nge: Secs. 15, 16,+21, T5 N, R1W, HBI
Landform (hillslope, terrace, etc.): Baysi de, Industria			
Subregion (LRR): A, MLRA, 4B	110	1 2 73()	10110-010
Soil Map Unit Name: 1014 - Urban Land - Anthratio	Lat:	chi ports April	17-1
	A A A A A A A A A A A A A A A A A A A		0-17 NWI classification: None
Are climatic / hydrologic conditions on the site typical for this			(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology si			Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology na	-		eded, explaif any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map s	howing	sampling point lo	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	,		11
	·	is the Sampled within a Wetlan	A
Wetland Hydrology Present? Yes No Remarks:	·		
remarks.			
		6	
VEGETATION – Use scientific names of plant	s.		
300-	Absolute	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 2017)	% Cover	Species? Status	Number of Dominant Species
2. Salix sitch ensis	10	THUM	That Are OBL, FACW, or FAC: (A)
2 Sullin Stichonsia	10	V THEOU	Total Number of Dominant
4			Species Across All Strata: (B)
	35	= Total Cover 17.5	Percent of Dominant Species 100 % (A/B)
Sapling/Shrub Stratum (Plot size:)	E	1 001	Prevalence index worksheet:
1. Salix lusiandry	2-	+ACW	Total % Cover of: Multiply by
2. Salix houlderign 4	5	CACUL	OBL species x 1 =
4		TAUN TAUN	FACW species x 2 =
5.			FAC species x 3 =
C(L	17	= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 2+T)	22	Day	UPL species x 5 =
2. Potentilla ansering spp Pacifica	AT	- TACW OBL	Column Totals: (A) (B)
3. Lotus Corniculatur	13	FAC	Prevalence Index = B/A =
4. Agrostis stolon of Erg	34	FAC	Hydrophytic Vegetation Indicators:
5. Juncus effuses	20	FACW	1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
6. Anthoxanthum odoratum	2	FACU	3 - Prevalence Index is ≤3.0 ¹
7. Holcus lanatus	2	FAC	4 - Morphological Adaptations ¹ (Provide supporting
8			data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants ¹
10			Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must
11	118	Total Cover 59	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	10_=	Total Cover 23.6	
1	1)I		Hydrophytic
2	~		Vegetation Present? Yes X No
% Bare Ground in Herb Stratum		Total Cover	
	-	1.	1
Remarks: Numerous willow Soppling	> prot	art	
	1	ê	
8		Flat in	A

US Army Corps of Engineers

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Western Mountains, Valleys, and Coast - Version 2.0

SOIL

Sampling Point: TP 9

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Prome Description: (Describe to the de	pth needed to document the indicator or confirm	the absence of indicators.)
Depth <u>Matrix</u>	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-3 7.5.YR2.5/(100		Peat Sod (Juncus roots.)
3-12 N2.5/ 96	10YR3/1 4 C M	CoGrCoLS Industrial fill
10-25+ 1121 100		S
12-20 NOT 100	$\underline{}$	
¹ Type: C=Concentration, D=Depletion, RM	I=Reduced Matrix, CS=Covered or Coated Sand Gr	rains. ² Location; PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to a	LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	3) at a star of the star of th
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7) Redox Depressions (F8)	unless disturbed or problematic.
Sandy Gleyed Matrix (S4) Restrictive Layer (if present):		
		()
Type:		Hydric Soil Present? Yes No
Depth (inches):		
Remarks:		
Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one require		Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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) Drainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) 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 required) 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 (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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 Roman Statement (C1) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3)
Wetland Hydrology Indicators: Primary 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)	 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 Rom Presence of Reduced Iron (C4) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrology Indicators: Primary 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)	 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 Roming Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) 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)	 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 Roi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 4) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) 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 (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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 4 B7) Other (Explain in Remarks)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) 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	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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 4 B7) Other (Explain in Remarks)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) 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 (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 Roi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 4 B7) Other (Explain in Remarks) (B8)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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Wetland Hydrology Indicators: Primary 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 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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 4 B7) Other (Explain in Remarks) (B8) 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) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary 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 Field Observations: Surface Water Present? Yes Water Table 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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 4 B7) Other (Explain in Remarks) (B8) No Depth (inches): NA Depth (inches): NA MA Depth (inches): MA MA MA MA MA MA MA M	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one 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 (Sector Sector S	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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 4 B7) Other (Explain in Remarks) (B8) No Depth (inches): N/A No Depth (inches): Wet	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region
Project/Site: RMT_1 city/county: Samoa / Humbol A Sampling Date: 5/28/20 Sampling Date: 5/28/20SAMPLIND SAMPLIND
Investigator(s): Joseph Saler, Sam Polly Section, Township, Range: Secs. 15, 16,+21, TSN, RIW, HBM
Landform (hillslope, terrace, etc.): Bayside Industria [1] Local relief (concave, convex, none): (an Cave Slope (%): 0-1 Subregion (LRR): A. MLRA, 4B Lat: 40.8170,75 Long: 124.185550 Datum: WG584
Soil Map Unit Name: 1014-Usban Land - Anthraltic Xerorthers Assn. 0-2% NWI classification: None Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No Yes No Yes No	Is the Sampled Area within a Wetland?	
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:) 1.		Dominant Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Species Across All Strata: Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC:
Sapling/Shrub Stratum (Plot size: 54) 1. Salix hookering 2. Salix fasionara 3.	8	1	FACW FACW	Description Multiply by:
4 5	16			FACW species x 2 = FAC species x 3 = FACU species x 4 =
Herb Stratum (Plot size: 54) 1. Scholnopie(tws pungles 2. Triglochin, Maritim Wah 3. Juntus ett usus 4. Lotus (acricultatus 5. Potentilla enspring 6. Juncus Apring 6. Juncus Apring 6. Juncus Apring 8. Agrostis stolonitera 9. Equisetum laevigatum 10. Suncus phaeocephalus 11.	15 00 m 2 1 10 10 15 m		OBL OBL TACK TAC OBL TAC OBL TAC TAC TAC TAC TAC TAC	UPL species x 5 = Column Totals: (A) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 ¹ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants ¹ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:) 1 2 % Bare Ground in Herb Stratum 44 * Remarks: *	_	= Total Cov		be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes No

Profile Description: (Describe to the de	epth needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-5 7.5 YR 2.5/ 100		MP
5-18+10 Y 2,5/1 96	10 YR 3/3 4 C PL	6662
and the second second second		
¹ Type: C=Concentration D=Depletion R	M=Reduced Matrix, CS=Covered or Coated Sand Gra	ains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soll Indicators: (Applicable to a		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	X Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4) Restrictive Layer (if present):	Redox Depressions (F8)	unless disturbed or problematic.
		11
Type:		Hydric Soil Present? Yes No
Depth (inches):		
Remarks:		
HYDROLOGY Wetland Hydrology Indicators:		
Primary Indicators (minimum of one requi		Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)
X Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along Living Root	
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4) Researching Reduction in Tilled Seils (C6)	Shallow Aquitard (D3) FAC-Neutral Test (D5)
Iron Deposits (B5) Surface Soil Cracks (B6)	Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A)	
Inundation Visible on Aerial Imagery		Frost-Heave Hummocks (D7)
Inditidation visible on Aerial Imagery Sparsely Vegetated Concave Surface		
Field Observations:		
Surface Water Present? Yes	No X Depth (inches): N/A	
Water Table Present? Yes	No Depth (inches):	
Saturation Present? Yes X		and Hydrology Present? Yes X No
(includes capillary fringe)		
	monitoring well, aerial photos, previous inspections), i	if available:
Remarks:		

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region
Project/Site: RMT 1 City/County: Samoa/Humboldt Sampling Date: 5/28/20
Applicant/Owner: Hunbold Bay Horbor District State: CA Sampling Point: TP11
Investigator(s): Sam Polly, Juseph Mer Section, Township, Range: Secs. 15, 16, +21, T5N, R1W, HBM
Landform (hillslope, terrace, etc.): Bayside Industria Fill Local relief (concave, convex, none): Can calle Slope (%): 0-1
Subregion (LRR): A, MLRA, 4B Lat: 40.816663 Long: -124.185236 Datum: WG5 84
Soil Map Unit Name: 1014-Urbon Land- Anthraffic Xenorthents ASSN. 0-2% NWI classification: NONE
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soit, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes No			
Hydric Soil Present?	Yes No	Is the Sampled Area	X	
Wetland Hydrology Present?	Yes X No	within a Wetland?	Yes	No
Remarks:				

VEGETATION – Use scientific names of plants.

	Absolute	Dominant		Dominance Test worksheat:
Tree Stratum (Plot size:)	<u>% Cover</u>	<u>Species?</u>	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Device of
3				Total Number of Dominant Species Across All Strata:
4.				
··	-			Percent of Dominant Species 🛛 🖉 🔴 🏀
Sapling/Shrub Stratum (Plot size: 54		= Total Co	ver	That Are OBL, FACW, or FAC: 076 (A/B)
1. Salix Sitchersis	12-	1	FAC	Prevalence Index worksheet:
2. Salix hockeriana	2	-¥	FACIN	Total % Cover of:Multiply by:
	TTT		TUCAN	OBL species x 1 =
3. Rubus armeniaicus	14	×	140	FACW species x 2 =
4				FAC species x 3 =
5				
571	28	= Total Co	ver 14	FACU species x 4 =
Herb Stratum (Plot size:)		1	5.6	UPL species x 5 =
1. Equisetur lagvigatur	20	V	FACW	Column Totals: (A) (B)
2. Low, conjulation	10	4	FAC	Prevalence Index = B/A =
3. Mertha pulezium	1		OBL	Hydrophytic Vegetation Indicators:
4. Holeus andus	4		FAC	1 - Rapid Test for Hydrophytic Vegetation
5. Trigloch maritima	5		OBL	2 - Dominance Test is >50%
6. Festilla Myunos	1		FACU	2 - Dominance Test is >50%
7. Isolepis Cernua	3		OBL	3 - Prevalence Index is ≤3.0 ¹
	14		YHE	 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
8. Sriza Makima	77-		NUL	. ,
9. leoptodan saxatilis	10	0	THU	5 - Wetland Non-Vascular Plants ¹
10. Plantago Inceolata	6		THOU	Problematic Hydrophytic Vegetation ¹ (Explain)
11. Tritolium dubium	3		FACU	¹ Indicators of hydric soil and wetland hydrology must
	67	= Total Cov	er 33.5	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)			13.4	
1	-			Hydrophytic
2.				Vegetation
		= Total Cov		Present? Yes No
% Bare Ground in Herb Stratum 33*	1		GI	
Remarks:), []		_		
Litter + thatch				

Depth Matrix		
	<u>Redox Features</u> Color (moist) % Type ¹ Loc ²	Texture Remarks
$\frac{\text{(inches)}}{0-5}$ $\frac{\text{Color}(\text{moist})}{25\sqrt{3/2}}$ $\frac{\%}{7()}$	EVE 3/1 20 C DI	
E 0 EV21 02	25102117 0 15	te
5-0 512/1 05	1.2 YK 3/1 17 0 FB	<u>L</u> 3
8-24+ N2.5/ 80	104K 3/4 20 C MPL	5.
6		
	=Reduced Matrix, CS=Covered or Coated Sand Gra	ains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to al	C 1	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10) Red Parent Material (TF2)
Histic Epipedon (A2) Black Histic (A3)	Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except MLRA 1)	Kes Parent Material (1F2) Very Shallow Dark Surface (TF12)
Black Filsuc (A3) Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depieted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:		X
Depth (inches):		Hydric Soil Present? Yes No
Remarks:		
	- *	
HYDROLOGY		
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one require		
Transition of the local of the local of the	d: check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1)		Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except	Water-Steined Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
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) Drainage Patterns (B10)
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)
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 (C9)
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) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
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 Room 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
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 Root Presence of Reduced Iron (C4) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Ceomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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 Roor Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Ceomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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)	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 Roor Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 87) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C9) (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) 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 Imagery (B	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 Roor Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 87) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C9) (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) 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 Imagery (B Sparsely Vegetated Concave Surface	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 Roor Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 87) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C9) (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) 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 Imagery (B Sparsely Vegetated Concave Surface 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 Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) S7) Other (Explain in Remarks) (B8)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C9) (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) 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 Imagery (E Sparsely Vegetated Concave Surface 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 Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) B7) Other (Explain in Remarks) (B8) 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) (C9) (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) 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 Imagery (B Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes Gaturation 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 Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Store (Explain in Remarks) (B8) 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) (c3) Saturation Visible on Aerial Imagery (C9) (c4) Second Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hurnmocks (D7) and Hydrology Present? Yes No
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 (B Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Saturation Present? Yes Saturation Present? Yes (includes capillary fringe)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) B7) Other (Explain in Remarks) (B8) 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) (c3) Saturation Visible on Aerial Imagery (C9) (c4) Second Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hurnmocks (D7) and Hydrology Present? Yes No
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 (B Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Saturation Present? Yes Saturation Present? Yes Describe Recorded Data (stream gauge, rr	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Store (Explain in Remarks) (B8) 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) (c3) Saturation Visible on Aerial Imagery (C9) (c4) Second Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hurnmocks (D7) and Hydrology Present? Yes No
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 (B Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Saturation Present? Yes Saturation Present? Yes (includes capillary fringe)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Store (Explain in Remarks) (B8) 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) (c3) Saturation Visible on Aerial Imagery (C9) (c4) Second Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hurnmocks (D7) and Hydrology Present? Yes No
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 (B Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Saturation Present? Yes Saturation Present? Yes Describe Recorded Data (stream gauge, rr	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Store (Explain in Remarks) (B8) 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) (c3) Saturation Visible on Aerial Imagery (C9) (c4) Second Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hurnmocks (D7) and Hydrology Present? Yes No
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 (B Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Saturation Present? Yes Saturation Present? Yes Describe Recorded Data (stream gauge, rr	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Store (Explain in Remarks) (B8) 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) (c3) Saturation Visible on Aerial Imagery (C9) (c4) Second Provide Table (C2) Saturation Visible on Aerial Imagery (C9) (c4) Second Provide Table (C2) Saturation Visible on Aerial Imagery (C9) (c5) Saturation Visible on Aerial Imagery (C9) (c4) Second Provide Table (C2) Saturation Visible on Aerial Imagery (C9) (c5) Saturation Visible on Aerial Imagery (C9) (c6) Saturation (D2) Shallow Aquitard (D3) (c7) FAC-Neutral Test (D5) (c7) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hurnmocks (D7) and Hydrology Present? Yes No
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 (B Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Saturation Present? Yes Saturation Present? Yes Describe Recorded Data (stream gauge, rr	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Store (Explain in Remarks) (B8) 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) (c3) Saturation Visible on Aerial Imagery (C9) (c4) Second Provide Table (C2) Saturation Visible on Aerial Imagery (C9) (c4) Second Provide Table (C2) Saturation Visible on Aerial Imagery (C9) (c5) Saturation Visible on Aerial Imagery (C9) (c4) Second Provide Table (C2) Saturation Visible on Aerial Imagery (C9) (c5) Saturation Visible on Aerial Imagery (C9) (c6) Saturation (D2) Shallow Aquitard (D3) (c7) FAC-Neutral Test (D5) (c7) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hurnmocks (D7) and Hydrology Present? Yes No

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region
Project/Site: RMT 1 City/County: Sanod Humbeldt Sampling Date: 6/4/20
Project/Site: KM City/County: Sanod / HVMbc dt Sampling Date: 6/4/20
Applicant/Owner: Humbeldt, Bay Horbor District State: CA Sampling Point: TP12
Investigator(s): Joseph Saler Sam low Section, Township, Range: Secs, 15, 16, +21, 75N, R1W, HBM Landform (hillslope, terrace, etc.): Bay Side fill Local relief (concave, convex, none): Nole Slope (%): 0-1
Landform (hilislope, terrace, etc.): Day Side till Local relief (concave, convex, none): Slope (%): 0-1
Subregion (LRR): A, MLRA - 4B Lat: 40.8/6/28° Long: -124. 183728° Deturn: WG584
Soil Map Unit Name: 1014 - Urban Land - Anthratic Xerorthets Arsn. 0-2% NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No Yes No Yes No Yes No Yes No Yes No Yes	Is the Sampled Area within a Wetland? Yes No
Remarks: 210% of wormal	may precip, 76% (of normal annual precip.

VEGETATION - Use scientific names of plants.

X

210		Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft) 1 Salix Nochering	<u>% Cover</u>	Species? Status	Number of Dominant Species(A)
2			Total Number of Dominant
3			Species Across All Strata:
4			
Sapling/Shrub Stratum (Plot size: 54)	80 -	Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (A/B)
1. RUDW Urshw	40	1 Ocu	Prevalence Index worksheet:
		- Inch	Total % Cover of: Multiply by:
2. Rubes armeniacus		- the	OBL species x 1 =
3. Ilex aguitatium		TACU	FACW species x 2 =
4			FAC species x 3 =
5			FACU species x 4 =
E (J	50 -	Total Cover 👫	
Herb Stratum (Plot size: 5,11)	2	/ 10	UPL species x 5 =
1. Bromy Carinaty	<u> </u>	NL	Column Totals: (A) (B)
2. Cortadoria jubata	_6	V TACY	Prevalence Index = B/A =
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is >50%
6			$\frac{1}{3} - \text{Prevalence Index is } \le 3.0^{1}$
7			
8			 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants ¹
10			Problematic Hydrophytic Vegetation ¹ (Explain)
11.			¹ Indicators of hydric soil and wetland hydrology must
	2	Total Cover 4	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 5++)		Total Cover T.6	
1. Hedera helix	5	1 tACU	Hydrophytic
2			Vegetation
	5	Total Cover	Present? Yes No
% Bare Ground in Herb Stratum 90%		Total Cover	
Remarks:			· · · · · · · · · · · · · · · · · · ·
* Leat littler			

US Army Corps of Engineers

DIL		Sampling Point: 1912
rofile Description: (Describe to the dep	oth needed to document the indicator or confirm	the absence of Indicators.)
Depth <u>Matrix</u>	Redox Features	Total Basedor
inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
J-5 10 YR 2/1 100		SL
5-11 10 YR3/2 100		E3 Some Cable
	TAVE 2/1 UD CM	10
1-29 104 9/1 00	1010217 10 C M	
	(*	
1		
Type: C=Concentration, D=Depletion, RM lydric Soll Indicators: (Applicable to all	Reduced Matrix, CS=Covered or Coated Sand Gr	ains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (\$5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	Server and the server of the s
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 (Fθ)	unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:		1
Depth (inches):		Hydric Soll Present? Yes No X
iemarks:		
YDROLOGY		
YDROLOGY Vetland Hydrology Indicators:		
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one require		Secondary Indicators (2 or more required)
YDROLOGY Vetland Hydrology Indicators:	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one require		
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one require 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 4A, and 4B)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one require 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, 5 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required 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) Saturation Visible on Aerial Imagery (C
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one require 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
YDROLOGY Vetland Hydrology Indicators: Primary 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)	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 Roc Presence of Reduced Iron (C4)	Water-Stained Leaves (B9) (MLRA 1, 1 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Seconorphic Position (D2) Shallow Aquitard (D3)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) 	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Sts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required 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)	 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 	Water-Stained Leaves (B9) (MLRA 1, 1 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Staturation Visible on Aerial Imagery (C Stallow Aquitard (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required 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 (B	 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) 	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Sts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required 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 (B Sparsely Vegetated Concave Surface of	 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A 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 Sts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
YDROLOGY Vetland Hydrology Indicators: Primary 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 (B Sparsely Vegetated Concave Surface of Teld 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) S7) Other (Explain in Remarks) (B8)	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Sts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required) 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 (E Sparsely Vegetated Concave Surface (E) 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Stunted or Stressed Plants (D1) (LRR A) To 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 Sts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required 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 (E Sparsely Vegetated Concave Surface Teld Observations: Surface Water Present? Yes Water Table 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) (B8) 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 Sts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Shallow Aquitard (D3) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required) 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 (E Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Mater Table 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) (B8) 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 Sts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
YDROLOGY Wetland Hydrology Indicators: Primary 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 (E Sparsely Vegetated Concave Surface of 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) (B8) No Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 1 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
YDROLOGY Wetland Hydrology Indicators: Primary 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 (E Sparsely Vegetated Concave Surface of 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A S7) Other (Explain in Remarks) (B8) No Depth (inches): NA No Depth (inches): NA No Depth (inches): NA Weth	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
YDROLOGY Wetland Hydrology Indicators: Primary 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 (E Sparsely Vegetated Concave Surface of 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A S7) Other (Explain in Remarks) (B8) No Depth (inches): NA No Depth (inches): NA No Depth (inches): NA Weth	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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 (B Sparsely Vegetated Concave Surface of Field Observations: Surface Water Present? Yes Mater Table Present? Yes Saturation Present? Yes Direction Present? Yes Saturation Present? Yes Directible Recorded Data (stream gauge, monoscipation)	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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A S7) Other (Explain in Remarks) (B8) No Depth (inches): NA No Depth (inches): NA No Depth (inches): NA Weth	Water-Stained Leaves (B9) (MLRA 1, 1 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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 (B Sparsely Vegetated Concave Surface of Field Observations: Surface Water Present? Yes Mater Table Present? Yes Saturation Present? Yes Direction Present? Yes Saturation Present? Yes Directible Recorded Data (stream gauge, monoscipation)	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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A S7) Other (Explain in Remarks) (B8) No Depth (inches): NA No Depth (inches): NA No Depth (inches): NA Weth	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Saturatin Visible on Aerial Image

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WETLAND DETERMINATION DATA FORM – Western	Mountains, Valleys, and Coast Region
Project/Site: RMT 1 ,, City/County:	anoa Humboldt sampling Date: 6/4/20
Applicant/Owner: Humboldt Bay Hachor District	State: (A Sampling Point: TP 13
	hip, Range: Secs. 15, 16,+21, 75N, RIW, HBM
	nave, convex, none): (A) (AVE Slope (%): 0~1
Subregion (LRR): A, MLRA - 48 , Lat: 40.8/5435	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	
Are Vegetation X, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling p	oint locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydric Son Present: Yes No within a	ampled Area Wetland? Yes No
wetland Hydrology Present? Yes No	
Woody Vegetation recently cut managed. Wettan described of PFMIEsOg. Rapid willow growt	Laccus in depression, bert
VEGETATION – Use scientific names of plants.	71.14
Absolute Dominant Ind	
Tree Stratum (Plot size:) <u>% Cover Species? St</u>	Number of Dominant Species
2	That Are OBL, FACW, or FAC: (A)
3	Total Number of Dominant Species Across All Strata: (B)
4	
	That Are OBL, FACW, or FAC:
Sapling/Shrub Stratum (Plot size: 544)	Prevalence Index worksheet:
1. Kubus urginus 12 V	Total % Cover of: Multiply by:
2. Salix hookeriana 10 +1	OBL species x 1 =
4	FACW species x 2 =
5	FAC species x 3 =
T (L 22 = Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 5+1,)	
	(A) (B)
2. Potentilla asserina ssp. paritica 12 0	Prevalence Index = B/A =
3. Equisitivity arvive 25 F	Hydrophytic Vegetation Indicators:
5. Agrortis stolatora 25 V FT	1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
6. PURMER (ASPUS	3 - Prevalence Index is <3.01
7	4 - Morphological Adaptations ¹ (Provide supporting
8	data in Remarks or on a separate sheet)
9	5 - Wetland Non-Vascular Plants ¹
10	Problematic Hydrophytic Vegetation ¹ (Explain)
11	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	
1	Hudrophutia
2	Hydrophytic Vegetation Present? Yes No
= Total Cover	Present? Yes <u>No</u> No
% Bare Ground in Herb Stratum	the privation of the minister at the
Remarks: & Eleochanis macrostanya is not listed in US species in the north coust region suggest OBLAFF	nor normal, norman, 005 of This
species in the north coust region suggest OBLAFFI	rew along nation dis theater as such.

Profile Description: (Describe to the de Depth <u>Matrix</u> (inches) <u>Color (moist)</u> %	epth needed to document the indicator or confirm Redox Features Color (moist) % Type ¹ Loc ²	Texture Remarks
5-24+ 2.542.5/1 100		GVGrGLS
¹ Type: C=Concentration, D=Depletion, R Hydric Soll Indicators: (Applicable to a	M=Reduced Matrix, CS=Covered or Coated Sand Gr.	ains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Histic Epipedon (A2)	Sandy Redox (S5) Stripped Matrix (S6)	2 cm Muck (A10) Red Parent Material (TF2)
Black Histic (A3) Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1) (except MLRA 1) Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Thick Dark Surface (A12)	Depleted Matrix (F3) Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	Depleted Dark Surface (F7) Redox Depressions (F8)	wetland hydrology must be present, unless disturbed or problematic.
Restrictive Layer (if present):		
Type: Depth (inches):		Hydric Soll Present? Yes No
Remarks:		
YDROLOGY		
Netland Hydrology Indicators:		
Primary Indicators (minimum of one requi		Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
High Water Table (A2)	MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrates (B13)	Drainage Fatterna (BTO)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along Living Roc	
Aigal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soils (C6	v ,
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery	(B7) Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface	e (68)	
Field Observations:	N.C. NUB	
Surface Water Present? Yes	No X Depth (inches):A	
Water Table Present? Yes 🙏	No Depth (inches):	\checkmark
Saturation Present? Yes X (includes capillary fringe) Describe Recorded Data (stream gauge,	No Depth (inches): Weth monitoring well, aerial photos, previous inspections),	and Hydrology Present? Yes A. No if available:
Remarks: * Ponded water	~ 4 ft wet of +p	
JS Army Corps of Engineers		Western Mountains, Valleys, and Coast - Version 2

WETLAND DETERMINATION DATA FORM	 Western Mountains, Valleys, and Coast Region
Applicant/Owner: HUMbold Bay Harbor District Investigator(s): Joseph Saler, Sam Polly se	
Subregion (LRR): A MLRA-4B Lat: 40. Soil Map Unit Name: 1014 - Urban land - Anthralfic X Are climatic / hydrologic conditions on the site typical for this time of year	814731° Long: -124.184807° Datum: WGS84 erorthents assh, 0-2 NWI classification: NONE
Are Vegetation, Soil, or Hydrology X significantly dis	
Are Vegetation, Soil, or Hydrology naturally probl	
	ampling point locations, transects, important features, etc.
Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	Is the Sampled Area within a Wetland? Yes No Yes definition
Remarks: 10' NW of DIE outfall to bay & of J DI is elevated, Ponding wate	is in surrounding area. Werts duta
VEGETATION – Use scientific names of plants.	normax
	Dominant Indicator Dominance Test worksheet: Species? Status Image: Status Number of Dominant Species That Are OBL, FACW, or FAC: (A)
3	Total Number of Dominant Species Across All Strata: (B)
Sapling/Shrub Stratum (Plot size:)	Total Cover Percent of Dominant Species 100% (A/B)
1	Prevalence Index worksheet: Total % Cover of: Multiply by:
3	OBL species x 1 = FACW species x 2 =
4	FAC species x 3 =
Herb Stratum (Plot size:)	FACU species x 4 = UPL species x 5 =
1. Lotus corniculatus 23	FAC Column Totals: (A) (B)
2. Festuca rubra 33. 3. Daucus carrota 12	Prevalence Index = B/A =
4. Grindelia stricta 12	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
5. Sonching alerage us	VPL X 2 - Dominance Test is >50%
6. Meli lotus abus 3	3 - Prevalence Index is ≤3.0 ¹
7. Rumer crispus 2 8. Agrostis stoloniforg 21	4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
9. Hyleus lapatus 3	FAC 5 - Wetland Non-Vascular Plants ¹
10 VICRA SOTIVA 2	Problematic Hydrophytic Vegetation ¹ (Explain)
11. Lev can theman vulgar e 1	1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	Total Cover 57.5 be present, unless disturbed or problematic.
1	Hydrophytic
2	Vegetation Present? Yes No
% Bare Ground in Herb Stratum	Total Cover
Remarks: Festura rubra, sparting	

SOIL

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	th needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist) %	<u>Color (moist)</u> % <u>Type¹</u> <u>Loc²</u>	Texture Remarks
0-11 10YR 2/1 100		The fill (Asphalt Brick)
1-24 10 2.5 100		Gr LS Fill (Asphalf, Brick)
	and the second second	
	(2	
·		
¹ Type: C=Concentration, D=Depletion, RM	=Reduced Matrix, CS=Covered or Coated Sand Gra	ains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (\$6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Thick Dark Surface (A12)	Depleted Matrix (F3) Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:`		V
Depth (inches):		Hydric Soil Present? Yes No 🔼
Remarks:		
A		1
		-
HYDROLOGY		
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one require	d check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)
X Saturation (A3)		
	Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1)	Salt Crust (B11) Aquatic Invertebrates (B13)	Drainage Patterns (B10) Dry-Season Water Table (C2)
Water Marks (B1)		_
	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Water Marks (B1) Sediment Deposits (B2)	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	 Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc 	 Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	 Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc Presence of Reduced Iron (C4) 	 Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) decomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	 Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 	 Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) decomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	Aquatic Invertebrates (B13) Aquatic Invertebrates (B13) Aydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) The Other (Explain in Remarks)	 Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) decomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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 (B	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) TO Other (Explain in Remarks) (B8)	 Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) decomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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 (B Sparsely Vegetated Concave Surface	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) (B8) No Depth (inches):	 Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) decomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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 (B Sparsely Vegetated Concave Surface Field Observations:	Aquatic Invertebrates (B13) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A S7) Other (Explain in Remarks) (B8) No Depth (inches): NA Depth (inches): NA	 Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) decomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 (E Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) (B8) No Depth (inches): NA Depth (inches): NA	 Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) decomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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 (B Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe)	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) (B8) No Depth (inches): Weth No Depth (inches): Weth	Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) with (C3) ✓ Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 (B Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe)	Aquatic Invertebrates (B13) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A S7) Other (Explain in Remarks) (B8) No Depth (inches): NA Depth (inches): NA	Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) with (C3) ✓ Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 (B Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, m	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) (B8) No Depth (inches): No Depth (inches): Weth	Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) its (C3) ✓ Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 (B Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe)	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) (B8) No Depth (inches): No Depth (inches): Weth	Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) its (C3) ✓ Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 (B Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, m	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) (B8) No Depth (inches): No Depth (inches): Weth	Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) its (C3) ✓ Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 (B Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, m	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) (B8) No Depth (inches): No Depth (inches): Weth	Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) its (C3) ✓ Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 (B Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, m	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) (B8) No Depth (inches): No Depth (inches): Weth	Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) dts (C3) ✓ Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

WETLAND DETERMINATION DA	ATA FORM - Western Mou	ntains, Valleys, and Coast Region
Project/Site: RMT 1 Applicant/Owner: Humbol of Bay Horbor Investigator(s): Sam Poly, Joseph Sale Landform (hillslope, terrace, etc.): Bayside Fill Subregion (LRR): ALRA 4B	City/County: Samoa District Section, Township, Ran Local relief (concave, o Lat: 40.814250° altric Xerorthats Assi is time of year? Yes No_ significantly disturbed? Are " naturally problematic? (If ne	Humbeld Sampling Date: 6/4/20 State: CA Sampling Point: TP15 nge: Secs.1516 + 21, T5N, R1W, HBM convex, none): ConCAVE Slope (%): 0 Long: -124.185571 Datum: V6584 Normal Circumstances" present? Yes No eded, explain any answers in Remarks.)
		ocationa, transecta, important reatures, etc.
Hydric Soil Present? Yes X	lo Is the Sampled within a Wetlan	nd? Yes No
VEGETATION – Use scientific names of plan	nts.	
Tree Stratum (Plot size: 30 ft) 1. Salix psi andra var. losiandra 2. Salix hookeriana 3.		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strate: Percent of Dominant Species That Are OBL, FACW, or FAC: Image: Dominant Species That Are OBL, FACW, or FAC: Image: Dominant Species That Are OBL, FACW, or FAC: Image: Dominant Species That Are OBL, FACW, or FAC: Image: Dominant Species That Are OBL, FACW, or FAC: Image: Dominant Species That Are OBL, FACW, or FAC: Image: Dominant Species That Are OBL, FACW, or FAC: Image: Dominant Species Total % Cover of: Multiply by: OBL species x 1 = FACW species x 2 = FAC species x 3 = FACU species x 4 = UPL species x 5 = Column Totals: (A) (B) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is <3.01
Remarks: * Leot litter		

1.75

SOIL Sampling Point Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Calor (moist) Type Loc² Remarks Color (moist) % Texture (inches % 2 50 05 on ²Location: PL=Pore Lining, M=Matrix. ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Indicators for Problematic Hydric Soils³: Hydric Soll 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) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (TF12) Black Histic (A3) Other (Explain in Remarks) Loamy Gleyed Matrix (F2) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Redox Dark Surface (F6) ³Indicators of hydrophytic vegetation and Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must be present, Sandy Gleyed Matrix (S4) Redox Depressions (FB) unless disturbed or problematic. **Restrictive Layer (If present):** Type: Depth (inches): Hydric Soil Present? Yes No Remarks: HYDROLOGY

Wetland Hydrology Indicators:		Sacondary Indicators (2 or more regulated)
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 Ima Sparsely Vegetated Concave Si	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) X Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) gery (B7) Other (Explain in Remarks)	Shallow Aquitard (D3)
Fleid Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe)	No Depth (inches): No Depth (inches):	nd Hydrology Present? Yes No
Describe Recorded Data (stream ga	uge, monitoring well, aerial photos, previous inspections), if	available:
Remarks:		

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region Project/Site: K noa itv/County Sampling Date: Applicant/Owner: Hum Distri State: Sampling Point SAL Section, Township, Range: Secs. 15, Investigator(s): 0 Landform (hillslope, terrace, etc.) Local relief (concave, convex, none): Slope Lat: Subregion (LRR): C 805 Datum: Soil Map Unit Name: None NWI classification: 200 (If no, explain in Remarks.) Are climatic / hydrologic conditions on the site typical for this time of year? Yes No Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Ye Are Vegetation ____ __, Soil ____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No Yes No Yes No	Is the Sampled Area within a Wetland?	Yes No
Remarks:		- du -	

VEGETATION – Use scientific names of plants.

	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size:)	<u>% Cover</u>	Species?	Status	Number of Dominant Species
1			<u> </u>	That Are OBL, FACW, or FAC:
2				Total Number of Dominant
3				Species Across All Strata:
4				100
-[]	/	= Total Cov	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size: 5++)	IC.	/	C	
1. Satix hookeriona	5	V	TRW	Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				OBL species x 1 =
4.				FACW species x 2 =
5		·		FAC species x 3 =
e / 1	15	= Total Co		FACU species x 4 =
Herb Stratum (Plot size: 5F+)	1		vei	UPL species x 5 =
1 TOPRILLA UNSTINA	15		QBL	Column Totals: (A) (B)
2. Holfustanatus,	18	V	FAC	Prevalence Index = B/A =
3. testuca arunding lea	20	V	FAC	Hydrophytic Vegetation Indicators:
4. Eleocharis Macrostachya	5	*	NLOB	1 - Rapid Test for Hydrophytic Vegetation
5. Lotus Cornicliations	35	V	FAC	2 - Dominance Test is >50%
6. Tritelium repay	1		FAC	3 - Prevalence Index is $\leq 3.0^{1}$
7. Mertha pulgium	5		OBL	
8. Crownly eithour	2		NL	 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9. Briza Maxima	1		NL	5 - Wetland Non-Vascular Plants ¹
10. Paretucellia VISCOSO	1	18 1	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
11. Cylens gragoshs			FACW	¹ Indicators of hydric soil and wetland hydrology must
	-			be present, unless disturbed or problematic.
12. Antho Xaithum odoratum	-0-		FACU	
B Festuca Munos	1		FACY	Hydrophytic
H RUMEX CHSOW	1.		FAC	Vegetation
A	114	= Total Cov	er 52	Present? Yes X No
% Bare Ground in Herb Stratum			2.7.9	
Remarks: d Eleochens macrostachya is	not lis	tedin c	SACEW	Lenval: however, obs of this solies
in the North coast region suggest s	BLOW	FACULA	Dagna	timb is then hed as auch
, manager o	0001		- J	The Streatter us such

Profile Description: (Describe to the dept	h needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (mgist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-1 10YR 2/2 100	<u> </u>	M
1-6 54 3/1 100		VGrGSL
1-19 5/7/1 00	2.5YR 3/6 2 C PL	LS Lensgravel
Call Elybert	C.JANJE L C PL	- <u> </u>
9-29+ 5612.7/1100		5 0
	Reduced Matrix, CS=Covered or Coated Sand Gra	
Hydric Soil Indicators: (Applicable to all	_RRs, unless otherwise noted.)	Indicators for Problematic Hydric Solls ³ :
Histosol (A1)	Sandy Redox (S5)	X 2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histle (A3)	Loarny Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	3
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, unless disturbed or problematic.
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	uniess disturbed or problematic.
Restrictive Layer (if present):		
Туре:		
Depth (inches):		Hydric Soil Present? Yes 🔼 No
Remarks:		
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required		Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	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 required Surface Water (A1) High Water Table (A2) Saturation (A3)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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 Root	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (84)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rool Presence of Reduced Iron (C4)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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 Roof Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C6) Stunted or Stressed Plants (D1) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (84) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B2) Sparsely Vegetated Concave Surface (I Field Observations: Surface Water Present? Yes Water Table 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 Roof Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 88) 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) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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WETLAND DETERMINATION DATA FORM - Western Mount	ntains, Valleys, and Coast Region
Project/Site: RMT_1 City/County: Samo	Humboldt Sampling Date: 5/4/20
Applicant/Owner: Humboldt Bay, Harbor District	State: CA Sampling Point: TP 17
	1998: Secs. 15, 16,+21, T5N, R1W, HBM
	convex, none): (an(AVP) Slope (%): 0-1
Subregion (LRR): A, MLRA - 4B Lat: 40.814160	Long: -124.187120* Datum: WGS 84
	0-2% NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No	
	Normal Circumstances" present? Yes X No
	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point lo	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Is the Sampled	Area V
Hydric Soil Present? Yes No Is the Sampled Wetland Hydrology Present? Yes No within a Wetland	
wetland occurs in Isolated depression out lighly manipulated ST	ails. Bestderenbedies: 1957.CsOn
VEGETATION – Use scientific names of plants.	
Tree Stratum (Plot size: 30 ft) Absolute Dominant Indicator % Cover Species? Status	Dominance Test worksheet:
1. SATX STORESS 70 FACW	Number of Dominant Species 3 (A)
2. Salix hookeriana 20 V FACW	
3	Total Number of Dominant Species Across All Strata:3 (B)
4	12.5
90 = Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:)	Prevalence Index worksheet:
1	Total % Cover of: Multiply by:
3.	OBL species x 1 =
4	FACW species x 2 =
5	FAC species x 3 =
= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 517)	UPL species x 5 = Column Totals: (A) (B)
1. testuca perennis 7 TAC 2. Lotus carniculatus 50 FAC	Column Totals: (A) (B)
3 mentry pulled 1/100 Z OBL	Prevalence Index = B/A =
4. Runch Cottons I PAC	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
5. Aprostis Stolanifera 1 FAC	2 - Dominance Test is >50%
6.	3 - Prevalence Index is $\leq 3.0^{1}$
7	4 - Morphological Adaptations ¹ (Provide supporting
8	data in Remarks or on a separate sheet)
9	5 - Wetland Non-Vascular Plants ¹
10	Problematic Hydrophytic Vegetation ¹ (Explain)
11	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:) = Total Cover 10.3	
	Uvdroshutio
2	Hydrophytic Vegetation
	Present? Yes No
% Bare Ground in Herb Stratum 12/.	
Remarks: * Leaf litter	

SOIL								Sampling Point: TP 1-	Ł
Profile Desc	cription: (Describe to	the depth n	eeded to docum	ent the i	ndicator	or confirm	the absence	e of indicators.)	
Depth	Matrix		Redox	<pre>K Features</pre>					
(inches)	Color (moist)	%	Colar (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-4	10YR2/1	100 -					MS	-	
4-5	10 YR 2/1	α -			-		GVGTMC	oS	
5-12	10 VR 2/1	10 -		-		~	GSI		_
12 10	5V25/1	100	5/2/1	2	1	M	217	Brick + Debris Protot	
12-10	212.211	10 4	21211		-	1	GrW	DITOR TUROTIS TOW	
		2	54312	2	<u> </u>	M			
18-	N2.5/	00 -					5		
	·								-
	oncentration, D=Deplet					d Sand Gr		cation: PL=Pore Lining, M=Matrix.	
-	Indicators: (Applicab				ia.)			ors for Problematic Hydric Soils ³ :	
Histosol	• •		Sandy Redox (S					m Muck (A10) d Parent Material (TF2)	
	pipedon (A2) istic (A3)	_	Stripped Matrix Loamy Mucky M		\ (except			ry Shallow Dark Surface (TF12)	
	en Sulfide (A4)	_	Loamy Gleyed N			MERA I/		ner (Explain in Remarks)	
	d Below Dark Surface (A11)	Depleted Matrix		,		_ •		
	ark Surface (A12)		Redox Dark Sur	· ·			³ Indicat	ors of hydrophytic vegetation and	
	Mucky Mineral (S1)		Depleted Dark S	Surface (F	7)			and hydrology must be present,	
Sandy C	Gleyed Matrix (S4)		Redox Depress	ions (F8)			unie	ss disturbed or problematic.	
Restrictive	Layer (If present):					1000			
Type:			-					V	
Depth (in	ches):		_				Hydric Soi	l Present? Yes 🔼 No 🔜	
Remarks:									
			*						
	<u></u>								
HYDROLO									
-	drology Indicators:		and a little statement				Coo	ondary Indicators (2 or more required)	e.
	cators (minimum of one	requireo; ci			(DO) (
_	Water (A1)		Water-Stai		• • •	xcept	A	Water-Stained Leaves (B9) (MLRA 1,	Ζ,
	ater Table (A2)			1, 2, 4A, a	ind 4B)			4A, and 4B)	
	ion (A3)		Salt Crust		(546)			Drainage Patterns (B10)	
	Marks (B1)		Aquatic Inv					Dry-Season Water Table (C2)	
	nt Deposits (B2)		Hydrogen		• •			Saturation Visible on Aerial Imagery (*	C9)
	posits (B3)		Oxidized F		-	-		Geomorphic Position (D2)	
	at or Crust (B4)		Presence				1	Shallow Aquitard (D3)	
	posits (B5)		Recent Iro				and the second se	FAC-Neutral Test (D5)	
	Soil Cracks (B6)		Stunted or			יז) (LKK A	·	Raised Ant Mounds (D6) (LRR A)	
V	ion Visible on Aerial Ima		Other (Exp	plain in Re	marks)			Frost-Heave Hummocks (D7)	
A Sparsel	y Vegetated Concave 9	surface (B8)							

Depth (inches):

Depth (inches):

Depth (inches):

5

Field Observations:

Surface Water Present?

(includes capillary fringe)

Water Table Present?

Saturation Present?

Remarks:

Yes

Yes

Yes

No

No

No

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

Yes

No

Wetland Hydrology Present?

WETLAND DETERMINATION DATA FORM	– Western Mountains, Valleys, and Coast Region
Project/Site: RMT 1 City	VCounty: Samea / Humbold sampling Date: 6/4/20
Applicant/Owner: Hunboldt Bay, Harbor Distric-	State: (A Sampling Point: TP18
	ction, Township, Range: Secs. 15, 16, +21, T5N, R1W, HBM
	cal relief (concave, convex, none): Cancave Slope (%): 0~
Subregion (LRR): A, MLKA - YB Lat: 40.	
Soil Map Unit Name: 1014 - Urban Land - Anthrattic Xero	
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly dis	turbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally proble	matic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sa	ampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes No No No	within a Wetland? Yes No
Remarks: # 2022 upgraved gps equipment 40.814034	10-124.1879080
wetland occurs inshallow depression at bare a	Islope. botdouribed as: PSS1CsOn.
VEGETATION – Use scientific names of plants.	
	orninant Indicator Dominance Test worksheet:
1. Salix hookeriana 27	FACU Number of Dominant Species 3 (A)
2	Total Number of Dominant
3	Species Across All Strata: (B)
4 27 =	Total Cover That Are OBL FACW or FAC: 75% (A/B)
Sapling/Shrub Stratum (Plot size: 74)	Total Cover That Are OBL, FACW, or FAC: (A/B) Prevalence Index worksheet:
1. Rubus wanus <u>40</u> 2. Rubus armeniacus <u>3</u>	Total % Cover of:Multiply by:
2. KUNOW MINYACH	CBL species x1 =
4	FACW species x 2 =
5	FAC species X 3 = FACU species X 4 =
Herb Stratum (Plot size: 5(+))	Total Cover 4.6 UPL species x 5 =
1. Holcus anorus 20	Column Totals: (A) (B)
2 Aucostis Stalaitera 18	Prevalence Index = B/A =
3. Lotus cornigulatus 10	Hydrophytic Vegetation Indicators:
4. Sonchus deraceus 2 5. Metha Pulesium, 2	1 - Rapid Test for Hydrophytic Vegetation
6. Geranium dissection I	
7. Epilobium ciliatum	4 - Morphological Adaptations ¹ (Provide supporting
8	data in Remarks or on a separate sheet)
9	5 - Wetland Non-Vascular Plants ¹
10	¹ Indicators of hydric soil and wetland hydrology must
	Total Cover 201 be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	IU.D
1	Hydrophytic Vegetation
	Total Cover Vegetation Present? Yes X No
% Bare Ground in Herb Stratum	
Remarks:	

Profile Description: (Describe to the dept	th needed to document the indicator or confirm t	he absence of indicators.)
Depth. Matrix	Redox Features	and an array of the second
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-9 10YR2/ 100		MS
4-19 10YR 3/1.100		LS
19-74+ 104 2.5/100		5
1 2 10 2 2 11 100		
¹ Type: C=Concentration D=Depletion BM=	Reduced Matrix, CS=Covered or Coated Sand Grai	ns. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soll Indicators: (Applicable to all		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histosof (A1) Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
X Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		17
Туре:		X III
Depth (inches):		Hydric Soll Present? Yes <u>No</u> No
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:	t: check all that apply)	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required		Secondary Indicators (2 or more required) Water-Stained Leaves (B9) /MI R& 1 2
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Steined Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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 required	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 (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots	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)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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)	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 Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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 Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain In Remarks) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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 (Britten Strength Strengt Strength Strength Strength Strength Stren	 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 Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain In Remarks) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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 (B2) Sparsely Vegetated Concave Surface (I	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 Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain In Remarks) B8)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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 (B Sparsely Vegetated Concave Surface (Fleid Observations: Surface Water Present? Yes	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfice Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain In Remarks) B8)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required	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 Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain In Remarks) B8) 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) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain In Remarks) B8) No Depth (inches): Depth (inches): Wetlan	Water-Steined 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 Hydrology Indicators: Primary Indicators (minimum of one required	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 Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain In Remarks) B8) No Depth (inches):	Water-Steined 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 Hydrology Indicators: Primary Indicators (minimum of one required	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain In Remarks) B8) No Depth (inches): Depth (inches): Wetlan	Water-Steined 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 Hydrology Indicators: Primary Indicators (minimum of one required	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain In Remarks) B8) No Depth (inches): Depth (inches): Wetlan	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 Hydrology Indicators: Primary Indicators (minimum of one required	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain In Remarks) B8) No Depth (inches): Depth (inches): Wetlan	Water-Steined 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 Hydrology Indicators: Primary Indicators (minimum of one required	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain In Remarks) B8) No Depth (inches): Depth (inches): Wetlan	Water-Steined 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 Hydrology Indicators: Primary Indicators (minimum of one required	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain In Remarks) B8) No Depth (inches): Depth (inches): Wetlan	Water-Steined 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 DATA FORM - 1	Western Mountains, Valleys, and Coast Region
PANT 7	
Project/Site: City/C	County: MMD2135 Sampling Date: (1910
Applicant/Owner: Humboldt Bay Harbor District	State: A Sampling Point: TP 19
Investigator(s): Joseph Saler, Sam Polly Section	on, Township, Range: Secs. 15, 16, +21, T5N, R1W, HBM
Landform (hillslope, terrace, etc.): Bayside till	I relief (concave, convex, none): Concave Slope (%): 0-1
Subregion (LRR): A. MLRA - 4B	
Soil Map Unit Name: 1019 - Urban Land - Anthraltic Xeros	theats ADSN. 0-27. NWI classification: NONE
Are climatic / hydrologic conditions on the site typical for this time of year? Y	fes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distur	rbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problem:	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing san	opling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	
Hydric Soil Present? Yes No X	is the Sampled Area
Wetland Hydrology Present? Yes No	within a Wetland? Yes No
Remarks: & 2022 upgueled Ggs equipment = 40. 811108°/	-124.1872550

VEGETATION – Use scientific names of plants.

2.01	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size 30 ft)	% Cover Species? Status	
1. Morella Californica	90 FACW	Number of Dominant Species 2 (A)
2. Salix hookering	5 FACW	
3.		Total Number of Dominant Species Across All Strata: (B)
4		
Sapling/Shrub Stratum (Plot size: 544)	95 = Total Cover 47.5	Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
1. Rubus armeniarus	15 FAC	Prevalence index worksheet:
2. RUBUS WISINW	15 FACU	Total % Cover of:Multiply by:
3.		OBL species x 1 =
4		FACW species x 2 =
5		FAC species x 3 =
	30 = Total Cover	FACU species x 4 =
Herb Stratum (Plot size:)		UPL species x 5 =
1		Column Totals: (A) (B)
2		Prevalence Index = B/A =
3		Hydrophytic Vegetation Indicators:
4		1 - Rapid Test for Hydrophytic Vegetation
5	· · · ·	2 - Dominance Test is >50%
6		3 - Prevalence Index is ≤3.0 ¹
7	· <u> </u>	 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
8		5 - Wetland Non-Vascular Plants ¹
9		Problematic Hydrophytic Vegetation ¹ (Explain)
10	<u> </u>	¹ Indicators of hydric soil and wetland hydrology must
11	= Total Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		
1		Hydrophytic
2	·	Vegetation
100*/*	= Total Cover	Present? Yes <u>No</u> No
% Bare Ground in Herb Stratum		
Remarks: * Dense Shade, leaf litter		
"Utic shade, real littler		

US Army Corps of Engineers

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Profile Description: (Describe to the dep	th needed to document the indicator or confirm	n the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-5 10YR 2/1 100		Stand
5-24+ (0 VR 3/) 100		GrLS Dredge Spoils > Stells
		and marine debris
	· · · · · · · · · · · · · · · · · · ·	MACINTAL OFFIC
		2
Type: C=Concentration, D=Depletion, RM Hydric Soil Indicators: (Applicable to all	Reduced Matrix, CS=Covered or Coated Sand G L PRs, uploss of herwise noted)	rains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10) Red Perent Meterial (TE2)
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) Loamy Gleyed Matrix (F2) 	Other (Explain in Remarks)
 Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) 	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Type:		
Depth (inches):		Hydric Soll Present? Yes No 📈
Remarks:		
Nomana.		
HYDROLOGY		
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one require	d: check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)		ots (C3) Geomorphic Position (D2)
Algal Mat or Crust (B4)	Oxidized Kinzdspheres along Living Ko Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
	Recent Iron Reduction in Tilled Soils (C	
Iron Deposits (B5)	Recent from Reduction in Third Solis (C Stunted or Stressed Plants (D1) (LRR /	
Surface Soil Cracks (B6)		Frost-Heave Hummocks (D7)
Inundation Visible on Aerial Imagery (B		Flost-fleave Hummocks (D7)
Sparsely Vegetated Concave Surface	D0)	
Field Observations:		
Surface Water Present? Yes	No Depth (inches):	
Water Table Present? Yes	No Depth (inches):	\vee
	No A Depth (inches): M/A Wei	land Hydrology Present? Yes No 🔼 🛛
(includes capillary fringe)	onitoring well, aerial photos, previous inspections)	if evailable:
Describe Recordeo Data (siream gauge, m	unturing weit, aerial protos, previous inspectionaly	
	*	
Remarks:		

roject/Site: Humboldt Bay Harbor District-RMMT	City/	County: Humboldt		Sampling Date:
oplicant/Owner: Humboldt Bay Harbor District			State: CA	Sampling Point: TP19 UP
vestigator(s); Joseph Saler, Cindy Wilcox	Secti	ion, Township, Rang		
andform (hillslope, terrace, etc.) Reninsula spit	Loca			ICOVE Slope (%): 0-1
ubregion (LRR): A, MLRA-4B	Lat: 40.9			
oil Map Unit Name: 1014-Whan and An	thraftic X.	evorthents	asor. 1-20/0NWI class	sification: none
e climatic / hydrologic conditions on the site typical for t				
re Vegetation, Soil, or Hydrology	-			
re Vegetation, Soil, or Hydrology			ded, explain any ans	
UMMARY OF FINDINGS – Attach site ma				
			cations, transet	ins, important reatures, etc
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes		Is the Sampled A	Area	
Wetland Hydrology Present? Yes		within a Wetland	d? Yes_	No <u>X</u>
Remarks: WETS normal rainfall		1 - 1 - 1	10	1 (
updated to reflect change	ed condifi	ons at 11	19 on alcohin	to ot Minor thee
· · · · · · · · · · · · · · · · · · ·				remard.
EGETATION – Use scientific names of pla	ints.			
Free Stratum (Plot size: 385)		minant Indicator	Dominance Test we	1
	<u></u>		Number of Dominan That Are OBL, FACV	
2				
3			Total Number of Dor Species Across All S	
4			Percent of Dominant	Species 231
Sapling/Shrub Stratum (Plot size: 5')		otal Cover	That Are OBL, FAC	
Pubus unsinus	15 V	FACU	Prevalence Index w	
BADy orney's cur	<u> </u>	FAC,	Total % Cover o	
s. Morella Californica		FACIN		x 1 = x 2 =
I				x 2 =
				x4 =
Herb Stratum (Plot size: 5')	=To	otal Cover 99	12	x 5 =
Melilotus indicus	8	PACY	Column Totals:	(A)(B)
Popertucellia VISCOSO	<u> </u>	FAC	Prevalence Ind	lex = B/A =
totus conniculation	15	<u>+AC</u>	Hydrophytic Vegeta	5
Geranium dissection	- 20-	NL	1 - Rapid Test fo	or Hydrophytic Vegetation
. Holaw Janatin Cinsign, vintore	$-\frac{30}{30}$ $\frac{1}{v}$	TACIL	2 - Dominance 1	
TIMEN Exterins		FACW	3 - Prevalence l	
Helminthothera echoides		FAC		al Adaptations ¹ (Provide supporting arks or on a separate sheet)
Sonchus overaceus	5	UPL	5 - Wetland Non	
o. Briza maxima	1	NL		Irophytic Vegetation ¹ (Explain)
1,				soil and wetland hydrology must
5'	113_= Tot	tal Cover 🚄 👘	De present, unless d	isturbed or problematic.
		20.4		
Voody Vine Stratum (Plot size: 5'			Hydrophytic	
			Vegetation	
	= Tot		Vegetation Present?	Yes No

i.

Western Mountains, Valleys, and Coast - Version 2.0

4

ofile Description: (Describe to the d	epth needed to document the indicator or confirm	the absence of indicators.)
epthMatrix	Redox Features	
nches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
		· · · · · · · · · · · · · · · · · · ·
pe: C=Concentration, D=Depletion, R	M=Reduced Matrix, CS=Covered or Coated Sand Gra	ains. ² Location: PL=Pore Lining, M=Matrix.
dric Soil Indicators: (Applicable to a		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3) Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redax Depressions (F8)	unless disturbed or problematic.
strictive Layer (if present):		
Туре:		
1300.		I had the Only Descent On Man
Depth (inches):		Hydric Soil Present? Yes No
	e RMT 2 TP19	Hydric Soil Present? Yes No
remarks: US DROLOGY	e RMT 2 TP19	
Processing		
emarks: US		Secondary Indicators (2 or more required)
Permarks: VS- VDROLOGY Vetland Hydrology Indicators:		Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
DROLOGY Torology Indicators: Timary Indicators (minimum of one requ	ired; 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)
Permarks: DROLOGY (etland Hydrology Indicators: rimary Indicators (minimum of one requ Surface Water (A1)	ired; 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)
TOROLOGY Tetland Hydrology Indicators: Timary Indicators (minimum of one requination of the second	ired; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait 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)
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one requ Surface Water (A1) High Water Table (A2) Saturation (A3)	ired; check all that apply) — Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) — Sait 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 (C9)
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one requ _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1)	ired: 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 Roc	<u>Secondary Indicators (2 or more required)</u> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2)
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one requ Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	ired; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4)	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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
emarks: DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one requ Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	ired; 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one requined) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	ired; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4)	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 (C9) ofts (C3) Geomorphic Position (D2) Shailow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one requinant 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)	ired; 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
marks: DROLOGY etland Hydrology Indicators: mary Indicators (minimum of one requination of the requinatio	ired; 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A (B7) Other (Explain in Remarks)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
PROLOGY etland Hydrology Indicators: imary Indicators (minimum of one requ 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	ired; 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A (B7) Other (Explain in Remarks)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ofts (C3) Geomorphic Position (D2) Shailow Aquitard (D3) FAC-Neutral Test (D5) Raised Artt Mounds (D6) (LRR A)
TOROLOGY etland Hydrology Indicators: imary Indicators (minimum of one_requSurface 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 ImagerySparsely Vegetated Concave Surface eld Observations:	ired; 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A (B7) Other (Explain in Remarks)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ofts (C3) Geomorphic Position (D2) Shailow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
TOROLOGY Tetland Hydrology Indicators: Timary Indicators (minimum of one reque 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 Ind Observations: Unface Water Present? Yes	ired: check all that apply)	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 (C9) ofts (C3) Geomorphic Position (D2) Shailow Aquitard (D3) FAC-Neutral Test (D5) Raised Artt Mounds (D6) (LRR A)
TOROLOGY Tetland Hydrology Indicators: Timary Indicators (minimum of one_reque	ired: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A (B7) Other (Explain in Remarks) e (B8) No Depth (inches):	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 (C9) ofts (C3) Geomorphic Position (D2) Shailow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
TOROLOGY Tetland Hydrology Indicators: Timary Indicators (minimum of one reque	ired: check all that apply)	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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) S) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
TOROLOGY Tetland Hydrology Indicators: Timary Indicators (minimum of one reque	ired: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A (B7) Other (Explain in Remarks) e (B8) No Depth (inches): No Depth (inches):	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) S) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
TOROLOGY Tetland Hydrology Indicators: rimary Indicators (minimum of one reque 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 ield Observations: urface Water Present? Yes fater Table Present? Yes aturation Present? Yes aturation Present? Yes ncludes capillary fringe) escribe Recorded Data (stream gauge,	ired: check all that apply)	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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one requ 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 eld Observations: urface Water Present? Yes fater Table Present? Yes aturation Present? Yes escribe Recorded Data (stream gauge, emarks:	ired: check all that apply)	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 (C9) Stailow Aquitard (D3) Geomorphic Position (D2) Shailow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No

WETLAND DETERMINATION DATA FOR	RM – Western Mour	ntains, Valleys, and Coast Region , ,
Project/Site: RMT 1	City/County: Hunb	1dt Courty Sampling Date: 8/13/20
Applicant/Owner: Humbeldt Bay Harbor District	City/County	State: CA Sampling Point: TP 20
Investigator(s): Sam Polly, Joseph Saler	Section Township Bar	ge Sec. 15, 16, +21, T5N, R1W, HBM
Landform (hillslope, terrace, etc.): Bayside fill		convex, none): Concave Slope (%): 0-1
Subregion (LRR): A, MLRA - HB Lat: 4		Long: -124. 1895 7° Datum: WG584
		0-2% NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of y	. /	
Are Vegetation, Soil, or Hydrology significanti	,	Normal Circumstances" present? Yes No X
Are vegetation, soil, or Hydrology aturally p	•	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showin		
Hydrophytic Vegetation Present? Yes No	<u>3 3 P 1</u>	
Hydric Soil Present? Yes No	Is the Sampled	
Wetland Hydrology Present? Yes X No	within a Wetlan	d? Yes No 🔨
Remarks: WETS data diver than normal	1.1	1
* Stormwater intrastructure present, including	ng weirs, chech	dans, pipe, or book and speers.
VEGETATION – Use scientific names of plants.		in the start of th
Absolute		Dominance Test worksheet:
Tree Stratum (Plot size:) <u>% Cove</u>	r <u>Species?</u> <u>Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC:
2.		
3		Total Number of Dominant Species Across All Strata:
4		Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 5ft)	= Total Cover	That Are OBL, FACW, or FAC: (A/B)
1. Salix hotheriana 38	FACU	Prevalence Index worksheet:
2.		Total % Cover of:Multiply by:
3		OBL species x 1 =
4		FACW species x 2 = FAC species x 3 =
5		FAC species x 3 = FACU species x 4 =
Herb Stratum (Plot size: 544)	= Total Cover	UPL species x 5 =
1. Alisma lances latim 12	V OBL	Column Totals: (A) (B)
2. Typha latitolia 20	V. OBL	Prevalence Index = B/A =
3. Persicatia Maculasa 15	FACW	Hydrophytic Vegetation Indicators:
4. Pseulougraphalium lutevalbum 1	- FACW	1 - Rapid Test for Hydrophytic Vegetation
5. Sonchus Okraceus 1	UPL	2 - Dominance Test is >50%
6. Epilbium ciliatum 1	FACW	3 - Prevalence Index is ≤3.0 ¹
7. Gyperne eragrostis 4	+ACW	 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
s. Hapechaeris Iradicata 1 s. Hardenn Marinun 1	FAC	5 - Wetland Non-Vascular Plants'
	- <u></u>	Problematic Hydrophytic Vegetation ¹ (Explain)
11.		¹ Indicators of hydric soil and wetland hydrology must
	= Total Cover 23	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	- 11.2	
1		Hydrophytic
2		Vegetation Present? Yes No No
% Bare Ground in Herb Stratum 44%	= Total Cover	· · · · · · · · · · · · · · · · · · ·
Remarks:		

.

			Camping Forth.
Profile Description: (Description:	e to the depth needed to document the i	indicator or confirm the ab	sence of indicators.)
Depth Matrix	Redox Feature	S	
(inches) Color (moist)	% Color (moist) %	Type ¹ Loc ² Text	
0-3 10 VR 2/1	00	0	Ordanic
3-12 754025/	2 100	h	
JIC 1.51 (- to Inviolo		- All all Malay have the
12-20 2.54 2.5/	40 10YRUL 30	CMO	Reduced Matrix, large volum
20-74+ N3/		18	indecomposed wordelips.
2000 110/			
		· <u> </u>	
		· · ·	
			Zi sestion. Di - Dere Lisies Mathéric
	epletion, RM=Reduced Matrix, CS=Covered		² Location: PL=Pore Lining, M=Matrix.
Hydric Soll Indicators: (App	icable to all LRRs, unless otherwise not	ed.) In	idicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)		_ 2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)		Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F	1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2		Other (Explain in Remarks)
Depleted Below Dark Sur			,
Thick Dark Surface (A12)	Redox Dark Surface (F6)	3 1	ndicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1			wetland hydrology must be present,
		()	unless disturbed or problematic.
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)		uniess disturbed of problematic.
Restrictive Layer (If present)			
Туре:			
Depth (inches):		Hydr	ic Soil Present? Yes No
Remarks: 6 1			
includers. () barit of	There decoulared lake	and Chills trans	adjacent annonill Lailer
O roman	they anopare w	the crip main o	na free pulpinan teichig.
	of maldid at 12:	dar	V V V
- Moeron bes	likely decomposed we ed wood chips at 12ic	che.	
	MA		
HYDROLOGY			
Wetland Hydrology Indicato	S:		
	f one required; check all that apply)		Secondary Indicators (2 or more required)
A STATE OF			
Surface Water (A1)	Water-Stained Leav	/es (B9) (except	X Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A,	and 4B)	4A, and 4B)
X Saturation (A3)	Salt Crust (B11)		👝 Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrate	es (B13)	X Dry-Season Water Table (C2)
	Hydrogen Sulfide O		Saturation Visible on Aerial Imagery (C9)
Sediment Deposits (B2)			
Drift Deposits (B3)		eres along Living Roots (C3)	
Algal Mat or Crust (B4)	Presence of Reduce		Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduct	ion in Tilled Soils (C6)	X FAC-Neutral Test (D5)
Surface Soil Cracks (B6)		Plants (D1) (LRR A)	Raised Ant Mounds (D6) (LRR A)
			Frost-Heave Hummocks (D7)
Inundation Visible on Aeri		und her	
X Sparsely Vegetated Conc	IVE SURACE (BB)	r	
Field Observations:		1110	
Surface Water Present?	Yes No X_ Depth (inches):	N/A	
Water Table Present?	Yes X No Depth (inches):	2.5	×
		Suctore .	
Saturation Present?	Yes X No Depth (inches):	Wetland Hy	drology Present? Yes 🔼 No
(includes capillary fringe)	am gauge, monitoring well, aerial photos, p	revious inspections), if evails	able:
	im gauge, monitoring weil, aenai priotos, p	revious inspections), il avalla	1016.
Remarks:			

Project/Site: RMT 1 City/County: Humbol 4 Candy Sampling Date: 8/13/ Applicant/Owner: 1000 4 Bay Harbar District State: A Sampling Point: TP 2 Investigator(s): Sam Poly, Joseph Paler Section, Township, Range: Sector, 5, 16, +21, 75N, R1W, Landform (hillslope, terrace, etc.): Bayside Fill Local relief (concave, convex, none): Concave Slope (%): Subregion (LRR): A HARA - HB Lat: 40, 80(915 Long: -124, 191134 Datum: W6 Soil Map Unit Name: 014 - Urban Land - Antroactic Xeror Hents Assn. 0-2% NWI classification: None Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.) Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)	/20
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features	16584 No X
Hydrophytic Vegetation Present? Yes No Is the Sampled Area Hydric Soil Present? Yes No No No Wetland Hydrology Present? Yes No No No	
Remarks: Wetz data divertien normal Better Dessiled in OHWM Sheet#1 is mostly wood waste.	1162
VEGETATION – Use scientific names of plants.	
Tree Stratum (Plot size: 30 4) Absolute % cover Dominant Indicator Dominance Test worksheet: 1. Morela (Alifer Arica Status Status Number of Dominant Species Air 2. Satix hooker and Status FACW FACW Total Number of Dominant Species Total Number of Dominant Species Air 3.	(B) (B) (B)
Woody Vine Stratum (Plot size: 1.	

Profile Description: Thescribe to the dep	th needed to document the indicator or confirm	the absence	e of indicators.)
Depth Matrix	Redox Features		
(inches) Color (mojst) %	Color (moist) % Type ¹ Loc ²	Texture	Remarks
0-10 10YR 3/2 100		LS	Some % or optic matter + root
10-74+10482/2 166		0	Wood Clips & Sawdust
TO EL TUTALES TUT			v see up so year
			-
		. 2.	
Type: C=Concentration, D=Depletion, RM Hydric Soil Indicators: (Applicable to all	Reduced Matrix, CS=Covered or Coated Sand Gra		cation: PL=Pore Lining, M=Matrix. ors for Problematic Hydric Soils ³ :
Histosol (A1) Histic Epipedon (A2)	Sandy Redox (S5) Stripped Matrix (S6)		m Muck (A10) d Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)		y Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		aer (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)		
Thick Dark Surface (A12)	Redox Dark Surface (F6)	^a Indicati	ors of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		and hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unle	ss disturbed or problematic.
Restrictive Layer (if present):			1.1
Туре:			X
Depth (inches):		Hydric Soi	I Present? Yes No
Remarks:			
Wetland Hydrology Indicators:			
Wetland Hydrology Indicators: Primary Indicators (minimum of one required			andary Indicators (2 or more required)
Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one required</u> Surface Water (A1)	Water-Stained Leaves (B9) (except		Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	X	Nater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	X	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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) 	X	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 required)	 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 (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo	15 (C3)	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)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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 Roo Presence of Reduced Iron (C4)	ts (C3)	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)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	ts (C3)	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)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A)	ts (C3)	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)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 7) Other (Explain in Remarks)	ts (C3)	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)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) 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 (B Sparsely Vegetated Concave Surface (Concave Surface)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 7) Other (Explain in Remarks)	ts (C3)	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)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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 (B Sparsely Vegetated Concave Surface (Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (7) Other (Explain in Remarks) B8)	ts (C3)	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)
Primary Indicators (minimum of one required	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) T) Other (Explain in Remarks) B8) No	ts (C3)	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)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) B8) No Depth (inches): Depth (inches):	ts (C3)	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 Hydrology Indicators: Primary Indicators (minimum of one required	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) B8) No Depth (inches): Depth (inches):	ts (C3)	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 Hydrology Indicators: Primary Indicators (minimum of one required 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 (B Sparsely Vegetated Concave Surface (Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) 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 Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) B8) No Depth (inches): Depth (inches):	ts (C3) and Hydrolog	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 Hydrology Indicators: Primary Indicators (minimum of one required	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) B8) No Depth (inches): N/A Depth (inches): N/A Depth (inches): N/A Depth (inches): N/A	ts (C3) and Hydrolog	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 Hydrology Indicators: Primary Indicators (minimum of one required	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) B8) No Depth (inches): N/A Depth (inches): N/A Depth (inches): N/A Depth (inches): N/A	ts (C3) and Hydrolog	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 Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) B8) No Depth (inches): N/A Depth (inches): N/A Depth (inches): N/A Depth (inches): N/A	ts (C3) and Hydrolog	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 Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) B8) No Depth (inches): N/A Depth (inches): N/A Depth (inches): N/A Depth (inches): N/A	ts (C3) and Hydrolog	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 Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) B8) No Depth (inches): NA Depth (inches): NA No Depth (inches): NA Wetta	ts (C3) and Hydrolog	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 DATA FORM -	Western Mountains, Valleys, and Coast Region
Project/Site: RMT1 City/C	County: Hum boldt Sampling Date: 8/13/20 State: CA Sampling Point: TP 22
Investigator(s): San Poly, Joseph Saler Secti	on, Township, Range: Secs. 5, 16,+21, TSN, RIW, HBM
	I relief (concave, convex, none): Carcave Slope (%): 0-1
Subregion (LRR): A-MLKA, 48 Lat: 40.0 Soil Map Unit Name: 04-Urban Long - Anthrophic Xeror	HERTS ADDA. 0-2% NWI classification: NORE
Are climatic / hydrologic conditions on the site typical for this time of year?	
Are Vegetation, Soil, or Hydrology significantly distu	bed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problem	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing san	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	Is the Sampled Area within a Wetland? Yes No
Remarks: Western most 4 Culvert outle	of ~ 1007d from old Greens office
- 3 large culverts empty into suale.	+ Unde composed will westerwood in soil
VEGETATION - Use scientific names of plants.	ninant Indicator Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft) % Cover Spe 1. Satix hosheriana 80	and the second se
2. Salix losiondra 15	Total Number of Dominant
3	Species Across All Strata: (B)
	otal Cover 47.5 Percent of Dominant Species That Are OBL, FACW, or FAC:
Sapling/Shrub Stratum (Plot size: 777) 1. RUDUS AMMIACW 15	FAC Prevalence Index worksheet:
2	<u>Total % Cover of:</u> <u>Multiply by:</u> OBL species x 1 =
3	FACW species x 2 =
5	FAC species x 3 =
Herb Stratum (Plot size:)	bital Cover FACU species x 4 = UPL species x 5 =
	Column Totals: (A) (B)
2	Prevalence Index = B/A =
<u>.</u>	Hydrophytic Vegetation Indicators:
5	2 - Dominance Test is >50%
6	3 - Prevalence Index is ≤3.0 ¹
7 8	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
9	5 - Wetland Non-Vascular Plants ¹
10	Problematic Hydrophytic Vegetation ¹ (Explain)
11	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	tal Cover
1	Hydrophytic Vegetation
	tal Cover Vegetation Present? Yes No
% Bare Ground in Herb Stratum 100%	

	depth needed to document the indicator or confirm	the absence of indicators.)
Depth <u>Matrix</u>	Redox Features	Touture
(inches) Color (moist) %	<u>Color (moist)</u> <u>%</u> <u>Type</u> ¹ <u>Loc</u> ²	Remarks
0-9 10/R2/1, 100		
9-17 56425/1100	~	15 1 11
17-74+ INVR 2/2 10x		LS 70% Saw dist/wordy dep
ILT. WINDE W		TO - 1020 Daw and 1000 och
		1
·		
	RM=Reduced Matrix, CS=Covered or Coated Sand Gr	ains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (E1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	— · · · ·	31-12-4
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:		X
Depth (inches):		Hydric Soil Present? Yes No
Remarks:		
4		
HYDROLOGY		
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one requ	uired; check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except	X Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
		Dry-Season Water Table (C2)
Water Marks (B1)	Aquatic Invertebrates (B13)	
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along Living Roo	ots (C3) X Geomorphic Position (D2)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soils (C6	i) X FAC-Neutral Test (D5)
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRR A)) Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery		Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface		_
	ce (B8)	
10731A	ce (B8)	
Field Observations:		
10731A		
Field Observations:		$\mathbf{\mathbf{\vee}}$
Field Observations: Surface Water Present? Yes	No Depth (inches):	and Hydrology Present? Yes No
Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? (includes capillary fringe)	No Depth (inches): N/A No Depth (inches): Hin No Depth (inches): 9in Wetta	
Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? (includes capillary fringe)	No Depth (inches):	
Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? (includes capillary fringe)	No Depth (inches): N/A No Depth (inches): Hin No Depth (inches): 9in Wetta	
Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? (includes capillary fringe)	No Depth (inches): N/A No Depth (inches): Hin No Depth (inches): 9in Wetta	
Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge	No Depth (inches): N/A No Depth (inches): Hin No Depth (inches): 9in Wetta	
Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge	No Depth (inches): N/A No Depth (inches): Hin No Depth (inches): 9in Wetta	
Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge	No Depth (inches): N/A No Depth (inches): Hin No Depth (inches): 9in Wetta	
Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge	No Depth (inches): N/A No Depth (inches): Hin No Depth (inches): 9in Wetta	

ologists, Inc. oject/Site: Humboldt Bay Harbor District-RMMT	City/Co	unter Humboldt		Sampling Data 4/29/2
plicant/Owner: Humboldt Bay Harbor District				_ Sampling Date: Sampling Point:
vestigator(s): Joseph Saler, Cindy Wilcox		I, Township, Range		
ndform (hillslope, terrace, etc.): Bayside				ave 5
Ibregion (LRR): A, MLRA-4B	Lat: <u>40, 82</u>			a. 144 d
il Map Unit Name: 1009 - Hydraguents	chlassent and kit Cil	stong caling		19331 Datum: WGS 84
e climatic / hydrologic conditions on the site typ				
e Vegetation, Soil, or Hydrolog				" present? Yes 🗶 No 🔄
e Vegetation, Soil, or Hydrolog	y naturally problemati	ic? (If need)	ed, explain any answ	vers in Remarks.)
UMMARY OF FINDINGS – Attach s	ite map showing samp	ling point loc	ations, transect	ts, important features, e
lydrophytic Vegetation Present? Yes _	X No			
lydric Soil Present? Yes _		is the Sampled Ar	ea 💦	×
Vetland Hydrology Present? Yes _		within a Wetland?		• No
Perca vater and a fainfall severe	regional draught	. Wetland #	2 1	0 - CA.
ALCORE A FETIAN	Ne Wettend It'All	SI NI IN DA	HAN LENDIO	n portions of the
vetland supports diverse satt		N MYO HAD	N	
EGETATION - Use scientific names				
ree Stratum (Plot size: <u>30'</u>)	Absolute Domin <u>% Cover</u> <u>Speci</u>	es2 Statue	ominance Test wo	
			lumber of Dominant hat Are OBL, FACW	
			otal Number of Dom pecies Across All St	
·		p	ercent of Dominant :	Spacios
apling/Shrub Stratum (Piot size: 5	= Tota		hat Are OBL, FACW	
	/	P	revalence Index wo	orksheet:
			Total % Cover of	Multiply by:
*				x 1 =
		the second se		x 2 =
·				x 3 =
erb Stratum (Rlot size: 5')	= Tota	i Gaver i		x 4 = x 5 =
Sparting desitiona	5			(A) (B
Samer cornes a	40 1	OBL		
Salcon a portica	3	001	Prevalence Inde lydrophytic Vegetat	ex = B/A =
Limpinim californicum	1	nu .		r Hydrophytic Vegetation
Disticials spirata	5		2 - Dominance Te	
\			3 - Prevalence In	
				Adaptations ¹ (Provide supporti
				ks or on a separate sheet)
			_ 5 - Wetland Non-'	
			 Problematic Hvdr 	ophytic Vegetation ¹ (Explain)
0				
0		1	ndicators of hydric s	oil and wetland hydrology must sturbed or problematic.
 	54 = Total	¹	ndicators of hydric s	oil and wetland hydrology must
0	54 = Total	Caver 21/	ndicators of hydric s e present, unless dis	oil and wetland hydrology must
0 1 /oody Vine Stratum (Plot size:	54 = Total	Cover 21/	ndicators of hydric s e present, unless dis ydrophytic	oil and wetland hydrology must sturbed or problematic.
0 1 /oody Vine Stratum (Plot size:	54 = Total	Cover 21/	ndicators of hydric s e present, unless dis ydrophytic	oil and wetland hydrology must

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i.

Consulting Enginee & Geologists, Inc Sampling Point: 123

2 Y

Profile Description: (Describ	o to the departit	eeded to document the monoator o		
Depth Matrix		Redox Features	<u> </u>	
(inches) Color (moist)	%(Color (moist) % Type ¹	Loc ² Te	exture Remarks
0-11 N2.56	_ 100 _			<u> </u>
1-14+ 2.5V 3/2	100		M	45
<u> </u>				
-				
· · · · · · · · · · · · · · · · · · ·				
·				
				2
		duced Matrix, CS=Covered or Coated	Sand Grains.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: (Appl				-
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)	Other (Explain in Remarks)
X Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)		Other (Explain in Remarks)
Depleted Below Dark Surfa	ace (A11)	Depleted Matrix (F3) 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) Restrictive Layer (if present)			1	
	•			
Type:		-	н	vdric Soil Present? Yes 📈 No
Depth (inches):		_		
Remarks:				
	*			
HYDROLOGY				
	rs:			
Wetland Hydrology Indicator		neck all that apply)		Secondary Indicators (2 or more required)
Wetland Hydrology Indicator			voont	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MI BA 1 2
Wetland Hydrology Indicator Primary Indicators (minimum c Surface Water (A1)		Water-Stained Leaves (B9) (e	xcept	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2)		Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B)	xcept	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3)		Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	xcept	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	xcept	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		 Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along	Living Roots (C	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		 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 (C4) 	Living Roots (C	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrology Indicator Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along	Living Roots (C	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicator Primary Indicators (minimum of 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) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Tiller Stunted or Stressed Plants (D 	Living Roots (C -) d Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrology Indicator Primary Indicators (minimum of 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)	of one required; c	 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 (C4 Recent Iron Reduction in Tiller 	Living Roots (C -) d Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicator Primary Indicators (minimum of 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)	of one required; cl	 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 (C4 Recent Iron Reduction in Tillet Stunted or Stressed Plants (D Other (Explain in Remarks) 	Living Roots (C -) d Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicator Primary Indicators (minimum of 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 Aeri	of one required; cl	 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 (C4 Recent Iron Reduction in Tillet Stunted or Stressed Plants (D Other (Explain in Remarks) 	Living Roots (C -) d Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicator Primary Indicators (minimum of 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 Aeri Sparsely Vegetated Conc	of one required; cl	 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 (C4 Recent Iron Reduction in Tillet Stunted or Stressed Plants (D Other (Explain in Remarks) 	Living Roots (C -) d Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicator Primary Indicators (minimum of 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 Aeri Sparsely Vegetated Conc Field Observations: Surface Water Present?	of one required; cl al Imagery (B7) ave Surface (B8) Yes X No	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 (C4 Recent Iron Reduction in Tiller Stunted or Stressed Plants (D Other (Explain in Remarks)	Living Roots (C l) d Soils (C6) 1) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicator Primary Indicators (minimum of 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 Aeri Sparsely Vegetated Conc Field Observations: Surface Water Present? Water Table Present?	al Imagery (B7) ave Surface (B8) Yes No Yes No	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 (C4 Recent Iron Reduction in Tiller Stunted or Stressed Plants (D Other (Explain in Remarks)	Living Roots (C I) d Soils (C6) 1) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicator Primary Indicators (minimum of 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 Aeri Sparsely Vegetated Conce Field Observations: Surface Water Present? Water Table Present? Saturation Present? Saturation Present?	al Imagery (B7) ave Surface (B8) Yes No Yes No Yes No	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 (C4 Recent Iron Reduction in Tiller Stunted or Stressed Plants (D Other (Explain in Remarks) Depth (inches): 0.5 Depth (inches): 5005000000000000000000000000000000000	Living Roots (C l) d Soils (C6) 1) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Hydrology Present? Yes No
Wetland Hydrology Indicator Primary Indicators (minimum of 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 Aeri Sparsely Vegetated Conce Field Observations: Surface Water Present? Water Table Present? Saturation Present? Saturation Present?	al Imagery (B7) ave Surface (B8) Yes No Yes No Yes No	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 (C4 Recent Iron Reduction in Tiller Stunted or Stressed Plants (D Other (Explain in Remarks)	Living Roots (C l) d Soils (C6) 1) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Hydrology Present? Yes No
Wetland Hydrology Indicator Primary Indicators (minimum of 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 Aeri Sparsely Vegetated Conce Field Observations: Surface Water Present? Water Table Present? Saturation Present? Saturation Present?	al Imagery (B7) ave Surface (B8) Yes No Yes No Yes No	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 (C4 Recent Iron Reduction in Tiller Stunted or Stressed Plants (D Other (Explain in Remarks) Depth (inches): 0.5 Depth (inches): 5005000000000000000000000000000000000	Living Roots (C l) d Soils (C6) 1) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Hydrology Present? Yes No
Primary Indicators (minimum of 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 Aeri Sparsely Vegetated Conc Field Observations: Surface Water Present? Water Table Present? Water Table Present? Saturation Present?	al Imagery (B7) ave Surface (B8) Yes No Yes No Yes No	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 (C4 Recent Iron Reduction in Tiller Stunted or Stressed Plants (D Other (Explain in Remarks) Depth (inches): 0.5 Depth (inches): 5005000000000000000000000000000000000	Living Roots (C l) d Soils (C6) 1) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Hydrology Present? Yes No
Wetland Hydrology Indicator Primary Indicators (minimum of 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 Aeri Sparsely Vegetated Conce Field Observations: Surface Water Present? Water Table Present? Water Table Present? Saturation Present? Describe Recorded Data (stree)	al Imagery (B7) ave Surface (B8) Yes No Yes No Yes No	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 (C4 Recent Iron Reduction in Tiller Stunted or Stressed Plants (D Other (Explain in Remarks) Depth (inches): 0.5 Depth (inches): 5005000000000000000000000000000000000	Living Roots (C l) d Soils (C6) 1) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Hydrology Present? Yes No
Wetland Hydrology Indicator Primary Indicators (minimum of 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 Aeri Sparsely Vegetated Conce Field Observations: Surface Water Present? Water Table Present? Saturation Present? Includes capillary fringe) Describe Recorded Data (stree	al Imagery (B7) ave Surface (B8) Yes No Yes No Yes No	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 (C4 Recent Iron Reduction in Tiller Stunted or Stressed Plants (D Other (Explain in Remarks) Depth (inches): 0.5 Depth (inches): 5005000000000000000000000000000000000	Living Roots (C l) d Soils (C6) 1) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Hydrology Present? Yes No
Wetland Hydrology Indicator Primary Indicators (minimum of 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 Aeri Sparsely Vegetated Conce Field Observations: Surface Water Present? Water Table Present? Saturation Present? Includes capillary fringe) Describe Recorded Data (stree	al Imagery (B7) ave Surface (B8) Yes No Yes No Yes No	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 (C4 Recent Iron Reduction in Tiller Stunted or Stressed Plants (D Other (Explain in Remarks) Depth (inches): 0.5 Depth (inches): 5005000000000000000000000000000000000	Living Roots (C l) d Soils (C6) 1) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Hydrology Present? Yes No

alting Engineers WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

: Geologists, Inc.) Project/Site: <u>Humboldt Bay Harbor District-RMMT</u>	City/County: Humboldt		Sampling Date: 4/29/22
Applicant/Owner: Humboldt Bay Harbor District	Otty/Odditty:	_ State: CA	Sampling Point: 1924
Investigator(s): Joseph Saler, Cindy Wilcox	Section, Township, Range:		div 1
Landform (hillslope, terrace, etc.):	Local relief (concave, conve	ex, none): <u>Nor</u>	Slope (%): <u>40</u>
Subregion (LRR): A, MLRA-4B	at: 40.823726 Lor	ng: - 124. 174	3 49 Datum: WGS 84
Soil Map Unit Name: 1009-Hydraquents-Wassents Mu	thy SiL strongsaline 0-3%	NWI classifi	cation: None
Are climatic / hydrologic conditions on the site typical for this time			
Are Vegetation, Soil, or Hydrology signif	icantly disturbed? Are "Norn	nal Circumstances"	present? Yes X No
Are Vegetation, Soil, or Hydrology natura	ally problematic? (If needed	l, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS - Attach site map sho	wing sampling point locat	tions, transects	s, important features, etc.
Hydrophytic Vegetation Present? Yes No			

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No No	Is the Sampled Area within a Wetland?	Yes No
Remarks: WETS normal rainfall				

VEGETATION - Use scientific names of plants.

201	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30'	<u>% Cover</u>	Species?	Status	Number of Dominant Species
1	. <u> </u>			That Are OBL, FACW, or FAC; (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4.				
4		= Total Co	wer	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 5'		10101-00		That Are OBL, FACW, or FAC: (A/B)
1				Prevalence Index worksheet:
2				Total % Cover of:Multiply by:
				OBL species x 1 =
3				FACW species x 2 =
4	1			FAC species x 3 =
5				FACU species x 4 =
U. t. O		= Total Co	ver	UPL species x 5 =
Herb Stratum (Plot size: 5')	30		NL	Column Totals: (A) (B)
1. Briza Makima	-11-			
2. Bromus diandrus	1		NL	Prevalence Index = B/A =
3. Parappelis incurva	<u> </u>	<u> </u>	FACU	Hydrophytic Vegetation Indicators:
4 Distichlis Spicata	10		FACW	1 - Rapid Test for Hydrophytic Vegetation
5. Artwexantim adoration	2	1.2.	FACU	2 - Dominance Test is >50%
5				3 - Prevalence Index is ≤3.0 ¹
7				
8				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
				5 - Wetland Non-Vascular Plants ¹
9				
10				Problematic Hydrophytic Vegetation ¹ (Explain)
11	AL			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	26	= Total Cov	ver 20	be present, unless distanced or problematic.
Woody Vine Stratum (Plot size:)				
1,				Hydrophytic
2	~			Vegetation Present? Yes No
杜门		= Total Cov	/er	Present? Yes No
% Bare Ground in Herb Stratum				
Remarks:				
baresona slope				

ofile Description: (Describe to the d	epth needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix	Redox Features	
$\frac{(\text{inches})}{1-27} \frac{(\text{Color (moist)})}{10 \text{ VR} 4/2} \frac{\%}{100}$	Color (moist) % Type ¹ Loc ²	SRemarks
Type: C=Concentration, D=Depletion, R	M=Reduced Matrix, CS=Covered or Coated Sand Gra	ains. ² Location: PL=Pore Lining, M=Matrix.
lydric Soil Indicators: (Applicable to a	all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S5)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	3
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7) Redox Depressions (F8)	wetland hydrology must be present, unless disturbed or problematic.
Sandy Gleyed Matrix (S4) Restrictive Layer (if present):		
		1
Type:		
		Lindria Call Dreaset? Vac. No. V
Depth (inches):		Hydric Soil Present? Yes No
Depth (inches):		Hydric Soil Present? Yes No _X
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators:		
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requ		Secondary Indicators (2 or more required)
Depth (inches):	Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
Depth (inches):	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):	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	<u>Secondary Indicators (2 or more required)</u> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Depth (inches):	 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)
Depth (inches):	 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 (C9)
Depth (inches):	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo 	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 (C9) ots (C3) Geomorphic Position (D2)
Depth (inches):	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) 	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 (C9) ets (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Depth (inches):	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) 	Secondary Indicators (2 or more required)
Depth (inches):	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) 	Secondary Indicators (2 or more required)
Depth (inches):	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks)	Secondary Indicators (2 or more required)
Depth (inches):	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks)	Secondary Indicators (2 or more required)
Depth (inches):	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) te (B8)	Secondary Indicators (2 or more required)
Depth (inches):	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): NA	Secondary Indicators (2 or more required)
Depth (inches):	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): NA Depth (inches): NA	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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Depth (inches):	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): NA Depth (inches): NA	Secondary Indicators (2 or more required)
Depth (inches):	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Secondary Indicators (2 or more required)
Depth (inches):	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Secondary Indicators (2 or more required)

Ê.

oject/Site: Humboldt Bay Harbor District-RMMT	City	County: Humboldt		_ Sampling Date:
plicant/Owner: Humboldt Bay Harbor District	_		State: CA	_ Sampling Point: <u>TP 25</u>
vestigator(s): Joseph Saler, Cindy Wilcox	Sec	tion, Township, Ra	nge:	
Indform (hillslope, terrace, etc.): Bayside fil	Loc	al relief (concave,	convex, none):	R Slope (%): 0
Ibregion (LRR): <u>A, MLRA-4B</u>	Lat: 40,	823340	Long: -124.17	5161 Datum: WGS 84
bil Map Unit Name: 1014 - Uy ban land - Anti	hraltic Xevorthe	ints assoc. 0-2	10 slove NWI classi	fication: None
e climatic / hydrologic conditions on the site typical		11		
e Vegetation, Soil, or Hydrology	_			
e Vegetation, Soil, or Hydrology			eded, explain any answ	30 100 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
UMMARY OF FINDINGS – Attach site	nap showing sa	mpling point l	ocations, transect	ts, important features, e
Hydrophytic Vegetation Present? Yes				N
Hydric Soil Present? Yes		Is the Sampled within a Wetlar		No
Vetland Hydrology Present? Yes				
Remarks: WETS normal rainfall	lace allaria	1 Jahon		
TP excavated wet of '	vance avoime	in oppio	paron.	
EGETATION – Use scientific names of	plants.			
		minant Indicator	Dominance Test wo	rkshaet:
ree Stratum (Plot size: 30'	% Cover Sr	ecies? Status	Number of Dominant	
Salix hookeriana	55	TACW	That Are OBL, FACW	
Malus punila		NL	Total Number of Dom	inant 🕠
			Species Across All St	rata: <u>1</u> (B
•	- 00-	42.5	Percent of Dominant	Species 2.5% (A
apling/Shrub Stratum (Plot size: 5')	_02_=1	Fotal Cover 17	That Are OBL, FACW	
Rubus unsinul	12	V FACY	Prevalence index we	
			Total % Cover of	
·			AP	x 1 =
·				x 2 =
•			FAC species	x 3 = x 4 =
lerb Stratum (Plot size: 5')	_12=	Total Cover		x 4 =
Vicia Cativa	40	V UPL	2 <u>2</u>	(A) (
Fragoria Vesca	<u> </u>	FACY		
Gerbaum dissectum	3	NL		ex = B/A =
Vicia totrasperma ,	4	NL	Hydrophytic Vegeta	r Hydrophytic Vegetation
Anthokastrum odpratum	5	FACU	2 - Dominance To	
Bromus diandrus	1	NL	3 - Prevalence In	
Briza Maxima	1	NL	_	Adaptations ¹ (Provide support
Symphystrichum chilense	1	FAC	data in Remai	rks or on a separate sheet)
1 1			5 - Wetland Non-	
0				rophytic Vegetation ¹ (Explain)
1	- 1/ -	241		oil and wetland hydrology must sturbed or problematic.
Veedu Vine Chestury (Plat along	<u> </u>	otal Cover 38/15.2	se present, amose die	
VOODV VIDE STRATUM POOT SIZE				
Voody Vine Stratum (Plot size:)			Hydrophytic Vegetation	\sim
	=T	otal Cover	Present? Y	'es No 🔀

2

Sampling Point TP2

E Taxa an Ala							n the abs	·
Depth (inches)	Color (moist)	%	Color (moist)	edox Feature %	es Type ¹	Loc ²	Textu	re Remarks
2-6	104R2/2	100	2.54				LS	
-21	10TR 4/2	89	2.54 4/3	-1	1	M	5	
5-11						-14-		M.VO JACON
	10YR3/2	10						Mixedmatrix
	•						-	
			44	\				
_	· · · · · · · · · · · · · · · · · · ·							
	Concentration, D=Deple					ed Sand G		² Location: PL=Pore Lining, M=Matrix.
-	Indicators: (Applica	ble to all			eted.)		Inc	licators for Problematic Hydric Soils ³ :
_ Histoso			Sandy Redo					2 cm Muck (A10)
_	pipedon (A2)		Stripped Ma					Red Parent Material (TF2)
	listic (A3)		Learny Muck	•		tMLRA 1)		Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
	en Sulfide (A4) el Bolow Dork Surface	(8.1.1)	Loamy Gley Depleted Ma		2)			Other (Explain In Remarks)
	ed Below Dark Surface Jark Surface (A12)	(ATT)	Redox Dark		3		3In	dicators of hydrophytic vegetation and
	Mucky Mineral (S1)		Depleted Da	-				wetland hydrology must be present,
	Gleyed Matrix (S4)		Redox Depr					unless disturbed or problematic.
					,		1	
estrictive	Laver (if present):							
	Layer (if present):							
Туре:							Hydrid	Soil Present? Yes No
Type: Depth (ir							Hydrie	c Soil Present? Yes No
Туре:							Hydrie	c Soil Present? Yes No
Type: Depth (ir							Hydrid	c Soil Present? Yes No
Type: Depth (ir							Hydrid	c Soil Present? Yes No
Type: Depth (ir							Hydrid	c Soil Present? Yes No
Type: Depth (ir emarks:	nches):						Hydrid	c Soil Present? Yes No
Type: Depth (ir emarks: /DROL(nches):						Hydrid	c Soil Present? Yes No
Type: Depth (ir emarks: (DROL(/etland Hy	nches):			ιρρίγ)				Secondary Indicators (2 or more required)
Type: Depth (ir emarks: /DROLC /etland Hy rimary Ind	DGY ydrology Indicators: icators (minimum of or		d; check all that a	N	ives (B9) (except		Secondary Indicators (2 or more required)
Type: Depth (ir emarks: /DROLC /etland Hy rimary Ind Surface	DGY ydrology Indicators: icators (minimum of or a Water (A1)		d; check all that a	Stained Lea		except		Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2
Type: Depth (ir emarks: /DROLC /etland Hy rimary Ind Surface High W	DGY ydrology Indicators: icators (minimum of or e Water (A1) Vater Table (A2)		d; check all that a Water- ML	Stained Lea RA 1, 2, 4A,		except		Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
Type: Depth (ir emarks: /DROL(/etland Hy rimary Ind Surface High W Saturat	DGY ydrology Indicators: icators (minimum of or e Water (A1) /ater Table (A2) icion (A3)		d; check all that a Water- MLI Salt Cr	Stained Lea RA 1, 2, 4A, rust (B11)	and 4B)	except		Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10)
Type: Depth (ir emarks: /DROL(/etland Hy rimary Ind Surface High W Saturat Water I	DGY ydrology Indicators: icators (minimum of or e Water (A1) Vater Table (A2) icion (A3) Marks (B1)		d; check all that a Water- MLI Salt Cr Aquatie	Stained Lea RA 1, 2, 4A, ust (B11) c Invertebra	, and 4B) tes (B13)	except		Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Type: Depth (ir emarks: /DROLC // // // // // // // // // // // // //	DGY ydrology Indicators: icators (minimum of or Water (A1) Vater Table (A2) icion (A3) Marks (B1) ent Deposits (B2)		d; check all that a Water- Salt Cr Salt Cr Aquatic Hydrog	Stained Lea RA 1, 2, 4A, rust (B11) c Invertebrai gen Sulfide (, and 4B) tes (B13) 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
Type: Depth (ir emarks: //DROLC /etland Hy rimary Ind Surface High W Saturat Water f Sedime Drift De	DGY ydrology Indicators: icators (minimum of or e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)		d; check all that a Water- Salt Cr Salt Cr Aquation Hydrog Oxidized	Stained Lea RA 1, 2, 4A, rust (B11) c Invertebrai gen Sulfide (ed Rhizosph	, and 4B) tes (B13) Odor (C1) heres along	Living Ro		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)
Type: Depth (ir emarks: //DROLC //etland Hy rimary Ind Surface High W Saturat Sedime Sedime Drift De Algal W	DGY ydrology Indicators: icators (minimum of or e Water (A1) /ater Table (A2) ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4)		d; check all that a Water- Salt Cr Salt Cr Aquation Hydrog Oxidized Preser	Stained Lea RA 1, 2, 4A, rust (B11) c Invertebra gen Sulfide (ed Rhizosph nee of Reduc	, and 4B) tes (B13) Odor (C1) neres along ced Iron (C	Living Ro	ots (C3)	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)
Type: Depth (ir temarks: YDROLC Yetland Hy Primary Ind Surface High W Saturat Sedime Sedime Crift De Algal W Iron De	DGY ydrology Indicators: icators (minimum of or e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)		d; check all that a Water- MLI Salt Cr Aquatic Hydrog Oxidize Preser Recent	Stained Lea RA 1, 2, 4A, rust (B11) c Invertebrai gen Sulfide (ed Rhizosph	, and 4B) tes (B13) Odor (C1) neres along ced Iron (C ction in Tille	Living Ro 4) ed Soils (Cl	ots (C3)	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)

Inundation Visible on Ae	rial Imagery	(B7) Other (Explain in Remarks)	Frost-Heave Hummocks	(D7)
Sparsely Vegetated Cor	ncave Surface	e (B8)		
Field Observations:		N.I.		
Surface Water Present?	Yes	_ No 🗶 Depth (inches)://A	_	
Water Table Present?	Yes	_ No 🖌 Depth (inches):	-	
Saturation Present? (includes capillary fringe)	Yes	_ No 🔽 Depth (inches):A	_ Wetland Hydrology Present? Yes	No
Describe Recorded Data (st	ream gauge,	monitoring well, aerial photos, previous insp	pections), if available:	
Remarks:				

oject/Site: Humboldt Bay Harbor District-RMMT	City/County: Hun	nboldt	_ Sampling Date: 4/29/22
plicant/Owner: Humboldt Bay Harbor District		State: CA	_ Sampling Point: TP26
	Section, Townshi		
indform (hillslope, terrace, etc.): druinage	Local relief (cond	cave, convex, none):	ane Slope (%): 0-7
ibregion (LRR): A, MLRA-4B	Lat: 40.824108°	Long: -124, 17	4208° Datum: WGS 84
il Map Unit Name: 1014 - Ur ban land Anthraltic	: Xevorthents a soc. U-	2/05/00e NWI classi	ication: None, PEMIC ne
e climatic / hydrologic conditions on the site typical for			
e Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances"	present? Yes V No
e Vegetation, Soil, or Hydrology		(If needed, explain any answ	With the second se
UMMARY OF FINDINGS – Attach site ma			
			s, important reatures, etc
Hydrophytic Vegetation Present? Yes	No Is the San	npled Area	/
Vetland Hydrology Present? Yes X	No within a V	Vetland? Yes 🖊	<u>\</u> No
remarks: WETS normal rainfall Weyard # 1	a a I daily rothe	1 PSBFDV)+30 Champleed
I excavated ategge at talwin	e scrubs nyb weig		The second way
conditions connecting notwal wello	nd (wor) totidal w	Glands (east). He	gave at vance Avenue
EGETATION – Use scientific names of pla			
Tree Stratum (Plot/size: 30')	Absolute Dominant Indic <u>% Cover</u> Species? Stat	ine in the second se	
Morella Californica	100 V FA	Number of Dominant	
•		Total Number of Dom	
•		Species Across All St	
· · · · · · · · · · · · · · · · · · ·		Percent of Dominant	Species (0.2.1
Sapling/Shrub Stratum (Plot size: 5)	Total Cover	That Are OBL, FACW	
		Prevalence index wo	
		Total % Cover of	
	<u> </u>		x1= x2=
•	_ <u>}</u>	FAC species	x 3 =
·			x 4 =
lerb Stratum (Plot size: 5'	= Total Cover		x 5 =
		Column Totals:	(A) (B)
		Prevalence Inde	x = B/A =
		Hydrophytic Vegetat	
·		🔀 1 - Rapid Test for	Hydrophytic Vegetation
		🔀 2 - Dominance Te	
		3 - Prevalence In	
		data in Remar	Adaptations ¹ (Provide supporting ks or on a separate sheet)
	<u></u>	5 - Wetland Non-	
0		Problematic Hydr	ophytic Vegetation ¹ (Explain)
1,			oil and wetland hydrology must
Voody Vine Stratum (Plot size)	= Total Cover	be present, unless dis	turbed or problematic.
Voody Vine Stratum (Plot size:)			
		Hydrophytic Vegetation	V
6 Bare Ground in Herb Stratum 100 %	= Total Cover	Present? Y	es 🔼 No
6 Bare Ground in Herb Stratum			
temarks: No herbaceour or Strub la	11		

Sampling Point 7P26 & Geologists, Inc

	Color (moist)		Color (moist)	%	_Type ¹	Loc ²	Textu	ire .		Remar	(S
8+ 2	54 2.5/1	100			-	/	m		Black	NOLY	cact color
								_	mate	h in b	OOK
			duced Matrix, CS			d Sand G), M=Matrix.
dric Soil Indi	cators: (Applic	able to all LRI	Rs, unless other	rwise note	ed.)		Inc				ydric Soils ^a :
Histosol (A1			Sandy Redox (X		Muck (A1)		
_ Histic Epipe			Stripped Matrix				-			erial (TF2)	
Black Histic Hydrogen S			Loamy Mucky Mucky Mucky		•	(MLRA 1)	1. 10			ark Surfao n Remarks	
	elow Dark Surfac	e (A11)	Depleted Matrix		,				(F		,
	Surface (A12)		Redox Dark Su				³ In	dicator	s of hydroj	phytic vege	etation and
Sandy Mucl	ky Mineral (S1)		Depleted Dark	Surface (F	7)				•	ly must be	
	ed Matrix (S4)		Redox Depress	sions (F8)			1	unless	disturbed	or problen	natic.
	er (if present):										
Туре:		-	-							V Y	No
Depth (inche	ng HS Sm. h organie c		.				nyan	0.300 1	Present?	res 🕰	NO
	logy Indicators:										
rimary Indicate	ors (minimum of a	one required; c	heck all that app					10			more required)
🖌 Surface Wa			Water-Sta			except		<u>~</u> w			(B9) (MLRA 1, 2,
High Water				1, 2 , 4 A, a	ind 4B)			V.	4A, and 4		
Saturation (Salt Crust							tterns (B10	
_ Water Mark			Aquatic In						-	Water Tab	
	eposits (B2)		Y Hydrogen			Liuina Do	ata (C2)			Position (I	erial Imagery (C9 22)
_ Drift Depos				of Reduce		Living Ro 4)			allow Aqu		52)
Algal Mat o						/ ed Soils (C	6)	5.1		Test (D5)	
	il Cracks (B6)		Stunted o					-			6) (LRR A)
	Visible on Aerial	Imagery (B7)	Other (Ex		-					Hummock	
	egetated Concav										
ield Observat	ions:										
urface Water I	Present?	res 💢 No	Depth (ir	iches):	lin	_					
ater Table Pre	esent?	res 🗶 No	Depth (in	iches): 🔊	urtace	1					1
aturation Pres ncludes capilla escribe Recor	ry fringe)	1000000000	Depth (in oring well, aerial	nches): Signature			_	_	Present?	Yes 🖊	No
			1.1								
lemarks:	1		has tide								

oject/Site: Humboldt Bay Harbor District-RMMT	City/			
plicant/Owner: Humboldt Bay Harbor District			State: CA	Sampling Point:
estigator(s): Joseph Saler, Cindy Wilcox	Sect		Construction of the second	10
ndform (hillslope, terrace, etc.): <u>FIISUpe</u>	Loca	al relief (concave, o	convex, none): Nore	Slope (%):
				162 Datum: WGS 84
I Map Unit Name: 1014-UVbanland Anth				L. L. Mand
e climatic / hydrologic conditions on the site typical t	for this time of year?	Yes <u>X</u> No _	(If no, explain in	Remarks.)
• Vegetation, Soil, or Hydrology	significantly distu	rbed? Are "	Normal Circumstances	'present? Yes 🔀 No _
• Vegetation, Soil, or Hydrology	naturally problem	atic? (If ne	eded, explain any answ	ers in Remarks.)
JMMARY OF FINDINGS – Attach site r	nap showing sar	npling point le	ocations, transect	ts, important features, e
ydrophytic Vegetation Present? Yes	_ No_X_			
ydric Soil Present? Yes		Is the Sampled	Area	No
/etland Hydrology Present? Yes	No	within a Wetlan	10? Yes	
emarks: WETS normal rainfall	a the	MARY 1-	all to	01
TP excavated on fillshipe al	ione molling	approx 1	c ti tran 11	26.
GETATION - Use scientific names of	plants.			
ee Stratum, (Plot size: <u>30'</u>)		minant Indicator	Dominance Test wo	rksheet:
Fucalization globalin	<u>% Cover</u> spi	ecies? Status	Number of Dominant That Are OBL, FACW	
Morella Califolnich	30 .	FACW		
			Total Number of Dom Species Across All St	
Pline (Charles Charles 5)	<u>//0</u> = Te	otal Cover 55/22	Percent of Dominant 3 That Are OBL, FACW	or FAC: 40% (A/
RING (Plot size: 5')	P	FACU	Prevalence Index wo	orksheet:
KAN TO THOMAS			Total % Cover of	Multiply by:
				x 1 =
				x 2 =
			FAC species	x 3 = x 4 =
erb Stratum (Plot size: 5')	<u> </u>	otal Cover		x 4 = x 5 =
Scrophulaia (alifornica)	8	FAC		(A) (E
Briza maxima	55 1	NL		
OXalis les-caltae	4	NL	Prevalence Inde Hydrophytic Vegetat	ex = B/A =
Viciasona	10	UPL		Hydrophytic Vegetation
Crocosmia x crocosmittera	5	FAC	2 - Dominance Te	
Avenaborbata		NL	3 - Prevalence In	dex is ≤3.0 ¹
			4 - Morphological	Adaptations ¹ (Provide supporti
				ks or on a separate sheet)
		<u> </u>	5 - Wetland Non-	
				ophytic Vegetation ¹ (Explain) oil and wetland hydrology must
	83 - 10	tal Cover 41.5/16.6		sturbed or problematic.
oody Vine Stratum (Plot size: 544)		1		
Lonicera japonica		FAL	Hydrophytic	
			Vegetation	
	-			
Bare Ground in Herb Stratum 20%	<u>5</u> = To	tal Cover	Present? Y	es No _X

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Sampling Point: TP Zecolog

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Frome Description: (Describe to the de	epth needed to document the indicator or confirm	
Depth <u>Matrix</u>	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-2 104R 313 100		L Many roots
2-12 10YR3/2 100		L
12-24+2.54 4/3 100		5 =1% 7.5YR 5/8 @23inces
10 41. C. 07 110 100		Conc. M.
	M=Reduced Matrix, CS=Covered or Coated Sand Gra	ains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: (Applicable to a		
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)	Other (Explain in Remarks)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	
Depleted Below Dark Surface (A11) Thick Dark Surface (A12)	Depleted Matrix (F3) Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Mucky Mineral (ST) Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
		Hydric Soil Present? Yes No
Depth (inches):		
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one requ	red: check all that anniv)	Secondary Indicators (2 or more required)
	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Surface Water (A1)		4A, and 4B)
High Water Table (A2)		
Saturation (A3)	MLRA 1, 2, 4A, and 4B)	
Water Marks (B1)	Salt Crust (B11)	Drainage Patterns (B10)
		Drainage Patterns (B10) Dry-Season Water Table (C2)
Sediment Deposits (B2)	Salt Crust (B11)	Drainage Patterns (B10)
· · /	Salt Crust (B11) Aquatic Invertebrates (B13)	 Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Sediment Deposits (B2)	 Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 	 Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Sediment Deposits (B2) Drift Deposits (B3)	 Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo 	 Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	 Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) 	 Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
 Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) 	 Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 	 Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery	 Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) 	 Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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	 Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) 	 Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
 Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B5) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Field Observations: 	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8)	 Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B5) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Field Observations: Surface Water Present?	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): N/A	 Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
 Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B5) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Field Observations: 	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): N/A Depth (inches): N/A	 Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) decomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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? Yes Saturation Present? Yes	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): N/A Depth (inches): N/A	 Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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? Yes Saturation Present? Yes (includes capillary fringe)	 Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) 	Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) 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)
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? Yes Saturation Present? Yes (includes capillary fringe)	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): N/A Depth (inches): N/A	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)
 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? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, 	 Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): <u>N/A</u> Wething No Depth (inches): <u>N/A</u> 	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)
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? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge,	 Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): <u>N/A</u> Wething No Depth (inches): <u>N/A</u> 	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)
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? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge,	 Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): <u>N/A</u> Wething No Depth (inches): <u>N/A</u> 	Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) 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)
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? Yes Water Table Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge,	 Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): <u>N/A</u> Wething No Depth (inches): <u>N/A</u> 	Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) 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)
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? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge,	 Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): <u>N/A</u> Wething No Depth (inches): <u>N/A</u> 	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)

roject/Site: Humboldt Bay Harbor Distri	ct-RMMT	City	/County: Humboldt		_ Sampling Date: 5/4/22
pplicant/Owner: Humboldt Bay Harbor	District			State: CA	Sampling Point: TP28
vestigator(s): Joseph Saler, Cindy Wild	xox	Sec	tion, Township, Ra	nge:	
andform (hillslope, terrace, etc.):	side till.	Loc	cal relief (concave, o	convex, none):	Cane Slope (%): 2
ubregion (LRR): A, MLRA-4B					811 Datum: WGS 84
oil Map Unit Name Uyurbanlan	A Anthaltic X.	crorthents	assoc. 0-	210 NWI class	ification: None
re climatic / hydrologic conditions on th	e site typical for this	time of year?	Yes X No	(If no, explain ir	Remarks.)
re Vegetation, Soil, or I	Hydrology s	ignificantly dist	urbed? Are "	Normal Circumstances	s" present? Yes 📈 No 🔄
re Vegetation, Soil, or I				eded, explain any ans	
UMMARY OF FINDINGS - At					
		~		ocations, transec	, s, important reatures, e
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes No Yes No		Is the Sampled	Area	
Wetland Hydrology Present?	Yes No	o 🗙	within a Wetlar		No <u></u>
Remarks: WETS normal rainfall	- willow dea	11 Ssim	be Juzzem	and A A A Maria M	NAL 0
				Allow KAG KUMM	mar bais
EGETATION – Use scientific	names of plan	ts.			
			ominant Indicator	Dominance Test we	orksheet:
Tree Stratum (Plot size: 30')	% Cover Sp	pecies? Status	Number of Dominant	
1. Salix hookering		<u> </u>	v picw	That Are OBL, FACV	N, or FAC: (A
2		· · · · · · · · · · · · · · · · · · ·		Total Number of Dor	
3 4				Species Across All S	Strata: (B
T.		90 =	Total Cover	Percent of Dominant	
Sapling/Shrub Stratum (Plot size: 5')	0	1	That Are OBL, FACV Prevalence index w	
1. Rubus vieinus		· _ <u> </u>	FACY		f: Multiply by:
2. Lypinus Arborew,			V UPL	-	x 1 =
3. Lonicera involucrata			FAC		x 2 =
4 5.		·		FAC species	x 3 =
5		15 =	Total Cover 15/3	FACU species	x 4 =
Herb Stratum (Plot size: 5)		1	UPL species	x 5 =
1. Antho Xathim adoration		27	FACU	Column Totals:	(A) (
2. Joleur lonatur		2	FAC	Prevalence Inc	lex = B/A =
3. Vicia tetraperma		5	NL	Hydrophytic Vegeta	ation Indicators:
4. Vicia sativa			upu		or Hydrophytic Vegetation
5				2 - Dominance 1	
6				3 - Prevalence I	
7 8					al Adaptations ¹ (Provide support arks or on a separate sheet)
9				5 - Wetland Nor	
10				Problematic Hyd	drophytic Vegetation ¹ (Explain)
11					soil and wetland hydrology musi
		<u>34</u> =т	Fotal Cover	be present, uniess d	isturbed or problematic.
Woody Vine Stratum (Plot size:					
1,				Hydrophytic Vegetation	
	*		Fotal Cover	Vegetation	Yes No 🔀

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Sampling Point: 128 & Geologists, Inc

Profile Description: (Describe to the dep	th needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Remarks
0-9 104K 5/2 100	/ / / /	L
9-13 104R4/3 100	- 1/-	GrLS fill
13-20 10VR5/2+ 80	/ / //	GrS fill
1010 11 12 00		Miled an atorial
DO DE DE LO		Mixed matrices
20-25 2.5 1 5/2 10	10 YK 4/ 5+ 10 C M	S Native horizon
	Deduced Matrix CO-Control or Control Cond Co	21 anation DI - Dava Lining Mathematic
Hydric Soil Indicators: (Applicable to all	Reduced Matrix, CS=Covered or Coated Sand Gr	rains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:		
Depth (inches):		Hydric Soil Present? Yes No
Remarks: Fill w cobbles		
MIL UI CODDLES		
HYDROLOGY		
Wetland Hydrology Indicators:		Consider Indicators (2 or more resulted)
Primary Indicators (minimum of one required		Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along Living Roc Descent of Reduced land (O1)	
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soils (C6 Stunted or Strenged Plante (D1) (LBR 4)	
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
 Inundation Visible on Aerial Imagery (Billing) Sparsely Vegetated Concave Surface (I 	· <u> </u>	
Field Observations:		
	No X Depth (inches): NA	
	No Depth (inches): N/A	1000
Water Table Present? Yes	N'IIA	
	No A Depth (inches): MA Weth	and Hydrology Present? Yes No 🔼
(includes capillary fringe) Describe Recorded Data (stream gauge, mo	nitoring well, aerial photos, previous inspections),	if available:
Remarks:	1 1 0 1	
Well Aroined loamy son	Ly amally fillerils	
AACH MOULED LOOMAN / 2016		
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oject/Site: Humboldt Bay Harbor District-RMMT	City	/County: Humboldt		_ Sampling Date: 514/22
plicant/Owner: Humboldt Bay Harbor District			State: CA	_ Sampling Point: TP 29
vestigator(s): Joseph Saler, Cindy Wilcox	Sec	tion, Township, Ra	nae:	
ndform (hillslope, terrace, etc.): Bayside Fill	Loc	al relief (concave,	convex, none): Nove	Siope (%): 0-
bregion (LRR): A, MLRA-4B	Lat: 40.8	022197	Long: -124.171	Datum: WGS 84
ill Map Unit Name: Ul/banland An thralt	ic Keronother	ts assoc. C	· 210 NWI classif	ication: None
e climatic / hydrologic conditions on the site typical f				
e Vegetation, Soil, or Hydrology				
e Vegetation, Soil, or Hydrology			eded, explain any answ	
UMMARY OF FINDINGS – Attach site n		mpling point i	Deations, transect	s, important reatures, et
lydrophytic Vegetation Present? Yes		Is the Sampled	Area	× .
lydric Soil Present? Yes Vetland Hydrology Present? Yes		within a Wetlar	nd? Yes	No
Remarks: WETS normal rainfall				
regsompte with willow potch	50 2 18 29	b for sail of	hudrolage came	metality conditions
ie) he we willow friere		- (- Doird	indering dictor	S dialing allo in a
EGETATION – Use scientific names of	plants.			
30'		ominant Indicator	Dominance Test wo	rksheet:
ree Stratum (Plot size: 30')	<u>% Cover</u> St	FACW	Number of Dominant	
Morella Californica	- 15	FACW	That Are OBL, FACW	, or FAC: (A)
			Total Number of Dom Species Across All St	
	95 =-	Total Cover 19	Percent of Dominant That Are OBL, FACW	
Sapling/Shrub Stratum (Plot size: 5')	75	1 ANGI	Prevalence Index wo	- 11
Rubus unsinus		FACU	Total % Cover of:	
·			OBL species	x 1 =
				x 2 =
·			FAC species	
	75 =	Total Cover		x 4 =
erb Stratum (Plot size: 5')	15	1 GAUL	services of the strategy of the	x 5 =
Polystichum munitum		V TACU		(A) (B)
				x = B/A =
·			Hydrophytic Vegetal	
· · · · · · · · · · · · · · · · · · ·				Hydrophytic Vegetation
			2 - Dominance Te	
				Adaptations ¹ (Provide supportin
			data in Remar	ks or on a separate sheet)
			5 - Wetland Non-	Vascular Plants ¹
0				ophytic Vegetation ¹ (Explain)
1,				oil and wetland hydrology must turbed or problematic.
Voody Vine Stratum (Plot size:)	= T	otal Cover	be preadin, diress dis	anood of problematic.
COUV VILLE Stratum (Flot Size.			Hudsonbutic	
			Hydrophytic Vegetation	\checkmark
4.14	= T	otal Cover	Present? Y	es No
6 Bare Ground in Herb Stratum _ <u>85%</u> *				

US Army Corps of Engineers

SOIL Sampling Point: Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Redox Features Matrix Remarks Color (moist) Loc² Texture (inches) Color (moist) Type ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) ____ Sandy Redox (S5) 2 cm Muck (A10) Histosol (A1) ____ Red Parent Material (TF2) Histic Epipedon (A2) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Other (Explain in Remarks) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Redox Dark Surface (F6) ³Indicators of hydrophytic vegetation and Thick Dark Surface (A12) Depleted Dark Surface (F7) wetland hydrology must be present, Sandy Mucky Mineral (S1) unless disturbed or problematic. Sandy Gleyed Matrix (S4) Redox Depressions (F8) Restrictive Layer (if present): Type: Depth (inches): Hydric Soil Present? Yes Remarks: see TP 28 for reprostative soil conditions HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2, Surface Water (A1) 4A, and 4B) High Water Table (A2) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Drainage Patterns (B10) Saturation (A3) Water Marks (B1) Aquatic Invertebrates (B Dry-Season Water Table (C2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Sediment Deposits (B2) Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (D2) Drift Deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Recent Iron Reduction In Tilled Soils (CE FAC-Neutral Test (D5) Iron Deposits (B5) Stunted or Stressed Plants (D1) Raised Ant Mounds (D6) (LRR A) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Other Explain in Remarks Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes ____ No ____ Depth (inches): Yes _____ No ____ Depth (inches): Water Table Present? Yes _____ No _____ Depth (inches): _ Wetland Hydrology Present? Yes Saturation Present? No. (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: See TP 28 For representative sail

oject/Site: Humboldt Bay Harbor District-RMMT	City/	County: Humboldt		_ Sampling Date:
plicant/Owner: Humboldt Bay Harbor District			State: CA	_ Sampling Point: TP30
vestigator(s): Joseph Saler, Cindy Wilcox	Sect	ion, Township, Ra	nge:	
indform (hillslope, terrace, etc.): hay side fi	Loca	al relief (concave,	convex, none): <u>Mare</u>	Slope (%): 12
bregion (LRR): A, MLRA-4B	Lat: <u>40, 6</u>	21591	Long: -124, 17	7492 Datum: WGS 84
il Map Unit Name: 1014-Urban 14nd Anthn	altiz scrowthe	nts associ	2-29/0 NWI classi	fication: NONE
e climatic / hydrologic conditions on the site typical fo	or this time of year?	Yes X No _	(If no, explain in	Remarks.)
e Vegetation, Soil, or Hydrology	significantly distu	rbed? Are "	'Normal Circumstances'	' present? Yes <u> X</u> No
e Vegetation, Soil, or Hydrology	naturally problem	natic? (If ne	eded, explain any answ	vers in Remarks.)
UMMARY OF FINDINGS – Attach site m	an showing sar	mpling point l	ocations transect	s important features e
hydrophytic Vegetation Present? Yes	1	inpung point i	ooutono, transpo.	a, important reatures, e
Hydric Soil Present? Yes		Is the Sampled	Area	$\mathbf{\mathbf{\vee}}$
Vetland Hydrology Present? Yes		within a Wetlar	nd? Yes	No <u>//</u>
Remarks: WETS normal rainfall	021	A A	1 1 1 1	1 June Idea
Veg sompled only. See 1	P 3 for re	presetative	Soil and hy	shologic conditions
			1	U.
EGETATION – Use scientific names of p		minant Indicator	Dominance Test wo	dealar at
Tree Stratum (Plot size: 30')		ecies? Status	Number of Dominant	
.Salix hooheriana	95	FACW	That Are OBL, FACW	
			Total Number of Dom	inant 2-
			Species Across All St	rata: (B)
	95	otal Cover	Percent of Dominant	
Sapling/Shrub Stratum (Plot size: 5')	=	otal Cover	That Are OBL, FACW Prevalence Index we	
Rubus insinus		V TACU	Total % Cover of	
Riburarmeniarus	10	9AC	-	x 1 =
				x 2 =
hu			FAC species	x 3 =
>	85 =T	otal Cover 42.5	FACU species	x 4 =
Herb Stratum (Plot size: 5)		17		x 5 =
			Column Totals:	(A)(E
			Prevalence Inde	ex = B/A =
·			Hydrophytic Vegeta	
			· ·	r Hydrophytic Vegetation
	×		2 - Dominance Te 3 - Prevalence In	
·	1			I Adaptations ¹ (Provide support
*			data in Remai	rks or on a separate sheet)
-			5 - Wetland Non-	
0			-	ophytic Vegetation ¹ (Explain)
1x			Indicators of hydric s be present, unless die	oil and wetland hydrology must sturbed or problematic.
Voody Vine Stratum (Plot size:)	= To	otal Cover		(F (F))
			Hydrophytic	
			Vegetation	\checkmark
6 Bare Ground in Herb Stratum	= To	otal Cover	Present? Y	'es No

SYA

The second s				Sampling Point: 1P 30 4/20
Profile Description: (Describe	e to the depth needed to doc	ument the indicator or con	firm the absence o	f indicators.)
Depth Matrix	Re	dox Features		
(inches) Color (moist)	<u>%</u> Color (moist)	<u>% Type¹ Loc²</u>	Texture	Remarks
	sec		1.	
	202			
	- TY-> OA	6		
			<	
	42 00			
	v			
¹ Type: C=Concentration, D=De	epletion RM=Reduced Matrix	CS=Covered or Coated San	Grains ² Loca	tion: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Appli				for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox			Muck (A10)
	Stripped Mat			Parent Material (TF2)
Histic Epipedon (A2)				Shallow Dark Surface (TF12)
Black Histic (A3)		Mineral (F1) (except MLRA		
Hydrogen Sulfide (A4)		d Matrix (F2)	Other	(Explain in Remarks)
Depleted Below Dark Surfa			3 Indiantar	of hudson but is used at is and
Thick Dark Surface (A12)	Redox Dark S			s of hydrophytic vegetation and
Sandy Mucky Mineral (S1)		k Surface (F7)		d hydrology must be present, disturbed or problematic.
Sandy Gleyed Matrix (S4)	Redox Depre	SSIONS (FO)	umess	disturbed of problematic.
Restrictive Layer (if present):				
Туре:				
Depth (inches):				resent? Yes No
0	see the 3 for			1.
IYDROLOGY				190
HYDROLOGY Wetland Hydrology Indicators	s:			6
IYDROLOGY	s:		Second	lary Indicators (2 or more required)
IYDROLOGY Wetland Hydrology Indicators	s: f one required; check all that as		Second	lary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2,
IYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of	s: f one required; check all that ar Water-S	(עופנ	Second	lary Indicators (2 or more required)
IYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1)	s: f one required; check all that ar Water-S MLR	pply) itained Leaves (B9) (except	Second	lary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2,
HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of	s: fone required; check all that as Water-S MLR Salt Cru	oply) itained Leaves (B9) (except A 1, 2, 4A, and 4B)	<u>Secono</u> Wa Wa	lary Indicators (2 or more required) Iter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
IYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	s: fone required; check all that as Water-S MLR Salt Cru Aquatic	boly) Stained Leaves (B9) (except A 1, 2, 4A, and 4B) Ist (B11) Invertebrates (B13)	<u>Second</u> Wa Dra Dra	lary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) <i>y</i> -Season Water Table (C2)
HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	s: f one required; check all that ar Water-S MLR Salt Cru Aquatic Hydroge	bply) itained Leaves (B9) (except A 1, 2, 4A, and 4B) ist (B11) Invertebrates (B13) en Sulfide Odor (C1)	<u>Second</u> Wa Dra Dra Sa	iary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) r-Season Water Table (C2) turation Visible on Aerial Imagery (C9)
IYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	s: <u>f one required; check all that ar</u> Water-S MLR Salt Cru Aquatic Hydroge Oxidize	itained Leaves (B9) (except A 1, 2, 4A, and 4B) Ist (B11) Invertebrates (B13) en Sulfide Odor (C1) d Rhizospheres along Living	<u>Second</u> Wa Dra Dra Sa Roots (C3) Ge	lary Indicators (2 or more required) Inter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9) omorphic Position (D2)
IYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	s: f one required; check all that ar Water-S MLR Salt Cru Aquatic Hydrogu Oxidize Present	boly) itained Leaves (B9) (except A 1, 2, 4A, and 4B) ist (B11) Invertebrates (B13) en Sulfide Odor (C1) a Rhizospheres along Living be of Reduced Iron (C4)	<u>Second</u> Wa Dra Dra Sa Roots (C3) Ge Sh	lary Indicators (2 or more required) Iter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9) omorphic Position (D2) allow Aquitard (D3)
HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of	s: fone required; check all that ar Water-S MLR Salt Cru Aquatic Hydroge Oxidize Presenc Recent	aply) itained Leaves (B9) (except A 1, 2, 4A, and 4B) ist (B11) Invertebrates (B13) en Sulfide Odor (C1) of Rhizospheres along Living the of Reduced Iron (C4) (ron Reduction in Tilled Soils	<u>Seconc</u> Wa Dra Dra Sa Roots (C3) Ge Sh FA	lary Indicators (2 or more required) Iter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) /-Season Water Table (C2) turation Visible on Aerial Imagery (C9) omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5)
HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of 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)	s: f one required; check all that as Water-S MLR Salt Cru Aquatic Hydrogu Oxidize Presend Recent Stunted	itained Leaves (B9) (except A 1, 2, 4A, and 4B) ist (B11) Invertebrates (B13) en Sulfide Odor (C1) a Rhizospheres along Living ce of Reduced Iron (C4) (ron Reduction in Tilled Soils or Stressed Plants (D1) (LR	Second Wa Dra Dra Sa Roots (C3) Ge Sh (C6) FA R A) Ra	iary Indicators (2 or more required) iter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) /-Season Water Table (C2) turation Visible on Aerial Imagery (C9) omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of 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 Aeria	s: <u>f one required; check all that ar</u> Water-S MLR Salt Cru Aquatic Hydrogr Oxidize Presend Recent Stunted al Imagery (B7) Other (I	aply) itained Leaves (B9) (except A 1, 2, 4A, and 4B) ist (B11) Invertebrates (B13) en Sulfide Odor (C1) of Rhizospheres along Living the of Reduced Iron (C4) (ron Reduction in Tilled Soils	Second Wa Dra Dra Sa Roots (C3) Ge Sh (C6) FA R A) Ra	lary Indicators (2 or more required) Iter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) /-Season Water Table (C2) turation Visible on Aerial Imagery (C9) omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5)
HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of	s: <u>f one required; check all that ar</u> Water-S MLR Salt Cru Aquatic Hydrogr Oxidize Presend Recent Stunted al Imagery (B7) Other (I	itained Leaves (B9) (except A 1, 2, 4A, and 4B) ist (B11) Invertebrates (B13) en Sulfide Odor (C1) a Rhizospheres along Living ce of Reduced Iron (C4) (ron Reduction in Tilled Soils or Stressed Plants (D1) (LR	Second Wa Dra Dra Sa Roots (C3) Ge Sh (C6) FA R A) Ra	iary Indicators (2 or more required) iter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) /-Season Water Table (C2) turation Visible on Aerial Imagery (C9) omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A)
IYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of 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 Aeria	s: f one required; check all that as Water-S MLR Salt Cru Aquatic Hydrogu Oxidize Present Recent Stunted al Imagery (B7) Other (I ive Surface (B8)	aply) itained Leaves (B9) (except A 1, 2, 4A, and 4B) ist (B11) Invertebrates (B13) en Sulfide Odor (C1) d Rhizospheres along Living ce of Reduced Iron (C4) (ron Reduction in Tilled Soils or Stressed Plants (D1) (LR Explain in Remarks)	Second Wa Dra Dra Sa Roots (C3) Ge Sh (C6) FA R A) Ra	lary Indicators (2 or more required) Iter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) /-Season Water Table (C2) turation Visible on Aerial Imagery (C9) omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of	s: f one required; check all that ar Water-S MLR Salt Cru Aquatic Hydrogu Oxidize Presend Recent Stunted al Imagery (B7) Other (I Types No X Depth	tained Leaves (B9) (except A 1, 2, 4A, and 4B) ist (B11) Invertebrates (B13) en Sulfide Odor (C1) d Rhizospheres along Living er of Reduced Iron (C4) Iron Reduction in Tilled Soils or Stressed Plants (D1) (LR Explain in Remarks)	Second Wa Dra Dra Sa Roots (C3) Ge Sh (C6) FA R A) Ra	iary Indicators (2 or more required) iter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) /-Season Water Table (C2) turation Visible on Aerial Imagery (C9) omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of	s: f one required; check all that ar Water-S MLR Salt Cru Aquatic Hydrogu Oxidize Presend Recent Stunted al Imagery (B7) Other (I Types No X Depth	aply) itained Leaves (B9) (except A 1, 2, 4A, and 4B) ist (B11) Invertebrates (B13) en Sulfide Odor (C1) d Rhizospheres along Living ce of Reduced Iron (C4) (ron Reduction in Tilled Soils or Stressed Plants (D1) (LR Explain in Remarks)	Second Wa Dra Dra Sa Roots (C3) Ge Sh (C6) FA R A) Ra	iary Indicators (2 or more required) iter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) /-Season Water Table (C2) turation Visible on Aerial Imagery (C9) omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of	s: f one required; check all that as Water-S MLR 	itained Leaves (B9) (except A 1, 2, 4A, and 4B) Inst (B11) Invertebrates (B13) en Sulfide Odor (C1) d Rhizospheres along Living te of Reduced Iron (C4) (ron Reduction in Tilled Soils or Stressed Plants (D1) (LR Explain in Remarks) (inches):	Second Wa Dra Dra Sa Roots (C3) Ge Sh (C6) FA R A) Ra	lary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9) omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A) pst-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of	s: <u>f one required; check all that ar</u> Water-S MLR 	itained Leaves (B9) (except A 1, 2, 4A, and 4B) Invertebrates (B13) En Sulfide Odor (C1) B Relizospheres along Living the of Reduced Iron (C4) (ron Reduction in Tilled Soils or Stressed Plants (D1) (LR Explain in Remarks) (inches):	Second Wa Dra Dra Dra Sa Roots (C3) Ge Sh (C6) FA R A) Ra Fra Yetland Hydrology	lary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9) omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A) pst-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of 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 Aeria Sparsely Vegetated Conca Field Observations: Surface Water Present? Water Table Present? Saturation Present?	s: <u>f one required; check all that ar</u> Water-S MLR 	itained Leaves (B9) (except A 1, 2, 4A, and 4B) Invertebrates (B13) En Sulfide Odor (C1) B Relizospheres along Living the of Reduced Iron (C4) (ron Reduction in Tilled Soils or Stressed Plants (D1) (LR Explain in Remarks) (inches):	Second Wa Dra Dra Dra Sa Roots (C3) Ge Sh (C6) FA R A) Ra Fra Yetland Hydrology	lary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9) omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A) pst-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of 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 Aeria Sparsely Vegetated Conca Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	s: <u>f one required; check all that ar</u> Water-S MLR 	itained Leaves (B9) (except A 1, 2, 4A, and 4B) Invertebrates (B13) En Sulfide Odor (C1) B Relizospheres along Living the of Reduced Iron (C4) (ron Reduction in Tilled Soils or Stressed Plants (D1) (LR Explain in Remarks) (inches):	Second Wa Dra Dra Dra Sa Roots (C3) Ge Sh (C6) FA R A) Ra Fra Yetland Hydrology	lary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9) omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A) pst-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of	s: <u>f one required; check all that ar</u> Water-S MLR 	boly) Stained Leaves (B9) (except A 1, 2, 4A, and 4B) Invertebrates (B13) en Sulfide Odor (C1) a Rhizospheres along Living the of Reduced Iron (C4) (ron Reduction in Tilled Soils or Stressed Plants (D1) (LR Explain in Remarks) (inches): (inches): (inches): al photos, previous inspectio	Vetland Hydrology	Arry Indicators (2 or more required) Inter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9) omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7) Present? Yes No
HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of	s: <u>f one required; check all that ar</u> Water-S MLR 	itained Leaves (B9) (except A 1, 2, 4A, and 4B) Invertebrates (B13) En Sulfide Odor (C1) B Relizospheres along Living the of Reduced Iron (C4) (ron Reduction in Tilled Soils or Stressed Plants (D1) (LR Explain in Remarks) (inches):	Vetland Hydrology	Iary Indicators (2 or more required) Iter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) /-Season Water Table (C2) turation Visible on Aerial Imagery (C9) omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7) Present? Yes No

rologists, Inc. roject/Site: Humboldt Bay Harbor District-RMMT	Official Humbold	tt Sampling Date: 5/4/22
oplicant/Owner: Humbold Bay Harbor District	City/County: Humbole	Sampling Date: 10.31
vestigator(s): Joseph Saler, Cindy Wilcox		State: CA Sampling Point: TP3
	Section, Township, R	
andform (hillslope, terrace, etc.): <u>Bay side fil</u> ubregion (LRR): <u>A, MLRA-48</u>	Local relief (concave	, convex, none): <u>con cave</u> Slope (%): <u>3-5</u> Long: <u>-124, 177503</u> Datum: WGS 84
Dil Map Unit Name: 1014-Urban land Ant		
		Chia lou ofto
e climatic / hydrologic conditions on the site typical fe		(if ite, explain in (ternarka.)
re Vegetation, Soil, or Hydrology		"Normal Circumstances" present? Yes V No No
re Vegetation, Soil, or Hydrology		needed, explain any answers in Remarks.)
UMMARY OF FINDINGS – Attach site m	hap showing sampling point	locations, transects, important features, etc
Hydrophytic Vegetation Present? Yes	_ No	
Hydric Soil Present? Yes X	No Is the Sample within a Wetla	
Wetland Hydrology Present? Yes X Remarks: WETS normal rainfall		tate to the tate
expr of Palustine frosted westing		ted Swale. TP excavated near
A Long Plat Andra A A	to Humboldt Bay	actions Scholander Biochard Land
EGETATION – Use scientific names of	plants.	
201	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')	<u>% Cover</u> <u>Species?</u> <u>Status</u>	Number of Dominant Species
Morella californica		That Are OBL, FACW, or FAC:(A)
2. Idlix hooken and	50 V FACW	Total Number of Dominant
		. Species Across All Strata: (B)
1	= Total Cover	Percent of Dominant Species 66 % (A/B)
Sapling/Shrub Stratum (Plot size: 5')		
1. Rubur ursinur	7 / FACU	Prevalence Index worksheet: Total % Cover of: Multiply by:
2		Total % Cover of: Multiply by: OBL species x 1 =
3		FACW species x 2 =
4		FAC species x 3 =
5	= Total Cover	FACU species x 4 =
H <u>erb Stratum</u> (Plot size: <u>5' \</u>)		UPL species x 5 =
1,		Column Totals: (A) (B)
2		Prevalence Index = B/A =
3		Hydrophytic Vegetation Indicators:
4		1 - Rapid Test for Hydrophytic Vegetation
5		- X 2 - Dominance Test is >50%
6		3 - Prevalence Index is ≤3.0 ¹
β		 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
a	<u> </u>	5 - Wetland Non-Vascular Plants ¹
9, 10		Problematic Hydrophytic Vegetation ¹ (Explain)
11		¹ Indicators of hydric soil and wetland hydrology must
	= Total Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		
1		Hydrophytic
2		Vegetation Present? Yes No
% Bare Ground in Herb Stratum	= Total Cover	

US Army Corps of Engineers

ماند. موجو

Devite Device Device	
Depth Matrix Redox Features	
(inches) Color (moist) % Color (moist) % Type Loc ² Texture Remarks	_
0-13 2.542.5/1 100 Ji till buried bricks +	
13-20+112.543/1 >99 104R 5/8 <1 C M SL Woody debris, pochets of mu	k
19-21+2,54 8/1 95 107R5/8 5 C M SL	
	-
X	-
	_
2 P	_
	-
In the Department of the Department Methics Of Control of Control Operations and Planet in the Methics	-
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :	-
Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2)	
Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Vory Shallow Dark Surface (TF12)	- 1
Depleted Below Dark Surface (A11) Depleted Matrix (F3)	1
Thick Dark Surface (A12) Redox Dark Surface (F6) Indicators of hydrophytic vegetation and	
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must be present,	
Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic.	
Restrictive Layer (if present):	1.11
Type:	pro 1
Depth (inches): No	_
Remarks: (14) clill a clean and a climate a cl	
HIT solid luyer @ 20-21" - concrete: Thed TP next to TP31- same issue	
mul A12 1 trant average to march & storning in 11 be potentially and	
Remarks: Hit solid layer @ 20-21" - concrete? Thed TP next to TP31- same issue May be A12, but canot excavele Jop enough to determine. Could be poten Hally an A12 but not able to dig deep enough to find out. Professional judgement = hydric	1
The but not able to dig belp enough tothaour. progessman judgement = nyaric	1
HYDROLOGY	
Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required: check all that apply) Secondary Indicators (2 or more required)	
Surface Water (A1) Water-Stained Leaves (B9) (except 🛛 🕹 Water-Stained Leaves (B9) (MLRA 1,	2,
Key High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B)	
Saturation (A3) Salt Crust (B11) Drainage Patterns (B10)	
Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2)	4
Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (29)
Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) 🔀 Geomorphic Position (D2)	
Algal Mat or Crust (B4) Presence of Reduced Iron (C4), Shallow Aquitard (D3)	
Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) 🛛 🔀 FAC-Neutral Test (D5)	
Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7)	
Sparsely Vegetated Concave Surface (B8)	
Field Observations:	
Surface Water Present? Yes No X Depth (inches): N/A	
Water Table Present? Yes X No Depth (inches): 12	
Saturation Present? Yes X No Depth (inches): 312" Wetland Hydrology Present? Yes X No	
(includes capillary fringe)	
(includes capillary fringe) Implication Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
	_
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	

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ect/Site: Humboldt Bay Harbor Distri	ict-RMMT	City/	County: Humboldi	t	_ Sampling Date:	5/4/22
licant/Owner: Humboldt Bay Harbor	District				_ Sampling Point:	
stigator(s): Joseph Saler, Cindy Wild	cox	Sect	ion, Township, Ra	inge:		
dform (hillslope, terrace, etc.):	side till	Loc	al relief (concave,	convex, none):	slope	e (%): 5
region (LRR): A, MLRA-4B	Lat	40.	820007	Long: -124.17	7639 Datum	WGS 84
Map Unit Name: 1014-Urban la	and Anthraltic Xe	rorthe	nts assoc	0-2010 NWI classifi	ication: Flesh	water To
climatic / hydrologic conditions on th					a lasces	ib welle
Vegetation, Soil, or I		-		"Normal Circumstances"		No
Vegetation, Soil, or I		-		eeded, explain any answ		3
Realization and an antipation of the		-				
MMARY OF FINDINGS - A			mpling point l	ocations, transect	s, important fea	tures, etc.
drophytic Vegetation Present?	Yes No		Is the Sampled		1	Rib.
dric Soil Present? atland Hydrology Present?	Yes No No No		within a Wetla	Y	No	(W)
marks: WETS normal rainfall	· · · ·				011	0 61
Pexcavored is smalle		md.	Connects to	s Humbold Bay	falustare	trested
vetland (PFOIES On						
GETATION – Use scientific	names of plants.		2			
	· · ·	olute Do	minant Indicator	Dominance Test wor	ksheet:	
ee Stratum (Plot size: 30'			ecies? Status	Number of Dominant :		
Allur Mbra. Salix hookeriana	9		V FAC	That Are OBL, FACW	, or FAC:	(A)
DUIN HUNGETONIA		<u> </u>	FACW	Total Number of Domi		ŝ
				Species Across All Str	ata:	(8)
) =т	otal Cover 55/12	Percent of Dominant §		(A/B)
pling/Shrub Stratum (Plot size: 5'			1	Prevalence Index wo		(AVD)
Rubus annovacus	<u>\$</u>	2	TAC	Total % Cover of:		by:
Rubw woints	5		TACU	OBL species		
				FACW species		
				FAC species	x 3 =	
2	9) =т	otal Cover	FACU species		
rb Stratum (Plot size: 5				UPL species		1.00
				Column Totals:	(A)	(B)
	<u> </u>			Prevalence Inde	x = B/A =	
	<u> </u>			Hydrophytic Vegetat		
					Hydrophytic Vegetal	tion
	<u> </u>			2 - Dominance Te		
				3 - Prevalence Inc		
dile	1			4 - Morphological data in Remar	ks or on a separate s	
8				5 - Wetland Non-Y		
				Problematic Hydr	ophytic Vegetation ¹ (Explain)
		1_		¹ Indicators of hydric se		
			otal Cover	be present, unless dis	turbed or problemation	С.
		1				
oody Vine Stratum (Plot size:				Hydrophytic Vegetation	\checkmark	
Card an energy and a second state.	1*	= T(otal Cover	Present? Y	es 🔼 No _	

	epth needed to document the indicator or confirm	the absence of indicators.)
Depth <u>Matrix</u> (inches) Color (moist) %	<u>Redox Features</u> Color (moist) % Type ¹ Loc ²	Texture Remarks
0-11 2.57 3/1 100		Sil_
11-24+254411 85	TOVO UTC 15 C M	<u>SCI</u>
1 27 2.07 1/1 02	1012 10 11 0 11	JUL
		· · · · · · · · · · · · · · · · · · ·
· · · · ·		<u> </u>
	M=Reduced Matrix, CS=Covered or Coated Sand Gr	
Hydric Soil Indicators: (Applicable to a	all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
— Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Redox Dark Surface (F6)- Depleted Dark Surface (F7)	^a Indicators of hydrophytic vegetation and wetland hydrology must be present,
Sandy Mucky Millerar (S1)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:	C	N. C. Martin
Depth (inches):		Hydric Soil Present? Yes X No
Remarks:		
HYDROLOGY	1	
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one requi	red; check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except	X Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)
X Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along Living Roo	ots (C3) 🔀 Geomorphic Position (D2)
Algal Mat or Grust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5)
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRR A)) Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery	(B7) Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface	e (B8)	
Field Observations:	NUN	
Surface Water Present? Yes	No X Depth (inches): NA	
Water Table Present? Yes	_ No 🔀 Depth (inches):	
Saturation Present? Yes X	_ No Depth (inches):i Wetla	and Hydrology Present? Yes X No
(includes capillary fringe)		if available:
Describe Recorded Data (stream gauge	monitoring well, aerial photos, previous inspections).	li avaliadie.
Describe Recorded Data (stream gauge,	monitoring well, aerial photos, previous inspections),	n available.
Describe Recorded Data (stream gauge, Remarks:	monitoring well, aerial photos, previous inspections),	
	monitoring well, aerial photos, previous inspections),	
	monitoring well, aerial photos, previous inspections),	
	monitoring well, aerial photos, previous inspections),	

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Project/Site: Humboldt Bay Harbor District-RMMT	City/County: Humb	oldt	_ Sampling Date: 5/4/21
Applicant/Owner: Humboldt Bay Harbor District		State: CA	Sampling Point: 7933
Investigator(s): Joseph Saler, Cindy Wilcox	Section, Township,	Range:	
Landform (hillslope, terrace, etc.) Buyside fill			
Subregion (LRR): A, MLRA-4B	Lat: 40.820793	Long: -124, 1-	17990 Datum: WGS 8
Soil Map Unit Name: 1014-Urban land Anth,			
Are climatic / hydrologic conditions on the site typical fo			Ch. A. Lot. In
Are Vegetation, Soil, or Hydrology		Are "Normal Circumstances	
Are Vegetation, Soil, or Hydrology		If needed, explain any answ	
SUMMARY OF FINDINGS – Attach site m		nt locations, transec	ts, important reatures, e
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes	In the Come	oled Area	
Wetland Hydrology Present? Yes			No <u>X</u>
Remarks: WETS normal rainfall	2.0	11 1 + 0	
TPercavated in Wland are		wetland TREXPloya	
poletter in it	representative	of upland Conditi	ans ground wetlan
VEGETATION – Use scientific names of p	ilants.		
Tree Stratum, (Plot size: 30')	Absolute Dominant Indicat % Cover Species? Status		
1. Anus rubra	RO FAL	Number of Dominant	
2			
3		Total Number of Dom Species Across All Si	
4		Percent of Dominant	Species - 4 1
Sapling/Shrub Stratum (Plot size: 5')	<u>80</u> = Total Cover	That Are OBL, FACM	
1. RUBW WEINW	90 / FACU	Prevalence Index w	orksheet:
2. Ruber armeniacus	O FAU	Total % Cover of	
3		-	x 1 =
4		FAC species	x 2 =
5			x 4 =
Herb Stratum (Plot size: 5')	= Total Cover		x 5 =
1. Polystichum Munitum	15 V FAC	Column Totals:	(A) (I
2		- Prevalence Inde	ex = B/A =
3		Hydrophytic Vegeta	
4			r Hydrophytic Vegetation
5			
6 7			
8			I Adaptations ¹ (Provide support rks or on a separate sheet)
9		5 - Wetland Non-	
10		Problematic Hyd	rophytic Vegetation ¹ (Explain)
11			coil and wetland hydrology must
Woody Vine Stratum (Plat size:	= Total Cover	be present, unless di	sturbed or problematic.
Woody Vine Stratum (Plot size:) 1			
2		Hydrophytic Vegetation	1
% Bare Ground in Herb Stratum 85*	= Total Cover	Present?	/es No 🗶
X			

Sampling Point: 1933 & Geologists, Inc

	lepth needed to document the indicator or confirm	
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-5 104R 2/1 100		<u>SiL</u>
·5-10, 104RB/1 100	/ // /	Sil grade time loolor change
10-24 104R312 100		Sit w/woody depris
01 114 1010 11 07	INVACIO 3 / M	
1-29+ 109K 4/1 97	10/K0/0 3 C M	<u> </u>
	RM=Reduced Matrix, CS=Covered or Coated Sand Gr	
Hydric Soil Indicators: (Applicable to	all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)		3
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):	· · · · · · · · · · · · · · · · · · ·	E STREET STREET
Туре:		
Depth (inches):		Hydric Soil Present? Yes No X
Remarks:		
HYDROLOGY	· · · · · · · · · · · · · · · · · · ·	10 A
Motiond Hydrology Indicators:	a for	
Wetland Hydrology Indicators:	and shark all that and a	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one requ		Secondary Indicators (2 or more required)
Primary Indicators (minimum of one requ Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Primary Indicators (minimum of one requestion) 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, 4A, and 4B)
Primary Indicators (minimum of one requ 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) Drainage Patterns (B10)
Primary Indicators (minimum of one requ 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)
Primary Indicators (minimum of one requ 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 (C9)
Primary Indicators (minimum of one required)	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 Room	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2)
Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ats (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Primary Indicators (minimum of one required)	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) tts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Primary Indicators (minimum of one required)	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR 4)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) tts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one required)	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) tts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Primary Indicators (minimum of one required) 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	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) tts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one required) 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:	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) (B8)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) tts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one required) 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:	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) tts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one required) 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? 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 Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) (B8)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) tts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one required) 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? 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 Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) (B8)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) tts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one required) 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? Yes Water Table Present? Yes Gaturation Present? Yes (includes capillary fringe)	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) (B8) No Depth (inches): NA No Depth (inches): NA No Depth (inches): NA Weth	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) its (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
Primary Indicators (minimum of one required) 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? Yes Water Table Present? Yes Gaturation Present? Yes (includes capillary fringe)	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) (B8)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) its (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
Primary Indicators (minimum of one required) 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? Yes Water Table Present? Yes Gaturation Present? Yes (includes capillary fringe)	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) (B8) No Depth (inches): NA No Depth (inches): NA No Depth (inches): NA Weth	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) its (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
Primary Indicators (minimum of one requestion of a second seco	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) (B8) No Depth (inches): NA No Depth (inches): NA No Depth (inches): NA Weth	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Saturation (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
Primary Indicators (minimum of one requestion of a second seco	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) ce (B8) No Depth (inches): No Depth (inches): Weth monitoring well, aerial photos, previous inspections),	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Saturation (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No if available:
Primary Indicators (minimum of one requestion of a second seco	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) ce (B8) No Depth (inches): No Depth (inches): Weth monitoring well, aerial photos, previous inspections),	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Saturation (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No if available:
Primary Indicators (minimum of one required) 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? Yes Water Table Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) ce (B8) No Depth (inches): No Depth (inches): Weth monitoring well, aerial photos, previous inspections),	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Saturation (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No

10

eologists, Inc. roject/Site: Humboldt Bay Harbor District-RMMT	City/County: Humbol	dt	Sampling Date: 5/4/22
pplicant/Owner: Humboldt Bay Harbor District			_ Sampling Point: TP34
vestigator(s): Joseph Saler, Cindy Wilcox			
andform (hillstope, terrace, etc.): Bay side fil	Local relief (concave	, convex, none): hor	L Slope (%): 5
ubregion (LRR): A, MLRA-4B	Lat: 40.821082	_ Long: -12.17	7511 Datum: WGS 84
oil Map Unit Name: 1014-Orbanland An	nthraltic Xevor thents a	650C. 0-28 NWI classi	
re climatic / hydrologic conditions on the site typical	for this time of year? Yes X No	(If no, explain in	Remarks.) Shub wetle,
re Vegetation, Soil, or Hydrology	significantly disturbed? Are	e "Normal Circumstances	" present? Yes 📈 No 🔜
re Vegetation, Soil, or Hydrology			
UMMARY OF FINDINGS – Attach site r	nap showing sampling point	locations, transec	s, important features, etc
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes			\sim
Wetland Hydrology Present? Yes		and? Yes	No
Pomarke: MICTO anarmal minfall		1 love	
TP excavated within willow 5	rand. Hatgrand, no 1	Agreleda	
H. Standard Contraction		× 01	
EGETATION – Use scientific names of	plants.		
Tree Stratum (Plot size: 30'	Absolute Dominant Indicator % Cover Species? Status		
1. Salix hopheriona	85 FRCW	Number of Dominant That Are OBL, FACW	•
2,		Total Number of Dom	
3		 Species Across All St 	
4		Percent of Dominant	Species Challe
Sapling/Shrub Stratum (Plot size: 5'	= Total Cover	That Are OBL, FACW	
1. Rubus insinus	40 V FACU	Prevalence Index w	
2. Malus fusca	1 . NH	Total % Cover of	
3		and the second sec	x1= x2=
4		the second	x 3 =
5		and a state of the	x 4 =
Herb Stratum (Plot size: 5))	= Total Cover	UPL species	x 5 =
1		Column Totals:	(A) (B)
2		- Prevalence Inde	ex = B/A =
3		Hydrophytic Vegeta	tion Indicators:
4			r Hydrophytic Vegetation
5		- 2 - Dominance T	
6 7		3 - Prevalence Ir	
8	/	data in Rema	I Adaptations ¹ (Provide supporting rks or on a separate sheet)
9		5 - Wetland Non-	Vascular Plants ¹
10		_ Problematic Hyd	rophytic Vegetation ¹ (Explain)
11			cil and wetland hydrology must sturbed or problematic.
Woody Vine Stratum (Plot size:)	= Total Cover	be present, unless di	
1	×		
2.		 Hydrophytic Vegetation 	
% Bare Ground in Herb Stratum		Present?	

Sampling Point: TP 3 Consulting Engine

Profile Desc	ription: (Describe f	to the depti	n needed to docu	ment the i	ndicator	or confirm	the absend	ce of indicators.)
Depth	Matrix			ox Feature:				
(inches)	Color (moist)	%	Color (moist)	%	Type	_Loc ²	Texture	Remarks
0-5	2.59 2.51	100					Sil	
5-13	IOYR 311	100		/		-	Sh	
12-73.5	5V 411		2.545/6	3	7	M	5	
12 5-24	4254251		2.5 / 1/0			-11-		and it at the
12.5-21	1.59 2.5/1	100					Gro	Bottomath + burged debris
					-	_		Very compacted.
	•						÷	
	oncentration, D=Depl					d Sand Gr		ocation: PL=Pore Lining, M=Matrix,
	Indicators: (Applica				¢d.)			tors for Problematic Hydric Soils ³ :
Histosol		-	Sandy Redox (cm Muck (A10)
	pipedon (A2)	-	Stripped Matrix					ed Parent Material (TF2)
	istic (A3)	-	Loamy Mucky		• • •	MLRA 1)		ery Shallow Dark Surface (TF12)
	en Sulfide (A4)	- (0.4.4)	Loamy Gleyed)		_ 0	ther (Explain in Remarks)
	d Below Dark Surface ark Surface (A12)	= (ATT) _	Depleted Matri Redox Dark St				31-41-	ators of hydrophytic vegetation and
	Aucky Mineral (S1)		Redux Dark St Depleted Dark	, ,				
	Gleyed Matrix (S4)		Depleted Dark Redox Depres		()			tland hydrology must be present, less disturbed or problematic,
	Layer (if present):		Redux Depres	siona (i u)				leas disturbed of problematic.
Type:								×
Depth (Ind	ches):						Hydric Se	oil Present? Yes No
IYDROLO	GY							1
	drology Indicators:							
Primary India	cators (minimum of o	ne required;	check all that app	ly)			Sec	condary Indicators (2 or more required)
Surface	Water (A1)		Water-Sta	ained Leav	es (B9) (e	xcept		Water-Stained Leaves (B9) (MLRA 1, 2,
	ater Table (A2)			1, 2, 4A, a				4A, and 4B)
Saturatio			Salt Crus		ana 46)			Drainage Patterns (B10)
	larks (B1)			vertebrate	e (B13)			Dry-Season Water Table (C2)
	nt Deposits (B2)			Sulfide O			_	Saturation Visible on Aerial Imagery (C9)
	posits (B3)			Rhizosphe	• •	Living Pos		Geomorphic Position (D2)
· · · · ·	at or Crust (B4)			of Reduce	-	-		Shallow Aquitard (D3)
	posits (B5)			on Reducti				
							·	FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
	Soil Cracks (B6)			r Stressed)	
	on Visible on Aerial I			plain in Re	anaiks)		_	Frost-Heave Hummocks (D7)
	y Vegetated Concave	Sunace (B	0)					
Field Obser			V	N	110			
Surface Wate		-		nches):				
Water Table	Present? Y	es N		nches):	1/H			\vee
Saturation Pr (includes cap	pillary fringe)	47	lo X_ Depth (ir		A			ogy Present? Yes No
Describe Ree	corded Data (stream	gauge, mor	nitoring well, aerial	photos, pr	evious ins	pections),	if available:	
Remarks:								
Remarks:								

A.

Project/Site: _Humboldt Bay Harbor District-RM	MMT City/Co	unty: Humboldt	Sampling Date: 5/4/22
pplicant/Owner: Humboldt Bay Harbor Distri	ct	State:	CA Sampling Point: TP35
nvestigator(s): <u>Joseph Saler, Cindy Wilcox</u> andform (hillslope, terrace, etc.): <u>Carsi</u> Subregion (LRR): <u>A, MLRA-4B</u> Soil Map Unit Name: <u>/014-Mrban la</u> Are climatic / hydrologic conditions on the site	Lat: HO.82 And Anthraltic Xerri e typical for this time of year? Ye	n, Township, Range: relief (concave, convex, none): <u>UT49 Long: -11</u> <u>DTHLENTS 0796</u> N s X No (If no e	None
Are Vegetation, Soil, or Hydro Are Vegetation, Soil, or Hydro SUMMARY OF FINDINGS – Attac	ology naturally problemat	ic? (If needed, explain	any answers in Remarks.)
Hydrophytic Vegetation Present? Y	es No	Is the Sampled Area	Yes No

VEGETATION - Use scientific names of plants.

	Absolute	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Rlot size: 30')	% Cover	Species? Status	Number of Dominant Species 7
1 Salix haveriand	10	V FACW	Number of Dominant Species (A)
2	_		
			Total Number of Dominant
3			Species Across All Strata:
4	1.2		Percent of Dominant Species
a a las a las de las estas est	10	= Total Cover	That Are OBL, FACW, or FAC: 60% (A/B)
Sapling/Shrub Stratum (Plot size: 5')	10	1 UP	Prevalence Index worksheet:
1. Barcharis pilularis sop caranguinea 2. Rubus armensacus	70	CAC	Total % Cover of: Multiply by:
	R	FILL	- OBL species x 1 =
3. Rubur Utsinus	0	TACUI	FACW species x 2 =
4			FAC species x 3 =
5	00		FACU species x 4 =
Herb Stratum (Plot size: 15')	38	= Total Cover 19	UPL species x 5 =
1. Carex parfordii	80	E OBL	Column Totals: (A) (B)
2. Antexantum odoratum	20	FACU	
3. Vicia sotiva	3	INO/	- Prevalence Index = B/A =
	- 1	FACW	- Hydrophytic Vegetation Indicators:
4. Juncus Lescuri	<u> </u>	TACW	
5			2 - Dominance Test is >50%
6			3 - Prevalence Index is ≤3.0 ¹
7			4 - Morphological Adaptations ¹ (Provide supporting
8			data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants ¹
10			Problematic Hydrophytic Vegetation ¹ (Explain)
			Indicators of hydric soil and wetland hydrology must
11		206	 be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:	-LUT	= Total Cover	
		21	
1			- Hydrophytic
2			
X		= Total Cover	Present? Yes No
% Bare Ground in Herb Stratum	/		
Remarks:	1	A le	
Coret dowinant in small localize	ed one	29	
	100		

Profile Description: (Describe to the	depth needed to docum	nent the ir	ndicator	or confirm	the absence of indicators.)	
Depth <u>Matrix</u>		k Features				
(inches) Color (moist) %		%	Type ¹	Loc ²	R	emarks
0-7 2.54312 10		-	-		-5	
7-16 104R411 70	7.54R 516	30	C	m	5	
16-24+54 4/4 100		_	-		5	
						_
					•·	
¹ Type: C=Concentration, D=Depletion,				d Sand Gra		
Hydric Soil Indicators: (Applicable to			a.)		Indicators for Problema	itic Hydric Solis":
— Histosol (A1) Histic Epipedon (A2)	Sandy Redox (S Stripped Matrix (2 cm Muck (A10) Red Parent Material	(TE2)
Black Histic (A3)	Loamy Mucky M) (excent		Very Shallow Dark S	
Hydrogen Sulfide (A4)	Loamy Gleyed N				Other (Explain in Rei	· · ·
Depleted Below Dark Surface (A11						
Thick Dark Surface (A12)	Redox Dark Sur	face (F6)			³ Indicators of hydrophytic	vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark S		7)		wetland hydrology mu	
Sandy Gleyed Matrix (S4)	Redox Depressi	ions (F8)			unless disturbed or pr	oblematic.
Restrictive Layer (if present):						1
Type:						X
Depth (inches):					Hydric Soil Present? Yes	
Remarks:						
HYDROLOGY Wetland Hudrology Indicators						С., Р
Wetland Hydrology Indicators:	uine du ale ante all électe a a de				Consideration desiderations of	(0
Primary Indicators (minimum of one reg			- (00) (-		Secondary Indicators (
Surface Water (A1) High Water Table (A2)	Water-Stai	neo Leave 1, 2, 4A, a		хсерг	4A, and 4B)	aves (B9) (MLRA 1, 2,
Saturation (A3)	Salt Crust		nu 40)		Drainage Patterns	(B10)
Water Marks (B1)	Aquatic Inv		(B13)		Dry-Season Wate	
Sediment Deposits (B2)	Hydrogen \$					on Aerial Imagery (C9)
Drift Deposits (B3)				Living Roof		
Algal Mat or Crust (B4)	Presence of				Shallow Aquitard (
Iron Deposits (B5)	Recent Iron	n Reductio	n in Tille	d Soils (C6)		
Surface Soil Cracks (B6)	Stunted or	Stressed	Plants (D	1) (LRR A)	Raised Ant Mound	is (D6) (L RR A)
Inundation Visible on Aerial Imager	y (B7) Other (Exp	lain in Rei	marks)		Frost-Heave Hum	mocks (D7)
Sparsely Vegetated Concave Surfa	ce (B8)					
Field Observations:	\sim	0	AL			
Surface Water Present? Yes			(/F)	-		1.50
Water Table Present? Yes		N	fr.	-		V
Saturation Present? Yes (includes capillary fringe)	No <u></u> Depth (inc	hes):	(A ;	_ Wetla	Ind Hydrology Present? Ye	s No <u>X</u>
Describe Recorded Data (stream gauge	, monitoring well, aerial p	hotos, pre	vious ins	pections), i	f available:	
Remarks:	100					
flat, fill area, son dys	soils.					
						5 A CA

		ty/County: Humboldt		Sampling Date: <u>5/4/2</u>
plicant/Owner: Humboldt Bay Harbor District			State: CA	_ Sampling Point: TP36
vestigator(s): Joseph Saler, Cindy Wilcox			nge:	
indform (hillslope, terrace, etc.): Bayside Fil	L	ocal relief (concave, o	convex, none):	Slope (%): 0-
ubregion (LRR): A, MLRA-4B	A STATE OF A		Long: -124.17	
oil Map Unit Name: 1014 Urban land An:	Mrathe Xe	rorthents o	-2010 NWI class	ification: None
e climatic / hydrologic conditions on the site typical for	r this time of year			
re Vegetation, Soil, or Hydrology	significantly di	sturbed? Are "	Normal Circumstances	" present? Yes <u> </u> No
re Vegetation, Soil, or Hydrology	naturally prob	ematic? (If ne	eded, explain any answ	wers in Remarks,)
UMMARY OF FINDINGS - Attach site m	ap showing s	ampling point l	ocations, transec	ts, important features, e
Hydrophytic Vegetation Present? Yes				
Hydric Soil Present? Yes		is the Sampled		\times
Wetland Hydrology Present? Yes		within a Wetlar	nd? Yes	No
Remarks: WETS normal rainfall	1	1	1611.	L.
TP excavated in isolated, hi	1 dophytic	veg prevent	, but not down	ONT.
	. /	U		
EGETATION – Use scientific names of p		Dominant Indicator	Dominance Test wo	skehoat-
Tree Stratum (Plot size: 30')	% Cover	Species? Status	Number of Dominant	
1. Salix hooksing	35	FACW	That Are OBL, FACV	
2			Total Number of Don	ninant U
3			Species Across All S	trata: (B)
4	35	= Total Cover	Percent of Dominant	
Sapling/Shrub Stratum (Plot size: 5')	100	Carl Maria	That Are OBL, FACV	V, di FAC:
1. Baccharis pilluloris sep. conson quinea	_ 20	W UPL	Prevalence Index w Total % Cover o	
2. Rubus unstinus		V_ FACU	-	x1=
3				x 2 =
5			FAC species	x 3 =
	38	= Total Cover		x 4 =
Herb Stratum (Plot size: 5')	0	1		x 5 =
1. Juncus et fusus		FACW	Column Totais:	(A) (I
2. Phalanis annolinacea	- 40	FACW		ex = B/A =
3. Juncus balticus. Ospa der 4. Cardonine oligosperma	- 5-	FAL	Hydrophytic Vegeta	
5. Galium aparine	1	FACU	1 - Rapid Test fo	or Hydrophytic Vegetation
3		11100	3 - Prevalence li	
7				al Adaptations ¹ (Provide support
3			data in Rema	arks or on a separate sheet)
9			5 - Wetland Non	
10		······		Prophytic Vegetation ¹ (Explain)
11	and the second s	Total Cover 13.8	be present, unless d	soil and wetland hydrology musi isturbed or problematic.
Woody Vine Stratum (Plot size:)	04	Total Cover	-	
1			Hydrophytic	1
2	1		Vegetation	Yes No
% Bare Ground in Herb Stratum 38	1	Total Cover	Present?	
% Bare Ground in Herb StratumQ				

a www.	epth needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix Inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
1-1 2.54 2.5/1 100		
-9 INVE 4/1 50		Mive-LungtoiceE
1018 413 50		S Mixed matrices
- 101K 415 50		
-21 JOYK 4/2 40	2.5 y 4/4 10 C M) Gradation between hotizon
1-23+ 54 2.5/1 100	///-	GrS
	18 March 19	
	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
	· · · · · · · · · · · · · · · · · · ·	
	M=Reduced Matrix, CS=Covered or Coated Sand Gra	
ydric Soil Indicators: (Applicable to a	II LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
_ Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
_ Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
_ Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
_ Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	3
_ 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):		17. The
Туре:		V
ALL DOMESTIC		Hydric Soil Present? Yes No V

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1) Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2) MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3) Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1) Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3)	Geomorphic Position (D2)
Algal Mat or Crust (B4) Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6)	FAC-Neutral Test (D5)
Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A)	Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface (B8)	
Field Observations:	
Surface Water Present? Yes No X Depth (inches):A	X
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes No X_ Depth (inches):/A Wetland Hy-	drology Present? Yes No 🔼
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if availa	ible:
Remarks:	
well drained, no hydrology insondy soil.	

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oject/Site: Humboldt Bay Harbor District-RMMT		City/County: Humboldt	Sampling Date: 515/2
pplicant/Owner: Humboldt Bay Harbor District			State: CA Sampling Point: TP37
vestigator(s): Joseph Saler, Cindy Wilcox		Section, Township, Rai	
ndform (hillslope, terrace, etc.): Bysta		Local relief (concave, o	convex none): Concave Slope (%): 5
ibregion (LRR): <u>A, MLRA-4B</u>	Lat:	0.8213840	Long: -124.1796840 Datum: WGS 84
il Map Unit Name: Urban land - Anthralt	ic Xevor	hents assoc. 0-	20/0 NWI classification: Freshwater Fores
e climatic / hydrologic conditions on the site typical for	this time of ye	ar? Yes X No	(If no, explain in Remarks.) Shrub wellan
e Vegetation, Soil, or Hydrology			Normal Circumstances" present? Yes X No
e Vegetation, Soil, or Hydrology	-		eded, explain any answers in Remarks.)
			ocations, transects, important features, etc
lydrophytic Vegetation Present? Yes X			ocations, transects, important reatures, etc
lydric Soil Present? Yes	No No	Is the Sampled	Area 🗸
Vetland Hydrology Present? Yes X	No	within a Wetlan	nd? Yes 🔼 No
Remarks: WETS normal rainfall	A 15	to the N	
TP excavated W/i steep sloped	hallow.	travitions abo	yatly toon 3p to Up and.
		Best describe	20 as (1403E0g)"
EGETATION Use scientific names of pla			
ree Stratum (Plot size: 30')	Absolute % Cover	Dominant Indicator Species? Status,	Dominance Test worksheet:
Morella californica	70	FACW	Number of Dominant Species 2/ That Are OBL, FACW, or FAC: (A)
Salix Lookeriana	20	V FACW	Total Number of Dominant
			Species Across All Strata: (B)
			Percent of Dominant Species 100%
apling/Shrub Stratum (Plot size: 5')	.40	= Total Cover 45/18	That Are OBL, FACW, or FAC:(A/B)
			Prevalence Index worksheet:
			Total % Cover of:Multiply by:
			OBL species x 1 = FACW species x 2 =
	<u> </u>		FAC species x 3 =
			FACU species x 4 =
erb Stratum (Plot size: 5')		= Total Cover	UPL species x 5 =
Corex obrupta	1	081	Column Totals: (A) (B)
			Prevalence Index = B/A =
			Hydrophytic Vegetation Indicators:
			X 1 - Rapid Test for Hydrophytic Vegetation
			X 2 - Dominance Test is >50%
24 A 1 0 01			3 - Prevalence Index is ≤3.0 ¹
			 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
			5 - Wetland Non-Vascular Plants ¹
)		-	Problematic Hydrophytic Vegetation ¹ (Explain)
+			¹ Indicators of hydric soil and wetland hydrology must
Ondy Vine Stratum (Plat size)	_1_	= Total Cover	be present, unless disturbed or problematic.
loody Vine Stratum (Plot size:)			
			Hydrophytic Vegetation
Bare Ground in Herb Stratum 99%	1	= Total Cover	Present? Yes No
74/2			•

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Sampling Point: TP 3 7 & Geologists, Inc

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Profile Description: (Describe to the dept		-
Depth <u>Matrix</u>	Redox Features	Testado
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-3 2.54 2.5/1 100		
3-7 2.512.5/2 00		Peat
7-16 2.542.5/1 100		My
16-24+1042.5/1 100		<
10 21 101 0.7 2 10-		
¹ Type: C=Concentration, D=Depletion, RM=	Reduced Matrix, CS=Covered or Coated Sand Gra	ains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all	LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	
Depleted Below Dark Surface (A11)	Depleted Matrix (F3) Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Depleted Dark Surface (F6)	wetland hydrology must be present,
Sandy Mucky Mineral (ST) Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:		
Depth (inches):		Hydric Soil Present? Yes X No
Remarks: Positive AAD reation @ 9		
HYDROLOGY		
HYDROLOGY Wetland Hydrology Indicators:		
	d; check all that apply)	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one require	d; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1)		
Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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) Oxidized Rhizospheres along Living Root Yeresence of Reduced Iron (C4) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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 Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary 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)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Yeresence of Reduced Iron (C4) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one 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)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary 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)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one 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 (B	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) (B8)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary 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 (B Sparsely Vegetated Concave Surface	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary 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 (E Sparsely Vegetated Concave Surface (E) 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 Roo Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) S7) Other (Explain in Remarks) (B8) 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) Sts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary 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 (E Sparsely Vegetated Concave Surface I 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 Roc Recent Iron Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) To 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) Ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary 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 (E Field Observations: Surface Water Present? Yes Saturation Present? Yes Saturation 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 Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A State of State of State of Remarks) (B8) No Depth (inches): No Depth (inches): No Depth (inches): No Depth (inches): No No	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Stailow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
Primary 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 (B Sparsely Vegetated Concave Surface I Field Observations: Surface Water Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation 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 Rood Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) S7) Other (Explain in Remarks) (B8) 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) Stailow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary 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 (E) Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Describe Recorded Data (stream gauge, mage)	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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A State of Stressed Plants (D1) (LRR A State of Stressed Plants) 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) Stailow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary 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 (E) Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Describe Recorded Data (stream gauge, mage)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A State of State of State of Remarks) (B8) No Depth (inches): No Depth (inches): No Depth (inches): No Depth (inches): No Depth (inches): Weti	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Stailow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No

bject/Site: Humboldt Bay Harbor Distric	ct-RMMT	City	County: Hu	mboldt		Sampling Date: 5/5	122
plicant/Owner: Humboldt Bay Harbor [District		_		State: CA	Sampling Point:	38
estigator(s): Joseph Saler, Cindy Wilc			tion, Townst	hip, Rang	ge:		-
ndform (hillslope, terrace, etc.): <u>Bay</u>	uside alluviumt f	Loc	al relief (con	ncave, co	nvex, none): Sope,	Me Slope (%)	48
bregion (LRR): <u>A, MLRA-4B</u>	La	it: 40,	821421	1	Long: -124. 179	723 Datum: WO	GS 84
il Map Unit Name: <u>UV ban land-</u>	Anthraltic Xe	vorthe	nts assoc	1.0-	296 NWI classific	cation: Freshwater	Fores
e climatic / hydrologic conditions on the	e site typical for this tim	e of year?	Yes X	No	(If πo, explain in R	temarks.) Shrub we	etlan
e Vegetation, Soil, or ⊢					lormal Circumstances" p		10
• Vegetation, Soil, or H	lydrology natur	ally problen	natic?	(If nee	ded, explain any answe	ers in Remarks.)	
JMMARY OF FINDINGS - At	tach site man sho	winn ea	molina o				a at
		Villig Sa	The second se				*s, eu
ydrophytic Vegetation Present? ydric Soil Present?	Yes No Yes No	\sim	Is the Sa	ampled A	Area		
/etland Hydrology Present?	Yes No		within a	Wetland	i? Yes	No	
emarks: WETS normal rainfall		10)	0	then (1-1-	
tp excavated on hold	ow slope abo	re wet	and.	Kepre	sctative of up	land conditions.	
GETATION – Use scientific	names of plants.		_				
ree Stratum (Plot size: 30'			minant Indi ecies? Sta	atue	Dominance Test work		
Morella, californica	6	0	7 7	SALL.	Number of Dominant S That Are OBL, FACW,		(A)
Salix hookeriana	1	0	FA	tew			
					Total Number of Domin Species Across All Stra		(B)
		1/2		10	Percent of Dominant Sp	necies a cola	
apling/Shrub Stratum (Plot size: 5		<u> </u>	otal Cover	35/14	That Are OBL, FACW,	or FAC:	(A/B
Rubus unsigues		7	V TA	<i>KU</i>	Prevalence Index wor		
					Total % Cover of:		
						x 1 = x 2 =	
					FAC species		
		1			FACU species		
erb Stratum (Plot size: 5	_)	<u> </u>	otal Cover			x 5 =	
Polystichum munitum	C	<u>; </u>	V FA	ACU	Column Totals:	(A)	(B)
Hypochaeris, radicata			FA	904	Prevalence Index	= B/A =	
RUMEr acetosela		5			Hydrophytic Vegetatio		
Epilobium ciliatum				9CW	1 - Rapid Test for H	Hydrophytic Vegetation	
					2 - Dominance Tes	1	
					3 - Prevalence Inde		
					4 - Morphological A data in Remarks	Adaptations ¹ (Provide suj s or on a separate sheet)	pportin }
					5 - Wetland Non-V		
					Problematic Hydro	phytic Vegetation ¹ (Expla	ain)
•		~ -		5.		il and wetland hydrology	must
oody Vine Stratum (Plot size:	, 2	0= To	otal Cover .	13 -	be present, unless distu	urbed of problematic.	
(Plot size:				-			
	~				Hydrophytic Vegetation	V	
						Y	
Bare Ground in Herb Stratum	1*	= To	otal Cover		Present? Ye	s No 🙏	

Sampling Point: TP 3 Star Geologists. Inc

Dentile Materia	n needed to document the indicator or confirm t	
Depth <u>Matrix</u>	Redox Features	
(inches) Color (moist) %	<u>Color (moist)</u> <u>%</u> <u>Type¹</u> <u>Loc²</u>	Texture Remarks
0-6 2.54 2.5/1 100		SL
6-24+59 4/3 100		15
		()
¹ Type: C=Concentration D=Depletion RM=	Reduced Matrix, CS=Covered or Coated Sand Gra	ins. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all L		Indicators for Problematic Hydric Soils ³ :
	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	1
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, unless disturbed or problematic.
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed of problematic.
Restrictive Layer (if present):		
Type:		Hydric Soil Present? Yes No 📈
Depth (inches):		
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:		
Wetland Hydrology Indicators: Primary Indicators (minimum of one required	; check all that apply)	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required		
Primary Indicators (minimum of one required 	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Primary Indicators (minimum of one required 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, 4A, and 4B)
Primary Indicators (minimum of one required 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,
Primary Indicators (minimum of one required 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)
Primary Indicators (minimum of one required	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Primary Indicators (minimum of one required 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) Hydrogen Sulfide Odor (C1) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Primary Indicators (minimum of one required	 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 Roof 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Primary Indicators (minimum of one required	 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 Roof Presence of Reduced Iron (C4) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)x
Primary Indicators (minimum of one required	 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 Roof Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)x
Primary Indicators (minimum of one required	 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 Roof Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5); Raised Ant Mounds (D6) (LRR A)
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Primary Indicators (minimum of one required	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 Roof Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 38) 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) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5); Raised Ant Mounds (D6) (LRR A)
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specialization State A Sampling Point State subsequence Local relief (concave, convex, none): COVCAUC Slope (%). subsequence Local relief (concave, convex, none): COVCAUC Slope (%). subsequence Lt 400.422.06.66° Long: -124.176.9497 Datum WGS Solid Map Unit Name: Lt 400.422.06.66° Long: -124.176.9497 Datum WGS Solid Map Unit Name: Lt 400.422.06.66° Long: -124.176.9497 Datum WGS Solid Map Unit Name: Lt 400.422.07.06 No (fine explain in Remarks) No ve Vegetation Solid or Hydrology significantly disurbed? Area No (fine explain in Remarks) No SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features Mo is the Sampled Area within a Wetland? Yes No	roject/Site: Humboldt Bay Harbor District-RMMT	City	/County: Humboldt		Sampling Date:
vestgacr(s): Joseph Sare, Cindy Wilcox Section, Township, Range andform (nillslope, terrace, etc.): <u>My Nice Art</u> Local relief (concave, convex, none): <u>CONCAUCE</u> Slope (%): UCS2 CEOLEGE of nong: <u>-124</u> , 176 999 Slope (%): Datum, WS3 oil Map Unit Name: <u>UK ban (a. k.d. Anthualhic, Korperthants 2, 800C, O - 246</u> in Wilclassification; <u>10 n. k.</u> No (ff no, explain hormanic): <u>10 n. k.</u> re climatic/ hydrologic contitions on the site typical for this time of year? Yea X. No (ff no, explain hormanic): <u>10 n. k.</u> No re vegetation Soil or Hydrology naturally problematic? (ff no, explain hormanic): <u>normatice scores</u> , <u>No</u> StudMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features No No Studmin Hydrology Present? Yes No No No No No No No No No Studmin Hydrology Present? Yes No No No No Actional Circumstances Studmin Anter Studming Stud	pplicant/Owner: Humboldt Bay Harbor District			State: CA	Sampling Point: 1P 39
ubregion (LRR): A.MEA43		Se			
ubregion (LRR): A.MLRA43	andform (hillslope, terrace, etc.): Bayside Fil	Lo	cal relief (concave, e	convex, none):	cave Slope (%): 3
ail Map Unit Name: Ut ban la LA Anthradhic Xerenthica is 9450 ⊂ 0-7.96 NWI classification: 14 bit L e cirratic/ hydrologic conditions on the site typical for this time of year? Yes	Ibregion (LRR): <u>A, MLRA-4B</u>	Lat: _40	920668°	Long: -124.17	
e climatic / hydrologic conditions on the site typical for this time of year? Yes	il Map Unit Name: Urbanland-Anthralt				
e VegetationSoltor Hydrologysignificantly disturbed? Are "Normal Circumstances" present? YesNo(if needed, explain any answers in Remarks.) UMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features (if needed, explain any answers in Remarks.) UMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features (if needed, explain any answers in Remarks.) UMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features (if needed, explain any answers in Remarks.) UMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features (if needed, explain any answers in Remarks.) UMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features (if needed, explain any answers in Remarks.) UMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features (if needed, explain any answers in Remarks.) UMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features (if needed, explain any answers in Remarks.) UMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features (if needed, explain any answers in Remarks.) Edited Stratum (Plot size: 5'					
e Vegetationorl Hydrologynaturally problematic? (ff needed, explain any answers in Remarks.) UMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features (hydrophytic Vegetation Present? YesNo					
UMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features hydrophytic Vegetation Present? Yes No ydrophytic Vegetation Present? Yes No yets of Present? Yes No getration of Present? Statum Present One Morella Californica ID Inductor ID Babiling/Shrub Stratum (Plot size: 5) ID ID					
hydric Vegetation Present? Yes No hydric Soil Present? Yes No within a Wetland? Yes No keinand Hydricogy Present? Yes No Keinand Karlow Present? Yes No Cettantific names of plants. Dominant Indicator Dominant Species Cettantific names of plants. No Total Number of Dominant Species Morella Gill Nookard and Total Number of Dominant Species Total Number of Dominant Species Machael W Shub Z Ift Prevalance Index worksheet: Total Number of Dominant Species Rubus Arbujack Z Ift Prevalance Index worksheet: Total Number of Dominant Species 100 / Rubus Arbujack Z Ift Prevalence Index worksheet: Total Cover Ift Rubus Arbujack Z Ift Ift Yes S <td></td> <td></td> <td>-</td> <td></td> <td></td>			-		
lydric Soil Present? Yes No is the Sampled Area within a Wetland? Yes No Vetland Hydrology Present? Yes No within a Wetland? Yes No Remarks: WETS normal rainfall In drainade swalle w/ Stretd-above grand connection to OL. Act for the data Act for the data No Image: Stratum (Plot size: 30° Asolute Dominant Indicator Species? Status Number of Dominant Species 3 Morella, Caliphrild III FAUM Faum No Total Number of Dominant Species 3 Species Across All Strate: 3 Species Across All Strate: 100 / 100 / Rudw Acting/Acvd 21 / FMU Prevalence Index worksheet: 100 / Rudw Acting/Acvd 21 / FMU Percent of Dominant Species 100 / Rudw Acting/Acvd 21 / FMU Percent of Cower of Multiply by: Balling/Shrub Stratum (Plot size: 5' 13 - FAC Perceince Index across at set = Column Totals: (A) - FACU Secies x3 = FACU species x4 =			ampling point l	ocations, transec	ts, important features, e
No within a Wetland Hydrology Present? Ves No termarks: WETS normal rainfall In dynimal e surgle wild the dawe grand connection to Ot. Asstation of the other dawe grand connection to Ot. Sector file and basic of plants. Absolute Dominant Indicator Sector file and the other dawe grand connection to Dominant Species? Status Absolute Dominant Indicator Sector file daw dawe grand connection to Dominant Species? Status Morela Gliptic file daw dawe grand connection to Dominant Species? Morela Gliptic file dawe grand connection to Dominant Species? Morela Gliptic file dawe grand connection to Dominant Species? Morela Gliptic file dawee grand coner file Rudue grand Total Number of Dominant Species? Stratum (Plot size: 5) Rudue grand Z And Wrights Z Erb Stratum (Plot size: 5) If It will have a daw dawee grand Gliptic file Stratum (Plot size: 5) If It will have a dawee grand Gliptic file Stratum (Plot size: 5) If It will have a dawee grand dawee grandawee grand dawee grand <			is the Sampled	Area 💊	1
temarks: WETS normal rainfall In drainage swale with truch above grand connection to OI. Nector rited at PSSICX09 GETATION - Use scientific names of plants. Tee Stratum (Plot size: 30' Norela, Californica Secies 2 Secies 2 Secie			· ·		✓ No
In drainage swalle wild frietdabale grand Cancola to UL. Actives at PSSIC(x) g EGETATION - Use scientific names of plants. Tee Stratum (Plot size: 30'				I at	
Rest definition of plants. Constraint of plants. Dominant Indicator Statum (Plot size: 30° Absolute Species? Status Marcela Californica 10 75 740.00 Marcela Californica 10 740.00 740.00 Sectors 75 740.00 740.00 Marcela Californica 10 740.00 740.00 Marcela Californica 10 740.00 740.00 Sectors 855 = Total Cover 11 Total Number of Dominant Species 100 // Rudus Acregitacus 21 740.00 740.00 740.00 Rudus Acregitacus 21 740.00 <td< td=""><td>in drainage swale widtree</td><td>fabore grand</td><td>connection.</td><td>to U1.</td><td></td></td<>	in drainage swale widtree	fabore grand	connection.	to U1.	
Res Stratum (Plot size: 30'	Bestdescribed as PSSIC	xQg			
ree Stratum (Plot size: 30°) $\frac{9}{5}$ Cover Species? Status Number of Dominant Species $\frac{75}{14000}$ That Are OBL, FACW, or FAC: $\frac{75}{14000}$ Number of Dominant Species $\frac{75}{14000}$ Total Number of Dominant Species $\frac{75}{14000}$ appling/Shrub Stratum (Plot size: $\frac{5^{\circ}}{140000}$) $\frac{855}{2}$ = Total Cover $\frac{17}{14000000000000000000000000000000000000$	EGETATION – Use scientific names of	plants.			Č Á
Salix hookerland 75 74LW Norella (alumnica) 75 74LW Norella (alumnica) 75 74LW Norella (alumnica) 75 74LW Total Number of Dominant Species 75 Total Number of Dominant Species 75 Total Number of Dominant Species 76 Total Number of Dominant Species 76 Rulux (rhould CM) 71 Rulux (rhould CM) 71 Rulux (rhould CM) 71 Rulux (rhould CM) 71 Provalence Index worksheet: 700 // Total % Cover of: Multiply by: OBL species x1 = FACU species x2 = FACU species x3 = FACU species x4 = UPL species x4 = UPL species x5 = Hildus (rhould Adata) 73 Sarow Mcc.copu 74 Northological Adaptations! (Provide supportion Indicators: 1 Northological Adaptations! (Provide supportion Indicators: 1 Northological Adaptations! 1 Sarow Mcc.copu	30'			Dominance Test wo	orkstieet:
Morella Californica III FACM aplino/Shrub Stratum (Plot size: 5') 85 = Total Cover 171 Species Across Al Strata: 3 aplino/Shrub Stratum (Plot size: 5') 21 741 Prevalence Index worksheet: 100 // Rubus Armonial 22 741 Prevalence Index worksheet: 100 // Rubus Armonial 22 741 Prevalence Index worksheet: 100 // Rubus Armonial 22 741 Prevalence Index worksheet: 100 // Rubus Armonial 22 741 Prevalence Index worksheet: 100 // Rubus Armonial 22 741 Prevalence Index worksheet: 100 // Rubus Armonial 22 741 Prevalence Index worksheet: 100 // Prevalence Index Brate: 24 742 742 742 742 Provide size: 5' 13 742	Stiv baskat dad	<u>% Cover</u> S		Number of Dominant	Species 3
animal animal 3 animal/Shrub Stratum (Plot size: 5') 85 = Total Cover 1'1 Percent of Dominant Species Ruduk (Armalia Colo 21 744 Ruduk (Armalia Colo 21 744 Ruduk (Armalia Colo 21 744 Prevalence Index worksheet: Total Number of Dominant Species $x1 = -$ Ruduk (Armalia Colo 21 744 Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species $x = x = -$ FACU species $x = 5 = x = -$ FACU species $x = 5 = x = -$ FACU species $x = 5 = x = -$ FACU species $x = 5 = x = -$ FACU species </td <td></td> <td></td> <td></td> <td>That Are OBL, FACV</td> <td>V, or FAC: (A)</td>				That Are OBL, FACV	V, or FAC: (A)
aplina/Shrub Stratum (Plot size: 5') 85 = Total Cover 11 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 // Rubus Artional Cover 11 71 71 Prevalence Index worksheet: Rubus Artional Cover 11 71 71 Prevalence Index worksheet: Rubus Artional Cover 11 71 71 Prevalence Index worksheet: Rubus Artional Cover 11 71 71 Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species $x 1 =$ 74 erb Stratum (Plot size: $5'$) 73 74 74 Equifytion Articles 73 74 74 Equifytion Articles 74 74 74 Barrow Articles 74 74 74 Equifytion Articles 74 74 74 Stratum (Plot size: $5'$) 74 74 74 Equifytion Articles 74 74 74 Equifytion Articles 74 74 74 Equifytion Articles 74 74 74 Distribut Articles 74 74	the second s		1400		
agling/Shrub Stratum (Plot size: 5') D				Species Across All S	trata: (B)
aplind/Shrub Stratum (Plot size: 5') 21 TAC Rubus Arrightacus 22 TAC Rubus Arrightacus 2 TAC Rubus Arrightacus 2 TAC Rubus Arrightacus 2 TAC Rubus Arrightacus 2 TAC Prevalence Index worksheet: X 1 =		85 =	Total Cover		
Control of the stratum Control of the stratum <thc< td=""><td></td><td>)</td><td>1</td><td></td><td></td></thc<>)	1		
Action 2 $11/CU$ OBL species $x 1 = $ FACU species $x 2 =$ FACU species $x 3 =$ FACU species $x 4 =$ UPL species $x 4 =$ UPL species $x 5 =$ Column Totals: (A) Equify the or VPSC 3 Sarow Mcc+Conv 2 OBL Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is 3.0^{1} 4 - Morphological Adaptations ¹ (Provide supp data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants ¹ Problematic Hydrophytic Vegetation ¹ (Explain ¹ Indicators of hydric soil and wetland hydrology m be present, unless disturbed or problematic. 18 = Total Cover $9/3$ to the present, unless disturbed or problematic.					
FACW species $x 2 = $ erb Stratum (Plot size: 5') 2.4 Thick matus 13 Equisition arVance 3 Sarrow Mcr.copw 2 Barrow Mcr.copw 2 Image: Sarrow Mcr.copw 3 Image: Sarrow Mcr.copw 3<		L	TACU	1	
2.4 = Total Cover 17/49 FACU speciesX 4 = PL speciesX 5 = UPL speciesX 5 = Column Totals: (A) Prevalence Index = B/A = Vody Vine Stratum (Plot size: 18 Image: Stratum (Plot size: 18	•				
Provide size: 5' 13 PAC 13 PAC 13 PAC 13 PAC 14 Column Totals: 15 Prevalence Index = B/A = 16 Prevalence Index = B/A = 17 Prevalence Index = B/A = 18 Prevalence Index is <3.01				FAC species	x 3 =
erb Stratum (Plot size: 5') Hicks 13 Equifstion Artwork Sarows Artwork Artwork Artwork Artwork <td></td> <td>24 =</td> <td>Total Cover 12/49</td> <td>FACU species</td> <td> x 4 =</td>		24 =	Total Cover 12/49	FACU species	x 4 =
Equisition arvinge 3 FAC Sarpy Mcr. copy 2 0BL Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is <3.0 ¹ 3 - Prevalence Index is <3.0 ¹ 4 - Morphological Adaptations ¹ (Provide supp data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants ¹ Problematic Hydrophytic Vegetation ¹ (Explain ¹ Indicators of hydric soil and wetland hydrology m be present, unless disturbed or problematic. Modey Vine Stratum (Plot size: 1					
Sdrpw Mcr. corput 2 08 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 ¹ 3 - Prevalence Index is ≤3.0 ¹ 4 - Morphological Adaptations ¹ (Provide supp data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants ¹ Problematic Hydrophytic Vegetation ¹ (Explain 1ndicators of hydric soil and wetland hydrology m be present, unless disturbed or problematic. Mody Vine Stratum (Plot size: 1		<u> </u>	V HAC	Column Totals:	(A) (B
Image: Second statum Image: Second statum Image: Second			FAC	Prevalence Ind	ex = B/A =
Image: Stratum (Plot size:) Image: Stratum (Plot size:) Image: Stratum (Plot size:) Image: Stratum (Plot size:)			051	Hydrophytic Vegeta	tion Indicators:
4 - Morphological Adaptations ¹ (Provide supp data in Remarks or on a separate sheet) 					
data in Remarks or on a separate sheet) data in Remarks or on a separate sheet) data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants ¹ Problematic Hydrophytic Vegetation ¹ (Explain 10					
Problematic Hydrophytic Vegetation ¹ (Explain Problematic Hydrophytic Vegetation ¹ (Explain Indicators of hydric soil and wetland hydrology m be present, unless disturbed or problematic. Hydrophytic				5 - Wetland Non-	-Vascular Plants ¹
1 1				Problematic Hyd	rophytic Vegetation ¹ (Explain)
<u>Acody Vine Stratum</u> (Plot size:) = Total Cover 13,6 Hydrophytic	l				
Hydrophytic	londy Vino Stratum (Distaine)	=т	otal Cover 9/36	be present, unless di	sturbed or problematic.
			5 A.S.		
Vegetation					1
Propert2 Vac A No.	No.	= T	otal Cover		res 🔼 🛛 No
emarks: Lifter and duff fram William, Degely shaded.					

	NYAN'
Sampling Point: T	36 cologists, Inc
tore)	

Profile Description: (Describe to the de	oth needed to document t	he indicator	or confirm	the absence	of indicators.)
Depth Matrix	Redox Feat				
(inches) Color (moist) %	<u>Color (moist)</u> %	Type	Loc ²	Texture	Remarks
0-2 2.5 Y 2.5/1 100				Peat	
2-26+ 2.54 4/2 60	7.5 YR4/6 5	<u> </u>	M	5	2.54 4/2 increases Walt
	2.5 × 4/4 35	5 0	M	/	
			-		
·					
¹ Type: C=Concentration, D=Depletion, RM	-Poducod Matrix CS=Cov	ered or Coste	d Sand Gr	ains ² l or	cation: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to al	LRRs, unless otherwise	noted.)	d oand of	Indicato	ors for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	,			n Muck (A10)
Histosoi (A1) Histic Epipedon (A2)	Stripped Matrix (S6)				Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Minera	I (F1) (excep	t MLRA 1)		y Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix				er (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)				
Thick Dark Surface (A12)	Redox Dark Surface				ors of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surfac				ind hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)		unles	ss disturbed or problematic.
Restrictive Layer (if present):					
Туре:					X
Depth (inches):				Hydric Soi	Present? Yes <u>No</u> No
Remarks:					
1000					
HYDROLOGY					
Wetland Hydrology Indicators:	ad aback all that each)			Seco	ndary Indicators (2 or more required)
Primary Indicators (minimum of one require					Water-Stained Leaves (B9) (MLRA 1, 2,
Surface Water (A1)	Water-Stained L		except		4A, and 4B)
High Water Table (A2)	MLRA 1, 2, 4			,	Drainage Patterns (B10)
Saturation (A3)	Salt Crust (B11)				Dry-Season Water Table (C2)
Water Marks (B1)	Aquatic Invertet			· · · · ·	Saturation Visible on Aerial Imagery (C9)
Sediment Deposits (B2)	Hydrogen Sulfic		Livian De		Geomorphic Position (D2)
Drift Deposits (B3)	Oxidized Rhizos				
Algal Mat or Crust (B4)	Presence of Re				Shallow Aquitard (D3) FAC-Neutral Test (D5)
Iron Deposits (B5)	Recent Iron Rec				Raised Ant Mounds (D6) (LRR A)
Surface Soil Cracks (B6)	Stunted or Stres) (ERR 2		Frost-Heave Hummocks (D7)
Inundation Visible on Aerial Imagery (II Remarks)		'	Tost-fleave fullimotics (57)
Sparsely Vegetated Concave Surface			1		
Field Observations:	No Depth (inches)	AIN.			
Surface Water Present? Yes	No Depth (inches)	131			
Water Table Present? Yes	No X Depth (inches)	(n):			
Saturation Present? Yes X	No Depth (inches)	: <u>10 m</u>	- ^{vvet}	land Hydrolog	gy Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, I	nonitoring well, aerial photo	s, previous ir	spections)	, if available:	
Remarks:		111	G 34	1 4	
Depression helds water	. Appears to be	hydrolo	gie in	put from	n PI and gralling
Remarks: Deprovsion holds water which connect to humi	boldt bay via of	terwet	lands.		Ŷ U
	/				

roject/Site: Humboldt Bay Harbor District-RMMT		City/Co	unty:	Humboldt		_ Sampling I	Date: 415/22
pplicant/Owner: Humboldt Bay Harbor District					State: CA		
vestigator(s): Joseph Saler, Cindy Wilcox		Section	, Tow	nship, Rar	ige:		
andform (hillslope, terrace, etc.): Bayside fil)		Local r	elief (concave, c	onvex, none): <u>Nón</u>	٩	Slope (%); 2
ubregion (LRR): <u>A. MLRA-4B</u>	Lat: Y	0,07	206	50°	Long: -124. 1790	53°	Datum: WGS 84
oil Map Unit Name: Urbanland Anthaltic)	Grorth	ent	a 550	16.0-2	% NWI classif	ication: n	one
re climatic / hydrologic conditions on the site typical for this				1			
re Vegetation, Soil, or Hydrology s	-				Normal Circumstances"		
re Vegetation, Soil, or Hydrology n					eded, explain any answ		
UMMARY OF FINDINGS – Attach site map	showing	samp	oling	point lo	cations, transect	s, importa	nt features, e
Hydrophytic Vegetation Present? Yes N				o		×	
Hydric Soil Present? Yes N				Sampled a Wetlan		No	\times
Wetland Hydrology Present? Yes <u>N</u>							
Remarks: WETS normal rainfall TP excavated within flat area	tabo	N. N	muli	2) Casta	sign wolferd	as dring	ptpo by TP3
I P OX CAVAGO WITHIN FLAT ONCA	just uno		apour (molition	Concet UNIA	nd	
EGETATION – Use scientific names of plan	te			or langers	MINOW - MIN	1 <u>1</u> -	
EGETATION - Ose scientine names of plan	Absolute	Domir	nant I	ndicator	Dominance Test wor	kchoot.	
Tree Stratum (Plot size: 30')	<u>% Cover</u>				Number of Dominant		\sim
1					That Are OBL, FACW		(A
2					Total Number of Dom	inant	1
3					Species Across All St		(B)
4					Percent of Dominant \$	Species	031
Sapling/Shrub Stratum (Plot size: 5')		= Tota	I Cove	ər	That Are OBL, FACW		(A
1. Rubur wsing	3			FACU	Prevalence Index wo	orksheet:	
2					Total % Cover of:		
3		-			OBL species		
4					FACW species		
5							
		= Tota	I Cove	er	FACU species		
Herb Stratum (Plot size: 5)	02	./	1	EAL	UPL species Column Totals:		
2. Arthoxadhun odoradum	- 20			FACU		(A)	(
3. Bromus diandrus				NL	Prevalence Inde		
4. Vicia Sativa	7			UPL	Hydrophytic Vegetat		
. Runex actoscila	3			FACY	1 - Rapid Test for		Vegetation
5. Bronnis hordeacens	1	-		FACY	2 - Dominance Te 3 - Prevalence In		
. Fotuca bromoides	4			NL	4 - Morphological		(Provide support
3. Equisetum arverse	41			FAC	data in Remar	ks or on a se	parate sheet)
9					5 - Wetland Non-	Vascular Plar	nts ¹
10					Problematic Hydr	ophytic Vege	tation ¹ (Explain)
11					¹ Indicators of hydric s		
March Vine Status (7)	93	= Total	Cove	r 46.5/	be present, unless dis	iturbed or pro	DIEMALIC,
Moody Vine Stratum (Plot size:)				18.6			
2		-			Hydrophytic Vegetation		
	/	= Total		r	Present? Y	es	No <u>×</u>
% Bare Ground in Herb Stratum *		- Total	. 00ve	•			

		EIN
Sampling Point:	PL	Geologists, Inc

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Profile Description: (Describe to the de	pth needed to docume	ent the in	dicator o	or confirm	the absence	of indicators.)
Depth Matrix		Features				
(inches) Color (moist) %	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-2 2.54 2.5/1 100					17	· /
2-24 2.5×4/2+ 99	7.5YR 416		<u> </u>	<u>m</u>	_ <u>S</u>	Other redox staining around metal pieces.
¹ Type: C=Concentration, D=Depletion, R Hydric Soil Indicators: (Applicable to a 	III LRRs, unless otherv Sandy Redox (Se Stripped Matrix (Loamy Mucky Mi Loamy Gleyed M Depleted Matrix (Redox Dark Surf Depleted Dark S Redox Depressio	vise noter 5) S6) Ineral (F1) Iatrix (F2) (F3) Iace (F6) Unface (F7) Dris (F8)	d.)) (except 7)	MLRA 1)	Indicat 2 c Re Ve Oth ³ Indicat weth unle	cation: PL=Pore Lining, M=Matrix. ors for Problematic Hydric Soils ³ : m Muck (A10) d Parent Material (TF2) ry Shallow Dark Surface (TF12) her (Explain in Remarks) ors of hydrophytic vegetation and and hydrology must be present, ss disturbed or problematic.
HYDROLOGY Wetland Hydrology Indicators:	in it creating) Iron	S 164r	ing (i	alleads hi	ker, chunlur *firon, noils, etc)
Primary Indicators (minimum of one requi	red; check all that apply)			Sec	ondary Indicators (2 or more required)
Surface Water (A1)	Water-Stair	ned Leave	es (B9) (e	xcept		Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1	, 2, 4A, a	nd 4B)			4A, and 4B)
Saturation (A3)	Salt Crust (B11)				Drainage Patterns (B10)
Water Marks (B1)	Aquatic Inv		s (B13)			Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen S					Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized R			Living Ro	ots (C3)	Geomorphic Position (D2)
Algal Mat or Crust (B4)	Presence o		-	-		Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iror					FAC-Neutral Test (D5)
Surface Soil Cracks (B6)	Stunted or			•		Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery				,,		Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surfac					_	
Field Observations:	. (50)		1	-		
Surface Water Present? Yes	_ No 🔀 Depth (inc	heel N	I/A			
			1/A			2.4
Water Table Present? Yes			(IA			
Saturation Present? Yes (includes capillary fringe)	_ No X Depth (inc	hes):	1	— ^{Wet}	land Hydrolo	gy Present? Yes No
Describe Recorded Data (stream gauge,	monitoring well, aerial p	hotos, pre	evious ins	spections)	if available:	
Remarks: Dry upland, well do	olned soils, f	íl.				

oject/Site: Humboldt Bay Harbor District-RMMT	City/0	County: Humboldt		_ Sampling Date: <u>5/5/22</u>
plicant/Owner: Humboldt Bay Harbor District			State: CA	Sampling Point: TP 41
estigator(s): Joseph Saler, Cindy Wilcox	Secti	on, Township, Rar		
ndform (hillslope, terrace, etc.): Bayside fill, SW				NO Slope (%): 0-1
			Long: -124.179	
il Map Unit Name: Urban land-Anthralti				
e climatic / hydrologic conditions on the site typical for t				
Vegetation, Soil, or Hydrology				
Vegetation, Soil, or Hydrology Vegetation, Soil, or Hydrology			Normal Circumstances'	
			eded, explain any answ	
JMMARY OF FINDINGS – Attach site map	p showing san	npling point lo	ocations, transect	ts, important features, etc
ydrophytic Vegetation Present? Yes	No		1	150
	No	Is the Sampled within a Wetlan		No
	No	within a wettan	d? fes_/	<u> </u>
emarks: WETS normal rainfall	1	had be war	La DATO39-	floogh buried culvert.
TP excavated Wi swale, Li		ted to we	DOCUE. O	Connected to Hum Bay
	Bestd	erribed au	PSSTLXUR.	Unincose in Thurby
GETATION – Use scientific names of pla				
ree Stratum (Plot size; <u>30'</u>)	Absolute Dor <u>% Cover</u> Spe	minant Indicator ecies? Status	Dominance Test wo	
Morella Californica	80	V FACW	Number of Dominant That Are OBL, FACW	
			Total Number of Dom	inant 0
			Species Across All St	
	0.		Percent of Dominant	Species
apling/Shrub Stratum (Plot size: 5')	_ <u></u> = To	otal Cover	That Are OBL, FACW	
Rybur amajacu	50 .	1 FM	Prevalence Index we	orksheet:
Rubus INTSIDUS	- 10 -	FACU	Total % Cover of	Multiply by:
Lonzera Involucrata	15 1	FAL	OBL species	
				x 2 =
			FAC species	
5	<u>75</u> = To	otal Cove312		x 4 =
erb Stratum (Plot size: 5')		15		x 5 =
			Column Totals:	(A) (B)
				ex = B/A =
		<u> </u>	Hydrophytic Vegeta	
				r Hydrophytic Vegetation
			2 - Dominance To	
			3 - Prevalence In	
			data in Remai	Adaptations ¹ (Provide supporting ks or on a separate sheet)
			5 - Wetland Non-	Vascular Plants ¹
			Problematic Hydr	ophytic Vegetation ¹ (Explain)
				oil and wetland hydrology must
andu Mino Stratum (Distant	= To	tal Cover	ue present, uniess dis	sturbed or problematic.
oody Vine Stratum (Plot size:)				
			Hydrophytic Vegetation	$\mathbf{\nabla}$
		tat Cover	Present? Y	res 🔼 No
Bare Ground in Herb Stratum 00 *		tal Cover		
emarks: Litter and Duff from dow	115			

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OIL					Sampling Point:
Profile Description: (Describe to the de			or confirm	the absence of ind	licators.)
Depth <u>Matrix</u> (inches) Color (moist) %	Color (moist) %	es Τγρε ¹	Loc ²	Texture	Remarks
$\frac{(\text{inches})}{D} = \frac{Color(\text{moist})}{12} \frac{\%}{12}$					Remarks
0-5 10 XR 5/1 100			-	1	
5-9 10 YK3/2 100				L	
9-22+2.544/1 97	10YR4/6 3	C	M		
		-			
Type: C=Concentration, D=Depletion, R	M=Reduced Matrix, CS=Cover	ed or Coate	d Sand Gra	ains. ² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to a					Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)			2 cm Muc	k (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)				nt Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except	MLRA 1)		low Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F	2)		X Other (Ex	plain in Remarks)
Depieted Below Dark Surface (A11)	Depleted Matrix (F3)			3	1 1 3
Thick Dark Surface (A12)	Redox Dark Surface (Fi				hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface			-	drology must be present, urbed or problematic.
Sandy Gleyed Matrix (S4) Restrictive Layer (if present):	Redox Depressions (F8)		Uniess disc	arbed of problematic.
					V
Type:				Hydric Soil Pres	ent? Yes 🔨 No
Depth (inches): Remarks: Positive AAD @			-	Tryunc Son Fres	
IYDROLOGY					1
Wetland Hydrology Indicators:				0	Latter (Commence and the d)
Primary Indicators (minimum of one requi					Indicators (2 or more required)
Surface Water (A1)	Water-Stained Lea		except	en even	Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A	, and 4B)			and 4B)
Saturation (A3)	Salt Crust (B11)			and the second se	ge Patterns (B10)
Water Marks (B1)	Aquatic Invertebra				eason Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sulfide		Living Day	N. AL	tion Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizosp				prphic Position (D2)
Algal Mat or Crust (B4)	Presence of Redu	•		N	w Aquitard (D3) leutral Test (D5)¥
Iron Deposits (B5)	Recent fron Redu				Ant Mounds (D6) (LRR A)
Surface Soil Cracks (B6)	(P7) Stunted or Stress)) (LKK A	·	Heave Hummocks (D7)
Inundation Visible on Aerial Imagery	· · _ · ·	Remarksj		1103(-1	leave numinous (D7)
Sparsely Vegetated Concave Surface	ə (DO)		1		
Field Observations:	_ No X Depth (inches): _	NA			
Surface Water Present? Yes	the second secon	3.0			
Water Table Present? Yes	No Depth (inches);	Suchas	0 144	and Durdeal and Pro-	Nor X No
Saturation Present? Yes A	_ No Depth (inches): _	Surfac	≚_ weti	and Hydrology Pre	sent? res / NO
Describe Recorded Data (stream gauge,	monitoring well, aerial photos,	previous in	spections),	if available:	
Remarks:					
Swale within fill an	Juntand and as				
Sware within the or	la upinio meso.				

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ect/Site: Humboldt Bay Harbor District-RMMT		City/County	r Humboldt		Sampling Date: 515	122
licant/Owner: Humboldt Bay Harbor District				State: CA	Sampling Point: TP4	2
estigator(s): Joseph Saler, Cindy Wilcox	61	Section, To	wnship, Rar	nge:		ļ,
dform (hillslope, terrace, etc.): Bay side fill	1	Local relief	f (concave, o	convex, none):	Ne Slope (%)	25
region (LRR): A, MLRA-4B	Lat: <u>4</u> 0	0.9203	367°	Long: -124.178	8020 Datum: WC	SS 8 4
Map Unit Name: Ur ban land - Anthraft.	e Xerorthen	15 0.5500	. 0-2%	NWI class	ification: hone	
climatic / hydrologic conditions on the site typical f						
Vegetation, Soil, or Hydrology	significantly of	disturbed?	Are "	Normal Circumstances	" present? Yes 🧹 N	10
Vegetation, Soil, or Hydrology				eded, explain any answ		
MMARY OF FINDINGS – Attach site n						
		Sampin	y point it	ocations, transec	is, important reature	95, e
rdrophytic Vegetation Present? Yes vdric Soil Present? Yes		Is th	e Sampled	Area	111	
etland Hydrology Present? Yes		with	in a Wetlan	id? Yes	No	
						_
opiena p	"t for TP4	1 Oh g	swale k	oa n K		
GETATION – Use scientific names of	plants.					
ee Stratum (Plot size: 30'	Absolute % Cover	the second second second	Indicator	Dominance Test wo	orksheet:	
Morela Californica	50	Species?	FACW	Number of Dominant That Are OBL, FACV		(A)
the dist collise these			110			(^)
				Total Number of Don Species Across All S		(B)
4						_ (=)
- 101 - 101 - 101 - 101 - 5 ¹		= Total Co	iver	Percent of Dominant That Are OBL, FACV		(AV
pling/Shrub Stratum (Plot size: 5')	70	1	FAC.	Prevalence Index w	orksheet:	
CADOS DA MATORIS				Total % Cover of	f: Multiply by:	
					x1=	1.1.1
			·		x 2 =	<u>11-</u> 31
					x 3 =	-31
5 Oliver (Division 5'	70	= Total Co	iver		x 4 = x 5 =	
rb Stratum (Plot size: 5')	μA	1	FACY		(A)	
SCIEDUS NACIOCORDUS			OBL			
Epilopium ciliatium	- 2		FACW	Prevalence Ind Hydrophytic Vegeta	ex = B/A =	-
Asthehathun adoration	Ŧ		FACU		or Hydrophytic Vegetation	
Polystichium munitum	20	\checkmark	FACU	2 - Dominance T		
Achilled pullefolium	5		FACU	3 - Prevalence Ir		
				and the second sec	al Adaptations ¹ (Provide sup	pporti
					irks or on a separate sheet)
				5 - Wetland Non		
		-			rophytic Vegetation ¹ (Explanation)	
	84	- Table	ver 47/16		soil and wetland hydrology isturbed or problematic.	must
ody Vine Stratum (Plot size:)	-8-1	= I otal Co	ver ver libe)		
				Hydrophytic		
				Vegetation	. 🗸	
				Present?	Yes No 🔨	
Bare Ground in Herb Stratum	-	= Total Co	ver			

Sampling Point: TH 200 Geologists, for

Profile Description: (Describe to the der	oth needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist)	Color (moist) , % Type ¹ Loc ²	Texture Remarks
0-27 OVR 3/2 00	7.5VR 4/6 51 C M	SL DCC. gravel
		J
		3
·		
		settr-
		F 87
		\$ ²
		2 PL D. Links Million 1
	Reduced Matrix, CS=Covered or Coated Sand Gr	ains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: (Applicable to al		-
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10) Red Parent Material (TF2)
— Histic Epipedon (A2) Black Histic (A3)	Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except MLRA 1)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	<u> </u>
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:		
Depth (inches):	V.a.	Hydric Soil Present? Yes No X
Remarks: Ruleur Fill		
prices = the		10
Remarks: Bricks - Fill. Brich, abble	- 4	
p and j =		
HYDROLOGY		
HYDROLOGY Wetland Hydrology Indicators:		
HYDROLOGY		Secondary Indicators (2 or more required)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir 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, 4A, and 4B)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2)	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)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir 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 (C9)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir 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 Rod	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir 	 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 Rod Presence of Reduced from (C4) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Vater 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 Rod Presence of Reduced fron (C4) Recent Iron Reduction in Tilled Soils (C0 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) FAC-Neutral Test (D5)
HYDROLOGY Wetland Hydrology Indicators: Primary 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)	 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 Rod Presence of Reduced from (C4) Recent Iron Reduction in Tilled Soils (C0) Stunted or Stressed Plants (D1) (LRR A) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir 	 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 Rod Presence of Reduced from (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A Dother (Explain in Remarks) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) FAC-Neutral Test (D5)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	 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 Rod Presence of Reduced from (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A Dother (Explain in Remarks) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C0 Stunted or Stressed Plants (D1) (LRR A B7) Other (Explain in Remarks) (B8)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	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 Rod Presence of Reduced fron (C4) Recent Iron Reduction in Tilled Soils (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A B7) Other (Explain in Remarks) (B8) No Depth (inches): NA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir 	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 Rod Presence of Reduced fron (C4) Recent Iron Reduction in Tilled Soils (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A B7) Other (Explain in Remarks) (B8) No Depth (inches): NA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A B7) Other (Explain in Remarks) (B8) No Depth (inches): NA Depth (inches): 27	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	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 Rod Presence of Reduced fron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A B7) Other (Explain in Remarks) (B8) No Depth (inches): <u>N/A</u> Depth (inches): <u>27</u> Wet	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) FAC-Neutral Test (D5) a) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A B7) Other (Explain in Remarks) (B8) No Depth (inches): NA Depth (inches): 27	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) FAC-Neutral Test (D5) a) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	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 Rod Presence of Reduced fron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A B7) Other (Explain in Remarks) (B8) No Depth (inches): <u>N/A</u> Depth (inches): <u>27</u> Wet	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) FAC-Neutral Test (D5) a) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	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 Rod Presence of Reduced fron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A B7) Other (Explain in Remarks) (B8) No Depth (inches): <u>N/A</u> No Depth (inches): <u>177</u> Wet monitoring well, aerial photos, previous inspections),	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) FAC-Neutral Test (D5) a) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	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 Rod Presence of Reduced fron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A B7) Other (Explain in Remarks) (B8) No Depth (inches): <u>N/A</u> No Depth (inches): <u>177</u> Wet monitoring well, aerial photos, previous inspections),	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) FAC-Neutral Test (D5) a) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	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 Rod Presence of Reduced fron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A B7) Other (Explain in Remarks) (B8) No Depth (inches): <u>N/A</u> Depth (inches): <u>27</u> Wet	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) FAC-Neutral Test (D5) a) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	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 Rod Presence of Reduced fron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A B7) Other (Explain in Remarks) (B8) No Depth (inches): <u>N/A</u> No Depth (inches): <u>177</u> Wet monitoring well, aerial photos, previous inspections),	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) obts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) FAC-Neutral Test (D5) a) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

oject/Site: Humboldt Bay Harbor District-RMMT	City/County: Humbo	oldt	Sampling Date:
oplicant/Owner: Humboldt Bay Harbor District		State: CA	_ Sampling Point: TP 43
vestigator(s): Joseph Saler, Cindy Wilcox	Section, Township,		
Indform (hillslope, terrace, etc.): Baksi de fill		e, convex, none):	ave Slope (%): 0-
Ibregion (LRR): A, MLRA-4B	Lat: 40.819992	Long - 124. 17	0002 Datum: WGS 84
il Map Unit Name: 1014-Urban land Ant			
e climatic / hydrologic conditions on the site typical f			China la sald
e Vegetation, Soil, or Hydrology		re "Normal Circumstances"	~ /
e Vegetation, Soil, or Hydrology		needed, explain any answ	
UMMARY OF FINDINGS – Attach site n		t locations, transect	ts, important features, e
lydrophytic Vegetation Present? Yes	No Is the Samp	led Area	1
lydric Soil Present? Yes X Vetland Hydrology Present? Yes X	No Is the Samp within a Wet		No
Remarks: WETS normal rainfall	See to	1 + TOUL La	aland can lake 5 along
TP excavated in 30 slough/di	abar have a li	1 Dood I	land conditions man
I have a sporterid	minings why. Best dozi	bed as PtOIHX	+h0g.
EGETATION – Use scientific names of	plants.		
201	Absolute Dominant Indicate	or Dominance Test wo	rksheet:
Morela Californica	<u>% Cover</u> <u>Species?</u> <u>Status</u>	Mumber or Dominant	
Frankula purshiang sop. pulshiana	$-\frac{85}{20}$ $-\frac{+AC}{FAC}$	That Are OBL, FACW	/, or FAC: (A)
Salis hoolering	TO FACE	Total Number of Dom	
Child I work in the		Species Across All St	irata: (B)
^	15 = Total Cover	Percent of Dominant That Are OBL, FACW	
apling/Shrub Stratum (Plot size: 5')	31	Prevalence Index we	
Rubus armeniacus	- LS FAC	Total % Cover of	-
Bacchorisglutinosa	UL V UDL		x 1 =
		FACW species	x 2 =
		FAC species	x 3 =
	47 = Total Cover 2		x 4 =
erb Stratum (Plot size: 5')		UPL species	x 5 =
Sonchus oleraceus	5 K UPL	Column Totals:	(A) (I
Cardonine oligosperma	<u> </u>	Prevalence Inde	ex = B/A =
		Hydrophytic Vegeta	
			r Hydrophytic Vegetation
		X2 - Dominance T 3 - Prevalence In	
			I Adaptations ¹ (Provide support
		data in Rema	rks or on a separate sheet)
		5 - Wetland Non-	Vascular Plants ¹
0		Problematic Hyd	rophytic Vegetation ¹ (Explain)
1			oil and wetland hydrology must sturbed or problematic.
Voody Vine Stratum (Plot size:)	= Total Cover	, be present, unless di	
Vodov Vine Stratum (Piot size:	10		
		Hydrophytic Vegetation	X
	= Total Cover	Present?	/es No
6 Bare Ground in Herb Straturn			

4.0

Profile Description: (Describe	to the depth needed to document the indicator or confirm	n the absence of indicators.)
Depth <u>Matrix</u>	Redox Features	
(inches) Color (moist)	<u>%</u> <u>Color (moist)</u> <u>%</u> <u>Type¹</u> <u>Loc²</u>	Texture Remarks
0-10 Black		Peat W/ pockets of Much
2.542.5/1		My Much color
10-13+ 1042.5/1	100	_LS
	The second s	
· · · · · · · · · · · · · · · · · · ·		
· · · · · · · · · · · · · · · · · · ·		
	eletion, RM=Reduced Matrix, CS=Covered or Coated Sand Gr	
Hydric Soil Indicators: (Applic	able to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4) Depleted Below Dark Surfac	Loamy Gleyed Matrix (F2) Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:		1
Depth (inches):		Hydric Soil Present? Yes V No
HYDROLOGY		
Wetland Hydrology Indicators:		
- 1	one required; check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1) Sediment Deposits (B2)	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along Living Roc	
Algal Mat or Crust (B4)	Oxidized reliably released from (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soils (Cf	7
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRR A	
Inundation Visible on Aerial	Imagery (B7) Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
X Sparsely Vegetated Concav	-	
Field Observations:	1	
Surface Water Present? Y	Yes X No Depth (inches):	
Water Table Present?	Yes X No Depth (inches): Mtale	\checkmark
Saturation Present?	Yes X No Depth (inches): MAR Wet	land Hydrology Present? Yes <u>No</u> No
(includes capillary fringe) Describe Recorded Data (stream	n gauge, monitoring well, aerial photos, previous inspections),	, if available:
Remarks:		1 1 2
standing water	within excavated drahage Islaugh	charrel.
J	JJ	

oject/Site: Humboldt Bay Harbor District-RMMT	City/	County: Humboldt		_ Sampling Date: 5/12/22
plicant/Owner: Humboldt Bay Harbor District			State: CA	_ Sampling Point: TP 44
vestigator(s): Joseph Saler, Cindy Wilcox		tion, Township, Rar		
ndform (hillslope, terrace, etc.): Baysi & Hill	Loc	al relief (concave, c	onvex, none): <u>Norv</u>	Slope (%): 20
bregion (LRR): A, MLRA-4B	Lat: 40. 8	19952	Long: 124. 1	78639 Datum: WGS 84
il Map Unit Name: 1014 Urbanland Anth,	altickeror	thents assoc	. 0-296 NWI classi	ification: theoh water fore
e climatic / hydrologic conditions on the site typical for	this time of year?	Yes X No	(If no, explain in	Remarks.) Shnibuetta
e Vegetation, Soil, or Hydrology		irbed? Are "I	Normal Circumstances	" present? Yes X No
e Vegetation, Soil, or Hydrology	_ naturally problem	natic? (If ne	eded, explain any ansv	vers in Remarks.)
JMMARY OF FINDINGS – Attach site ma	n showing sa	mpling point le	cations transpo	te important features ato
	1			is, important leatures, etc
lydrophytic Vegetation Present? Yes lydric Soil Present? Yes		Is the Sampled	Area	
Vetland Hydrology Present? Yes		within a Wetlan	d? Yes	No <u><</u>
			CI h	
To excovated ~ 30 inclus above	standing wa	per and o	Gircld south	of welland edge.
No. No. 1994	V			
EGETATION – Use scientific names of pl	ants.			
ree Stratum (Plot size: 30'		minant Indicator ecies? Status	Dominance Test wo	_
Franginal a custiona sop pustiona	30	V FAC	Number of Dominant That Are OBL, FACW	
Salix hodbarana	_ 50 _	FACW.	Total Number of Dom	ninant /
Morella californica	5	FACH	Species Across All S	
			Percent of Dominant	Species 50%
agling/Shrub Stratum (Plot size: 5')	<u>95</u> =T	otal Cover 475	That Are OBL, FACW	V, or FAC: (A/B)
Rubur utrinus	50 V	FACU	Prevalence Index w	
·			Total % Cover of	f: Multiply by: x 1 =
				x2=
·	<u></u>			× 3 =
	60	otal Cover		x 4 =
erb Stratym (Plot size: 5')	<u>·)0</u> = 1	otal Cover	UPL species	x 5 =
Polystichum munitum		FACY	Column Totals:	(A) (B)
Galium aponine	4	FACU	Prevalence ind	ex = B/A =
Sonchus deraceus	4	MPL	Hydrophytic Vegeta	ition Indicators:
			1 - Rapid Test fo	r Hydrophytic Vegetation
			2 - Dominance T	
			3 - Prevalence Ir	ndex is ≤3.0° Il Adaptations ¹ (Provide supporting
			data in Rema	rks or on a separate sheet)
			5 - Wetland Non-	-Vascular Plants ¹
0				rophytic Vegetation ¹ (Explain)
1		0		soil and wetland hydrology must sturbed or problematic.
Voody Vine Stratum (Plot size:)	= TO	otal Cover		and a second sec
		1977 1977	Hydrophytic	
			Manager and a strength of the	Yes No
Bare Ground in Herb Stratum <u>62</u> *	= To	otal Cover	Present?	Yes No
a Bare Ground in Herb Stratum 📩 🜽 🔄				

Sampling Point: TP44& Geologists, Inc

Profile Description: (Describe to the	depth needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist) %		Texture Remarks
0-14 2.542.5/1 10	A CONTRACT OF A	52
14-21 2.57 3/2 90	9 7.54R 518	SL
21-28 2.54 5/2 80	7.54×5/8 20 (m	LS
		2
	é.	
Trunci CoConcentration D-Dopletion	RM=Reduced Matrix, CS=Covered or Coated Sand G	rains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)		2 cm Muck (A10)
Histic Epipedon (A2)	Sandy Redox (S5) Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11		
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:		
Depth (inches):	Q. (Hydric Soil Present? Yes No Y
Remarks:		1
HYDROLOGY		
HYDROLOGY Wetland Hydrology Indicators:		
	quired; check all that apply)	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators:	auired; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators:		
Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one rec</u> Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one red 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,
Wetland Hydrology Indicators: Primary Indicators (minimum of one real 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)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one real Surface Water (A1) High Water Table (A2) Saturation (A3)	 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) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one red	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 Rome	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one red	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 Roi Presence of Reduced Iron (C4)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Primary Indicators (minimum of one red	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 Rome	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one real	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 Rom Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Cilling Stunted or Stressed Plants (D1) (LRR 4)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one real 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)	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 Rom Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A ry (B7) _ Other (Explain in Remarks)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one read 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	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 Rom Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A ry (B7) _ Other (Explain in Remarks)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one read) 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 Surface	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 Rou Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A ry (B7) Other (Explain in Remarks) ace (B8)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one ready of the second	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 Roi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Recent Iron Reduction in Tilled Soils (C) Stunted or Stressed Plants (D1) (LRR A ry (B7) Other (Explain in Remarks) ace (B8) Depth (inches): NA	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one reading of the second of t	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 Roi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A ry (B7) Other (Explain in Remarks) ace (B8) No Depth (inches):A	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one ready of the second	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 Roi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Ci Stunted or Stressed Plants (D1) (LRR A ry (B7) Other (Explain in Remarks) ace (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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one reading of the second of t	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 Roi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A ry (B7) Other (Explain in Remarks) ace (B8) No Depth (inches):A	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one reading of the second of t	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 Roi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Ci Stunted or Stressed Plants (D1) (LRR A) ry (B7) Other (Explain in Remarks) ace (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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one reading of the second of t	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 Roi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Ci Stunted or Stressed Plants (D1) (LRR A) ry (B7) Other (Explain in Remarks) ace (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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one real	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 Roi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Ci Stunted or Stressed Plants (D1) (LRR A) ry (B7) Other (Explain in Remarks) ace (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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one real	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 Roi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A ry (B7) Other (Explain in Remarks) ace (B8) No Depth (inches): NA No Depth (inches): NA Wet	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one real 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 Surface Water Present? Yes Water Table Present? Yes Gaturation Present? Yes Gaturation Present? Yes Mater Table Recorded Data (stream gauge)	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 Roi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A ry (B7) Other (Explain in Remarks) ace (B8) No Depth (inches): NA No Depth (inches): NA Wet	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

ect/Site: Humboldt Bay Harbor District-F	RMMT	City/County: Hu	mboldt	_ Sampling Date: 5/12 2
licant/Owner: Humboldt Bay Harbor Dis	rict		State: CA	Sampling Point: <u>TP 95</u>
estigator(s): Joseph Saler, Cindy Wilcox			nip, Range:	
dform (hillslope, terrace, etc.): 💆 🛶 斜				
pregion (LRR): <u>A, MLRA-4B</u>				
Map Unit Name: 1014 Urban 1	a the second second second second second second	and the second se		OL . C. Ald
climatic / hydrologic conditions on the s				
Vegetation, Soil, or Hyd			Are "Normal Circumstance	
Vegetation, Soil, or Hyd	rology naturally pro	blematic?	(If needed, explain any ans	wers in Remarks.)
IMMARY OF FINDINGS – Atta	ch site map showing	sampling p	oint locations, transed	cts, important features, etc
ydrophytic Vegetation Present?	Yes No	1- 4h - D-		
			Impled Area Yes	No
fetland Hydrology Present? emarks: WETS normal rainfall	Yes X No			
TPetcavoted in small,	imlated dashe	Nin. Dor	-described as PSS.	THAT DS+X OU
in a change in small,	isonner achte			
GETATION – Use scientific na	mes of plants.			
ee Stratum (Plot size: 30'	Absolute % Cover	Dominant Indi Species? Sta	atue	
Salix bocker and	42	V f	Number of Dominan	
			Total Number of Do	
			Species Across All \$	
	715	·	Percent of Dominan	t Species [0b]
apling/Shrub Stratum (Plot size: 5'	42	= Total Cover	That Are OBL, FAC	
Rubu anniacus	20	VFI	AC Prevalence Index v	
			Total % Cover @	
				x 1 = x 2 =
			FAC species	
	20	= Total Cover	and the second sec	x 4 =
erb Stratum (Plot size: 5)	_ = Total Cover		x 5 =
Denosthe sormetisg	85	<u>~ 00</u>	Column Totals:	(A)(B)
Rumex (cispus	2	· ±	AC Prevalence Ind	dex = B/A =
				or Hydrophytic Vegetation
				al Adaptations ¹ (Provide supporting
			data in Rem	arks or on a separate sheet)
			5 - Wetland No	
)				drophytic Vegetation ¹ (Explain)
l	27	= Total Cover		soil and wetland hydrology must disturbed or problematic.
loody Vine Stratum (Plot size: 5f+)	_≓ I otal Cover		
Lowcera Lispidula	2		Hydrophytic	
			Vegetation Present?	Yes X No
Bare Ground in Herb Stratum	1	= Total Cover	Fiesditt	

Profile Description: (Describe to the depth	needed to docum	ent the i	ndicator	or confirm	n the absence of indicators.)	
Depth <u>Matrix</u>		Features				
(inches) Color (moist) %	Color (moist)		Type'	Loc	Texture Remarks	
0-7 2.5Y 2.5/1 100	-		_		Peat	
7-12 2.5Y 3/1 100		_	_		SiL	
(2- 7+2.54 4/1 85	04R 5/8	15	C	M	C	
						
¹ Type: C=Concentration, D=Depletion, RM=R	Reduced Matrix CS	=Covered	or Coate	d Sand Gra	rains. ² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil Indicators: (Applicable to all LI					Indicators for Problematic Hydric Soils ³ :	
	_ Sandy Redox (S				_ 2 cm Muck (A10)	
Histic Epipedon (A2)	Stripped Matrix				Red Parent Material (TF2)	
Black Histic (A3)	Loamy Mucky M	lineral (F1	I) (except	MLRA 1)		
Hydrogen Sulfide (A4)	_ Loamy Gleyed M	/latrix (F2)		X Other (Explain in Remarks)	
V Depleted Below Dark Surface (A11)	_ Depleted Matrix	(F3)				
Thick Dark Surface (A12)	_ Redox Dark Sur	. ,			³ Indicators of hydrophytic vegetation and	
Sandy Mucky Mineral (S1)	_ Depleted Dark S		7)		wetland hydrology must be present,	
Sandy Gleyed Matrix (S4)	_ Redox Depressi	ons (F8)			unless disturbed or problematic.	-
Restrictive Layer (if present):					the second se	
	-					
Depth (inches):	2		~		Hydric Soil Present? Yes X No	-
Remarks: BSMVE AAD reaction u	1/1 12 ind	-e(0	top	Face,	(9 - 12 in)	
103111	1. 10 101	0.				
						5.13
HYDROLOGY						
Wetland Hydrology Indicators:		3			Constant and a first on 10	
Primary Indicators (minimum of one required;			(84) (Secondary Indicators (2 or more required	24
Surface Water (A1)	Water-Stain			xcept	Water-Stained Leaves (B9) (MLRA 1	, 2 ,
High Water Table (A2)		, 2, 4A, a	ind 4B)	*	4A, and 4B)	
Saturation (A3)	Salt Crust (Drainage Patterns (B10)	
Water Marks (B1)	Aquatic Inv				Dry-Season Water Table (C2)	
Sediment Deposits (B2)	Hydrogen S				Saturation Visible on Aerial Imagery	(C9)
Drift Deposits (B3)	Oxidized R					
Algal Mat or Crust (B4)	Presence o		-		Shallow Aquitard (D3)	
Iron Deposits (B5)	Recent Iror					
Surface Soil Cracks (B6)	Stunted or			1) (LRR A)		
Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B6)	Other (Exp	iann in Re	marksj		Frost-Heave Hummocks (D7)	
Field Observations:				-1		
Surface Water Present? Yes No	Depth (inc		NA			
			tin	-	Ν.	
Water Table Present? Yes No	Depth (inc		ND aco			
Saturation Present? Yes <u>Yes</u> No (includes capillary fringe)	Depth (inc	nes): 👱 🗸	race	vvetia	and Hydrology Present? Yes 🔼 No	
Describe Recorded Data (stream gauge, moni	itoring well, aerial p	hotos, pre	evious ins	pections), i	if available:	1
Remarks:						-
						6. M

oject/Site: Humboldt Bay Harbor District-RMMT	City/County: Humbo	oldt Sampling Date: 5/12/1
pplicant/Owner: Humboldt Bay Harbor District		State: <u>CA</u> Sampling Point: <u>TP 46</u>
vestigator(s): Joseph Saler, Cindy Wilcox	Section, Township,	
andform (hillslope, terrace, etc.): Poirs Ma/Spit, 6	Sayside Local relief (concav	re, convex, nane): <u>Nore</u> Slope (%): <u>()</u> -
ubregion (LRR): A, MLRA-4B	Lat: 46, 819624	Long: -124.179131 Datum: WGS 84
bil Map Unit Name: 1014 Urban land Ant	thraltic xerorthents	assoc. 0-PlanWI classification: Fresh water En
e climatic / hydrologic conditions on the site typical for	this time of year? Yes X No	o (If no, explain in Remarks.) Shrub weft
re Vegetation, Soil, or Hydrology	significantly disturbed? A	re "Normal Circumstances" present? Yes X No
re Vegetation, Soil, or Hydrology		needed, explain any answers in Remarks.)
		t locations, transects, important features, e
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes		led Area
Hydric Soil Present? Yes Wetland Hydrology Present? Yes		tland? Yes No
Remarks: WETS normal rainfall		
		1 m
<i>k</i>		
EGETATION – Use scientific names of pl	ants.	
30	Absolute Dominant Indicate	
Tree Stratum (Plot size: 30)	<u>% Cover Species? Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC:
2		
3.		Total Number of Dominant 5 Species Across All Strata:
4		
	= Total Cover	That Are OBL, FACW, or FAC:
Sapling/Shrub Stratum (Plot size: 5')	20 - UPL	Prevalence Index worksheet:
2. Salix hosketiana.	30 1 60	Total % Cover of: Multiply by:
3. Rubu ormeniacu	30 - 40	OBL species x 1 =
4.		FACW species x 2 =
5.		FAC species x 3 =
	80 = Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 5')	8 UPL	UPL species X 5
1. Brita malina 2. Artholarthum edocatum	- 7 - FACI	T
3. LILICA, SATIVA	- 10 INPL	Frevalence index - D/A -
4. Myasotis Liscolor	- 3 FAC	Hydrophytic Vegetation Indicators:
5. Plantago ma jor	1 FAC	 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
6. Rumer criseus	1. FAC	$\frac{1}{2} = 2 \cdot \text{Dominance results > 30 / 3}$
7. Sorchur oberacew	1 UPL	4 - Morphological Adaptations ¹ (Provide suppor
B. Gergnium, dissection	<u>3</u> <u>UPL</u>	data in Remarks or on a separate sheet)
s. Plastage lonceslata	<u>3</u> <u>FACI</u>	5 - Wetland Non-Vascular Plants ¹
10 Holcus lanatus	1 FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
11. Cratium oparine	$-\frac{3}{11}$ $-\frac{fAC}{100}$	Indicators of hydric soil and wetland hydrology mus be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 5++)	4 = Total Cover 20.5	
1. Lonicera Uspidula	20 / FACI	Hydrophytic
2.		Vegetation
% Bare Ground in Herb Stratum 59*	20 = Total Cover	Present? Yes No A
1.411.0		

	STAN
Sampling Point: 16	

epth nches) Color	Matrix (moist)	%	Color (moist)	edox Feature %	Type ¹	Loc ²	Texture	Remarks
-15 104R		100		/0			SiL	whole anevel
148 00 01								
2- FL 21 "	1	90	milean	ashix	citt-		gyts	compacted gravel
WYR	3/2	10			ru		-	" pocketsof clay
·								
pe: C=Concentration						d Sand Gr		ocation: PL=Pore Lining, M=Matrix.
_ Histosol (A1)	a. (Obbiic				leu.j			•
 Histosof (AT) Histic Epipedon (A 	2)		Sandy Redo Stripped Ma	•				m Muck (A10) d Parent Material (TF2)
Black Histic (A3)	w.)		Supped Ma		1) (evcent			ry Shallow Dark Surface (TF12)
_ Hydrogen Sulfide	(A4)		Loamy Much			, and (SA 1)		ner (Explain in Remarks)
_ Depleted Below D		æ (A11)	Depleted Ma		-,		0	ior (Explain in Remaina)
Thick Dark Surfac			Redox Dark)		³ Indicat	ors of hydrophytic vegetation and
- Sandy Mucky Min			Depleted Da					and hydrology must be present,
Sandy Gleyed Ma			Redox Depr		-			ss disturbed or problematic.
strictive Layer (if p	present):							
Туре:							1 6	
Depth (inches):							Hydric Soi	Present? Yes No 🔀
Depth (inches): emarks: Old voad	suf	iee 15	-24+7				Hydric Soi	il Present? Yes No 🗶
DROLOGY						0	Hydric Soi	il Present? Yes No 🗶
DROLOGY	ndicators	:				- 0	- k	1
DROLOGY etland Hydrology In imary Indicators (min	ndicators: nimum of c	:	: check all that a		(70)		<u>Secc</u>	ondary Indicators (2 or more required)
DROLOGY etland Hydrology In imary Indicators (min _ Surface Water (Af	ndicators: nimum of c	:	l: check all that a	Stained Lea		xcept	<u>Secc</u>	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2
DROLOGY etiand Hydrology In Surface Water (Af High Water Table	ndicators: nimum of c	:	I <u>: check all that a</u> Water-1 MLF	Stained Lea RA 1, 2, 4A,	and 4B)	xcept	<u>Secc</u>	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
DROLOGY etland Hydrology In mary Indicators (min Surface Water (Af High Water Table Saturation (A3)	ndicators: nimum of c	:	l <u>: check all that a</u> Water- MLF Salt Cr	Stained Leas RA 1, 2, 4A, ust (B11)	and 4B)	xcept	<u>Secc</u> 1	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10)
DROLOGY ettand Hydrology In imary Indicators (min Surface Water (A1 High Water Table Saturation (A3) Water Marks (B1)	ndicators: nimum of c I) (A2)	:	<u>: check all that a</u> Water-1 Salt Cn Aquatic	Stained Leav RA 1, 2, 4A, ust (B11) : Invertebrat	and 4 B) es (B13)	xcept	<u>Secc</u>	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
DROLOGY ettand Hydrology In mary Indicators (min Surface Water (A1 High Water Table Saturation (A3) Water Marks (B1) Sediment Depositi	ndicators: nimum of c) (A2) s (B2)	:	<u>: check all that a</u> Water-1 Salt Cri Aquatic Hydrog	Stained Leav RA 1, 2, 4A, ust (B11) c Invertebrate en Sulfide C	and 4 B) es (B13) Odor (C1)		<u>Secc</u>	ondary 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
DROLOGY etfand Hydrology In mary Indicators (min Surface Water (A1 High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits (B3)	ndicators: nimum of c I) (A2) s (B2)	:	I: check all that a Water-3 MLF Salt Cri Aquatic Hydrog Oxidized	Stained Lean RA 1, 2, 4A, ust (B11) c Invertebrate en Sulfide C ed Rhizosphe	and 4B) es (B13) Odor (C1) eres along	Living Roc	<u>Secc</u> 11 11 11 11 	ondary 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)
marks: Old voad DROLOGY atland Hydrology In mary Indicators (min Surface Water (A1 High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust	ndicators: nimum of (1) (A2) s (B2)) (B4)	:	I: check all that a Water-3 MLF Salt Cri Aquatic Hydrog Oxidize Presen	Stained Lean RA 1, 2, 4A, ust (B11) Invertebrate en Sulfide C ed Rhizosphe ce of Reduc	and 4B) es (B13) Odor (C1) eres along red Iron (C4	Living Roc	<u>Secc</u>	ondary 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)
DROLOGY DROLOGY etfand Hydrology In mary Indicators (min Surface Water (Art High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5)	ndicators: nimum of () (A2) s (B2)) (B4)	:	I: check all that a Water-1 MLF Salt Cri Aquatic Hydrog Oxidize Presen Recent	Stained Lear RA 1, 2, 4A, ust (B11) Invertebrate en Sulfide C ed Rhizosphe ce of Reduc Iron Reduc	and 4B) es (B13) Odor (C1) eres along ed Iron (C4 tion in Tille	Living Roc I) d Soils (C6	<u>Secc</u>	ondary 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)
DROLOGY Ettand Hydrology In imary Indicators (min Surface Water (Art High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Crack	ndicators: nimum of () (A2) s (B2) (B4) (s (B6)	: one required	L: check all that a Water-1 MLF Salt Cr Aquation Hydrog Oxidized Presen Recent Stunted	Stained Lear RA 1, 2, 4A, ust (B11) c Invertebrate en Sulfide C ed Rhizosphe ce of Reduct fron Reduct d or Stressed	and 4B) es (B13) Odor (C1) eres along ed Iron (C4 tion in Tille d Plants (D	Living Roc I) d Soils (C6	<u>Secc</u>	ondary 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) Raised Ant Mounds (D6) (LRR A)
marks: Old voad DROLOGY ettand Hydrology Iu mary Indicators (min Surface Water (Af High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Crack Inundation Visible	ndicators: nimum of c (A2) s (B2) (B4) cs (B6) on Aerial	ine required	<u>: check all that a</u> <u>Water-3</u> MLF <u>Aquatic</u> <u>Aquatic</u> <u>Hydrog</u> <u>Oxidize</u> <u>Presen</u> <u>Recent</u> <u>Stuntec</u> () <u>Other</u> (Stained Lear RA 1, 2, 4A, ust (B11) Invertebrate en Sulfide C ed Rhizosphe ce of Reduc Iron Reduc	and 4B) es (B13) Odor (C1) eres along ed Iron (C4 tion in Tille d Plants (D	Living Roc I) d Soils (C6	<u>Secc</u>	ondary 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)
marks: Old voad DROLOGY atland Hydrology Iu mary Indicators (min Surface Water (A1 High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Crack Inundation Visible Sparsely Vegetate	ndicators: nimum of c (A2) s (B2) (B4) cs (B6) on Aerial	ine required	<u>: check all that a</u> <u>Water-3</u> MLF <u>Aquatic</u> <u>Aquatic</u> <u>Hydrog</u> <u>Oxidize</u> <u>Presen</u> <u>Recent</u> <u>Stuntec</u> () <u>Other</u> (Stained Lear RA 1, 2, 4A, ust (B11) c Invertebrate en Sulfide C ed Rhizosphe ce of Reduct fron Reduct d or Stressed	and 4B) es (B13) Odor (C1) eres along ed Iron (C4 tion in Tille d Plants (D	Living Roc I) d Soils (C6	<u>Secc</u>	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 3 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) Raised Ant Mounds (D6) (LRR A)
DROLOGY etland Hydrology In imary Indicators (min Surface Water (Art High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Crack Inundation Visible Sparsely Vegetate Ed Observations:	ndicators: nimum of () (A2) s (B2) (B4) (B4) ss (B6) on Aerial ed Concave	imagery (B7 e Surface (8	I: check all that a Water-3 MLF Salt Cri Aquatic Hydrog Oxidize Presen Recent Stunted Other (38)	Stained Lean RA 1, 2, 4A, ust (B11) Invertebrate en Sulfide C ed Rhizosphe ce of Reduc I ron Reduct d or Stressed Explain in R	and 4B) es (B13) Odor (C1) eres along ed Iron (C4 tion in Tille d Plants (D	Living Roc I) d Soils (C6	<u>Secc</u>	ondary 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) Raised Ant Mounds (D6) (LRR A)
emarks: Old Voad DROLOGY etland Hydrology In imary Indicators (min Surface Water (A1 High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Crack Inundation Visible Sparsely Vegetate eld Observations: Irface Water Present	ndicators: nimum of () (A2) s (B2) (B4) (B4) s (B6) on Aerial ed Concave	imagery (B7 e Surface (8 'es I	L: check all that a Water-1 MLF Salt Cri Aquatic Hydrog Oxidize Presen Recent Stunted Other (38)	Stained Lear RA 1, 2, 4A, ust (B11) Invertebrate en Sulfide C ed Rhizosphe ce of Reduc Iron Reduct d or Stressee Explain in R	and 4B) es (B13) Odor (C1) eres along ed Iron (C4 tion in Tille d Plants (D	Living Roc I) d Soils (C6	<u>Secc</u>	ondary 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) Raised Ant Mounds (D6) (LRR A)
OLd Voad Voa	ndicators: nimum of ()) (A2) s (B2)) (B4) ss (B6) on Aerial ed Concave (? Y	Imagery (Bi e Surface (Bi 'es I	Check all that a Water-3 MLF Salt Cri Aquatic Hydrog Oxidize Presen Recent Stunted () Other (38)	Stained Lean RA 1, 2, 4A, ust (B11) c Invertebrate en Sulfide C ed Rhizosphe ce of Reduc t Iron Reduc d or Stressee Explain in R (inches):	and 4B) es (B13) Odor (C1) eres along ed Iron (C4 tion in Tille d Plants (D	Living Roc I) ⁻ d Soils (C6 1) (LRR A	Secc 1 	ondary 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) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
OLd Voced OLd Voced	ndicators: nimum of () (A2) s (B2) (B4) (s (B6) on Aerial ed Concave t? Y	Imagery (Bi e Surface (Bi 'es I	Check all that a Water-3 MLF Salt Cri Aquatic Hydrog Oxidize Presen Recent Stunted () Other (38)	Stained Lear RA 1, 2, 4A, ust (B11) Invertebrate en Sulfide C ed Rhizosphe ce of Reduc Iron Reduct d or Stressee Explain in R	and 4B) es (B13) Odor (C1) eres along ed Iron (C4 tion in Tille d Plants (D	Living Roc I) ⁻ d Soils (C6 1) (LRR A	Secc 1 	ondary 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) Raised Ant Mounds (D6) (LRR A)
DROLOGY etland Hydrology In imary Indicators (min Surface Water (A1 High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Crack Inundation Visible Sparsely Vegetate eld Observations: urface Water Present? aturation Present? cludes capillary fring	ndicators: nimum of ((A2) (A2) (B4) (B4) (S (B6) on Aerial ed Concave (? Y Y ge)	imagery (B7 e Surface (8 'es 1 'es 1	L: check all that a Water-3 MLF Salt Cri Aquatic Hydrog Oxidize Presen Recent Stuntec) Other (38) No Depth No Depth	Stained Lear RA 1, 2, 4A, ust (B11) Invertebrate invertebrate ce of Reduce Ced Rhizosphe ce of Reduce Iron Reduced or Stressee Explain in R (inches): (inches):	and 4B) es (B13) Odor (C1) eres along ed Iron (C4 tion in Tilled d Plants (D emarks)	Living Roc i) ⁻ d Soils (C6 1) (LRR A Weth	Seco 1 	ondary 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) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
DROLOGY etland Hydrology Iu imary Indicators (min Surface Water (A1 Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Crack Inundation Visible Sparsely Vegetate eld Observations: Unface Water Present ater Table Present?	ndicators: nimum of ((A2) (A2) (B4) (B4) (S (B6) on Aerial ed Concave (? Y Y ge)	imagery (B7 e Surface (8 'es 1 'es 1	L: check all that a Water-3 MLF Salt Cri Aquatic Hydrog Oxidize Presen Recent Stuntec) Other (38) No Depth No Depth	Stained Lear RA 1, 2, 4A, ust (B11) Invertebrate invertebrate ce of Reduce Ced Rhizosphe ce of Reduce Iron Reduced or Stressee Explain in R (inches): (inches):	and 4B) es (B13) Odor (C1) eres along ed Iron (C4 tion in Tilled d Plants (D emarks)	Living Roc i) ⁻ d Soils (C6 1) (LRR A Weth	Seco 1 	ondary 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) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
emarks: Old Voced DROLOGY etland Hydrology In imary Indicators (min Surface Water (A1 High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Crack Inundation Visible Sparsely Vegetate eld Observations: Irface Water Present? atter Table Present? Ituration Present? Cludes capillary fring	ndicators: nimum of ((A2) (A2) (B4) (B4) (S (B6) on Aerial ed Concave (? Y Y ge)	imagery (B7 e Surface (8 'es 1 'es 1	L: check all that a Water-3 MLF Salt Cri Aquatic Hydrog Oxidize Presen Recent Stuntec) Other (38) No Depth No Depth	Stained Lear RA 1, 2, 4A, ust (B11) Invertebrate invertebrate ce of Reduce Ced Rhizosphe ce of Reduce Iron Reduced or Stressee Explain in R (inches): (inches):	and 4B) es (B13) Odor (C1) eres along ed Iron (C4 tion in Tilled d Plants (D emarks)	Living Roc i) ⁻ d Soils (C6 1) (LRR A Weth	Seco 1 	ondary 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) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

ologists, Inc. Dject/Site: Humboldt Bay Harbor District-RMMT	(City/County	Humboldt		Sampling Date: 5/12/22
plicant/Owner: Humboldt Bay Harbor District			S	State: CA	Sampling Point: TP47
estigator(s): Joseph Saler, Cindy Wilcox	8	Section, To	wnship, Ran	ge:	
ndform (hillslope, terrace, etc.): Peninsula spit		Local relief	(concave, c	onvex, none):	cave Slope (%): 2-5
bregion (LRR): A, MLRA-4B	Lat: 40	.8191	18	Long: -124,179	663 Datum: WGS 84
il Map Unit Name: 1014 - Urbanland Anth	saltic y	Youth	ents 0	-2010 NWI classi	fication: Arechevaker Forest
e climatic / hydrologic conditions on the site typical for th					
e Vegetation, Soil, or Hydrology				Normal Circumstances	
e Vegetation, Soil, or Hydrology				eded, explain any ansv	
JMMARY OF FINDINGS – Attach site map		samplin	g point id	ocations, transec	ts, important features, etc
	No	le th	e Sampled	Area	~
	No No		in a Wetlan		X No
			1 lind	12 000	Come lasting
In allow a	arno con	neurity	to Munda	aorday.	Bot winked as
Current out Flow depression	. COBDI	es,	swepp	beature?	PEM1A+BXOn
EGETATION – Use scientific names of pla	nts.				
	Absolute	Dominant	Indicator	Dominance Test wo	orksheet:
ree Stratum (Plot size: <u>30'</u>)	% Cover	Species?	Status	Number of Dominant	
		ä . – – –		That Are OBL, FACV	V, or FAC: (A)
		•		Total Number of Don	
				Species Across All S	trata: (B)
		= Total Co	wer	Percent of Dominant That Are OBL, FACV	
apling/Shrub Stratum (Plot size: 5')			Chr	Prevalence Index w	
-Rubus armaniacus		~	HAC	Total % Cover of	
s			/	OBL species	x 1 =
•			() <u></u>)/	FACW species	x 2 =
·		÷		FAC species	× 3 =
·	5	= Total Co			x 4 =
lerb Stratum (Plot size: 5)		_ 1016101	1000		x 5 =
Agrostis stalonitiera	93	V	FAC	Column Totals:	(A) (B)
Lotus corniculatus			+AC.	Prevalence Ind	ex = B/A =
Cyperros eragroshs	2		FACW	Hydrophytic Vegeta	
Figura perennis			FAC	1 - Rapid Test fo	or Hydrophytic Vegetation
Trifelium repens	3		FAC	Z 2 - Dominance 1	Fest is >50%
				3 - Prevalence II	
					al Adaptations ¹ (Provide supportin arks or on a separate sheet)
· · · · · · · · · · · · · · · · · · ·				5 - Wetland Non	
0				and the second sec	drophytic Vegetation ¹ (Explain)
1k	_			¹ Indicators of hydric	soil and wetland hydrology must
~	105	= Total Co	ver 212	de present, uniess d	isturbed or problematic.
Voody Vine Stratum (Plot size:)			a star		
				Hydrophytic Vegetation	V
	and a second sec			Present?	Yes X No
2		= Total Co	UCE	Fresentr	

Sampling Point: 1947 & Geologists, Inc

ngine

Depth Matrix		he absence of indicators.)
	Redox Features	·
	lor (moist) % Type ¹ Loc ²	Texture Remarks
0-3 0YR3/2 00	/ / / / /	L
3-17+ 2.544/2 100	/ 2//	.15
<u> </u>		013
¹ Type: C=Concentration, D=Depletion, RM=Redu	ced Matrix, CS=Covered or Coated Sand Grain	ns. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LRRs,	, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1) S	andy Redox (S5)	2 cm Muck (A10)
	tripped Matrix (S6)	Red Parent Material (TF2)
	oamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
· · · · · · · · · · · · · · · · · · ·	oamy Gleyed Matrix (F2)	X Other (Explain in Remarks)
	epleted Matrix (F3)	
	edox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
	epleted Dark Surface (F7)	wetland hydrology must be present,
	edox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		unless disturbed or problematic.
Type:		X .
Depth (inches):		Hydric Soil Present? Yes 🔨 No
Remarks:	- 10 1	
- Diviting AAD reaction 1	n unler Dinches	
1041110 410 10001011		
- Positive AAD reaction in - Extremely compacted	rubble and boy doks (O) [] 1	N.
mundly million		
HYDROLOGY		
Wetland Hydrology Indicators:		
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check		Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check Surface Water (A1)	<u>k all that apply)</u> Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check		
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check 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 required; check 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 (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check 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 Roots	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check 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 Roots Presence of Reduced Iron (C4)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check 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 Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check 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)	 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 Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	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 Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check 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)	 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 Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	 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 Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present?	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): <u>A</u> Depth (inches): <u>Fin</u>	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Saturation Present? Yes No	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): <u>A</u> Depth (inches): <u>Fin</u>	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Saturation Present? Yes No Saturation Present? Yes No	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): MA Depth (inches): Wetlan	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) d Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Saturation Present? Yes No	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): MA Depth (inches): Wetlan	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) d Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Saturation Present? Yes No Cincludes capillary fringe) Describe Recorded Data (stream gauge, monitoring)	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 Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): MA Depth (inches): Wetlan	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) d Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Saturation Present? Yes No Saturation Present? Yes No Saturation Present? Yes No Saturation Present? Yes No Describe Recorded Data (stream gauge, monitorin	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 Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): <u>Fin</u> Depth (inches): <u>WA</u> Wetlan ing well, aerial photos, previous inspections), if a	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) d Hydrology Present? Yes No available:
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Saturation Present? Yes No Saturation Present? Yes No Saturation Present? Yes No Saturation Present? Yes No Describe Recorded Data (stream gauge, monitorin	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 Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): <u>Fin</u> Depth (inches): <u>WA</u> Wetlan ing well, aerial photos, previous inspections), if a	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) d Hydrology Present? Yes No available:
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Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Saturation Present? Yes No Saturation Present? Yes No Describe Recorded Data (stream gauge, monitorin	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 Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): <u>Fin</u> Depth (inches): <u>WA</u> Wetlan ing well, aerial photos, previous inspections), if a	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) d Hydrology Present? Yes No available:
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Saturation Present? Yes No Saturation Present? Yes No Describe Recorded Data (stream gauge, monitorin	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 Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) Depth (inches): <u>Fin</u> Depth (inches): <u>WA</u> Wetlan ing well, aerial photos, previous inspections), if a	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) d Hydrology Present? Yes No available:

eject/Site: Humboldt Bay Harbor District-RMMT	c	ity/County: Humbold	t Sampling Date: 5/12/27
plicant/Owner: Humboldt Bay Harbor District			State: CA Sampling Point:
estigator(s): Joseph Saler, Cindy Wilcox	S	ection, Township, Ra	Inge:
ndform (hillslope, terrace, etc.): RAINSULA Spit	ballside 1	ocal relief (concave,	convex, none): Nane Slope (%): 0-2
bregion (LRR): A, MLRA-4B			Long: 124. 179666 Datum: WGS 84
	maltic Xer	orthents asso	DC. 0-290NWI classification: Fires hwo fer for
			(If no, explain in Remarks.) Shrub uction
Vegetation, Soil, or Hydrology			"Normal Circumstances" present? Yes Ves
 Vegetation, Soil, or Hydrology 			
		ampling point l	ocations, transects, important features, etc
ydrophytic Vegetation Present? Yes		Is the Sampleo	d Area
ydric Soil Present? Yes /etland Hydrology Present? Yes		within a Wetla	×
emarks: WETS normal rainfall			
upland for TP47			
GETATION – Use scientific names of	plants.		
201	Absolute	Dominant Indicator	Dominance Test worksheet:
ree Stratum (Plot size: 30'	% Cover	Species? Status	Number of Dominant Species
			That Are OBL, FACW, or FAC:
			Total Number of Dominant 3
			Species Across All Strata: (B)
		= Total Cover	Percent of Dominant Species 33% (A/B)
apling/Shrub Stratum (Plot size: 5')		- Total Obver	That Are OBL, FACW, or FAC: (A/B) Prevalence Index worksheet:
Rulous armaniacus	_ 20	V HAC	Total % Cover of: Multiply by:
			OBL species x1 =
			FACW species x 2 =
			FAC species x 3 =
	20		FACU species x 4 =
erb Stratum (Plotisize: 5')	10	= Total Cover	UPL species x 5 =
Anthexanthun adoration	35	FACU	Column Totals: (A) (B)
Contaderia jubata	25	FACU	Prevalence Index = B/A =
Leontidon saxatilis	6	FACU	Hydrophytic Vegetation Indicators:
Hokes another	15	FAC	1 - Rapid Test for Hydrophytic Vegetation
Plantago lanceolota	2	FACU	2 - Dominance Test is >50%
Lotur Jarni cultur	10	FAC	$3 - Prevalence Index is \leq 3.0^{1}$
Circium Vulgare		FACU	4 - Morphological Adaptations ¹ (Provide supporting
Viça vilasa j	-12	UPL	data in Remarks or on a separate sheet)
testuca announaces			5 - Wetland Non-Vascular Plants
Symphyotrichim chilese			Problematic Hydrophytic Vegetation ¹ (Explain)
Daykin carota	- the	FACU SIS	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
oody Vine Stratum (Plot size:)	112=	Total Cover 23	
	<u> </u>		Hydrophytic Vegetation
Q		Total Cover	Present? Yes No A
Bare Ground in Herb Stratum			

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i a 4

Sampling Point: TP

Realized Engine Geologists, Inc

	iption: (Describe	to the dept	h needed to docum	nent the	ndicator	or confirm	n the absenc	e of indicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)		Color (moist)	%	Туре'	_Loc ²	Texture	Remarks
0-3	104R 3/2	100					SL	
3-23	104R 8/2	100					gr SL	compacted
23-24	2.54 4/1	95	1048312	5	-	-	grsci	- very compacted
11							-	
								1.
				-				
					· — —		-	- · · · · · · · · · · · · · · · · · · ·
					·		-	
							. 2.	
		the second s	Reduced Matrix, CS RRs, unless other			d Sand G		ocation: PL=Pore Lining, M=Matrix. tors for Problematic Hydric Soils ³ :
Histosol (Sandy Redox (,			cm Muck (A10)
	ipedon (A2)	-	Stripped Matrix					ed Parent Material (TF2)
Black His			Loamy Mucky M		1) (except	MLRA 1		ary Shallow Dark Surface (TF12)
-	n Sulfide (A4)		Loamy Gleyed					ther (Explain in Remarks)
	Below Dark Surfac	e (A11)	Depleted Matrix		-,			
	rk Surface (A12)	- (,	Redox Dark Su				³ Indica	tors of hydrophytic vegetation and
	ucky Mineral (S1)		Depleted Dark					land hydrology must be present,
	leyed Matrix (S4)		Redox Depress	sions (F8)			unl	ess disturbed or problematic.
	ayer (if present):							
Type:								
	hes):						Hydric Sc	oil Present? Yes No 🔀 👘
Remarks:								
ngenaria.								
HYDROLOG	GY							
Wetland Hyd	Irology Indicators:							
-	Irology Indicators:		I: check ail that app	ly)			Sec	condary Indicators (2 or more required)
Primary Indica	Irology Indicators: ators (minimum of (/es (B9) (¢	except	Sec	
Primary Indica	Irology Indicators: ators (minimum of (Water (A1)		Water-Sta	lined Leav		except	<u>Sec</u>	Water-Stained Leaves (B9) (MLRA 1, 2,
Primary Indica Surface V High Wat	Irology Indicators ators (minimum of o Nater (A1) ter Table (A2)		Water-Sta MLRA	uined Lear 1, 2, 4A,	and 4B)	except		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Primary Indica Surface V High Wat Saturatio	irology Indicators: ators (minimum of e Water (A1) ter Table (A2) m (A3)		Water-Sta MLRA Salt Crust	uined Leav 1, 2, 4A, t (B11)	and 4B)	except		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Primary Indica Surface V High Wat Saturatio Water Ma	Irology Indicators: ators (minimum of c Water (A1) ter Table (A2) in (A3) arks (B1)		Water-Sta MLRA Salt Crust Aquatic In	uined Lean 1, 2, 4A, t (B11) ivertebrat	and 4 B) es (B13)	except		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Primary Indica Surface W High Wat Saturatio Water Ma Sediment	Irology Indicators: ators (minimum of c Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2)		Water-Sta MLRA Salt Crust Aquatic In Hydrogen	tined Leav 1, 2, 4A, t (B11) ivertebrate Sulfide C	and 4B) es (B13) Odor (C1)			Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Primary Indica Surface W High Wat Saturatio Water Ma Sediment Drift Dep	ators (minimum of a Nater (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) iosits (B3)		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I	tined Leav 1, 2, 4A, t (B11) ivertebrate Sulfide C Rhizosphi	and 4B) es (B13) Odor (C1) eres along	Living Ro		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)
Primary Indica Surface V High Wat Saturatio Water Ma Sediment Drift Depu	Irology Indicators: ators (minimum of e Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) iosits (B3) t or Crust (B4)		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence	tined Lear 1, 2, 4A, (B11) ivertebrate Sulfide C Rhizosphe of Reduc	and 4B) es (B13) Odor (C1) eres along ed Iron (C	Living Ro 4)		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)
Primary Indica Surface V High Wat Saturatio Water Ma Sediment Drift Depu Algal Mat	Irology Indicators: ators (minimum of e Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) iosits (B3) t or Crust (B4) iosits (B5)		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent In	tined Lear 1, 2, 4A, (B11) wertebrate Sulfide C Rhizosphe of Reduct on Reduct	and 4B) es (B13) Odor (C1) eres along ed Iron (C tion in Tille	Living Ro 4) ed Soils (C		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Primary Indica Surface V High Wat Saturatio Water Ma Sediment Drift Depu Algal Mat Iron Depu Surface S	Irology Indicators: ators (minimum of e Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) iosits (B3) t or Crust (B4) iosits (B5) Soil Cracks (B6)	one required	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o	tined Lear 1, 2, 4A, t (B11) ivertebrate Sulfide C Rhizospho of Reduct on Reduct r Stressed	and 4B) es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (E	Living Ro 4) ed Soils (C		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indica Surface V High Wat Saturatio Water Ma Sediment Drift Depu Algal Mat Iron Depu Surface S Inundatio	Irology Indicators: ators (minimum of e Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) iosits (B3) t or Crust (B4) iosits (B5) Soil Cracks (B6) on Visible on Aerial	one required	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o 7) Other (Ex	tined Lear 1, 2, 4A, t (B11) ivertebrate Sulfide C Rhizospho of Reduct on Reduct r Stressed	and 4B) es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (E	Living Ro 4) ed Soils (C		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Primary Indica Surface W High Wat Saturatio Water Ma Sediment Drift Dep Algal Mat Iron Depo Surface S Inundatio Sparsely	Irology Indicators: ators (minimum of e Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) iosits (B3) t or Crust (B4) iosits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav	one required	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o 7) Other (Ex	tined Lear 1, 2, 4A, t (B11) ivertebrate Sulfide C Rhizospho of Reduct on Reduct r Stressed	and 4B) es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (E	Living Ro 4) ed Soils (C		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indica Surface V High Wat Saturatio Water Ma Sediment Drift Depu Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ	Irology Indicators: ators (minimum of e Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav vations:	Imagery (Bi e Surface (I	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Inc Stunted o 7) Other (Ex 38)	tined Lean 1, 2, 4A, t (B11) Invertebrate Sulfide C Rhizosphi of Reduct on Reduct on Reduct on Reduct plain in R	and 4B) es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (E emarks)	Living Ro 4) ed Soils (C		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indica Surface W High Wat Saturatio Water Ma Sediment Drift Dep Algal Mat Iron Depo Surface S Inundatio Sparsely	Irology Indicators: ators (minimum of e Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav rations: or Present?	Imagery (B e Surface (I res	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Inc Stunted o 7) Other (Ex 38)	tined Lean 1, 2, 4A, t (B11) ivertebrate Sulfide C Rhizosphe of Reduce on Reduce on Reduce plain in R plain in R	and 4B) es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (E	Living Ro 4) ed Soils (C		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indica Surface V High Wat Saturatio Water Ma Sediment Drift Depu Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ	Irology Indicators: ators (minimum of e Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav rations: or Present?	Imagery (Bi e Surface (I	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o T) Other (Ex 38)	tined Lean 1, 2, 4A, t (B11) avertebrate Sulfide C Rhizosphi of Reduct on Reduc	and 4B) es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (E emarks) N/A 244	Living Ro 4) ed Soils (C		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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Primary Indica Primary Indica Surface W High Wat Saturatio Water Ma Sediment Drift Depu Algal Mat Iron Depu Surface S Inundatio Sparsely Field Observ Surface Wate Water Table G Saturation Pri (includes cap	Irology Indicators: ators (minimum of e Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav vations: er Present? Present? Soil Cracks (B6) Present? Soil Cracks (B6) Present? Soil Cracks (B6) Soil	Imagery (B) e Surface (I fes I fes I	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o 7) Other (Ex 38)	tined Lean 1, 2, 4A, (B11) wertebrate Sulfide C Rhizosphe of Reduct on Reduct on Reduct r Stressed plain in R nches): nches):	and 4B) es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (E emarks) N/A 24/9	Living Ro 4) 5d Soils (C 01) (LRR 7		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)
Primary Indica Primary Indica Surface W High Wat Saturatio Water Ma Sediment Drift Depu Algal Mat Iron Depu Surface S Inundatio Sparsely Field Observ Surface Wate Water Table G Saturation Pri (includes cap	Irology Indicators: ators (minimum of e Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav vations: er Present? Present? Soil Cracks (B6) Present? Soil Cracks (B6) Present? Soil Cracks (B6) Soil	Imagery (B) e Surface (I fes I fes I	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o 7) Other (Ex 38)	tined Lean 1, 2, 4A, (B11) wertebrate Sulfide C Rhizosphe of Reduct on Reduct on Reduct r Stressed plain in R nches): nches):	and 4B) es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (E emarks) N/A 24/9	Living Ro 4) 5d Soils (C 01) (LRR 7		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)
Primary Indica Primary Indica Surface W High Wat Saturatio Water Ma Sediment Drift Depu Algal Mat Iron Depu Surface S Inundatio Sparsely Field Observ Surface Wate Water Table G Saturation Pri (includes cap	Irology Indicators: ators (minimum of e Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav vations: er Present? Present? Soil Cracks (B6) Present? Soil Cracks (B6) Present? Soil Cracks (B6) Soil	Imagery (B) e Surface (I fes I fes I	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o 7) Other (Ex 38)	tined Lean 1, 2, 4A, (B11) wertebrate Sulfide C Rhizosphe of Reduct on Reduct on Reduct r Stressed plain in R nches): nches):	and 4B) es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (E emarks) N/A 24/9	Living Ro 4) 5d Soils (C 01) (LRR 7		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)
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Primary Indica	Irology Indicators: ators (minimum of e Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav vations: er Present? Present? Soil Cracks (B6) Present? Soil Cracks (B6) Present? Soil Cracks (B6) Soil	Imagery (B) e Surface (I fes I fes I	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o 7) Other (Ex 38)	tined Lean 1, 2, 4A, (B11) wertebrate Sulfide C Rhizosphe of Reduct on Reduct on Reduct r Stressed plain in R nches): nches):	and 4B) es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (E emarks) N/A 24/9	Living Ro 4) 5d Soils (C 01) (LRR 7		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)
Primary Indica	Irology Indicators: ators (minimum of e Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav vations: er Present? Present? Soil Cracks (B6) Present? Soil Cracks (B6) Present? Soil Cracks (B6) Soil	Imagery (B) e Surface (I fes I fes I	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o 7) Other (Ex 38)	tined Lean 1, 2, 4A, (B11) wertebrate Sulfide C Rhizosphe of Reduct on Reduct on Reduct r Stressed plain in R nches): nches):	and 4B) es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (E emarks) N/A 24/9	Living Ro 4) 5d Soils (C 01) (LRR 7		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)

gists, Inc. .ct/Site: <u>Humboldt Bay Harbor District-RMMT</u>	City/County: Humbol	Idt Sampling Date: 5/12/2
cant/Owner: Humboldt Bay Harbor District		State: CA Sampling Point: TP49
tigator(s): Joseph Saler, Cindy Wilcox		Range:
form (hillslope, terrace, etc.): Reninsula		
egion (LRR): A, MLRA-4B		Long: -124, 180274 Datum: WGS 84
Map Unit Name: 1014 UVbunland 4	nthraltic Xerorthents a	2500.0-74 CNWI classification: hone
limatic / hydrologic conditions on the site typical	for this time of year? Yes X No	(If no, explain in Remarks.)
/egetation, Soil, or Hydrology	significantly disturbed? Are	e "Normal Circumstances" present? Yes 📈 No 🔜
/egetation, Soil, or Hydrology	naturally problematic? (If	needed, explain any answers in Remarks.)
IMARY OF FINDINGS – Attach site	map showing sampling point	locations, transects, important features, etc
Irophytic Vegetation Present? Yes	No	* Meets CCC
Iric Soil Present? Yes	No Is the Sample	ed Area
tland Hydrology Present? Yes X	No within a Wetl	land? Yes No Yes Moliond d
narks: WETS normal rainfall	1. Internet	de 14 de la la
P excavated in mowed in	morner field. In	slight depression
ETATION - Use scientific names of	nlante	
	Absolute Dominant Indicator	r Dominance Test worksheet:
e Stratum (Plot size: <u>30'</u>)	<u>% Cover Species? Status</u>	
		_ That Are OBL, FACW, or FAC: (A)
		Total Number of Dominant
		_ Species Across All Strata: (B)
	= Total Cover	ー Percent of Dominant Species That Are OBL, FACW, or FAC:/ひひ メ ⟨A/B
ling/Shrub Stratum (Plot size: <u>5'</u>)	That Are OBL, FACW, or FAC: (A/B) Prevalence Index worksheet:
	<u> </u>	Total % Cover of: Multiply by:
		- OBL species x 1 =
		- FACW species x 2 =
		FAC species x 3 =
	= Total Cover	FACU species x 4 =
b Stratum (Plot size: 5')	ES / OBI-	UPL species x 5 = Column Totals: (A) (B)
mentha fullegium	20 V FA	
estuca perennis	2 FAC	- Prevalence Index = B/A =
ypons cragrostis,	1. FACW	Hydrophytic Vegetation Indicators:
leachards placrostactiva	S NL	 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
contidon saxatilis	1 FACU	$\begin{bmatrix} 2 & 2 & 3 \\ 2 & 3 & - \text{ Prevalence Index is } \leq 3.0^1 \end{bmatrix}$
other corniculations	2 AC	4 - Morphological Adaptations ¹ (Provide supporting
		data in Remarks or on a separate sheet)
		_ 5 - Wetland Non-Vascular Plants ¹
		Problematic Hydrophytic Vegetation ¹ (Explain)
		 ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
ody Vine Stratum (Plot size:)	86 = Total Cover	
		- Hydrophytic
		Vegetation
are Ground in Herb Stratum 30*	= Total Cover	Present? Yes No

US Army Corps of Engineers

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file Description: (Describe to the depth needed to document the indicator or cor oph Matrix Redox Features oph Color (moist) % Color (moist) % Type1 Loc % Color (moist) % Type1 Loc </th <th>nfirm the absence of indicators.)</th>	nfirm the absence of indicators.)
thes) Color (moist) % Color (moist) % Type ¹ Loc V OTR 3 1 100	
-6 104R 3/1 100	² Texture Remarks
	<u>remarks</u>
-16 2.545/1 99 Wer 414 1	
	graveles very competied
	~ Chary pockets
ä	
e: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated San ric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	nd Grains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Sandy Redox (S5)	2 cm Muck (A10) Red Barret Meterial (TE2)
Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLR	Red Parent Material (TF2) (A 1) Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4) Loamy Mucky Millerar (FT) (except MLK	Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Depleted Matrix (F3)	
Thick Dark Surface (A12) Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4) Redox Depressions (F8)	unless disturbed or problematic
trictive Layer (if present):	,
ype:	
Depth (inches):	Hydric Soil Present? Yes No 🔀
arks: clay pockets have low old of redook. Mostly	gravel & cobbles.
)))
DROLOGY	
tland Hydrology Indicators:	
tland Hydrology Indicators:	Secondary Indicators (2 or more required)
tland Hydrology Indicators:	
iland Hydrology Indicators: hary Indicators (minimum of one required; check all that apply)	
land Hydrology Indicators: hary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except	t Water-Stained Leaves (B9) (MLRA 1, 2,
cland Hydrology Indicators: harv Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) MLRA 1, 2, 4A, and 4B)	t Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Iand Hydrology Indicators: harry Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except High Water Table (A2) MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13)	t Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
cland Hydrology Indicators: mary Indicators (minimum of one required; check all that apply) Surface Water (A1)	t Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Iand Hydrology Indicators: harry Indicators (minimum of one required; check all that apply) Surface Water (A1)	t Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) g Roots (C3)
tland Hydrology Indicators: mary Indicators (minimum of one required; check all that apply) Surface Water (A1)	t Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) g Roots (C3) Z Geomorphic Position (D2) Shallow Aquitard (D3)
Itand Hydrology Indicators: harry Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (exception of the state of	t 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) is (C6) XFAC-Neutral Test (D5)
Iand Hydrology Indicators: harry Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Living Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soil Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LI	t 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) is (C6) Shallow Aquitard (D3) RR A) Raised Ant Mounds (D6) (LRR A)
Iand Hydrology Indicators: harry Indicators (minimum of one required; check all that apply) Surface Water (A1)	t Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) g Roots (C3) Z Geomorphic Position (D2) Shallow Aquitard (D3) is (C6) Z FAC-Neutral Test (D5)
tland Hydrology Indicators: nary Indicators (minimum of one required; check all that apply) Surface Water (A1)	t 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) is (C6) Shallow Aquitard (D3) RR A) Raised Ant Mounds (D6) (LRR A)
Itand Hydrology Indicators: mary Indicators (minimum of one required; check all that apply) Surface Water (A1)	t 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) is (C6) Shallow Aquitard (D3) RR A) Raised Ant Mounds (D6) (LRR A)
Iterand Hydrology Indicators: harry Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Living Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soil Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LI Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Depth (inches):	t 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) is (C6) Shallow Aquitard (D3) RR A) Raised Ant Mounds (D6) (LRR A)
tland Hydrology Indicators: nary Indicators (minimum of one required; check all that apply) Surface Water (A1)	t Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) g Roots (C3) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
High Water Table (A2) MLRA 1, 2, 4A, and 4B) Saturation (A3)	t 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) is (C6) Shallow Aquitard (D3) RR A) Raised Ant Mounds (D6) (LRR A)
tland Hydrology Indicators: nary Indicators (minimum of one required; check all that apply) Surface Water (A1)	tWater-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) is (C6)Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
tland Hydrology Indicators: nary Indicators (minimum of one required; check all that apply) Surface Water (A1)	t 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) is (C6) Shallow Aquitard (D3) is (C6) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
thand Hydrology Indicators: nary Indicators (minimum of one required; check all that apply) Surface Water (A1)	tWater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) g Roots (C3) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) is (C6) FAC-Neutral Test (D5) RR A)Shallow Additard (D5) (LRR A)Shallow Additard (D5) (LRR A)Shallow Additard (D5) RR A)Shallow Additard (D5) RR A)Shallow Additard (D5) (LRR A)Shallow Additard (D5) (D5) (D5) (D5) (D5) (D5) (D5) (D5)
thand Hydrology Indicators: mary Indicators (minimum of one required; check all that apply) Surface Water (A1)	tWater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) g Roots (C3) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) is (C6) FAC-Neutral Test (D5) RR A)Shallow Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No ions), if available:
land Hydrology Indicators: mary Indicators (minimum of one required; check all that apply) Surface Water (A1)	tWater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) g Roots (C3) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) is (C6) FAC-Neutral Test (D5) RR A)Shallow Additard (D5) (LRR A)Shallow Additard (D5) (LRR A)Shallow Additard (D5) RR A)Shallow Additard (D5) RR A)Shallow Additard (D5) (LRR A)Shallow Additard (D5) (D5) (D5) (D5) (D5) (D5) (D5) (D5)

ct/Site: Humboldt Bay Harbor District-RMMT	City/County: Humbol	Idt Sampling Date: 5/12/22
cant/Owner: Humboldt Bay Harbor District		State: CA Sampling Point: TP 50
tigator(s): Joseph Saler, Cindy Wilcox	Section, Township, R	
form (hillslope, terrace, etc.): Reninsula 3pi	Local relief (concave	e, convex, none): Slape (%): 10
		Long: -124.180302 Datum: WGS 84
Ap Unit Name: 1014 Urbanland Anth	maltic Xerorthents a	660C. O-VENIMI classification: 101 h &
limatic / hydrologic conditions on the site typical for	1	(If no, explain in Remarks.)
egetation, Soil, or Hydrology		e "Normal Circumstances" present? Yes No
egetation, Soil, or Hydrology	_ naturally problematic? (If I	needed, explain any answers in Remarks,)
MARY OF FINDINGS – Attach site ma	p showing sampling point	t locations, transects, important features, etc
rophytic Vegetation Present? Yes		N
ric Soil Present? Yes		×
land Hydrology Present? Yes	No within a Wetl	
vpland pit for TP49 in	walked man taking	
upland pit for 1194 in	uplana vegetation	
	anto	
ETATION – Use scientific names of pla		Dominanza Tast waskabasti
Stratum (Plot size: 30')	Absolute Dominant Indicator <u>% Cover Species? Status</u>	
		That Are OBL, FACW, or FAC:
		Total Number of Dominant
		_ Species Across All Strata: (B)
		Percent of Dominant Species
line/Chrub Chrobum / Distainer 5	= Total Cover	That Are OBL, FACW, or FAC:
ling/Shrub Stratum (Plot size: 5')	4	Prevalence Index worksheet:
		Total % Cover of: Multiply by:
		OBŁ species x 1 =
		FACW species x 2 =
		FAC species x 3 =
8	= Total Cover	FACU species x 4 =
<u>Stratum</u> (Plot size: <u>5'</u>)	25 V UPL	UPL species x 5 =
Siza Maxima	-25 V UPL	Column Totals: (A) (B)
Plantago lanceolata		Prevalence Index = B/A =
typerholenis radicata	$-\frac{5}{10}$ $-\frac{fACU}{UPL}$	Hydrophytic Vegetation Indicators:
Int-pxantin operation	2 FACU	1 - Rapid Test for Hydrophytic Vegetation
entodon sakatilis	- I FACI	
typochaeris glabra	2 492	$\begin{array}{c c} 3 & - \text{Prevalence Index is } \leq 3.0^{1} \\ \hline \end{array}$
from where deader	5 FACU	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
ISTACK MYWOS	20 FACU	5 - Wetland Non-Vascular Plants ¹
DINCK NIVO VS	5 FACIL	Problematic Hydrophytic Vegetation ¹ (Explain)
Sira correphylea	- u - UPL	¹ Indicators of hydric soil and wetland hydrology must
		I be access uplace disturbed as problematic
silere gallica		be present, unless disturbed or problematic.
Silere gallica		be present, unless disturbed or problematic.
Silere gallica		- Hydrophytic
Silere gallica		

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Sampling Point: TPS Coologists, Inc

ingine

Profile Description: (Describe to the depth	needed to document the indicator or confirm	n the absence of indicators.)
Depth Matrix _	Redox Features	s
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-5 104R 311 100		52
5-16 2.59 51 100		gricobbly very compacted
		2
	Reduced Matrix, CS=Covered or Coated Sand G	
Hydric Soil Indicators: (Applicable to all L		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1) Loamy Glaved Matrix (F2)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	31 - discharge of builty - builty - and - builty - 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) Restrictive Layer (if present):	Redox Depressions (F8)	unless disturbed or problematic.
Туре:	-	
Remarks: Same soils as TP		Hydric Soil Present? Yes No
HYDROLOGY		
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required)		Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (82)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along Living Ro	oots (C3) Geomorphic Position (D2)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soils (C	C6) FAC-Neutral Test (D5)
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRR /	
Inundation Visible on Aerial Imagery (B7		Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface (B)		
Field Observations:		
	lo Depth (inches): N/A	
	Depth (inches): NA	h
		Hand Hudralanu Bragant2 Vac Na
Saturation Present? Yes N (includes capillary fringe)	lo X Depth (inches): <u>IV /A</u> Wet	tland Hydrology Present? Yes No
	nitoring well, aerial photos, previous inspections)), if available:
		P.
Remarks:		
The second second		
Constraint of the second s		
Gravelly upland.		

ct/Site: Humboldt Bay Harbor District-RMMT	City/Cou	inty: Humboldt		Sampling Date: 5/12/22
cant/Owner: Humboldt Bay Harbor District			State: <u>CA</u>	Sampling Point: 7P51
tigator(s): Joseph Saler, Cindy Wilcox	Section.	Township, Range:	15.	-C 17 (1
form (hillslope, terrace, etc.): Reninsula				
egion (LRR): A. MLRA-4B	Lat: 40, 810		g: -124,180	
Map Unit Name: 1014-Urbanland A			and the second s	1020 (\$410) (C
limatic / hydrologic conditions on the site typic	al for this time of year? Yes	. <u>X_</u> №	(If no, explain in Re	emarks.)
/egetation, Soil, or Hydrology _	significantly disturbe	d? Are "Norm	al Circumstances" p	resent? Yes 📈 No
egetation, Soil, or Hydrology _	naturally problematic	? (If needed,	, explain any answer	s in Remarks.)
MARY OF FINDINGS - Attach site	map showing samp	ling point locat	ions, transects	important features, etc.
Irophytic Vegetation Present? Yes	× No			
Iric Soil Present? Yes		s the Sampled Area		×*
tland Hydrology Present? Yes 📿	<u> No </u>	vithin a Wetland?	Yes	
narks: WETS normal rainfall			ill, the cone	is stalthranit
slight depression in	noustrial mower	field. 1000	Maats ((1.0. f.
ETATION – Use scientific names of			A pikep C	CC T P abilition
	•	ant Indicator Dor	ninance Test works	sheet:
e Stratum (Plot size: <u>30'</u>)	% Cover Specie	e2 Status	nber of Dominant Sp	
		Tha	t Are OBL, FACW, o	r FAC: (A)
			al Number of Domina	
		Spe	cies Across All Strat	a: (B)
	= Total	Cover Per	cent of Dominant Sp t Are OBL, FACW, c	
ling/Shrub Stratum (Plot size: 5'			valence Index work	
JallX hospersana		THOW	Total % Cover of:	
Rubw anneriacus				x 1 =
		FAC	W species	x 2 =
		FAC	C species	x 3 =
	Total	Cover <		x 4 =
<u>Stratum</u> (Plot size: <u>5'</u>)	L.	UPI		x 5 =
restuca, perennis			umn Totals:	(A) (B)
Artha pulkgium		- OBL FAC HV		= B/A =
oraxocum officinale		CACIL	Irophytic Vegetatio	
staxathyn acoration	5	- FACU X	2 - Dominance Test	ydrophytic Vegetation
Agrostis Stolenitora	35 1	FAC	3 - Prevalence Inde	
Roduncy us pepers	30	FAC -		daptations ¹ (Provide supporting
ntolium repeut	15	FAC	data in Remarks	or on a separate sheet)
umet crispus	1	FAC -	5 - Wetland Non-Va	
1			• •	hytic Vegetation ¹ (Explain)
1	100		licators of hydric soil present, unless distu	and wetland hydrology must rbed or problematic.
	09_= Total	Cover		
		Live	Irophytic	
dy Vine Stratum (Plot size:)	and the second			
dy Vine Stratum (Plot size:		Veg	etation	X
are Ground in Herb Stratum	= Total	Veg		

US Army Corps of Engineers

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Sampling Point: TPS Consult

Profile Description: (Describe to the de		
DepthMatrix (inches) Color (moist) %	<u>Redox Features</u> Color (moist) % Type ¹ Loc ²	Texture Remarks
0 - 10 104R251 100		Urw
a wake mile ale	- <u> </u>	
10-147 104R 312 106	<u> </u>	sich Slag ~ 99% of
		harizon
	3	
¹ Type: C=Concentration, D=Depletion, R	M=Reduced Matrix, CS=Covered or Coated Sand Gra	ains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to a		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
, Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:		
Depth (inches):		Hydric Soil Present? Yes No
IYDROLOGY		and the second
		the state
		Secondary Indicators (2 or more required)
Wetland Hydrology Indicators:	ired: check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one requ		
Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one requ</u> Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one requ</u> 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, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one requ</u> 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) Drainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requestion: 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) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requestion: 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 (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requination of the requ	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) 	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)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requ 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 Roo Presence of Reduced Iron (C4) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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Wetland Hydrology Indicators: Primary Indicators (minimum of one required) 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? Yes Water Table Present? Yes Saturation Present? Yes Saturation 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 Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) ree (B8) Depth (inches): NA Depth (inches): NA	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) and Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) 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? Yes Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	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) and Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) 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? Yes Saturation Present? Yes Gincludes capillary fringe) Describe Recorded Data (stream gauge,	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) ve (B8) No Depth (inches): NA No Depth (inches): NA Wetla monitoring well, aerial photos, previous inspections),	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) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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Primary Indicators (minimum of one requination of a second sec	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No,

oject/Site: Humboldt Bay Harbor District-RMMT	City/County:_Humboldt	t Sampling Date: 5/12/2
plicant/Owner: Humboldt Bay Harbor District		State: CA Sampling Point: TP 52(
vestigator(s): Joseph Saler, Cindy Wilcox	Section, Township, Ra	ange:
ndform (hillslope, terrace, etc.): Runsula /Spit, B	Avside fill Local relief (concave,	convex, none): Nave Slope (%): 0
bregion (LRR): A, MLRA-4B	Lat: 40. 819156	_ Long: -124.180662 Datum: WGS 84
il Map Unit Name: 1014-Urbanland Anth	altic Xerowthents assoc.	0-290 NWI classification: none
e climatic / hydrologic conditions on the site typical fo	or this time of year? Yes <u>X</u> No _	(If no, explain in Remarks.)
e Vegetation, Soil, or Hydrology	significantly disturbed? Are	"Normal Circumstances" present? Yes 📈 No
e Vegetation, Soil, or Hydrology	naturally problematic? (If ne	eeded, explain any answers in Remarks.)
IMMARY OF FINDINGS - Attach site m	an showing sampling point l	locations, transects, important features, e
		iocationa, transecta, important reatures, e
lydrophytic Vegetation Present? Yes lydric Soil Present? Yes		d Area
Vetland Hydrology Present? Yes		nd? Yes No X
Remarks: WETS normal rainfall		
VETONY. SEE TP 5	if the processistative	soils and hy drology.
vejenij. Dee n	1 lot reporterio	ours are ny Gorall.
EGETATION – Use scientific names of p	plants.	
ree Stratum (Plot size: 30)	Absolute Dominant Indicator <u>% Cover Species? Status</u>	Dominance Test worksheet:
		Number of Dominant Species 1 (A)
		Total Number of Dominant 2 (B)
•	<u> </u>	Percent of Dominant Species 50%
apling/Shrub Stratum (Plot size: 5	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (AV
Bulars or men a cus	4 FAC	Prevalence Index worksheet:
*		Total % Cover of: Multiply by:
		OBL species x 1 =
*		FACW species x 2 = FAC species x 3 =
• •		FACU species x4 =
Herb Stratum (Plot size: 5')	= Total Cover	UPL species x 5 =
Arthoxantum odoratum	40 FACU	Column Totals: (A) (i
Totalium repay	40 V FAL	Prevalence Index = B/A =
Daycus carota	FACU	Hydrophytic Vegetation Indicators:
Achillea Millefolium	TACY TACY	1 - Rapid Test for Hydrophytic Vegetation
Plastago lancedata	- FACU FAC	2 - Dominance Test is >50%
Hacks motor	- TO - FAC	3 - Prevalence Index is $\leq 3.0^1$
Fragaria (Liloesis	I FACU	4 - Morphological Adaptations ¹ (Provide support data in Remarks or on a separate sheet)
		5 - Wetland Non-Vascular Plants ¹
0		Problematic Hydrophytic Vegetation ¹ (Explain)
1		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	= Total Cover	be present, unless disturbed of problematic.
Moody Vino Stratum (Distaine)	71	I hudan also sta
Voody Vine Stratum (Plot size:)		Hydrophytic Vegetation
		regetation
	= Total Cover	Present? Yes No

Depth	• •	and dopant	leeded to docu	ment the t	ndicator	or confirm	the absence of	indicators.)
	Matrix			x Features		1 2		Remarks
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	lype'	Loc ²	Texture	<u>Remarks</u>
						<u> </u>		
		<u> </u>	-					
		~		-				
			1					
	°							
				1 A A A A A A A A A A A A A A A A A A A				
				/				
	oncentration, D=Depleti					d Sand Gra		ion: PL=Pore Lining, M=Matrix.
lydric Soil	Indicators: (Applicabl	e to all LR	Rs, unless othe	rwise note		ed Sand Gra	Indicators	for Problematic Hydric Soils ³ :
lydric Soil Histoso	Indicators: (Applicabl I (A1)	e to all LR	Rs, unless othe Sandy Redox (rwise note (S5)		d Sand Gr	Indicators 2 cm M	for Problematic Hydric Soils ³ : /luck (A10)
lydric Soil Histosol Histic E	Indicators: (Applicabl I (A1) pipedon (A2)	e to all LR	Rs, unless othe Sandy Redox (Stripped Matrix	rwise note (S5) ((S6)	ed.)		Indicators 2 cm M Red P	for Problematic Hydric Soils ³ : Juck (A10) arent Material (TF2)
lydric Soil Histosol Histic E Black H	Indicators: (Applicabl I (A1) pipedon (A2) istic (A3)	e to all LR	Rs, unless othe Sandy Redox (Stripped Matrix Loamy Mucky	rwise note (S5) (S6) Mineral (F1	ed.)		Indicators 2 cm M Red P Very S	for Problematic Hydric Soils ³ : /luck (A10) arent Material (TF2) Shallow Dark Surface (TF12)
lydric Soil Histosol Histic E Black H Hydroge	Indicators: (Applicabl I (A1) pipedon (A2) istic (A3) en Sulfide (A4)	e to all LR 	Rs, unless othe Sandy Redox (Stripped Matrix Loamy Mucky Loamy Gleyed	rwise note (S5) ((S6) Mineral (F1 Matrix (F2)	ed.)		Indicators 2 cm M Red P Very S	for Problematic Hydric Soils ³ : Juck (A10) arent Material (TF2)
ydric Soil Histosol Histic E Black H Hydroge Deplete	Indicators: (Applicabl I (A1) pipedon (A2) istic (A3) an Sulfide (A4) d Below Dark Surface (A	e to all LR 	Rs, unless othe Sandy Redox (Stripped Matrix Loarny Mucky Loarny Gleyed Depleted Matri	rwise note (S5) (S6) Mineral (F1 Matrix (F2 x (F3)	ed.)		Indicators 2 cm M Red P Very S Other	for Problematic Hydric Soils ³ : /luck (A10) arent Material (TF2) shallow Dark Surface (TF12) (Explain in Remarks)
lydric Soil Histosol Histic E Black H Hydroge Deplete Thick D	Indicators: (Applicabl I (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Below Dark Surface (A ark Surface (A12)	e to all LR 	Rs, unless othe Sandy Redox (Stripped Matrix Loamy Mucky Loamy Gleyed Depleted Matri Redox Dark St	rwise note (S5) (S6) Mineral (F1 Matrix (F2 x (F3) urface (F6)	3d.))) (except		Indicators 2 cm M Red P Very S Other ³ Indicators	for Problematic Hydric Soils ³ : Muck (A10) arent Material (TF2) Shallow Dark Surface (TF12) (Explain in Remarks) of hydrophytic vegetation and
Histosol Histosol Histic E Black H Hydroge Deplete Thick D Sandy N	Indicators: (Applicabl I (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Below Dark Surface (A ark Surface (A12) Mucky Mineral (S1)	e to all LR 	Rs, unless othe Sandy Redox (Stripped Matrix Loamy Mucky Loamy Gleyed Depleted Matri Redox Dark St Depleted Dark	rwise note (S5) ((S6) Mineral (F1 Matrix (F2 x (F3) urface (F6) Surface (F6)	3d.))) (except		Indicators 2 cm M Red P Vary S Other ³ Indicators wetland	for Problematic Hydric Soils ³ : Muck (A10) arent Material (TF2) shallow Dark Surface (TF12) (Explain in Remarks) of hydrophytic vegetation and hydrology must be present,
Histosol Histosol Histic E Black H Hydroge Deplete Thick D Sandy M Sandy (Indicators: (Applicabl I (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Below Dark Surface (A ark Surface (A12) Mucky Mineral (S1) Sleyed Matrix (S4)	e to all LR 	Rs, unless othe Sandy Redox (Stripped Matrix Loamy Mucky Loamy Gleyed Depleted Matri Redox Dark St	rwise note (S5) ((S6) Mineral (F1 Matrix (F2 x (F3) urface (F6) Surface (F6)	3d.))) (except		Indicators 2 cm M Red P Vary S Other ³ Indicators wetland	for Problematic Hydric Soils ³ : Muck (A10) arent Material (TF2) Shallow Dark Surface (TF12) (Explain in Remarks) of hydrophytic vegetation and
Histosol Histosol Histic E Black H Hydroge Deplete Thick D Sandy M Sandy (Indicators: (Applicabl I (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Below Dark Surface (A ark Surface (A12) Mucky Mineral (S1)	e to all LR 	Rs, unless othe Sandy Redox (Stripped Matrix Loamy Mucky Loamy Gleyed Depleted Matri Redox Dark St Depleted Dark	rwise note (S5) ((S6) Mineral (F1 Matrix (F2 x (F3) urface (F6) Surface (F6)	3d.))) (except		Indicators 2 cm M Red P Vary S Other ³ Indicators wetland	for Problematic Hydric Soils ³ : Muck (A10) arent Material (TF2) shallow Dark Surface (TF12) (Explain in Remarks) of hydrophytic vegetation and hydrology must be present,
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1.10

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1) Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2) MLRA 1, 2, 4A, and 4B	4A, and 4B)
Saturation (A3) Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1) Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2) Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Oxidized Rhizospheres along Living Root	is (C3) Geomorphic Position (D2)
Algai Mat or Crust (B4) Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6)	FAC-Neutral Test (D5)
Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A)	Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface (B8)	
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches): M/A Wetla	nd Hydrology Present? Yes No
(includes capillary fringe)	F annihele v
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), i	
Remarks:	
Veg Sampled only. see TB 51 for	representative hydrologic
Veg sompted unip. See is st to	The company of the line
J v v	conditions

oject/Site: Humboldt Bay Harbor District-RMMT	(City/County	Humboldt		_ Sampling Date: 5/12/22
plicant/Owner: Humboldt Bay Harbor District					Sampling Point: 7953
vestigator(s): Joseph Saler, Cindy Wilcox		Section, To	wnship, Ra	nge:	
ndform (hillslope, terrace, etc.): Policy a/501	t, baxside	Local relief	(concave.)	convex, none);	ave Siope (%): 0-
bregion (LRR): A, MLRA-4B					0644 Datum: WGS 84
il Map Unit Name: 1014-Urbanland	Anthralticy	worth	ents as	DC. 0-20/DNIAII classi	fication: hO /
e climatic / hydrologic conditions on the site typica	/				
e Vegetation, Soil, or Hydrology _					present? Yes V. No
e Vegetation, Soil, or Hydrology				eded, explain any answ	
JMMARY OF FINDINGS – Attach site	map showing	samplin	g point l	ocations, transect	s, important features, e
lydrophytic Vegetation Present? Yes	No			(h	10
lydric Soil Present? Yes	No		e Sampled		No
Vetland Hydrology Present? Yes	No	with	in a Wetlar	nd? Yes	No
Remarks: WETS normal rainfall	ocribed as	2511	Bello		
Loolated 3p wetland. Bot de	scribed as	DU	DO UN.		
	f als als	_	-		
GETATION – Use scientific names o					
ree Stratum (Plot size: 30')	Absolute <u>% Cover</u>	Dominant Species?		Dominance Test wor	
				Number of Dominant That Are OBL, FACW	
				Fotal Number of Dom Species Across All St	
				Percent of Dominant :	Species (14 A
apling/Shrub Stratum (Plot size: 5		= Totai Co	ver	That Are OBL, FACW	
Salix Losheriana	25	1	FALL	Prevalence index wo	orksheet:
Salix sitchesis	15	~	FACW	Total % Cover of:	Multiply by:
Rubus ormeniacus	25	$\overline{\mathbf{v}}$	FAC		x 1 =
·					x 2 =
				FAC species	
	65	= Total Co	ver 13/	FACU species	× 4 =
erb Stratum (Plot size; 5')	20	1	10032	UPL species	× 4 = x 5 =
testuca arundinacea		<u> </u>	rac	Column Totals:	(A) (6
Symphyotrichim Chilese	- 17	<u> </u>	TAC		ex = B/A =
Carex harfordii			OBL	Hydrophytic Vegetat	
Adiller Miletolium			FACU		Hydrophytic Vegetation
Anthorathun addratum	30	~	FACU	2 - Dominance Te	
Lotus corniculatus	. 5		FAC	3 - Prevalence In	
Trifolium repas	- Ŭ		FAC		Adaptations ¹ (Provide support ks or on a separate sheet)
				5 - Wetland Non-'	
				Problematic Hydr	ophytic Vegetation ¹ (Explain)
					oil and wetland hydrology must
		= Total Cov	rer 14.	be present, unless dis	turbed or problematic.
·	96				
boody Vine Stratum (Plot size:)	46		40		
0 1 /oody Vine Stratum (Plot size:)	46_		49	Hydrophytic	
l		Total Cov	~49	Hydrophytic Vegetation Present? Y	es X No

L

0	^	
- 55	IJ	L

Sampling Point: 10 5 3 Geologists, Inc

+

Profile Description: (Describe to the depth needed to document the indicator	or confirm the absence of indicators.)
Depth Matrix Redox Features	
(inches) Color (moist) % Type	Loc ² Texture Remarks
0-7 2.54 2.5/1 100	
7-16 10 x 4/1 90 7.5 VR 4/6 10 C	M SCL bits at charceal
16-24+ N 3/ 100	- 5
	· · · · · · · · · · · · · · · · · · ·
	N
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coat	ed Sand Grains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2) Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3) Loamy Mucky Mineral (F1) (except	
Hydrogen Sulfide (A4)Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
✓ Depleted Below Dark Surface (A11) ✓ Depleted Matrix (F3)	31 distance of building building and
Thick Dark Surface (A12) Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):	
Type:	V
Depth (inches):	Hydric Soil Present? Yes <u>No</u> No
Remarks:	
HYDROLOGY	
HYDROLOGY Wetland Hydrology Indicators:	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	except Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	except Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	except Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	except Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Primary Indicators (minimum of one required; check all that apply)	except Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) C4) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	except Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) g Living Roots (C3) Geomorphic Position (D2) C4) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	except Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) g Living Roots (C3) Geomorphic Position (D2) C4) FAC-Neutral Test (D5) D1) (LRR A) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (High Water Table (A2) MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres alon Algal Mat or Crust (B4) Presence of Reduced Iron (0 iron Deposits (B5) Recent Iron Reduction in Till Surface Soil Cracks (B6) Stunted or Stressed Plants (Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	except Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) g Living Roots (C3) Geomorphic Position (D2) C4) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	except Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) g Living Roots (C3) Geomorphic Position (D2) C4) FAC-Neutral Test (D5) D1) (LRR A) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (High Water Table (A2) MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres alon Algal Mat or Crust (B4) Presence of Reduced Iron (C iron Deposits (B5) Recent Iron Reduction in Till Surface Soil Cracks (B6) Stunted or Stressed Plants (Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) ML/A	except Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) g Living Roots (C3) Geomorphic Position (D2) C4) FAC-Neutral Test (D5) D1) (LRR A) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) High Water Table (A2) MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres alon Algal Mat or Crust (B4) Presence of Reduced Iron (C iron Deposits (B5) Recent Iron Reduction in Till Surface Soil Cracks (B6) Stunted or Stressed Plants (Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Eield Observations: Surface Water Present? Yes No Depth (inches): N/A	except Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) g Living Roots (C3) Geomorphic Position (D2) C4) FAC-Neutral Test (D5) D1) (LRR A) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (High Water Table (A2) MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres alon Algal Mat or Crust (B4) Presence of Reduced Iron (C iron Deposits (B5) Recent Iron Reduction in Till Surface Soil Cracks (B6) Stunted or Stressed Plants (Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) ML/A	(except Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) (A) Geomorphic Position (D2) (A) FAC-Neutral Test (D5) (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) (D1) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) C4) Velocities (C6) D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) High Water Table (A2) MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres alon Algal Mat or Crust (B4) Presence of Reduced Iron (O iron Deposits (B5) Recent Iron Reduction in Till Surface Soil Cracks (B6) Stunted or Stressed Plants (Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Depth (inches): Field Observations: Yes No Surface Water Present? Yes No Saturation Present? Yes No Depth (inches): 24 Saturation Present? Yes No Depth (inches):	water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) C4) Velocities (C6) D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Q Living Roots (C3) C4) Ied Soils (C6) D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) wetland Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Q Living Roots (C3) C4) Ied Soils (C6) D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) wetland Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Q Living Roots (C3) C4) Ied Soils (C6) D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) wetland Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) C4) Velocities (C6) D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

oject/Site: Humboldt Bay Harbor District-RMM	IT City	County: Humboldt		_ Sampling Date: 5/13/2
plicant/Owner: Humboldt Bay Harbor District				Sampling Point: 759
vestigator(s): Joseph Saler, Cindy Wilcox	Sec	tion, Township, Ran	ge:	
ndform (hillslope, terrace, etc.): Reminsu	la spit Lor	cal relief (concave, c	onvex, none): <u>none</u>	e Slope (%):
ibregion (LRR): <u>A, MLRA-4B</u>	Lat: 40.	019499	Long: -124.19	0599 Datum: WGS 84
Nap Unit Name: 1014-Urban lan				
e climatic / hydrologic conditions on the site t				
e Vegetation, Soil, or Hydrold			Vormal Circumstances"	
e Vegetation, Soii, or Hydrold			eded, explain any answ	in the second seco
UMMARY OF FINDINGS - Attach	site map showing sa	mpling point lo	cations, transect	s, important features, et
Hydrophytic Vegetation Present? Yes	No			× /
	No 🎸	is the Sampled A within a Wetland	Area d? Yes	No
Vetland Hydrology Present? Yes Remarks: WETS normal rainfall	No 🔀			
Next to vali raintal line, ju	statide of wills	Adepression	dorabed in TP	52
incri ac variatina inejji	of dot bloc of weiling	ada a contra		
EGETATION – Use scientific name	s of plants.			
		ominant Indicator	Dominance Test wor	ksheet.
ree Stratum (Plot size: 30)		pecies? Status	Number of Dominant \$	
			That Are OBL, FACW,	
			Total Number of Domi	nant C
*	<u> </u>		Species Across All Str	ata: (B)
•			Percent of Dominant S	Species 1007
apling/Shrub Stratum (Plot size: 5'	=	Fotal Cover	That Are OBL, FACW,	
SA IX Sitchesis	15 1	FACW	Prevalence Index wo	
Salix Lookertana	10 1	/ FACW	Total % Cover of:	
Rubus ormaniacus	0	FAC		x 1 = x 2 =
*			FAC species	
·				x 4 =
lerb Stratum (Plot size: 5')	37 =1	Fotal Cover		x 5 =
Junus lescurii	70	FACW		(A) (B
Symphystrichum dilese	25	FAC		
Platestilla, assering	4	OBL	Hydrophytic Vegetat	x = B/A =
Holais lanatus	2	FAC		Hydrophytic Vegetation
Low corriculatus	1	FAC	\mathbf{X} 2 - Dominance Te	
		- Trees	3 - Prevalence Inc	
			4 - Morphological	Adaptations ¹ (Provide supporti
				ks or on a separate sheet)
			5 - Wetland Non-V	
0				ophytic Vegetation ¹ (Explain)
1,	127-		be present, unless dis	bil and wetland hydrology must turbed or problematic.
Voody Vine Stratum (Plot size:	_ <u>[U4_</u> =Te	otal Cover 20.4		
			Hydrophytic	
			Hydrophytic Vegetation	es X No
Bare Ground in Herb Stratum	= Te	otal Cover	Present? Ye	es No

*

		6.1
OIL		Sampling Point: TPS Consulting Color
	depth needed to document the indicator or confirm	
Depth Matrix	Redox Features	
$\frac{(\text{inches})}{0-5} \frac{\text{Color}(\text{moist})}{10 \text{GeV}} \frac{\%}{100}$	Color (moist) % Type ¹ Loc ²	Texture Remarks
5-7 10 YR 4/2 100		Corls
7-13 10 YR 4/2 99	17.5 YR 5/8 1 C M	5 poches of brick not reday
9-24+56V 3/1 90	- TOVO HIC I C M	Si L Slag, bride + debris ~ 80%. C w/ black organic feels
		no Hydrogen perotide nka
Type: C=Concentration, D=Depletion,	RM=Reduced Matrix, CS=Covered or Coated Sand Gra	
Hydric Soil Indicators: (Applicable to	all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11)	Loamy Gleyed Matrix (F2)) Depleted Matrix (F3)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:		
Depth (inches):		Hydric Soil Present? Yes No 📈
Remarks:		
YDROLOGY	<i>C</i> 1	1 - 10 - 2010 10 - 10 - 2010
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one req	uired; check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except	
High Water Table (A2)		Water-Stained Leaves (B9) (MLRA 1, 2,
		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Saturation (A3)	MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	
	MLRA 1, 2, 4A, and 4B)	4A, and 4B) 🔹
Saturation (A3)	MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	4A, and 4B) Drainage Patterns (B10)
Saturation (A3) Water Marks (B1)	MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
 Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) 	MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4)	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3)) FAC-Neutral Test (D5)
Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A)	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3)) FAC-Neutral Test (D5)
Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) y (B7) Other (Explain in Remarks)	4A, and 4B)
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	MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) y (B7) Other (Explain in Remarks)	4A, and 4B)
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	MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) y (B7) Other (Explain in Remarks)	4A, and 4B)
Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imager Sparsely Vegetated Concave Surfa Field Observations: Surface Water Present? Yes	MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) y (B7) Other (Explain in Remarks) ace (B8) Depth (inches): N/A	4A, and 4B)
 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 Surfa Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes 	MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) ace (B8) Depth (inches): N/A Depth (inches): N/A	4A, and 4B)
 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 Surfa Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) 	MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) ace (B8) Depth (inches): N/A Depth (inches): N/A	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) > FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 Surfa Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge Remarks:	MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) y (B7) Depth (inches): NA Depth (inches): NA Depth (inches): NA Ro Ro Depth (inches): NA Ro	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) > FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
	MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) y (B7) Depth (inches): NA Depth (inches): NA Depth (inches): NA Ro Ro Depth (inches): NA Ro	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) > FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imager Sparsely Vegetated Concave Surfa Sparsely Vegetated Concave Surfa Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge	MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) y (B7) Depth (inches): NA Depth (inches): NA Depth (inches): NA Ro Ro Depth (inches): NA Ro	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) > FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

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oject/Site: Humboldt Bay Harbor District-RMMT	Ci	ty/County: Humbold	t	_ Sampling Date: 5/3/2
plicant/Owner: Humboldt Bay Harbor District			State: CA	_ Sampling Point: TP 55 (
vestigator(s): Joseph Saler, Cindy Wilcox	S	ection. Township. Ra	ande:	
ndform (hillslope, terrace, etc.): PAINSULA (Apit	Baysidefill L	ocal relief (concave.	convex, none); Nov	/ Slope (%): 0-
bregion (LRR): A, MLRA-4B	Lat UD	919469	Long -124. 18	0532 Datum: WGS 84
il Map Unit Name: 1014-Urbanland An				
e climatic / hydrologic conditions on the site typical				and the second
e Vegetation, Soil, or Hydrology			"Normal Circumstances"	
e Vegetation, Soil, or Hydrology	naturally probl	ematic? (If n	eeded, explain any answ	ers in Remarks.)
JMMARY OF FINDINGS – Attach site r	nap showing s	ampling point	locations, transect	s, important features, et
lydrophytic Vegetation Present? Yes	No X			
lydric Soil Present? Yes		Is the Sample	d Area	
Vetland Hydrology Present? Yes	No _X	within a Wetla	nd? Yes	
Remarks: WETS normal rainfall				a'
Veg Somple only.				
EGETATION Use scientific names of	plants.			
ree Stratum (Plot size: 30)		Dominant Indicator Species? <u>Status</u>	Dominance Test wor	
			Number of Dominant That Are OBL, FACW	
			Total Number of Domi Species Across All Str	
4				
-		Total Cover	Percent of Dominant S That Are OBL, FACW	
apling/Shrub Stratum (Plot size: 5'	2	FAC	Prevalence Index wo	
Rulpus ormeniacus		TAU	Total % Cover of:	Multiply by:
·			OBL species	x 1 =
			FACW species	x 2 =
			FAC species	x 3 =
•		Total Cover	4012 A.O. 10 10 10 10 10 10 10 10 10 10 10 10 10	x 4 =
lerb Stratum (Plot size: 5,)		-1	TOTAL TOTAL CONTRACT OF THE PARTY OF THE PAR	x 5 =
Antaxantum & doration		V RAW	Column Totals:	(A) (B
Holew, Janatus	22	FAC	Prevalence Inde	x = B/A =
Vica toposperma		upt	Hydrophytic Vegetat	
Viciasativa	<u> </u>	UPL	1 - Rapid Test for	Hydrophytic Vegetation
Daucus carota	<u> </u>	FACU	2 - Dominance Te	
SXMPHYoticchim chilese		FAC	3 - Prevalence Ind	
Low coniculation	<u> </u>	- UPL FAC		Adaptations ¹ (Provide supportinks or on a separate sheet)
Geravium dissectum		TIPI	5 - Wetland Non-	
arex harbordii		OBL		ophytic Vegetation ¹ (Explain)
1.		.VWP		oil and wetland hydrology must
~	127 =	Total Cover 15.1		turbed or problematic.
Voody Vine Stratum (Plot size: 5'	+	-		
	<u> </u>	635	Hydrophytic	Χ.
	<u> </u>		Vegetation Present? Y	esNo
			ricaent: T	
6 Bare Ground in Herb Stratum		Total Cover		

rofile Description: (Describe to the dest	h needed to document the indicator or confirm	Sampling Point: 11 J J (0)
epth Matrix	Redox Features	The absence of marcators.
nches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
		1
		· · · · · · · · · · · · · · · · · · ·
		·
	Participation (1997)	
ype: C=Concentration, D=Depletion, RM= lydric Soil Indicators: (Applicable to all L	Reduced Matrix, CS=Covered or Coated Sand G	rains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
-	Sandy Redox (S5)	2 cm Muck (A10)
_ Histosof (A1)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
_ Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	+
_ Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
_ Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4) estrictive Layer (if present):	Redox Depressions (F8)	unless disturbed or problematic.
Type:		
Depth (inches):		Hydric Soil Present? Yes No
temarks:		right Son Flesent: res No
Veg sample only.	see TP 54 for repr	estative soil contins.
Veg sample only.	SUC IT JI to I the	ustative soll (mittins,
	SUC IT JI TO I TO	usedative soll contitions.
Vetland Hydrology Indicators:		
Vetland Hydrology Indicators: rimary Indicators (minimum of one required	; check all that apply)	Secondary Indicators (2 or more required)
Vetland Hydrology Indicators: Irimary Indicators (minimum of one required Surface Water (A1)	; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
Vetland Hydrology Indicators: rimary Indicators (minimum of one required	; check all that apply)	Secondary Indicators (2 or more required)
Vetland Hydrology Indicators: Irimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2)	; 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)
Vetland Hydrology Indicators: Irimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3)	: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	<u>Secondary Indicators (2 or more required)</u> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Vetland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	 <u>check all that apply</u> <u>Water-Stained Leaves (B9) (except</u> <u>MLRA 1, 2, 4A, and 4B)</u> <u>Salt Crust (B11)</u> <u>Aquatic Invertebrates (B13)</u> <u>Hydrogen Sulfide Odor (C1)</u> <u>Oxidized Rhizospheres along Living Roc</u> 	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 (C9)
Vetland Hydrology Indicators: Irimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	 <u>check all that apply</u> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rod Presence of Reduced Iron (C4) 	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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Vetland Hydrology Indicators: Trimary Indicators (minimum of one required 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)	: 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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4)	Secondary Indicators (2 or more required)
Vetland Hydrology Indicators: Trimary Indicators (minimum of one required 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)	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4 Stunted or Stressed Plants (D1) (LRR 4	Secondary Indicators (2 or more required)
Vetland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7	 <u>check all that apply</u> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) 	Secondary Indicators (2 or more required)
Vetland Hydrology Indicators: Irimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7 Sparsely Vegetated Concave Surface (E	 <u>check all that apply</u> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) 	Secondary Indicators (2 or more required)
Vetland Hydrology Indicators: Trimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7 Sparsely Vegetated Concave Surface (E Tield Observations:	: 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 Rod — Presence of Reduced Iron (C4) — Recent Iron Reduction in Tilled Soils (C4) — Stunted or Stressed Plants (D1) (LRR A - Other (Explain in Remarks) 	Secondary Indicators (2 or more required)
Vetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7 Sparsely Vegetated Concave Surface (E Field Observations: Surface Water Present? Yes N		Secondary Indicators (2 or more required)
Vetland Hydrology Indicators: Primary Indicators (minimum of one required		Secondary Indicators (2 or more required)
Vettand Hydrology Indicators: Primary Indicators (minimum of one required		Secondary Indicators (2 or more required)
Vetland Hydrology Indicators: Primary Indicators (minimum of one required		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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Vetland Hydrology Indicators: Primary Indicators (minimum of one required		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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7 Sparsely Vegetated Concave Surface (E Field Observations: Surface Water Present? Yes Nater Table Present	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4 Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) Depth (inches): NA Depth (inches): NA Depth (inches): NA Depth (inches): NA Wett nitoring well, aerial photos, previous inspections),	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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Vetland Hydrology Indicators: Primary Indicators (minimum of one required	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4 Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) Depth (inches): NA Depth (inches): NA Depth (inches): NA Depth (inches): NA Wett nitoring well, aerial photos, previous inspections),	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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Vetland Hydrology Indicators: Inimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7 Sparsely Vegetated Concave Surface (E Vater Table Present? Yes N Vater Table Present? Yes N Saturation		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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

roject/Site: Humboldt Bay Harbor District-RMMT	City/County: Humboldt		Sampling Date:	5/13/2
pplicant/Owner: Humboldt Bay Harbor District		State: CA	Sampling Point:	P56
vestigator(s): Joseph Saler, Cindy Wilcox	Section, Township, Rai	nge:		
andform (hillslope, terrace, etc.): <u>Percinsula Spit</u>	Local relief (concave, o	convex, none): Lang: <u>-/24.</u>	none Slope 180675 Datum:	WGS 84
oil Map Unit Name: 1014 Urbunland Anthraltic	Xerorthents assoc	- 0-2% NWI 0	classification: hone	
re climatic / hydrologic conditions on the site typical for this time	of year? Yes X No	(If no, expla	ain in Remarks.)	
re Vegetation, Soil, or Hydrology significa				No
		Normal Circumsta	inces present? Tes	
re Vegetation, Soil, or Hydrology natural	ly problematic? (If ne	eded, explain апу	answers in Remarks.)	
				ures, etc
UMMARY OF FINDINGS – Attach site map show				ures, etc
UMMARY OF FINDINGS – Attach site map show Hydrophytic Vegetation Present? Yes No		Area	sects, important feat	ures, etc
SUMMARY OF FINDINGS – Attach site map show Hydrophytic Vegetation Present? Yes No Yes No	ving sampling point lo	Area		ures, etc
SUMMARY OF FINDINGS – Attach site map show Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	ving sampling point lo	Area hd? Ye	sects, important feat	cures, etc
SUMMARY OF FINDINGS – Attach site map show Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	ving sampling point lo	Area hd? Ye	sects, important feat	ures, etc
BUMMARY OF FINDINGS – Attach site map show Hydrophytic Vegetation Present? Yes Hydroic Soil Present? Yes Wetland Hydrology Present? Yes Remarks: WETS normal rainfall Veg + hydrology Set Vecony. See TP 51	ving sampling point lo	Area hd? Ye	sects, important feat	ures, etc
SUMMARY OF FINDINGS – Attach site map show Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	ving sampling point lo	Area hd? Ye	sects, important feat	ures, etc
BUMMARY OF FINDINGS – Attach site map show Hydrophytic Vegetation Present? Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No Remarks: WETS normal rainfall Veg + hydrology Suppled on y. See TP 51 /EGETATION – Use scientific names of plants.	Is the Sampled Within a Wetlar	Area hd? Ye	sects, important feat	ures, etc
BUMMARY OF FINDINGS – Attach site map show Hydrophytic Vegetation Present? Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No Remarks: WETS normal rainfall Veg + hydrology Suppled only. SeeTP 51 YEGETATION – Use scientific names of plants.	ving sampling point le Is the Sampled within a Wetlar	Area Marea Marea Marea Yes Non ditan	sects, important feat	3
BUMMARY OF FINDINGS – Attach site map show Hydrophytic Vegetation Present? Yes No Hydrocology Present? Yes No Yes Wetland Hydrology Present? Yes No Yes No Remarks: WETS normal rainfall Yes No Yes Yes Veg + hydrology Suppled only. SeeTP 51 Yes Yes Yes Veg + hydrology Suppled only. SeeTP 51 Yes Yes Yes Yes Veg + hydrology Suppled only. SeeTP 51 Yes Yes Yes Yes Veg + hydrology Suppled only. SeeTP 51 Yes Yes Yes Yes Veg + hydrology Suppled only. SeeTP 51 Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes	Is the Sampled Within a Wetlar	Area Marea Marea Marea Yes Sol) Con dition	sects, important feat	ures, etc
BUMMARY OF FINDINGS – Attach site map show Hydrophytic Vegetation Present? Hydrophytic Soil Present? Yes No Wetland Hydrology Present? Yes No Remarks: WETS normal rainfall Veg + hydrology Sumpled on y. See TP 51 /EGETATION – Use scientific names of plants.	Is the Sampled Within a Wetlar	Area Marea Marea Marea Yes Non ditan	sects, important feat	3

		That Are UBL, FACW, of F	-AC: (A)
23		Total Number of Dominant Species Across All Strata:	<u>3</u> (B)
4	= Total Cover	Percent of Dominant Spec That Are OBL, FACW, or F	
		Prevalence Index worksh	ieet:
1		Total % Cover of:	Multiply by:
2		OBL species	x 1 =
3		FACW species	
4		FAC species	
5	<u> </u>	FACU species	
Herb Stratum (Plot size: 5')	= Total Cover	UPL species	
1. Acrostis Stabiliera	35 V FAC		(A) (B)
2. Festuca perginis	75 7 00		
3. Runex case	THE THE	Prevalence Index =	B/A =
4. lotur corniculatur	25 V FAC	Hydrophytic Vegetation	ndicators:
		1 - Rapid Test for Hyd	rophytic Vegetation
5. Gergnium disrectum	<u>15 UPL</u>	2 - Dominance Test is	>50%
6. Metha pulegium	<u>3</u> 0BL	3 - Prevalence Index i	s ≤3.0 ¹
7		4 - Morphological Ada data in Remarks or	ptations ¹ (Provide supporting
8		5 - Wetland Non-Vasc	
9		Problematic Hydrophy	
10			nd wetland hydrology must
11	117 58.5	be present, unless disturbe	
Woody Vine Stratum (Plot size: 5')	17 = Total Cover 58.5		*
1			
2		Hydrophytic Vegetation	
2	- Tatal Cause	Present? Yes_	X No
% Bare Ground in Herb Stratum	= Total Cover		
Remarks:		(,)	
Dese provacent veg. Regul	orly maved as	atine break.	



	EIN
Sampling Point: 1	P56& Geologists, Inc

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Profile Description: (Describe to the	ne depth needed to document the indicator or	confirm the absence o	f indicators.)
Depth <u>Matrix</u>	<u>Redox Features</u>	Taxture	Remarks
nches) Color (moist)		Loc ² Texture	
	18.5x	<u></u>	
		10	
		if.	
· · · · · · · · · · · · · · · · · · ·		<u> </u>	
	n, RM=Reduced Matrix, CS=Covered or Coated S		tion: PL=Pore Lining, M=Matrix.
dric Soil Indicators: (Applicable)	e to all LRRs, unless otherwise noted.)		s for Problematic Hydric Soils ³ :
_ Histosol (A1)	Sandy Redox (S5)		Muck (A10)
_ Histic Epipedon (A2)	Stripped Matrix (S6)		Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except M Learning Claused Matrix (F2)		Shallow Dark Surface (TF12)
_ Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other	(Explain in Remarks)
_ Depleted Below Dark Surface (A		3	
_ Thick Dark Surface (A12)	Redox Dark Surface (F6)		s of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		d hydrology must be present,
_ Sandy Gleyed Matrix (S4) estrictive Layer (if present):	Redox Depressions (F8)	Uniess	disturbed or problematic
Type:			
Depth (inches):		Hudria Soil E	Present? Yes No
Deptil (illenes)			
	t- soils similar to TPS P SI for Soils	-	
see T		-	
SER TI		-	
See T /DROLOGY Vetland Hydrology Indicators:	P. SI for Soils	51	dary Indicators (2 or more required)
See T YDROLOGY Vetland Hydrology Indicators: trimary Indicators (minimum of one r	P. SI For Soils required; check all that apply)	51 	dary Indicators (2 or more required)
See T YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one r Surface Water (A1)	P SI For Soils required; check all that apply) Water-Stained Leaves (B9) (exc	51 	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2,
See T /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one r Surface Water (A1) High Water Table (A2)	P Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B)	st Second reptWa	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
See T (DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one r Surface Water (A1) High Water Table (A2) Saturation (A3)	P SI For Soils required; check all that apply) — Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) _ Sait Crust (B11)	sept Wa	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10)
See T (DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one r Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	P SI For Soils required; check all that apply) — Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) — Sait Crust (B11) — Aquatic Invertebrates (B13)	Second Sept Dr Dr Dr	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2)
See T (DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one r Surface Water (A1) High Water Table (A2) Saturation (A3)	P SI For Soils required; check all that apply) — Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) _ Sait Crust (B11)	Second Sept Dr Dr Dr	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2)
See T (DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one r Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	P SI For Soils required; check all that apply) — Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) — Sait Crust (B11) — Aquatic Invertebrates (B13)	Second Sept Wa Dr Dr Sa	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2)
See T (DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one r Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	P SI for Soils required; check all that apply) — Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) — Sait Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1)	Second Second Exect Exect	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9
See T /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one r Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	P SI for Soils required; check all that apply) — Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) — Sait Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along Liv	Second sept Second	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9 comorphic Position (D2)
See T TOROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one r 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)	P SI for SGIS required; check all that apply) Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4)	Second sept Watch Dr. Dr. Dr. Dr. Dr. Dr. Dr.	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9 comorphic Position (D2) allow Aquitard (D3)
See T TOROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one r 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)	PSI For Soils required; check all that apply) Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Stunted or Stressed Plants (D1)	Second sept Second	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9 comorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A)
See T TDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one r _ 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	PSI For Soils required; check all that apply) Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Ign Reduction in Tilled S Stunted or Stressed Plants (D1) gery (B7) Other (Explain in Remarks)	Second sept Second	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9 comorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5)
See T TOROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one r 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 Su	PSI For Soils required; check all that apply) Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Ign Reduction in Tilled S Stunted or Stressed Plants (D1) gery (B7) Other (Explain in Remarks)	Second sept Second	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9 comorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A)
See T TOROLOGY Vetland Hydrology Indicators: trimary Indicators (minimum of one of 	P. S. For Soils required; check ali that apply) — Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) — Sait Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along Lix — Presence of Reduced Iron (C4) — Recent Igon Reduction in Tilled S — Stunted or Stressed Plants (D1) — Other (Explain in Remarks) Inface (B8)	Second sept Second	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9 comorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A)
See T YDROLOGY Yetland Hydrology Indicators: Primary Indicators (minimum of one r 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 Surfield Observations; Surface Water Present? Yes	P SI For Soils required; check all that apply) Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lix Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Stunted or Stressed Plants (D1) gery (B7) Other (Explain in Remarks) Mo Depth (inches): NA	Second sept Second	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9 comorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A)
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See T //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one r 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 Surface Water Present? Yes water Table Present? Yes water Table Present? Yes aturation Present? Yes aturation Present? Yes mcludes capillary fringe) Vescribe Recorded Data (stream gatering the second stream gatering the second stre	P. S. For Soils required; check all that apply) Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Ign Reduction in Tilled S Stunted or Stressed Plants (D1) Gery (B7) Other (Explain in Remarks) No Depth (inches): MA No Depth (inches): MA No Depth (inches): MA	Second Second Sept Watter wing Roots (C3) Ge Soils (C6) FA (LRR A) Ra Free Wetland Hydrology	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9 comorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)
See T //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one r 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 Surface Water Present? Yes water Table Present? Yes water Table Present? Yes aturation Present? Yes aturation Present? Yes mcludes capillary fringe) Vescribe Recorded Data (stream gatering the second stream gatering the second stre	P. S. For Soils required; check all that apply) Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Ign Reduction in Tilled S Stunted or Stressed Plants (D1) Gery (B7) Other (Explain in Remarks) No Depth (inches): MA No Depth (inches): MA No Depth (inches): MA	Second Second Sept Watter wing Roots (C3) Ge Soils (C6) FA (LRR A) Ra Free Wetland Hydrology	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9 comorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)
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oject/Site: Humboldt Bay Harbor District-RMMT	City/0	County: Humboldt		Sampling Date:	5/13
plicant/Owner: Humboldt Bay Harbor District			State: CA		
vestigator(s): Joseph Saler, Cindy Wilcox	Sect	on, Township, Rang	ie:		
ndform (hillslope, terrace, etc.): Poinsula spit, Bays	the fill Loca	al relief (concave, co	nvex, none): Concav	Slope	(%): 0-
bregion (LRR): A, MLRA-4B	Lat: 40.9	19395	Long: -124.179	674 Datum:	WGS 84
il Map Unit Name: 1014-Urban land Anthrop					
e climatic / hydrologic conditions on the site typical for this					
e Vegetation, Soil, or Hydrology si			ormal Circumstances"		No
e Vegetation, Soil, or Hydrology n			ded, explain any answe	A STREET	
JMMARY OF FINDINGS – Attach site map		npling point lo	cations, transects	s, important feat	ures, etc
lydrophytic Vegetation Present? Yes No	o	Is the Sampled A			
	o	within a Wetland	X	No	
Remarks: WETS normal rainfall					
TP excavated within 3p ve	Hend lat	m () _)	Q-MIN.R.O.		
It excavated within it as	none, son	worked a	ICH LIAT OBUG		
EGETATION – Use scientific names of plant	ts.				
305			Dominance Test work	sheet:	
	<u>% Cover</u> Spe		Number of Dominant S		
			That Are OBL, FACW,	or FAC:	(A)
			Total Number of Domin		(5)
			Species Across All Stra	ata:	(B)
	= To		Percent of Dominant S That Are OBL, FACW,		(A/B)
apling/Shrub Stratum (Plot size: 5')			Prevalence Index wor	10-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	(VD)
			Total % Cover of:	Multiply by	r:
			OBL species	x 1 =	
			FACW species	× 2 =	
				x 3 =	
	= To	ia Cover I	FACU species		
lerb Stratum (Plot size: 5')	80 1	1 1.		100 C	
Alone curve geniculatus	12	- Incw	Column Totals:	(A)	(B)
Electaris Macrostachya	5	# NL CORE		= B/A =	
RUMER COSTU	3	FAC	ydrophytic Vegetatio		
Fortuca perenis	1	FAC	1 - Rapid Test for I		n
			3 - Prevalence Indi		
				Adaptations ¹ (Provide	supporting
			data in Remark	s or on a separate she	et)
			5 - Wetland Non-V		
0			Problematic Hydro		
1	101 = Tot		Indicators of hydric soil be present, unless dist		gy must
loody Vine Stratum (Plot size: 3	Tot = Tot	al Cover 50.2			
	a <u></u>		Hydrophytic		
				V	
			ogotation	X	
	= Tot		Present? Ye	s <u>X</u> No	-

÷

SOIL	h needed to document the indicator or confirm	Sampling Point: TP 5 and the absence of indicators)
$\begin{array}{c c} \hline \text{Prome Description: (Describe to the dept} \\ \hline \text{Depth} \\ \hline (inches) \\ \hline \hline 0-5 \\ \hline 5-16+ \\ \hline \end{array} \\ \hline \begin{array}{c} \hline \text{Color} (moist) \\ \hline 2.5 \\ \hline 3/1 \\ \hline 100 \\ \hline \end{array} \\ \hline \end{array} \\ \hline \begin{array}{c} \% \\ \hline 100 \\ \hline 100 \\ \hline \end{array} \\ \hline \end{array}$	Redox Features Color (moist) % Type ¹ Loc ²	Texture Remarks MUP Nony Cooks Cols Mony Cobbles.
	Reduced Matrix, CS=Covered or Coated Sand Gr	ains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: (Applicable to all Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4)	Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except MLRA 1) Loamy Gleyed Matrix (F2)	2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Restrictive Layer (if present):		
Type: Depth (inches):	_	Hydric Soil Present? Yes No
Remarks:		

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; che	ck all that apply)	Secondary Indicators (2 or more required)	
X Surface Water (A1)	pt X Water-Stained Leaves (B9) (MLRA 1, 2,		
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)	
X Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)	
Water Marks (B1)	Water Marks (B1) Aquatic Invertebrates (B13)		
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)	
Drift Deposits (B3)	Oxidized Rhizospheres along Livit	ng Roots (C3) 🔏 Geomorphic Position (D2)	
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)	
Iron Deposits (B5)	Recent Iron Reduction in Tilled So		
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (I		
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Frost-Heave Hummocks (D7)	
Sparsely Vegetated Concave Surface (B8)			
Field Observations:	051		
Surface Water Present? Yes 🐥 No _	Depth (inches):		
Water Table Present? Yes X No _	Depth (inches):	\checkmark	
Saturation Present? Yes 🔀 No _	Depth (inches): Switace	Wetland Hydrology Present? Yes 🔨 No	
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitor	ing well, aerial photos, previous inspec	tions), ir availadie:	
Remarks:	III as at	$\gamma \to (1, \gamma)$	
Hydrology preset within S	light depression Contain	nyworand.	
	J ,		
, ,			

ject/Site: Humboldt Bay Harbor Distri	ct-RMMT	City	/County: <u>+</u>	lumboldt		_ Sampling Date: 5/13/20
plicant/Owner: Humboldt Bay Harbor	District				State: CA	Sampling Point: TP 58
estigator(s): Joseph Saler, Cindy Wild	xox	Sec	tion, Town:	ship, Ran	ge:	
ndform (hillslope, terrace, etc.): Pinn bregion (LRR); A, MLRA-4B						Slope (%): 0- 761 Datum: WGS 84
il Map Unit Name: 1014-V Man 1	and Anthaltic	xeron	hentso	2400.1	2-29/D NWI class	ification: None
climatic / hydrologic conditions on th						
Vegetation, Soil, or I						" present? Yes X No
Vegetation, Soil, or I		-			ded, explain any ans	
JMMARY OF FINDINGS - At	tach site map she	owing sa	mpling	point lo	cations, transec	ts, important features, e
ydrophytic Vegetation Present? ydric Soil Present? /etland Hydrology Present?	Yes No Yes No Yes No	X		Sampled / a Wetland		No ×*
emarks: WETS normal rainfall		IN				
TP excavated at slight	ty higher even	ation +1	on 3	p. we	Hand.	* Meets CCC 1-p
GETATION – Use scientific	names of plants.					
ree Stratum (Plot size: 30		bsolute Do Cover Sp	minant Invesion		Dominance Test wo	0
					Number of Dominant That Are OBL, FACV	
			·		Total Number of Don	ninant O
(a					Species Across All S	
apling/Shrub Stratum (Plot size; 5'		=1	otal Cover	r	Percent of Dominant That Are OBL, FACV	
apling/Shrub Stratum (Plot size)			t	Prevalence Index w	orksheet:
	<u> </u>			=======================================	Total % Cover of	f: Multiply by:
· · · · · · · · · · · · · · · · · · ·						x 1 =
) <u></u>						x 2 =
						x 3 =
5		 =1	otal Cover	r		x 4 = x 5 =
Allecurus geniculatus	_) _	5	10	BL		(A) (B
Metha prietium	f	0 -	- 0	A		
Tuncus butoring		5	V F	ACW		ex = B/A =
Leonadon suxatilis		0	-i	ACU	Hydrophytic Vegeta	
Fetuca provis		7	- f	AC	2 - Dominance T	r Hydrophytic Vegetation
Isoleois terning		1	(JBL	3 - Prevalence Ir	
Lotus corniculatus		8	4	FAC		I Adaptations ¹ (Provide supporti
1240					data in Rema	rks or on a separate sheet)
					5 - Wetland Non	-Vascular Plants ¹
)					Problematic Hyd	rophytic Vegetation ¹ (Explain)
•		-				soil and wetland hydrology must
loody Vine Stratum (Plot size: 5'		9 <u>6</u> =T	otal Cover	H.Z	pe present, unless di	sturbed or problematic.
					Hydrophytic	× .
					Vegetation	
					Present?	
Bare Ground in Herb Stratum 5	7.	= T	otal Cover		Present?	Yes <u> </u>

US Army Corps of Engineers

N:

US Army Corps of Engineers

Profile Description: (Describe to the dep	th needed to document the indicator or confirm	the absence of indicators.)
Depth <u>Matrix</u>	Redox Features	
(inches) Color (moist) %	<u>Color (moist)</u> <u>%</u> <u>Type¹</u> <u>Loc²</u>	Texture Remarks
0-1 10YR3/2 100		Veat
1-9 10 YR3/2 100	/ / / /	GrLS
9-14+ 104 4/1 100		Color
		() () () () () () () () () () () () () (
	·	
And the state of t		2
	=Reduced Matrix, CS=Covered or Coated Sand Gra	ains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: (Applicable to al		
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2) Depleted Matrix (F3)	
Depleted Below Dark Surface (A11) Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Thick Dark Surface (AT2) Sandy Mucky Mineral (S1)	Redux Dark Surface (F6) Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:		\checkmark
Depth (inches):		Hydric Soil Present? Yes No 🔨
	der / cabble at 14 in. Cannot	h h h h h h
HYDROLOGY		
Wetland Hydrology Indicators:	·	Consider to lister (2 or more serviced)
Primary Indicators (minimum of one require		Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)
X Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along Living Room	ts (C3) Geomorphic Position (D2)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soils (C6)	i) 🗹 FAC-Neutral Test (D5)
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRR A)) Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery (I	 Other (Explain in Remarks) 	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface		
Field Observations:	1	
Surface Water Present? Yes	No X Depth (inches): N/A	×
Water Table Present? Yes	No X Depth (inches): 2.5	N
Saturation Present? Yes X		and Hydrology Present? Yes 🔀 No
(includes capillary fringe)	No Deptil (inclies) House	
Describe Recorded Data (stream gauge, m	onitoring well, aerial photos, previous inspections),	if available:
Remarks:		11 1
Remarks:	voisting awayfor zo wetlar	nd shown at TPS7
Remarks: Wetland hydrology din	n'nisting away from 3p wetlar	nd shown at TP57
Remarks: Wetland hydrology din	ninisting away from 3p wetlar	nd shown at TP57
Remarks: Wetland hydrology din	ninisting away-from 3p wetlar	nd shown at TP57
Remarks: Wetland hydrology din	ninisting awayfrom 3p wetlar	nd shown at TP57
Remarks: Wetland hydrology dr	ninisting away-from 3p wetlar	Western Mountains, Valleys, and Coast - Version 2.0

Project/Site: Humboldt Bay Harbor District-RMMT City/County: Humbo	Idt Sampling Date: 5/13/22
Applicant/Owner: Humboldt Bay Harbor District	State: CA Sampling Point: TP 59
Investigator(s): Joseph Saler, Cindy Wilcox Section, Township, H	
Landform (hillslope, terrace, etc.): <u>Penin Sula Spit</u> Local relief (concave	e, convex, none): <u>No ne</u> Slope (%): <u>3-5</u>
	Long: -124.179829 Datum: WGS 84
Soil Map Unit Name: 1014 - Urbunland Anthraltic xerorthents as	50C 0-290 NWI classification: NONE
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No	
Are climated hydrologic conditions on the site typical for this time of year? Tes <u></u> No	e "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology significantly disturbed? Ar	e "Normal Circumstances" present? Yes You No
Are Vegetation, Soil, or Hydrology naturally problematic? (If	needed, explain any answers in Remarks.)
Are Vegetation, Soil, or Hydrology naturally problematic? (If SUMMARY OF FINDINGS – Attach site map showing sampling point	needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point	needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point Hydrophytic Vegetation Present? Yes No	needed, explain any answers in Remarks.) t locations, transects, important features, etc.
SUMMARY OF FINDINGS – Attach site map showing sampling point Hydrophytic Vegetation Present? Yes No	needed, explain any answers in Remarks.) t locations, transects, important features, etc. ed Area
SUMMARY OF FINDINGS – Attach site map showing sampling point Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Is the Sample Wetland Hydrology Present? Yes No No Within a Wetland	needed, explain any answers in Remarks.) t locations, transects, important features, etc. ed Area land? Yes No
SUMMARY OF FINDINGS – Attach site map showing sampling point Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Is the Sample Wetland Hydrology Present? Yes No No Within a Wetland	needed, explain any answers in Remarks.) t locations, transects, important features, etc. ed Area land? Yes No
SUMMARY OF FINDINGS – Attach site map showing sampling point Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes No No Wetland Hydrology Present? Yes No No	needed, explain any answers in Remarks.) t locations, transects, important features, etc. ed Area land? Yes No
SUMMARY OF FINDINGS - Attach site map showing sampling point Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Remarks: WETS normal rainfall TP excavated aprox- 3ft from Hydrophytic Veg da	needed, explain any answers in Remarks.) t locations, transects, important features, etc. ed Area land? Yes No
SUMMARY OF FINDINGS – Attach site map showing sampling point Hydrophytic Vegetation Present? Yes No Hydroc Soil Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Remarks: WETS normal rainfall TP excavated agrox - 3ft from Hydrophytic Veg do VEGETATION – Use scientific names of plants.	needed, explain any answers in Remarks.) t locations, transects, important features, etc. ed Area land? Yes No X Whance Showhin TP 58.
SUMMARY OF FINDINGS – Attach site map showing sampling point Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Is the Sample Wetland Hydrology Present? Yes No No Is the Sample Remarks: WETS normal rainfall Yes No Yes No TP excavated ayrox- 3ft from Hydrophytic Veg da A VEGETATION – Use scientific names of plants. Absolute Dominant Indicato	r Dominance Test worksheet:
SUMMARY OF FINDINGS – Attach site map showing sampling point Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Is the Sample Wetiand Hydrology Present? Yes No Is the Sample Wetiand Hydrology Present? Yes No Is the Sample Remarks: WETS normal rainfall No Is the Sample TP cxcavated aurox - 3ft from Hydop fic Veg da Is the Sample VEGETATION – Use scientific names of plants. Absolute Dominant Indicated	needed, explain any answers in Remarks.) t locations, transects, important features, etc. ed Area land? Yes No X Whonce Shownin TI 58. r Dominance Test worksheet:
SUMMARY OF FINDINGS – Attach site map showing sampling point Hydrophytic Vegetation Present? Yes No Hydroc Soil Present? Yes No Is the Sample Wetiand Hydrology Present? Yes No Is the Sample Wetiand Hydrology Present? Yes No Is the Sample Remarks: WETS normal rainfall Hydrophytic Veg da TP excavated ayrox- 3ft from Hydrophytic Veg da VEGETATION – Use scientific names of plants. Absolute Dominant Indicato <u>% Cover</u> Species? Status	needed, explain any answers in Remarks.) t locations, transects, important features, etc. ed Area land? Yes No X Whance Showhin TP 58. r Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A)
SUMMARY OF FINDINGS – Attach site map showing sampling point Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Is the Sample Wetiand Hydrology Present? Yes No Is the Sample Wetiand Hydrology Present? Yes No No Is the Sample Remarks: WETS normal rainfall Yes No Hydrophytic Vegetation Wetiand Hydrophytic Vegetation TP excavated agrex- 3ft from Hydrophytic Vegetation Hydrophytic Vegetation Mo VEGETATION – Use scientific names of plants. Absolute Dominant Indicator % Cover Species? Status 1. 1. 1.	r Dominance Test worksheet: - Number of Dominant Species

			Total Number of Dominant	2	
3			Species Across All Strata:		(B)
4			Percent of Dominant Speci		
Sapling/Shrub Stratum (Plot size: 5'	= 10	otal Cover	That Are OBL, FACW, or F	AC: <u>/</u>	(A/B)
1	-		Prevalence Index worksh	eet:	
			Total % Cover of:	Multiply by:	_
2			OBL species	x 1 =	_
3			FACW species	x 2 =	_
4			FAC species	x 3 =	_
5	<u> </u>		FACU species	x 4 =	_
Herb Stratum (Plot size: 5')	= 10	otal Cover	UPL species	x 5 =	
1. Boza Maxima	60	UPL	Column Totals:		
2. Plantago lanceolata	10	FACU	Prevalence Index =	D/A -	
3. Geranium dissection	3	UPL	Hydrophytic Vegetation 1		_
4. Asthexanthum oderature	25	FACU	1 - Rapid Test for Hyd		
5. Bronus diandrus	2	TIPL	2 - Dominance Test is		
6. Tritolium subjestaneum	2	UPL	3 - Prevalence Index is		
7. Vicia soriva	1	UPL			
8			4 - Morphological Ada data in Remarks or	on a separate sheet	
	· · · · · ·		5 - Wetland Non-Vasc		
9			Problematic Hydrophy		ain)
	,		¹ Indicators of hydric soil an		
11	102	tal Cover 51.5	be present, unless disturbe		
Woody Vine Stratum (Plot size: 5'	- 10	tal Cover 20.6			
1			Hydrophytic		
2			Venetation	\checkmark	
N	= To	tal Cover	Present? Yes_	No X	
% Bare Ground in Herb Stratum	1				
Remarks: We and veg diminance, net	. Lie	a and incid	no al asserve (-D- 10	
when a compare let	eont	at interface	ry of grossy , fo	ha na	
Industrial field.		J	'J'		

Sampling Point: TPS Consulting Engine

- 7

V

inches) Color (moist) %	Color (moist) % Type ¹ Loc ² Texture Rema	rks
- 12 104R 2/1 100		1142
12 10 11 100	TANAULC IN MALESCUS	r .
-16+ 107 4/1 >49	10 YIL4/6 21% C M/PL EXCOGELS redox on color	e maces
pe: C=Concentration, D=Depletion, RM= dric Soil Indicators: (Applicable to all	Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Linir LRRs, unless otherwise noted.) Indicators for Problematic H	
Histosol (A1)	Sandy Redox (S5) 2 cm Muck (A10)	
_ Histic Epipedon (A2)	Stripped Matrix (S6) Red Parent Material (TF2	
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface	
_ Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2) Other (Explain in Remark	s)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
_ Thick Dark Surface (A12)	Redox Dark Surface (F6) ³ Indicators of hydrophytic veg	
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7) wetland hydrology must be Peder Depresentations (F2) unless disturbed or problem	
Sandy Gleyed Matrix (S4) strictive Layer (if present):	Redox Depressions (F8) unless disturbed or proble	
Туре:		
Depth (inches):	Hydric Soil Present? Yes	No
emarks:		
etland Hydrology Indicators:	d: check all that apply) Secondary Indicators (2 or	more required)
etland Hydrology Indicators: imary Indicators (minimum of one required		
etland Hydrology Indicators: imary Indicators (minimum of one required _ Surface Water (A1)	Water-Stained Leaves (B9) (except Water-Stained Leaves	
etland Hydrology Indicators: imary Indicators (minimum of one required Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except Water-Stained Leaves MLRA 1, 2, 4A, and 4B) 4A, and 4B)	(B9) (MLRA 1,
etland Hydrology Indicators: imary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) (except Water-Stained Leaves MLRA 1, 2, 4A, and 4B) 4A, and 4B) Salt Crust (B11) Drainage Patterns (B1	(B9) (MLRA 1, 0)
etland Hydrology Indicators: imary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leaves (B9) (except Water-Stained Leaves MLRA 1, 2, 4A, and 4B) 4A, and 4B) Salt Crust (B11) Drainage Patterns (B1 Aquatic Invertebrates (B13) Dry-Season Water Tail	(B9) (MLRA 1, 0) ble (C2)
etland Hydrology Indicators: imary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Leaves (B9) (except Water-Stained Leaves MLRA 1, 2, 4A, and 4B) 4A, and 4B) Salt Crust (B11) Drainage Patterns (B1 Aquatic Invertebrates (B13) Dry-Season Water Tall Hydrogen Sulfide Odor (C1) Saturation Visible on A	(B9) (MLRA 1, 0) blé (C2) Verial Imagery (C
etland Hydrology Indicators: imary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Leaves (B9) (except Water-Stained Leaves MLRA 1, 2, 4A, and 4B) 4A, and 4B) Salt Crust (B11) Drainage Patterns (B1 Aquatic Invertebrates (B13) Dry-Season Water Tal Hydrogen Sulfide Odor (C1) Saturation Visible on A Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position ((B9) (MLRA 1, 0) ble (C2) Aerial Imagery (C (D2)
etland Hydrology Indicators: imary Indicators (minimum of one required 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 Water-Stained Leaves MLRA 1, 2, 4A, and 4B) 4A, and 4B) Salt Crust (B11) Drainage Patterns (B1 Aquatic Invertebrates (B13) Dry-Season Water Tall Hydrogen Sulfide Odor (C1) Saturation Visible on A Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (Presence of Reduced Iron (C4) Shallow Aquitard (D3)	(B9) (MLRA 1, 0) ble (C2) Aerial Imagery (C D2)
etland Hydrology Indicators: imary Indicators (minimum of one required 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 Water-Stained Leaves MLRA 1, 2, 4A, and 4B) 4A, and 4B) Salt Crust (B11) Drainage Patterns (B1 Aquatic Invertebrates (B13) Dry-Season Water Tall Hydrogen Sulfide Odor (C1) Saturation Visible on A Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (Presence of Reduced Iron (C4) Shallow Aquitard (D3) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5)	(B9) (MLRA 1, 0) ble (C2) Aerial Imagery (C D2)
etland Hydrology Indicators: imary Indicators (minimum of one required 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)	Water-Stained Leaves (B9) (except Water-Stained Leaves MLRA 1, 2, 4A, and 4B) 4A, and 4B) Salt Crust (B11) Drainage Patterns (B1 Aquatic Invertebrates (B13) Dry-Season Water Tall Hydrogen Sulfide Odor (C1) Saturation Visible on A Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (Presence of Reduced Iron (C4) Shallow Aquitard (D3) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D1)	(B9) (MLRA 1, 0) ble (C2) Aerial Imagery (C (D2)) 06) (LRR A)
etland Hydrology Indicators: mary Indicators (minimum of one required 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 (B	Water-Stained Leaves (B9) (except Water-Stained Leaves MLRA 1, 2, 4A, and 4B) 4A, and 4B) Salt Crust (B11) Drainage Patterns (B1 Aquatic Invertebrates (B13) Dry-Season Water Tall Hydrogen Sulfide Odor (C1) Saturation Visible on A Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (Presence of Reduced Iron (C4) Shallow Aquitard (D3) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D1) (7) Other (Explain in Remarks) Frost-Heave Hurnmood	(B9) (MLRA 1, 0) ble (C2) Aerial Imagery (C (D2)) 06) (LRR A)
etland Hydrology Indicators: imary Indicators (minimum of one required 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 (B Sparsely Vegetated Concave Surface (Water-Stained Leaves (B9) (except Water-Stained Leaves MLRA 1, 2, 4A, and 4B) 4A, and 4B) Salt Crust (B11) Drainage Patterns (B1 Aquatic Invertebrates (B13) Dry-Season Water Tall Hydrogen Sulfide Odor (C1) Saturation Visible on A Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (Presence of Reduced Iron (C4) Shallow Aquitard (D3) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D1) (7) Other (Explain in Remarks) Frost-Heave Hurnmood	(B9) (MLRA 1, 0) ble (C2) Aerial Imagery (C (D2)) 06) (LRR A)
etland Hydrology Indicators: imary Indicators (minimum of one required 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 (magery (B Sparsely Vegetated Concave Surface (eld Observations:	Water-Stained Leaves (B9) (except Water-Stained Leaves MLRA 1, 2, 4A, and 4B) 4A, and 4B) Salt Crust (B11) Drainage Patterns (B1 Aquatic Invertebrates (B13) Dry-Season Water Tall Hydrogen Sulfide Odor (C1) Saturation Visible on A Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (Presence of Reduced Iron (C4) Shallow Aquitard (D3) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (E (7) Other (Explain in Remarks) Frost-Heave Hummod	(B9) (MLRA 1, 0) ble (C2) Aerial Imagery (C (D2)) 06) (LRR A)
etland Hydrology Indicators: imary Indicators (minimum of one required 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 (magery (B Sparsely Vegetated Concave Surface (eld Observations: Irface Water Present? Yes	Water-Stained Leaves (B9) (except Water-Stained Leaves MLRA 1, 2, 4A, and 4B) 4A, and 4B) Salt Crust (B11) Drainage Patterns (B1 Aquatic Invertebrates (B13) Dry-Season Water Tall Hydrogen Sulfide Odor (C1) Saturation Visible on A Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (Presence of Reduced Iron (C4) Shallow Aquitard (D3) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (E (7) Other (Explain in Remarks) Frost-Heave Hummood (B8) No Depth (inches):	(B9) (MLRA 1, 0) ble (C2) Aerial Imagery (C (D2)) 06) (LRR A)
etland Hydrology Indicators: imary Indicators (minimum of one required 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 (magery (B Sparsely Vegetated Concave Surface (eld Observations: Irface Water Present? Yes	Water-Stained Leaves (B9) (except Water-Stained Leaves MLRA 1, 2, 4A, and 4B) 4A, and 4B) Salt Crust (B11) Drainage Patterns (B1 Aquatic Invertebrates (B13) Dry-Season Water Tal Hydrogen Sulfide Odor (C1) Saturation Visible on A Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (Presence of Reduced Iron (C4) Shallow Aquitard (D3) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D B8) Frost-Heave Hummood No Depth (inches): No Depth (inches):	(B9) (MLRA 1, 0) ble (C2) Aerial Imagery (C (D2)) 06) (LRR A)
etland Hydrology Indicators: mary Indicators (minimum of one required 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 (magery (B Sparsely Vegetated Concave Surface (eld Observations: rface Water Present? Yes ater Table Present? Yes turation Present? Yes	Water-Stained Leaves (B9) (except Water-Stained Leaves MLRA 1, 2, 4A, and 4B) 4A, and 4B) Salt Crust (B11) Drainage Patterns (B1 Aquatic Invertebrates (B13) Dry-Season Water Tall Hydrogen Sulfide Odor (C1) Saturation Visible on A Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (Presence of Reduced Iron (C4) Shallow Aquitard (D3) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D3) State (Explain in Remarks) Frost-Heave Hummod B8) Wetland Hydrology Present? Yes	(B9) (MLRA 1, 0) ble (C2) Aerial Imagery (C (D2)) 06) (LRR A)
etland Hydrology Indicators: imary Indicators (minimum of one required 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 (magery (B Sparsely Vegetated Concave Surface (eld Observations: Irface Water Present? Yes ater Table Present? Yes furation Present? Yes furation Present? Yes	Water-Stained Leaves (B9) (except Water-Stained Leaves MLRA 1, 2, 4A, and 4B) 4A, and 4B) Salt Crust (B11) Drainage Patterns (B1 Aquatic Invertebrates (B13) Dry-Season Water Tal Hydrogen Sulfide Odor (C1) Saturation Visible on A Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (Presence of Reduced Iron (C4) Shallow Aquitard (D3) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D B8) Frost-Heave Hummood No Depth (inches): No Depth (inches):	(B9) (MLRA 1, 0) ble (C2) Aerial Imagery (C (D2)) 06) (LRR A)
etland Hydrology Indicators: imary Indicators (minimum of one required _ 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 (magery (B _ Sparsely Vegetated Concave Surface (eld Observations: urface Water Present? Yes fater Table Present? Yes aturation Present? Yes	Water-Stained Leaves (B9) (except Water-Stained Leaves MLRA 1, 2, 4A, and 4B) 4A, and 4B) Salt Crust (B11) Drainage Patterns (B1 Aquatic Invertebrates (B13) Dry-Season Water Tall Hydrogen Sulfide Odor (C1) Saturation Visible on A Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (Presence of Reduced Iron (C4) Shallow Aquitard (D3) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (E No Depth (inches): N/A No Depth (inches): Start A No Depth (inches): Start A No Depth (inches): Yes onitoring well, aerial photos, previous inspections), if available: A	(B9) (MLRA 1, 0) ble (C2) Aerial Imagery (C (D2)) 06) (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 (magery (B Sparsely Vegetated Concave Surface (ield Observations: urface Water Present? Yes Vater Table Present? Yes Aturation Present? Yes Aturation Present? Yes Concludes capillary fringe) escribe Recorded Data (stream gauge, memory)	Water-Stained Leaves (B9) (except Water-Stained Leaves MLRA 1, 2, 4A, and 4B) A, and 4B) Salt Crust (B11) Drainage Patterns (B1 Aquatic Invertebrates (B13) Dry-Season Water Tall Hydrogen Sulfide Odor (C1) Saturation Visible on A Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (Oxidized Rhizospheres along Living Roots (C6) Shallow Aquitard (D3) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Stunted or Stressed Plants (D1) (LRR A)	(B9) (MLRA 1, 0) ble (C2) Aerial Imagery (C (D2) 0) 05) (LRR A) ks (D7) No
etland Hydrology Indicators: mary Indicators (minimum of one required 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 (magery (B Sparsely Vegetated Concave Surface (eld Observations: rface Water Present? Yes ater Table Present? Yes turation Present? Yes cludes capillary fringe) scribe Recorded Data (stream gauge, mo	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 Roots (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Stunted or Stressed Plants (D1) (LRR A) B8) No Depth (inches): NA Depth (inches): Scendte, Wetland Hydrology Present? Yes onitoring well, aerial photos, previous inspections), if available: TP 58-No hydrology fresh Rockets of From 10-12 h, Status of the constant	(B9) (MILRA 1, 0) blé (C2) Aerial Imagery (C (D2) 0) 05) (LRR A) ks (D7) No No
etland Hydrology Indicators: imary Indicators (minimum of one required 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 (magery (B Sparsely Vegetated Concave Surface (eld Observations: Inface Water Present? Yes ater Table 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 Roots (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Stunted or Stressed Plants (D1) (LRR A) B8) No Depth (inches): NA Depth (inches): Scendte, No Depth (inches): Scendte, No Depth (inches): Scendte, No Depth (inches): Scendte, No No Depth (inches): Scendte, No No Depth (inches): Scendte, No Depth (inches): Scendte, No No Depth (inches): Scendte, No Depth (inches): Scendte, No No Depth (inches): Scendte, No No Depth (inches): Scendte, No No No No No No No No No No	(B9) (MLRA 1, 0) ble (C2) Aerial Imagery (C (D2) 0) 05) (LRR A) ks (D7) No
etland Hydrology Indicators: imary Indicators (minimum of one required 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 (magery (B Sparsely Vegetated Concave Surface (eld Observations: urface Water Present? Yes fater Table Present? Yes aturation 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 Roots (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Stunted or Stressed Plants (D1) (LRR A) B8) No Depth (inches): NA Depth (inches): Scendte, Wetland Hydrology Present? Yes onitoring well, aerial photos, previous inspections), if available: TP 58-No hydrology Present? Yes Calls a provided for the set of	(B9) (MLRA 1, 1 0) ble (C2) Aerial Imagery (C (D2) 0) 05) (LRR A) ks (D7) No No 2 2 2 2 2 2 2 2 2 2 2 2 2

oject/Site: Humboldt Bay Harbor District-RM	MT City/County: Humboldt Sampling Date: 513123
oplicant/Owner: Humboldt Bay Harbor Distric	
vestigator(s): Joseph Saler, Cindy Wilcox	Section, Township, Range:
andform (hillslope, terrace, etc.): Peninsu	la spit Local relief (concave, convex, none): <u>concave</u> Slope (%): 0-1
ubregion (LRR): A, MLRA-4B	Lat: 40. 819883 Long: -124, 179 390 Datum: WGS 84
bil Map Unit Name: 1014-vrbanland	Anthraltic Xerorthen to 2550 0-29/0 NWI classification: Theohurater forec
	typical for this time of year? Yes X No (If no, explain in Remarks.) Shrub welland
e Vegetation, Soil, or Hydrol	
e Vegetation, Soil, or Hydrol	
UMMARY OF FINDINGS – Attach	site map showing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	
Netland Hydrology Present? Ye: Remarks: WETS normal rainfall	
Slicht Curale Muralah wi	Now 1 black berry community. Best derribed as 1551+4B50g
Singht sada Antogh -	No aboregrainal connectivity
EGETATION – Use scientific nam	es of plants.
	Absolute Dominant Indicator Dominance Test worksheet:
ree Stratum (Plot size: 30')	% Cover Species? Status Number of Dominant Species
Morella Californica	That Are OBL, FACW, or FAC:
Salix hooketima	Total Number of Dominant
·	Species Across All Strata: (B)
• <u> </u>	Total Cover 52.5 Percent of Dominant Species
apling/Shrub Stratum (Plot size: 5	
Rybur annavacus	40 FAC Prevalence Index worksheet:
Rubus winw	2 FACU Total % Cover of: Multiply by: OBL species x 1 =
. Linicera itavolucrata	
•	FAC species x 3 =
lerb Stratum (Plot size: 5	47 = Total Cover 7.4 FACU species x 4 = UPL species x 5 =
	Column Totals: (A) (B)
	Prevalence Index = B/A =
	Hydrophytic Vegetation Indicators:
·	1 - Rapid Test for Hydrophytic Vegetation
-	2 - Dominance Test is >50%
<u>.</u>	3 - Prevalence Index is ≤3.0 ¹
·	
• <u></u>	
0	Desklamstin Lindenskeite Meseteking 1 (Evelate)
0 1	¹ Indicators of hydric soil and wetland hydrology must
×	= Total Cover be present, unless disturbed or problematic.
Voody Vine Stratum (Plot size: 5'	
	Hydrophytic
	Vegetation
	Present? Yes No
Bare Ground in Herb Stratum	Present? Yes No

Sampling Point: TF60 & Geologists, Inc

Profile Description: (Description)	e to the depth	needed to docun	nent the in	dicator or	r confirm	the absence of indica	ators.)
Depth <u>Matrix</u>			Features			+ .	
(inches) Color (moist)		Color (moist)		Type	Loc ²	Texture	Remarks
0-2 IOYR 24	001					MU Peat	
2-16 2.5931	100					mus	
·							,
· ·							
					_		
¹ Type: C=Concentration, D=D	epletion, RM=R	Reduced Matrix, CS	=Covered	or Coated	Sand Gra	ins. ² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil Indicators: (App							oblematic Hydric Soils ³ :
Histosol (A1)		Sandy Redox (S	35)			2 cm Muck (/	A10)
Histic Epipedon (A2)	_	_ Stripped Matrix				Red Parent N	Material (TF2)
Black Histic (A3)	_	Loamy Mucky M			WLRA 1)		/ Dark Surface (TF12)
Hydrogen Sulfide (A4)	-	Loamy Gleyed I				Other (Expla	in in Remarks)
Depleted Below Dark Sur	ace (A11) _	_ Depleted Matrix				1	
Thick Dark Surface (A12)	. –	_ Redox Dark Su		-			rophytic vegetation and
Sandy Mucky Mineral (S1 Sandy Gleyed Matrix (S4)		_ Depleted Dark \$ _ Redox Depress	,	0			logy must be present, ed or problematic.
Restrictive Layer (if present		_ Redux Depress	ions (FO)				su or problematic.
							N
Type: Depth (inches):						Hydric Soil Present	
		-				riyane gon Present	
Remarks: Other- a.a.d Brea							
HYDROLOGY							
Wetland Hydrology Indicato	rs:						
Primary Indicators (minimum of	of one required:	check all that apply	a			V	licators (2 or more required)
Surface Water (A1)		Water-Stai	ned Leave	es (B9) (ex	cept	X Water-Sta	ined Leaves (B9) (MLRA 1, 2,
High Water Table (A2)			1, 2, 4A, a	nd 4B)		4A, an	
X Saturation (A3)		Salt Crust	(B11)				Patterns (B10)
Water Marks (B1)		Aquatic Inv					on Water Table (C2)
Sediment Deposits (B2)			Sulfide Od				Visible on Aerial Imagery (C9)
Drift Deposits (B3)				es along Li	_		nic Position (D2)
Algal Mat or Crust (B4)		Presence					quitard (D3)
Iron Deposits (B5)		Recent Iro					ral Test (D5)
Surface Soil Cracks (B6)	(07)	Stunted or) (LRR A)		nt Mounds (D6) (LRR A)
Inundation Visible on Aeri			olain in Rer	marks)		Frost-Hea	ve Hummocks (D7)
Field Observations:	410 041.400 (24	1					
Surface Water Present?	Yes N	o 📈 Depth (ind	ches):	AIV			
Water Table Present?	Yes X N	N.		411	1		
Saturation Present?	Yes X N			14	Wotla	and Hydrology Preser	nt? Yes X No
(includes capillary fringe) Describe Recorded Data (stre				evious insp			
Remarks:							
- Ø							le sa la la

ject/Site: Humboldt Bay Harbor District-	RMMT	City/County: Humbold	it	_ Sampling Date: 5/13/22
olicant/Owner: Humboldt Bay Harbor Dis	strict		State: CA	_ Sampling Point: TP 61
estigator(s): Joseph Saler, Cindy Wilcox	1	Section, Township, R:	ange:	
ndform (hillslope, terrace, etc.): Philosophia	a Koit Bassideti	Local relief (concave,	, convex, none): Nove	Slope (%): 0-1
pregion (LRR); A, MLRA-4B	Lat:	40. 819830	Long: -124.17	9396 Datum: WGS 84
Map Unit Name: 1014-Urbanl	and Anthral +	icxenorthent	5 0-290 NWI class	ification: Freshwarter Fore
climatic / hydrologic conditions on the				Shu a wetter
Vegetation, Soil, or Hy				
• Vegetation, Soil, or Hy			ieeded, explain any ansi	
IMMARY OF FINDINGS – Atta	ch site map showing	ng sampling point	locations, transec	ts, important features, etc
ydrophytic Vegetation Present?	Yes No	le the Samala	4.4-44	×1
ydric Soil Present?	Yes No	Is the Sample within a Wetla	and? Yes	No X
emarks: WETS normal rainfall	Yes NoX	-		
TA all a stand approx 50	16 Lend	c.t	(()	
TP excavated approx. 5f	T TEM ION VI	· consolving w	Alwa.	
GETATION – Use scientific n	ames of plants.	J		
	Absolu	te Dominant Indicator	Dominance Test wo	orksheet:
ree Stratum (Plot size: 30'		er Species? Status	Number of Dominant	
Salix hoporana	40	- HICW	That Are OBL, FACV	V, or FAC: (A)
Morella californica	5_	TACM	Total Number of Don	
			Species Across All S	trata: (B)
	95	= Total Cover	Percent of Dominant	
apling/Shrub Stratum (Plot size: 5)		That Are OBL, FACV	
Rybus Weinus	25	- FACU	Prevalence Index w Total % Cover of	
Rulans armaiacus	30	_ V FAC		x1=
				x 2 =
				x 3 =
	55	= Total Cover 17.5		x 4 =
erb Stratum (Plot size: 5',)	= Total Cover -T	UPL species	x 5 =
Arthoxathin, oldoratin	12	FACU	Column Totals:	(A) (B)
Contadoria jubata	10	FACU	Prevalence Ind	ex = B/A =
J			Hydrophytic Vegeta	
			1 - Rapid Test fo	or Hydrophytic Vegetation
			- 2 - Dominance T	
a a				
			- 4 - Morphologica data in Rema	al Adaptations ¹ (Provide supporting irks or on a separate sheet)
			5 - Wetland Non	
)				Irophytic Vegetation ¹ (Explain)
			¹ Indicators of hydric :	soil and wetland hydrology must
	22	= Total Cover	be present, unless di	isturbed or problematic.
loody Vine Stratum (Plot size: 5	2			
Heidera helix	<u>_</u>		Hydrophytic	× -
			Vegetation Present?	Yes No 🔀
The second se	C			
Bare Ground in Herb Stratum 78	2	= Total Cover		

1.

Consulting Engines & Geologists, Inc Sampling Point: 776

NY.

e.

Profile Description: (Describe to the dep	oth needed to document the indicator or confirm t	he absence of indicators.)
DepthMatrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-5 184R3/1 100		SCH
5-15 2.54 4/2 100		TrLS compacted
15-28+2.5/ 4/2 87	104R5/6 10 C M	S
	7.5V4/6 3 C M	
	<u>].] 0 / 0 / 1 </u>	
	·	
		<u> </u>
¹ Type: C=Concentration D=Depletion BM	Reduced Matrix, CS=Covered or Coated Sand Grain	ns. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to al		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depieted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic,
Restrictive Layer (if present):		
Type:		
Depth (inches):		Hydric Soil Present? Yes No
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one require		Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2
Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait 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 required)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Suifide Odor (C1) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Suifide Odor (C1) Oxidized Rhizospheres along Living Roots	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	 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 Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Suifide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Suifide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) (B8)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Suifide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 37) Other (Explain in Remarks) (B8) No	 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)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Suifide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 37) Other (Explain in Remarks) (B8) No Depth (inches): <u>N/A</u> Depth (inches): <u>N/A</u> Depth (inches): <u>N/A</u> Depth (inches): <u>N/A</u> Depth (inches): <u>N/A</u> Mo	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 37) Other (Explain in Remarks) (B8) No Depth (inches): Depth (inches): 2.2. in	 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)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Suifide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 37) Other (Explain in Remarks) (B8) No Depth (inches): <u>N/A</u> Depth (inches): <u>N/A</u> Depth (inches): <u>N/A</u> Depth (inches): <u>N/A</u> Depth (inches): <u>N/A</u> Mo	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 Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 37) Other (Explain in Remarks) (B8) No No Depth (inches): <u>25 in</u> Depth (inches): <u>22 in</u> Wetlar	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 Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) To Other (Explain in Remarks) (B8) No Depth (inches): 125 in Depth (inches): 22 in Wetlar monitoring well, aerial photos, previous inspections), if	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) available:
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) To Other (Explain in Remarks) (B8) No Depth (inches): 125 in Depth (inches): 22 in Wetlar monitoring well, aerial photos, previous inspections), if	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) available:
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 37) Other (Explain in Remarks) (B8) No No Depth (inches): <u>25 in</u> Depth (inches): <u>22 in</u> Wetlar	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) available:
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) To Other (Explain in Remarks) (B8) No Depth (inches): 125 in Depth (inches): 22 in Wetlar monitoring well, aerial photos, previous inspections), if	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 Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) To Other (Explain in Remarks) (B8) No Depth (inches): 125 in Depth (inches): 22 in Wetlar monitoring well, aerial photos, previous inspections), if	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)

ject/Site: Humboldt Bay Harbor District-RMMT	City	County: Humboldt	t Sampling Date:
plicant/Owner: Humboldt Bay Harbor District			State: CA Sampling Point:
estigator(s): Joseph Saler, Cindy Wilcox .	Sec		
			convex, none): Slope (%):
bregion (LRR): A. MLRA-4B	Lat: 40.	019122	Long: -124.182003 Datum: WGS 84
Map Unit Name: 1014-Urbanland And	Waltie Kerora	hents Assoc a	0-2010 NWI classification: NON-R
climatic / hydrologic conditions on the site typical fo			
Vegetation, Soil, or Hydrology	_		"Normal Circumstances" present? Yes X No _
Vegetation, Soil, or Hydrology			eeded, explain any answers in Remarks.)
JMMARY OF FINDINGS – Attach site m	ap showing sa	mpling point l	ocations, transects, important features, e
ydrophytic Vegetation Present? Yes		12501.0	and a second
ydric Soil Present? Yes		Is the Sampled within a Wetlar	
/etland Hydrology Present? Yes			
TP excavored within wit	las natch	t la vost a	oist
10 excavored with with	in harry o	n nongi h	
GETATION – Use scientific names of p	lante		
		minant Indicator	Dominance Test worksheet:
ree Stratum (Plot size: 30')	% Cover Sp	ecies? Status	Number of Dominant Species
Salix Sitcharis	80 1	FACW	That Are OBL, FACW, or FAC:
Pinus radiata	10	UPL	Total Number of Dominant
Morella Californica		FACW	Species Across All Strata: (B)
	100		Percent of Dominant Species 50%
apling/Shrub Stratum (Plot size: 5')	100 = T	otal Cover	That Are OBL, FACW, or FAC: (AV
			Prevalence index worksheet:
			Total % Cover of: Multiply by:
	<u> </u>		OBL species x 1 =
	1		FACW species x 2 =
			FAC species x 3 = FACU species x 4 =
erb Stratum (Plot size: 5')	= T	otal Cover	UPL species x5 =
Cortadina Jubata	50	FACU	Column Totals: (A) (E)
			Prevalence Index = B/A =
			1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominance Test is >50%
			3 - Prevalence Index is ≤3.0 ¹
			4 - Morphological Adaptations ¹ (Provide support
			data in Remarks or on a separate sheet)
			5 - Wetland Non-Vascular Plants ¹
			Problematic Hydrophytic Vegetation ¹ (Explain)
			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
oody,Vine Stratum (Plot size: 5')	<u></u> =T	otal Cover	· · · · · · · · · · · · · · · · · · ·
Hedra helix	2		Hydrophytic
			Vegetation X/
			Broost Van Na X
Bare Ground in Herb Stratum 50%	2 = T	otal Cover	Present? Yes No X

US Army Corps of Engineers

		P'AA/
1		
	Sampling Point:	TP62 Ceologists, Inc

1

	pth needed to document the indicator or confirm t	
Depth Matrix	Redox Features	Total Branda
(inches) Color (moist) %	<u>Color (moist)</u> <u>%</u> <u>Type¹</u> <u>Loc²</u>	Texture Remarks
0-3 WYK 41 100		
5-17 10YR 3/2 100		LS Mixed fill
7-24 10VR 4/2 90	5 Y 4/2 10 D m	S
· ·		
		here and the second sec
¹ Type: C=Concentration D=Depletion B	M=Reduced Matrix, CS=Covered or Coated Sand Gra	ins. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to a		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histosof (A1) Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	3
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):	- X ¹	and the second second
Туре:		
Depth (inches):		Hydric Soil Present? Yes No
Remarks:		2
		*
HYDROLOGY		
HYDROLOGY Wetland Hydrology Indicators:		
Wetland Hydrology Indicators:	red: check all that apply)	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one require		Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1. 2.
Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one requir</u> Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one require</u> Surface Water (A1) <u>High Water Table (A2)</u>	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requir 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) Drainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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 Wáter Table (C2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	 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 (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) rs (C3) Geomorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Wáter Table (C2) Saturation Visible on Aerial Imagery (C9) s (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Wáter Table (C2) Saturation Visible on Aerial Imagery (C9) S (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Wáter Table (C2) Saturation Visible on Aerial Imagery (C9) S (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sails (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Wáter Table (C2) Saturation Visible on Aerial Imagery (C9) ss (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sails (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Wáter Table (C2) Saturation Visible on Aerial Imagery (C9) ss (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) (B8)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Wáter Table (C2) Saturation Visible on Aerial Imagery (C9) ss (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches):	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Wáter Table (C2) Saturation Visible on Aerial Imagery (C9) ss (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): NA Depth (inches): NA	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 Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) (B7) Depth (inches): N/A Depth (inches): N/A Depth (inches): N/A Wetla	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Wáter Table (C2) Saturation Visible on Aerial Imagery (C9) Second State Control (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): NA Depth (inches): NA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Wáter Table (C2) Saturation Visible on Aerial Imagery (C9) Second State Control (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) (B7) Depth (inches): N/A Depth (inches): N/A Depth (inches): N/A Wetla	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Wáter Table (C2) Saturation Visible on Aerial Imagery (C9) Second State Control (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) (B7) Depth (inches): N/A No Depth (inches): N/A Wetla monitoring well, aerial photos, previous inspections), i	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Wáter Table (C2) Saturation Visible on Aerial Imagery (C9) Second State Control (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

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ologists, Inc. oject/Site: <u>Humboldt Bay Harbor District-RMMT</u>	City/County:	Humboldt	Sampling Date: 5/14/2
plicant/Owner: Humboldt Bay Harbor District		State: CA	Sampling Point: TP63
vestigator(s): Joseph Saler, Cindy Wilcox		nship, Range:	
ndform (hillslope, terrace, etc.): Paintula (Spit,	hil Local relief (concave, convex, none):	L Slope (%):
bregion (LRR): A, MLRA-4B	Lat: <u>40. 81959</u>	55 Long: -124.182	2949 Datum: WGS 84
il Map Unit Name: Urban land - Anthra	the Knothents a	SCC 0-290 NWI classi	fication: none
e climatic / hydrologic conditions on the site typical f			
e Vegetation, Soil, or Hydrology			" present? Yes 🔀 No _
e Vegetation, Soil, or Hydrology		(If needed, explain any answ	
en a construction de la construction			
UMMARY OF FINDINGS – Attach site n	nap showing sampling	point locations, transec	ts, important features, e
lydrophytic Vegetation Present? Yes		Demailed Area	\sum
tydric Soil Present? Yes	- Ito - Juithin	Sampled Area	No
Vetland Hydrology Present? Yes Remarks: WETS normal rainfall			
VETS format raintall	to cal.	the al	ANT
Veg Somple only. See	1 62 for	representative 2011	+Lydrology.
EGETATION – Use scientific names of	plants.		I JI
	Absolute Dominant I	ndicator Dominance Test wo	rksheet:
ree Stratum (Plot size: 30')		Status Number of Dominant	
Salix, hookpriana	- <u>80</u>	That Are OBL, FACM	
Morella Galitonica		Total Number of Dom	ninant 🛄
Pipu radiaty		Species Across All S	trata: (B)
•		Fercent of Dominant	Species 15%
agling/Shrub Stratum (Plot size: 5')	<u>(0)</u> = Total Cove	marrie eac, mer	
Rubus yesinur.	12 -	ACU Prevalence Index w	
Cotoneaster la geur	8 1	UPL Total % Cover of	
			x1 = x2 =
·		FAC species	
•	- 20		x4=
lerb Stratum (Plot size: 5'	20 = Total Cove	er - L	x 5 =
Arthexarthin odoration	5 4		(A) (I
folow longths	6	FAC	ex = B/A =
Contodoria Jubota	20 1	FACU Hydrophytic Vegeta	
J	1992 - 1992 - 1993 - 19		r Hydrophytic Vegetation
·		3 - Prevalence Ir	idex is ≤3.0 ¹
·			Adaptations ¹ (Provide support
-			rks or on a separate sheet)
0			rophytic Vegetation ¹ (Explain) soil and wetland hydrology musi
1	3 = Total Cove	be present, unless di	soli and wettand hydrology must sturbed or problematic.
Voody Vine Stratum (Plot size: 5')		6.2	
Heden Lelix	<u> </u>	Hydrophytic	
·		Venetation	(es No 🗡
6 Bare Ground in Herb Stratum 69*	= Total Cove	Present?	res No <u>/ `</u>
Hara Cround in Hach Change IN			

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	th needed to document the indicator or confirm	the absence of indicators.)
epth Matrix	Redox Features	
nches Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
		· · · · · · · · · · · · · · · · · · ·
	<u> </u>	<u> </u>
· · · · · · · · · · · · · · · · · · ·		
	Reduced Matrix, CS=Covered or Coated Sand Gra	ains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
dric Soil Indicators: (Applicable to all		
_ Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10) Red Parent Material (TF2)
_ Histic Epipedon (A2)	Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
_ Black Histic (A3) _ Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
_ Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
estrictive Layer (if present):		
Type:		
Type: Depth (inches):	52 for representative so	Hydric Soil Present? Yes No 1 (Mditions,
Type: Depth (inches): emarks: Wy Only. See TP	= 52 for representative so	
Type: Depth (inches): emarks: Wy only. See TP :	= 52 for representative so	
Type: Depth (inches): emarks: Wy dnly. See TP : /DROLOGY /etland Hydrology Indicators:		il conditions.
Type: Depth (inches): emarks: W W M /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one require	d; check all that apply)	I CA ditions. Secondary Indicators (2 or more required)
Type: Depth (inches): emarks: Wy dr.ly. See TP in PROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requires Surface Water (A1)	d <u>; check all that apply)</u>	<u>Secondary Indicators (2 or more required)</u> Water-Stained Leaves (B9) (MLRA 1, 2
Type: Depth (inches): emarks: Wy dify. See TP in DROLOGY /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2)	d: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<u>Secondary Indicators (2 or more required)</u> Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
Type: Depth (inches): emarks: Wy ONLY. See TP in /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requires Surface Water (A1) High Water Table (A2) Saturation (A3)	d: 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)
Type: Depth (inches): emarks: Wy dnly. See TP in DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	d; 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)
Type: Depth (inches): emarks: Wy dr. V. See TP a /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	d; 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
Type: Depth (inches): emarks: Wy dnly. See TP is TDROLOGY fetland Hydrology Indicators: imary Indicators (minimum of one requires Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	d: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo	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 ets (C3)
Type: Depth (inches): emarks: W	d: check all that apply) — Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along Living Roo — Presence of Reduced Iron (C4)	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 ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Type: Depth (inches): emarks: Wy dry. See Tr / // // // // // // // // // // // //	d: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo	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 ats (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Type: Depth (inches): emarks: W	d: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A)	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 ats (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Type: Depth (inches): emarks: W	d: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) 7) 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 Stallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Type: Depth (inches): emarks: W	d: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) 7) 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 Stallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Type: Depth (inches): emarks: W	d: check all that apply) — Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along Living Roo — Presence of Reduced Iron (C4) — Recent Iron Reduction in Tilled Soils (C6 — Stunted or Stressed Plants (D1) (LRR A) 7) — Other (Explain in Remarks) B8)	 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 Stallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Type: Depth (inches): emarks: W	d: check all that apply)	 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 Stallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Type: Depth (inches): emarks: W	d: check all that apply)	 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 Stallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Type: Depth (inches): emarks: W	d: check all that apply)	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 Staturation (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
Type: Depth (inches): emarks: WONY. See TP in TDROLOGY fetland Hydrology Indicators: timary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Saturation (A3) Saturation (A3) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (leld Observations: urface Water Present? Yes fater Table Present? Yes aturation Present? Yes	d: check all that apply)	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 Staturation (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
Type: Depth (inches): emarks: WONY. See TP in TDROLOGY fetland Hydrology Indicators: timary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Saturation (A3) Saturation (A3) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (leld Observations: urface Water Present? Yes fater Table Present? Yes aturation Present? Yes	d: check all that apply)	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 Staturation (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No

oject/Site: Humboldt Bay Harbor District-RMMT	City/County: Humb	oldt	Sampling Date: 5/14/2
oplicant/Owner: Humboldt Bay Harbor District			Sampling Point: TP64
vestigator(s): Joseph Saler, Cindy Wilcox	Section, Township	Range:	
Indform (hillslope, terrace, etc.): Pariosula Spit	Local relief (conca	ve, convex, none):	ave Slope (%): 0-
bregion (LRR): A, MLRA-4B	Lat: 40. 819481	Long: 124.18	3652 Datum: WGS 84
Dil Map Unit Name: UVbanland - Anthralt			
e climatic / hydrologic conditions on the site typical fo			
e Vegetation, Soil, or Hydrology			s" present? Yes X No
e Vegetation, Soil, or Hydrology		If needed, explain any ans	
UMMARY OF FINDINGS – Attach sife m	ap showing sampling point	nt locations, transed	ts, important features, e:
Hydrophytic Vegetation Present? Yes	_ No		
Hydric Soil Present? Yes	No Is the Sam		×No
Vetland Hydrology Present? Yes X	_ NO	- C \ + - 7	
Remarks: WETS normal rainfall TP CXCa	voted within deprove	d tandation of	tomer industrial
	tavilitie	5. Surranded b	Vincete
EGETATION – Use scientific names of p	lants		1 sale sale
	Absolute Dominant Indica	tor Dominance Test we	orksheet:
Tree Stratum (Plot size: 30')	% Cover Species? Statu	S Number of Dominan	
. Salix, lotiandra	60 FACI	Mat Are OBL, FAC	
Morella californica	FA(Total Number of Dor	minant 7
3		Species Across All S	Strata: (B)
1	70 31	Percent of Dominant	
Sapling/Shrub Stratum (Plot size: 5	= Total Cover	That Are OBL, FAC	N, or FAC:
		Prevalence Index w	
2		<u>Total % Cover c</u>	of: Multiply by: x 1 =
3	<u> </u>	Concentration of the second se	x 2 =
4		FAC species	
j		Sharpy 124015 Beerly .	x 4 =
Herb Stratum (Plot size: 5')	= Total Cover		x 5 =
Typha lotifolia	8 / OB	Column Totals:	(A) (B
			dex = B/A =
B		Hydrophytic Veget	
l			or Hydrophytic Vegetation
5		X 2 - Dominance	Test is >50%
S		3 - Prevalence I	ndex is ≤3.0 ¹
·			al Adaptations ¹ (Provide support
		6ata in Rema	arks or on a separate sheet)
			drophytic Vegetation ¹ (Explain)
l0			soil and wetland hydrology must
	= Total Cover		listurbed or problematic.
Noody Vine Stratum (Plot size: 5'			
		Hydrophytic	×
2	<u> </u>	Vegetation Present?	Yes X No
% Bare Ground in Herb Stratum 92*	= Total Cover	i isogint:	···· ··· ····

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17 Consulting Enginee & Geologists, Inc Sampling Point:

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Profile Desc	cription: (Describe	to the depth	needed to docume		r or commi	the absence of in	dicators.)
Depth	Matrix			Features	2	T	De verde
(inches)	LOTR 3	<u>%</u> _	Color (moist)	<u>% Type</u>	Loc ²	Texture	Remarks
0-6		100 -				Mup	
6-12	2,54 3/2	100				Mus	
12-18+	10 / 3/1	100				5	
	20						
				Alara.			
).j 			L.		÷	
		· · · · · · · · · · · · · · · · · · ·			·		
	·		a na stre				
			Reduced Matrix, CS=		ted Sand Gra	ins. ² Location	: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applic	able to all L	RRs, unless otherw	rise noted.)		Indicators for	r Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Redox (S5)	i)		2 cm Mu	ck (A10)
	pipedon (A2)	-	Stripped Matrix (\$				ent Material (TF2)
	istic (A3)	-	Loamy Mucky Mill		pt MLRA 1)	12.1	llow Dark Surface (TF12)
	en Sulfide (A4) d Belev: Deck Surfee	- (814)	Loamy Gleyed M Depleted Matrix (• •		Coner (E:	kplain in Remarks)
	d Below Dark Surfac ark Surface (A12)	e(ATT) _	Depleted Matrix (Redox Dark Surface)	•		³ Indicators of	hydrophytic vegetation and
	Mucky Mineral (S1)	-	Depleted Dark Suite	•			/drology must be present,
	Gleyed Matrix (S4)	-	Redox Depressio				turbed or problematic.
	Layer (if present):				- 18		
Type:					99		\checkmark
Depth (in	iches):					Hydric Soil Pres	sent? Yes <u>No</u> No
Remarke.							
* Britin	e AAD at	Min C	h depth				
HYDROLO	GY						
Wetland Hy	drology Indicators:						
•	•••		check all that apply)			Secondary	Indicators (2 or more required)
	Water (A1)			ed Leaves (B9)	(excent		-Stained Leaves (B9) (MLRA 1, 2,
	ater Table (A2)			2, 4A, and 4B)			, and 4B)
X Saturati			Salt Crust (i				ige Patterns (B10)
	Aarks (B1)			ertebrates (B13)			eason Water Table (C2)
	nt Deposits (B2)			ulfide Odor (C1)			tion Visible on Aerial Imagery (C9)
_	posits (B3)			izospheres alor			orphic Position (D2)
	at or Crust (B4)		Contraction and an and a second se	Reduced Iron (Sector Sector - Secto	w Aquitard (D3)
Iron De				Reduction in Ti			leutral Test (D5)
	posits (B5)		Recent Iron	readenon ni ii	ieu aolis (Co)	FAC-	
Surface	posits (B5) Soil Cracks (B6)			Stressed Plants		and the second second	d Ant Mounds (D6) (LRR A)
Inundat		Imagery (B7)	Stunted or S			Raise	
_ Inundat	Soil Cracks (B6)		Stunted or S	Stressed Plants		Raise	d Ant Mounds (D6) (LRR A)
_ Inundat	Soil Cracks (B6) ion Visible on Aerial y Vegetated Concav		Stunted or S	Stressed Plants		Raise	d Ant Mounds (D6) (LRR A)
Inundat Sparsei Field Obser	Soil Cracks (B6) ion Visible on Aerial y Vegetated Concav rvations:	e Surface (B	Stunted or S	Stressed Plants ain in Remarks)		Raise	d Ant Mounds (D6) (LRR A)
Inundat Sparsei Field Obser	Soil Cracks (B6) ion Visible on Aerial y Vegetated Concav rvations: ter Present?	e Surface (B	Stunted or S Control Stunted or S Other (Explained) Other (Explained) Depth (incl	Stressed Plants ain in Remarks) nes):		Raise	d Ant Mounds (D6) (LRR A)
Inundat Sparsel Field Obser Surface Water Water Table	Soil Cracks (B6) ion Visible on Aerial ly Vegetated Concav rvations: ter Present?	e Surface (Bi res N res N	Stunted or S Other (Expla 8) Depth (inch Depth (inch	Stressed Plants ain in Remarks) nes): $\frac{N/A}{3i}$	(D1) (LRR A)	Raise Frost-	d Ant Mounds (D6) (LRR A) Heave Hummocks (D7)
Inundat Sparsei Field Obser Surface Wat Water Table Saturation P (includes ca	Soil Cracks (B6) ion Visible on Aerial ly Vegetated Concav rvations: ter Present? Present? Present? Present? N	e Surface (B /es N /es N /es N	Stunted or 8 Other (Explained) Other (Explained) Depth (include) Depth (include) Depth (include)	Stressed Plants ain in Remarks) nes): $\frac{N/A}{3 i \Lambda}$ nes): $\frac{3 i \Lambda}{5 \sqrt{16} \sqrt{16}}$	(D1) (LRR A)	Raise Frost-	d Ant Mounds (D6) (LRR A) Heave Hummocks (D7)
Inundat Sparsei Field Obser Surface Wat Water Table Saturation P (includes ca	Soil Cracks (B6) ion Visible on Aerial ly Vegetated Concav rvations: ter Present? Present? Present? Present? N	e Surface (B /es N /es N /es N	Stunted or S Other (Expla 8) Depth (inch Depth (inch	Stressed Plants ain in Remarks) nes): $\frac{N/A}{3 i \Lambda}$ nes): $\frac{3 i \Lambda}{5 \sqrt{16} \sqrt{16}}$	(D1) (LRR A)	Raise Frost-	d Ant Mounds (D6) (LRR A) Heave Hummocks (D7)
Inundat Sparsei Field Obser Surface Wat Water Table Saturation P (includes ca Describe Re	Soil Cracks (B6) ion Visible on Aerial y Vegetated Concav rvations: ter Present? Present? Present? Present? Secorded Data (stream	e Surface (B /es N /es N /es N n gauge, mor	Stunted or S Stunted or S Other (Explain) Depth (incl Depth (incl Depth (incl Depth (incl Depth (incl Depth (incl Depth (incl	Stressed Plants ain in Remarks) nes): N/A nes): 3 in nes): Swofac notos, previous i	(D1) (LRR A)	Raise Frost- and Hydrology Pro	d Ant Mounds (D6) (LRR A) Heave Hummocks (D7)
Inundat Sparsei Field Obser Surface Wat Water Table Saturation P (includes ca Describe Re	 Soil Cracks (B6) ion Visible on Aerial iv Vegetated Concav rvations: ter Present? Present? Present?	e Surface (B /es N /es N /es N n gauge, mor	Stunted or S Other (Explain) Other (Explain) Depth (inch Depth (inch Depth (inch Depth (inch itoring well, aerial ph	Stressed Plants ain in Remarks) nes): N/A nes): 3 in nes): Swofac notos, previous i	(D1) (LRR A)	Raise Frost- and Hydrology Pro	d Ant Mounds (D6) (LRR A) Heave Hummocks (D7)
Inundat Sparsei Field Obser Surface Wat Water Table Saturation P (includes ca Describe Re	 Soil Cracks (B6) ion Visible on Aerial iv Vegetated Concav rvations: ter Present? Present? Present?	e Surface (B /es N /es N /es N n gauge, mor	Stunted or S Other (Explain) Other (Explain) Depth (inch Depth (inch Depth (inch Depth (inch itoring well, aerial ph	Stressed Plants ain in Remarks) nes): N/A nes): 3 in nes): Swofac notos, previous i	(D1) (LRR A)	Raise Frost- and Hydrology Pro	d Ant Mounds (D6) (LRR A) Heave Hummocks (D7)
Inundat Sparsei Field Obser Surface Wat Water Table Saturation P (includes ca Describe Re	 Soil Cracks (B6) ion Visible on Aerial iv Vegetated Concav rvations: ter Present? Present? Present?	e Surface (B /es N /es N /es N n gauge, mor	Stunted or S Other (Explain) Other (Explain) Depth (inch Depth (inch Depth (inch Depth (inch itoring well, aerial ph	Stressed Plants ain in Remarks) nes): N/A nes): 3 in nes): Swofac notos, previous i	(D1) (LRR A)	Raise Frost- and Hydrology Pro	d Ant Mounds (D6) (LRR A) Heave Hummocks (D7)
Inundat Sparsei Field Obser Surface Wat Water Table Saturation P (includes ca Describe Re	 Soil Cracks (B6) ion Visible on Aerial iv Vegetated Concav rvations: ter Present? Present? Present?	e Surface (B /es N /es N /es N n gauge, mor	Stunted or S Other (Explain) Other (Explain) Depth (inch Depth (inch Depth (inch Depth (inch itoring well, aerial ph	Stressed Plants ain in Remarks) nes): N/A nes): 3 in nes): Swofac notos, previous i	(D1) (LRR A)	Raise Frost- and Hydrology Pro	d Ant Mounds (D6) (LRR A) Heave Hummocks (D7)
Inundat Sparsei Field Obser Surface Wat Water Table Saturation P (includes ca Describe Re	 Soil Cracks (B6) ion Visible on Aerial iv Vegetated Concav rvations: ter Present? Present? Present?	e Surface (B /es N /es N /es N n gauge, mor	Stunted or S Other (Explain) Other (Explain) Depth (inch Depth (inch Depth (inch Depth (inch itoring well, aerial ph	Stressed Plants ain in Remarks) nes): N/A nes): 3 in nes): Swofac notos, previous i	(D1) (LRR A)	Raise Frost- and Hydrology Pro	d Ant Mounds (D6) (LRR A) Heave Hummocks (D7)

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region onsulting Engineers & Geologists, Inc. _____ Sampling Date: 5/14/27_ Project/Site: Humboldt Bay Harbor District-RMMT _____ City/County: Humboldt Applicant/Owner: Humboldt Bay Harbor District State: CA _____ Sampling Point: _____65 Investigator(s): Joseph Saler, Cindy Wilcox Section, Township, Range: Landform (hillslope, terrace, etc.): Panoula Soft Local relief (concave, convex, none): None Slope (%): 5 Lat: 40.819480 Long: -124.183669 Datum: WGS 84 Subregion (LRR): A, MLRA-4B Soil Map Unit Name: Urban land-Anthrathic Xevorthants assoc. 0-2% NWI classification: None X No (If no, explain in Remarks.) Are climatic / hydrologic conditions on the site typical for this time of year? Yes Are "Normal Circumstances" present? Yes 🗸 No Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Is the Sampled Area Hydric Soil Present? Yes No 3 within a Wetland? Wetland Hydrology Present? Yes No Remarks: WETS normal rainfall cutface slope at edge of concrete VEGETATION – Use scientific names of plants. Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size: 30' % Cover Species? Status Number of Dominant Species 1. Morella Californica 20 FACIN That Are OBL, FACW, or FAC: (A) 2. Total Number of Dominant 3. Species Across All Strata: (B) Percent of Dominant Species 20 = Total Cover That Are OBL, FACW, or FAC: (A/B)Sapling/Shrub Stratum (Plot size: 55 Prevalence Index worksheet: 1. Total % Cover of: Multiply by: 2. OBL species _____ x 1 = _____ FACW species _____ x 2 = ____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ = Total Cover Herb Stratum (Plot size: 5' UPL species _____ x 5 = _____ 1 Cortaderia Moda Column Totals: _____ (A) _____ (B) toxathing odoration Prevalence Index = B/A = Holcus mostils Hydrophytic Vegetation Indicators: Briza makima 1 - Rapid Test for Hydrophytic Vegetation 5. Lotus Corniculatur 2 - Dominance Test is >50% 6. 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 8. 9._____ 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. = Total Cover Woody Vine Stratum (Plot size: 5 ARU 1 Hedera Whix Hydrophytic Vegetation

= Total Cover

ON ANNU

US Army Corps of Engineers

Duff + grave

Remarks

% Bare Ground in Herb Stratum 2

×

Western Mountains, Valleys, and Coast - Version 2.0

Present?

 $\frac{1}{2} = \frac{1}{2}$

-

	SYT
-+0	Consulting Engine
Samoling Point:	Ceologists, Inc

Profile Description: (Describe to the de			
	pth needed to document the indicator or confirm	the absence of	indicators.)
Depth Matrix	Redox Features		
(inches) Color (moist) %	<u>Color (moist)</u> % <u>Type¹</u> Loc ²	Texture	Remarks
0-3 2.54 2.5/ 00			nony tine roots
3-24+2.54 4/2 100	/ ///	GrLS 1	vith was, charadal
			,
· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	· · · ·	
	·		
	M=Reduced Matrix, CS=Covered or Coated Sand Gra		on: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to a	II LRRs, unless otherwise noted.)	Indicators	for Problematic Hydric Soils ¹ :
Histosol (A1)	Sandy Redox (S5)	2 cm N	uck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)		rent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)		hallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	4	
Thick Dark Surface (A12)	Redox Dark Surface (F6)		of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless o	isturbed or problematic.
Restrictive Layer (if present):			
Туре:		-	X
Depth (inches):		Hydric Soil Pr	esent? Yes No
HYDROLOGY Wetland Hydrology Indicators:			
	red; check all that apply)	Seconda	ry Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requi			
Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1)	Water-Stained Leaves (B9) (except	Wat	ery Indicators (2 or more required) er-Stained Leaves (B9) (MLRA 1, 2, A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Wat	er-Stained Leaves (B9) (MLRA 1, 2, A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Wat Drai	er-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) nage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requi 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)	Wat Drai Dry-	er-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) nage Patterns (B10) Season Water Table (C2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 	Wat Drai Dry- Satu	er-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) nage Patterns (B10) Season Water Table (C2) tration Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requi	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo	Wat Drai Dry- Satu ts (C3) Geo	er-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) nage Patterns (B10) Season Water Table (C2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requi	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4)	Wat Drai Dry- Satu ts (C3) Geo Sha	er-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) nage Patterns (B10) Season Water Table (C2) aration Visible on Aerial Imagery (C9) morphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requi	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	Wat Drai Dry- Satu ts (C3) Geo Sha FAC	er-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) nage Patterns (B10) Season Water Table (C2) aration Visible on Aerial Imagery (C9) morphic Position (D2) llow Aquitard (D3) -Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requited in the second sec	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 	Wat Drai Dry- Satu ts (C3) Geo Sha) FAC Rais	er-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) mage Patterns (B10) Season Water Table (C2) mation Visible on Aerial Imagery (C9) morphic Position (D2) llow Aquitard (D3) c-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
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) Inundation Visible on Aerial Imagery	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks)	Wat Drai Dry- Satu ts (C3) Geo Sha) FAC Rais	er-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) nage Patterns (B10) Season Water Table (C2) aration Visible on Aerial Imagery (C9) morphic Position (D2) Ilow Aquitard (D3) -Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks)	Wat Drai Dry- Satu ts (C3) Geo Sha) FAC Rais	er-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) mage Patterns (B10) Season Water Table (C2) mation Visible on Aerial Imagery (C9) morphic Position (D2) llow Aquitard (D3) c-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requited) 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:	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8)	Wat Drai Dry- Satu ts (C3) Geo Sha) FAC Rais	er-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) mage Patterns (B10) Season Water Table (C2) mation Visible on Aerial Imagery (C9) morphic Position (D2) llow Aquitard (D3) c-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requited in the second sec	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): N/A	Wat Drai Dry- Satu ts (C3) Geo Sha) FAC Rais	er-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) mage Patterns (B10) Season Water Table (C2) mation Visible on Aerial Imagery (C9) morphic Position (D2) llow Aquitard (D3) c-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requited in the second sec	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): NA Depth (inches): NA	Wat Drai Dry- Satu ts (C3) Geo Sha FAC Rais Fros	er-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) nage Patterns (B10) Season Water Table (C2) aration Visible on Aerial Imagery (C9) morphic Position (D2) llow Aquitard (D3) c-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requited in the second of	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): NA Depth (inches): NA	Wat Drai Dry- Satu ts (C3) Geo Sha FAC Rais Fros	er-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) mage Patterns (B10) Season Water Table (C2) mation Visible on Aerial Imagery (C9) morphic Position (D2) llow Aquitard (D3) c-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one requit 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? Yes Saturation Present? Yes Gaturation 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 Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): NA Depth (inches): NA	Wat Drai Dry- Satu its (C3) Geo Sha FAC Rais Fros	er-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) nage Patterns (B10) Season Water Table (C2) aration Visible on Aerial Imagery (C9) morphic Position (D2) llow Aquitard (D3) c-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requited in the second sec	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): NA Depth (inches): NA Wetta	Wat Drai Dry- Satu its (C3) Geo Sha FAC Rais Fros	er-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) nage Patterns (B10) Season Water Table (C2) aration Visible on Aerial Imagery (C9) morphic Position (D2) llow Aquitard (D3) c-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requit	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): NA No Depth (inches): NA No Depth (inches): NA Wetta monitoring well, aerial photos, previous inspections),	Wat Drai Dry- Satu ts (C3) Geo Sha FAC Rais Fros	er-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) nage Patterns (B10) Season Water Table (C2) aration Visible on Aerial Imagery (C9) morphic Position (D2) llow Aquitard (D3) c-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requit	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): NA No Depth (inches): NA No Depth (inches): NA Wetta monitoring well, aerial photos, previous inspections),	Wat Drai Dry- Satu ts (C3) Geo Sha FAC Rais Fros	er-Stained Leaves (B9) (MLRA 1, 2, A, and 4B) mage Patterns (B10) Season Water Table (C2) wration Visible on Aerial Imagery (C9) morphic Position (D2) llow Aquitard (D3) -Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7)

ject/Site: Humboldt Bay Harbor District-RMMT		City/County: Humbold	t Sampling Date: 5 M
olicant/Owner: Humboldt Bay Harbor District			State: CA Sampling Point:6
estigator(s): Joseph Saler, Cindy Wilcox	8		ange:
ndform (hillslope, terrace, etc.): hilslope		Local relief (concave,	convex, none): Slope (%):
pregion (LRR): A, MLRA-4B	Lat: <u>40</u>	.818237	Long: -124.185179 Datum: WGS
Map Unit Name: Urban land - Anthro	altic Xevor	thents assoc.	0-2010 NWI classification: 10ne
climatic / hydrologic conditions on the site typical			
Vegetation, Soil, or Hydrology			"Normal Circumstances" present? Yes 📈 No
Vegetation, Soil, or Hydrology	naturally prot		eeded, explain any answers in Remarks.)
			ocations, transects, important features
	1	sampling point i	ocations, transects, important features
ydrophytic Vegetation Present? Yes ydric Soil Present? Yes		Is the Sampleo	i Area
fetland Hydrology Present? Yes		within a Wetla	nd? Yes No
emarks: WETS normal rainfall			
pland pit for EmTI TP7. On	hill slape ab	me drainese	
The second se		- uning c	
GETATION – Use scientific names of	plants.		
ee Ştratum, (Plot şize: 30')	Absolute	Dominant Indicator	Dominance Test worksheet:
Zalix Sicharis	<u>% Cover</u>	Species? Status	Number of Dominant Species 2
		- IACO	That Are OBL, FACW, or FAC:
			Total Number of Dominant
	50	= Total Cover	Percent of Dominant Species 50%
pling/Shrub Stratum (Plot size: 5') 47	FAL.	Prevalence Index worksheet:
Rubus arminiacu		- Acu	Total % Cover of:Multiply by:
tother accuto		MCUI	OBL species x 1 =
			FACW species x 2 =
			FAC species x 3 =
	42	= Total Cover	FACU species x 4 =
rb Stratum (Plot size: 5')	70	1 0.1	UPL species x 5 =
Cartadonia jubata		FACU	Column Totals: (A)
0			Prevalence Index = B/A =
			Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominance Test is >50%
		21	3 - Prevalence Index is ≤3.0 ¹
			4 Marabalaginal Adaptations ¹ (Dravide super-
			4 - Morphological Adaptations ¹ (Provide support data in Remarks or on a separate sheet)
			 4 - Morphological Adaptations¹ (Provide support data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹
			data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants ¹ Problematic Hydrophytic Vegetation ¹ (Explain)
			data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants ¹ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology mu
			data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants ¹ Problematic Hydrophytic Vegetation ¹ (Explain)
pody Vine Stratum, (Plot size: 5)		= Total Cover	data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants ¹ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology mu be present, unless disturbed or problematic.
ody Vine Stratum (Plot size: 5)			data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants ¹ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology mube present, unless disturbed or problematic. Hydrophytic Vegetation
pody Vine Stratum, (Plot size: 5)	 	= Total Cover	data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants ¹ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology mu be present, unless disturbed or problematic.

Sampling Point: 106 Consulting Engine

Profile Des	cription: (Describe	to the dept	th needed to docu	ment the ind	licator or	confirm	the absence of	of indicators.)
Depth	Matrix		Redo	x Features	- 1			
(inches)	Color (moist)		Color (moist)		Type'	Loc	<u>Texture</u>	Remarks
0-3	IOTR 311	106					SL.	
3-24	104R412	100					5	
	1-11-11-1							4
	-	· <u> </u>	-					
	-						<u> </u>	11
¹ Type: C=	Concentration, D=Dep	letion, RM	Reduced Matrix, C	S=Covered	or Coated	Sand Gr		ation: PL=Pore Lining, M=Matrix.
Hydric Soi	I Indicators: (Applic	able to all			.)			s for Problematic Hydric Soils ³ :
Histos			Sandy Redox (Muck (A10)
	Epipedon (A2)		Stripped Matrix		(Parent Material (TF2) Shallow Dark Surface (TE12)
	Histic (A3)		Loamy Mucky		(except N	ILKA 1)		Shallow Dark Surface (TF12) r (Explain in Remarks)
	gen Sulfide (A4)	. /8/11	Loamy Gleyed				Othe	(Explain in Remarks)
	ed Below Dark Surface	æ (A11)	Depleted Matri Redox Dark St				³ Indicator	s of hydrophytic vegetation and
	Dark Surface (A12) Mucky Mineral (S1)		Depleted Dark		'n			nd hydrology must be present,
	Gleyed Matrix (S4)		Redox Depres		,			s disturbed or problematic.
	e Layer (if present):					-	1	
	s Eufor (processi)							11
	inches):	-					Hydric Soil	Present? Yes No X
Remarks:	inchea).						1	
HYDROL								
	lydrology Indicators dicators (minimum of		d: chock all that our	ska)			Secon	dary Indicators (2 or more required)
		one require			(BO) (av	aant		/ater-Stained Leaves (B9) (MLRA 1, 2,
	ce Water (A1)			ained Leave: \ 1, 2, 4A, ar		cept	**	4A, and 4B)
	Nater Table (A2)				ia 46)		0	rainage Patterns (B10)
	ation (A3)		the second se	it (811)	(012)			ry-Season Water Table (C2)
	Marks (B1)			nvertebrates	•			aturation Visible on Aerial Imagery (C9)
	nent Deposits (B2)			n Sulfide Odd		ining Dou		eomorphic Position (D2)
	Deposits (B3)			Rhizosphere of Reduced				hallow Aquitard (D3)
	Mat or Crust (B4)			e of Reduced				AC-Neutral Test (D5)
	eposits (B5)			ron Reductio or Stressed F			-,	aised Ant Mounds (D6) (LRR A)
	ce Soil Cracks (B6)							rost-Heave Hummocks (D7)
	ation Visible on Aerial			xplain in Ren	narks)			
	ely Vegetated Conca	ve Sunace	(88)					
	ervations:		× ·	M	10			
		Yes		nches): <u>N</u>	1A			
		Yes	V	inches):	JA -	-		
		Yes	No <u> </u>	inches):	1A	_ Wet	land Hydrolog	y Present? Yes No
(includes	capillary fringe) Recorded Data (strea		onitoring well serie	I photos ore	vious insr	ections)	, if available:	
Describe	NELANDER DATA (SILEA)		ontoing won, acha	. p. a.a.a, pie	tiono niej.			
Describe I		n gauge, n						
Describe I Remarks:		1 gauge, 11						
Describe I Remarks:	1	ì	Sland		_			
Describe I	1	ì	slope.					

ect/Site: Humboldt Bay Harbor District-RMMT	City/C	County: Humboldt	Sampling Date: 5/14/22
icant/Owner: Humboldt Bay Harbor District			Sampling Point: TP67
stigator(s): Joseph Saler, Cindy Wilcox		on, Township, Range:	
form (hillslope, terrace, etc.): Physula, 1	Ad till Loca	I relief (concave, convex, none):	01 Cave Slope (%): 0-1
region (LRR): A, MLRA-4B	Lat: <u>40.81</u>	1353 Long: 124.	185955 Datum: WGS 84
Map Unit Name: Urbanland - Anthra	tic Xero whent	30550C 0-296 NWI	classification: <u>no poe</u>
climatic / hydrologic conditions on the site typica	for this time of year? Y	res _ X No (If no, exp	lain in Remarks.)
Vegetation, Soil, or Hydrology	significantly distur	bed? Are "Normal Circumst	ances" present? Yes X No
/egetation, Soil, or Hydrology _	naturally problema	atic? (If needed, explain any	y answers in Remarks.)
MMARY OF FINDINGS - Attach site	map showing sam	upling point locations, trai	sects, important features, etc
drophytic Vegetation Present? Yes	< No		* Meers C
dric Soil Present? Yes		Is the Sampled Area	
tland Hydrology Present? Yes 🔀	No	within a Wetland? Yo	es No Wettend of
marks: WETS normal rainfall			
igh Base of hillslope, slight	drainage Des	allel to NBA, View	st w/ Slightly deprosed
GETATION – Use scientific names o		the in any vice	J' Swale.
0	•	ninant Indicator Dominance Te	et worksheet
e Stratum (Plot size: 30'	% Cover Spe		
		That Are OBL,	FACW, or FAC: (A)
		Total Number of	
		Species Across	All Strata: (B)
	= To	tal Cover Percent of Dorr	
ling/Shrub Stratum (Plot size: 5'		That Ale OBE,	FACW, or FAC: (A/B)
Rubus armeniacus	<u> ></u>	140	ver of: Multiply by:
			x1=
			x 2 =
		FAC species	x 3 =
	15 = To	tal Cover I	x 4 =
b Stratum (Plot size: 5')		UPL species	x 5 =
Juncus ettusus	<u> </u>		(A) (B)
Agrostis Stolon fera	<u>50</u> V		e Index = B/A =
Anti-skathun odoratun	<u> </u>		egetation Indicators:
quisetun laguigatun			est for Hydrophytic Vegetation
		A Y with	псе Test is >50% nce Index is ≤3.0¹
			logical Adaptations ¹ (Provide supporting
		data in l	Remarks or on a separate sheet)
		5 - Wetland	I Non-Vascular Plants ¹
			c Hydrophytic Vegetation ¹ (Explain)
		Indicators of hy	ydric soil and wetland hydrology must ess disturbed or problematic.
	<u> </u>	al Cover	
ody Vine Stratum (Plot size:)			
		Hydrophytic Vegetation	X
ody Vine Stratum (Plot size:)	= Tota		Yes 📐 No

. .

Ŧ

Sampling Point: TPL P & Geologists; Inc

I - 24+ 2.5 Y 4/2 2.5 Y 4/3 2.0 C M S I - 24+ 2.5 Y 4/2 2.0 C M S International States (S) I - 24+ 2.5 Y 4/2 2.0 C M S International States (S) I - 24+ 2.5 Y 4/2 2.0 C M S International States (S) International States (S) I - 124+ 2.5 Y 4/2 2.0 C M S International States (S) International States (S) <t< th=""><th></th><th></th><th></th><th></th><th></th></t<>					
Color (maist) % Color (maist) % Type: Loc Texture Remarks 0 - 3 10 VR 2/1 10 0	escription: (Describe to the depth nee		dicator or con	firm the absen	ce of indicators.)
0-3 [0 VR 2/1 [0 0]			Turn! Lor	2 Touture	Pomorka
3-11 2.5 Y 4/2 0.0 2.5 Y 4/3 2.0 M Gr LS W/was y debrts, brtth 1-14+ 2.5 Y 4/2 8.0 2.5 Y 4/3 2.0 M Gr LS W/was y debrts, brtth 1-14+ 2.5 Y 4/2 8.0 2.5 Y 4/3 2.0 M S S M <td>$- \frac{\text{Color}(\text{mgist})}{(0 \vee 0 \circ 1)} \frac{\%}{(0 \vee 0 \circ 1)} \frac{1}{(0 \vee$</td> <td>blor (moist) %</td> <td>Type Loc</td> <td>M.O</td> <td></td>	$- \frac{\text{Color}(\text{mgist})}{(0 \vee 0 \circ 1)} \frac{\%}{(0 \vee 0 \circ 1)} \frac{1}{(0 \vee$	blor (moist) %	Type Loc	M.O	
I - 24+ 2.5 Y 4/2 2.5 Y 4/3 2.0 C M S I - 24+ 2.5 Y 4/2 2.0 C M S International States (S) I - 24+ 2.5 Y 4/2 2.0 C M S International States (S) I - 24+ 2.5 Y 4/2 2.0 C M S International States (S) International States (S) I - 124+ 2.5 Y 4/2 2.0 C M S International States (S) International States (S) <t< td=""><td>_ 10 YK 2/ 1, 100</td><td></td><td></td><td>MUP</td><td></td></t<>	_ 10 YK 2/ 1, 100			MUP	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histo Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shalkow Dark Surface (TF12) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type:	2.5 × 9/2 100			GrLJ	w woo dy debris, brich + (1
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histo Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Learny Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (TF12) Hydrogen Sulfide (A4) Loarny Gieyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Sandy Gieyed Matrix (S4) Redox Dark Surface (F7) Sandy Gieyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic. Restrictive Layer (if present): Type:	+ 2.5 4/2 80 2.5	Y4/3 20	CM	5	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histo Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Learny Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (TF12) Hydrogen Sulfide (A4) Loarny Gieyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Sandy Gieyed Matrix (S4) Redox Dark Surface (F7) Sandy Gieyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic. Restrictive Layer (if present): Type:					
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histo Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Learny Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (TF12) Hydrogen Sulfide (A4) Loarny Gieyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Sandy Gieyed Matrix (S4) Redox Dark Surface (F7) Sandy Gieyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic. Restrictive Layer (if present): Type:		••			
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histo Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Learny Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (TF12) Hydrogen Sulfide (A4) Loarny Gieyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Sandy Gieyed Matrix (S4) Redox Dark Surface (F7) Sandy Gieyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic. Restrictive Layer (if present): Type:					
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histo Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Learny Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (TF12) Hydrogen Sulfide (A4) Loarny Gieyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Sandy Gieyed Matrix (S4) Redox Dark Surface (F7) Sandy Gieyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic. Restrictive Layer (if present): Type:					
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histo Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shalkow Dark Surface (TF12) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type:					
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histo Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shalkow Dark Surface (TF12) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type:					
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histo Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shalkow Dark Surface (TF12) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type:			er Cented Fan	A Crains 2	exotion: DI - Poro Liping M-Matrix
Histosl (A1)					
Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Loarny Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (TF12) Hydrogen Sulfide (A4) Loarny Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) ^a Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type:					•
Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (TF12) Hydrogen Sulfide (A4) Loamy Gieyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A12) Redox Dark Surface (F6) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Gleyed Matrix (S4) Redox Depressions (F6) unless disturbed or problematic. Restrictive Layer (if present): Type:					
Hydrogen Sulfide (A4) Loany Gleved Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Matrix (F3) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type:	•••••		(except MLR)		
Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Image: Type: Unless disturbed or problematic. Depleted Dark Surface (F7) unless disturbed or problematic. Restrictive Layer (if present): Type: Depth (inches): Hydric Soil Present? Yes No Remarks: Primary Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLR High Water Table (A2) MLRA 1, 2, 4A, and 4B) Water-Stained Leaves (B9) (MLR Saturation (A3) Sati Crust (B11) Dreinage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Seeson Water Table (C2) Sediment Deposits (B2) Hydrogen Sufface Odor (C1) Stauration Visible on Aerial Image Orifi Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Stauration Visible on Aerial Image Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shalow Aquitard (D3)			(overbrinning		•
Thick Dark Surface (A12) Redox Dark Surface (F6) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic. Restrictive Layer (if present): Type:					
Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic. Restrictive Layer (if present): Type:		Redox Dark Surface (F6)		^a Indic	ators of hydrophytic vegetation and
Restrictive Layer (if present): Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except High Water Table (A2) MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Deposits (B2) Hydrogen Suifide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A)	idy Mucky Mineral (S1) D	Depleted Dark Surface (F7	')	We	etland hydrology must be present,
Type: Hydric Soil Present? Yes No Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLR 4A, and 4B) High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3) Sait Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Image Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) Shallow Aquitard (D3) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A)	ndy Gleyed Matrix (S4) F	Redox Depressions (F8)		ur	less disturbed or problematic.
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Begin (inclus):	C				X
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	DLOGY d Hydrology Indicators: r Indicators (minimum of one required; che rface Water (A1) h Water Table (A2) turation (A3) tter Marks (B1) diment Deposits (B2)	Water-Stained Leaver MLRA 1, 2, 4A, ar Sait Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Odd	nd 4B) 6 (B13) or (C1)	t	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C
Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A)	DLOGY d Hydrology Indicators: r Indicators (minimum of one required; che rface Water (A1) h Water Table (A2) turation (A3) tter Marks (B1) diment Deposits (B2) ft Deposits (B3)	Water-Stained Leaver MLRA 1, 2, 4A, ar Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere	nd 4B) s (B13) or (C1) es along Living	t	 Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aeria! Imagery (C Geomorphic Position (D2)
	DLOGY d Hydrology Indicators: r Indicators (minimum of one required; che rface Water (A1) th Water Table (A2) turation (A3) tter Marks (B1) diment Deposits (B2) ff Deposits (B3) gal Mat or Crust (B4)	Water-Stained Leaver MLRA 1, 2, 4A, ar Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced	nd 4B) 6 (B13) or (C1) es along Living d Iron (C4)	g Roots (C3)	 Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aeria! Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3)
	DLOGY d Hydrology Indicators: r Indicators (minimum of one required; che rface Water (A1) h Water Table (A2) turation (A3) tter Marks (B1) diment Deposits (B2) ft Deposits (B3) pal Mat or Crust (B4) n Deposits (B5)	Water-Stained Leaver MLRA 1, 2, 4A, ar Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reductio	nd 4B) or (C1) es along Living d Iron (C4) on in Tilled Soil	t g Roots (C3) ls (C6)	 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)
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Field Observations:	S: DLOGY d Hydrology Indicators: r Indicators (minimum of one required; che rface Water (A1) h Water Table (A2) turation (A3) tter Marks (B1) diment Deposits (B2) ff Deposits (B3) pal Mat or Crust (B4) n Deposits (B5) rface Soil Cracks (B6) indation Visible on Aerial Imagery (B7)	Water-Stained Leaver MLRA 1, 2, 4A, ar Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reductio	nd 4B) or (C1) es along Living d Iron (C4) on in Tilled Soil Plants (D1) (L I	t g Roots (C3) ls (C6)	 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)
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	S: DLOGY d Hydrology Indicators: r Indicators (minimum of one required; che rface Water (A1) th Water Table (A2) turation (A3) tter Marks (B1) diment Deposits (B2) ft Deposits (B3) nal Mat or Crust (B4) n Deposits (B5) rface Soil Cracks (B6) Indation Visible on Aerial Imagery (B7) arsely Vegetated Concave Surface (B8) Deservations: a Water Present? Yes No	Water-Stained Leaver MLRA 1, 2, 4A, ar Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reductio Stunted or Stressed F Other (Explain in Rer	nd 4B) or (C1) es along Living d Iron (C4) on in Tilled Soil Plants (D1) (LI marks)	t g Roots (C3) ls (C6)	 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) Raised Ant Mounds (D6) (LRR A)
Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No (includes capillary fringe) Depth (inches): Wetland Hydrology Present? Yes No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: No	S: DLOGY d Hydrology Indicators: r Indicators (minimum of one required; che rface Water (A1) th Water Table (A2) turation (A3) tter Marks (B1) diment Deposits (B2) ff Deposits (B3) nal Mat or Crust (B4) n Deposits (B5) rface Soil Cracks (B6) Indation Visible on Aerial Imagery (B7) arsely Vegetated Concave Surface (B8) Deservations: a Water Present? Yes No Table Present? Yes No	Water-Stained Leaver MLRA 1, 2, 4A, ar Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reductio Stunted or Stressed F Other (Explain in Rer	nd 4B) (B13) or (C1) es along Living d Iron (C4) on in Tilled Soil Plants (D1) (LI marks)	t g Roots (C3) ls (C6) RR A)	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aeria! Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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Remarks:	S: DLOGY d Hydrology Indicators: r Indicators (minimum of one required; che rface Water (A1) th Water Table (A2) turation (A3) tter Marks (B1) diment Deposits (B2) ft Deposits (B3) tal Mat or Crust (B4) in Deposits (B5) rface Soil Cracks (B6) Indation Visible on Aerial Imagery (B7) arsely Vegetated Concave Surface (B8) Deservations: a Water Present? Yes No Table Present? Yes No No Solution State No No No No No No No No No No	Water-Stained Leaver MLRA 1, 2, 4A, ar Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reductio Stunted or Stressed F Other (Explain in Ren Depth (inches):	nd 4B) (B13) or (C1) es along Living d Iron (C4) on in Tilled Soil Plants (D1) (LI marks)	t g Roots (C3) ls (C6) RR A) Wetland Hydro	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aeria! Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Hydriby indicates portided to smalle.	S: DLOGY d Hydrology Indicators: r Indicators (minimum of one required; che rface Water (A1) (h Water Table (A2) turation (A3) tter Marks (B1) diment Deposits (B2) ff Deposits (B3) nal Mat or Crust (B4) n Deposits (B5) rface Soil Cracks (B6) undation Visible on Aerial Imagery (B7) arsely Vegetated Concave Surface (B8) Deservations: a Water Present? Yes No Fable Present? Yes No Sign Present? Yes No arseight of the second data (stream gauge, monitorial to be recorded Data (stream gauge, monitorial)	Water-Stained Leaver MLRA 1, 2, 4A, ar Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reductio Stunted or Stressed F Other (Explain in Ren Depth (inches):	nd 4B) (B13) or (C1) es along Living d Iron (C4) on in Tilled Soil Plants (D1) (LI marks)	t g Roots (C3) ls (C6) RR A) Wetland Hydro	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aeria! Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

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roject/Site: Humboldt Bay Harbor District-RMMT	City/0	County: Humboldt		_ Sampling Date: <u>5/14/2</u>
pplicant/Owner: Humboldt Bay Harbor District			State: CA	Sampling Point: 1P68
nvestigator(s): Joseph Saler, Cindy Wilcox	Secti	on, Township, Ra	nae:	
andform (hillslope, terrace, etc.):	Loca	al relief (concave, d	convex, none): Nov	Slope (%): 7
ubregion (LRR): <u>A, MLRA-4B</u>	Lat: 40.0	817366	Long: - 124.185	5976 Datum: WGS 84
oil Map Unit Name: Urban land -Anthre	(fic Xerothents.	assoc 020/0	NWI classi	fication: None
re climatic / hydrologic conditions on the site typica				
re Vegetation, Soil, or Hydrology _				present? Yes X No
re Vegetation, Soil, or Hydrology _			eded, explain any ansv	
UMMARY OF FINDINGS – Attach site		npling point le	ocations, transect	is, important features, e
		Is the Sampled	Area	N
		within a Wetlan	d? Yes	No 🔀
Remarks: WETS normal rainfall				
Hillslope above TP67				
11-67		-		L
EGETATION – Use scientific names o	f plants.			1
200		ninant Indicator	Dominance Test wo	rksheet:
Tree Stratum (Plot size: 30)	<u>% Cover</u> Spe	cies? <u>Status</u>	Number of Dominant	
			That Are OBL, FACW	(A)
			Total Number of Dom	7
3 4.	<u> </u>		Species Across All St	rata: [(B)
	= Tr	tal Cover	Percent of Dominant	
Sapling/Shrub Stratum (Plot size: 5'			That Are OBL, FACW	
Rubus armeniacus	30 -	+AC	Prevalence Index wo	Multiply by:
e Cotoneaster lacteur	<u>15</u> _	<u>UPL</u>		x 1 =
3				x 2 =
l			FAC species	
	55 = TO	275		x 4 =
Herb Stratum (Plot size: 5'	<u> </u>	otal Cover 275		x 5 =
Anthexanthum a doratum	<u>65</u> 1	- fray	Column Totals:	(A) (B
trappria voca	34 1	- FACU	Prevalence Inde	ex = B/A =
Holdustanatus		FAC	Hydrophytic Vegetal	tion Indicators:
Geranum dissectum		UPL		Hydrophytic Vegetation
			2 - Dominance Te	est is >50%
-			3 - Prevalence In-	dex is ≤3,0 ¹
			4 - Morphological	Adaptations ¹ (Provide supporti
·			5 - Wetland Non-	ks or on a separate sheet)
 0		•		ophytic Vegetation ¹ (Explain)
1				oil and wetland hydrology must
	108 = Tot	a Cover 54	be present, unless dis	turbed or problematic.
Voody Vine Stratum (Plot size:)	<u> </u>	21.0		
			Hydrophytic	
			Vegetation Present? Y	es No 🔀
6 Bare Ground in Herb Stratum	= Tot	al Cover	reacht? I	ea NU <u>/ / </u>

SOIL	
------	--

Sampling Point:

۲

Enginee ists, Inc

5

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	epth needed to document the indicator or		
Depth <u>Matrix</u>	Redox Features	Loc ² Texture	Remarks
(inches) Color (moist) %	Color (maist) % Type ¹		Remarks
0-2 104R 2/1 100		<u></u>	
2-16 2.54 3/2 100		15	
16-24- 2.51 4/2 10		5	-
Type: C=Concentration, D=Depletion, I Hydric Soil Indicators: (Applicable to	RM=Reduced Matrix, CS=Covered or Coated and an and a content of the content of th		ion: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm N	Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red P	arent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except M	ILRA 1) Very S	Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		(Explain in Remarks)
 Depleted Below Dark Surface (A11) 			
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators	of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)		disturbed or problematic.
Restrictive Layer (if present):			
Туре:			
Depth (inches):		Hydric Soil P	resent? Yes No
Remarks:			
IYDROLOGY			

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1) Water-Stained Leaves	B9) (except Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2) MLRA 1, 2, 4A, and	4B) 4A, and 4B)
Saturation (A3) Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1) Aquatic Invertebrates (I	
Sediment Deposits (B2) Hydrogen Sulfide Odor	
Drift Deposits (B3) Oxidized Rhizospheres	along Living Roots (C3) Geomorphic Position (D2)
Algal Mat or Crust (B4) Presence of Reduced i	ron (C4) Shallow Aquitard (D3)
Iron Deposits (B5) Recent Iron Reduction	
Surface Soil Cracks (B6) Stunted or Stressed Pla	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rema	rks) Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface (B8)	· · · · · · · · · · · · · · · · · · ·
Field Observations:	N. Contraction of the second se
Surface Water Present? Yes No X Depth (inches):	<u></u>
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes <u>No Depth</u> (inches): <u>N</u> (includes capillary fringe)	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previ	ous inspections), if available:
Remarks	
well drained sandy slope	
Will Clained Soundy stope.	

oject/Site: Humboldt Bay Harbor District-RMMT	City/County: Humbold	t Sampling Date: 5/17/22
oplicant/Owner: Humboldt Bay Harbor District		State: <u>CA</u> Sampling Point: <u>TP 69</u>
vestigator(s): Joseph Saler, Cindy Wilcox	Section, Township, Ra	
indform (hillslope, terrace, etc.): this was soit	, BAUSI de Fill Local relief (concave,	convex, none): None Slope (%): 0-
ubregion (LRR): A, MLRA-4B		Long: -124.185182 Datum: WGS 84
bil Map Unit Name: Urbanland-Anthr		
e climatic / hydrologic conditions on the site typic	11	
e Vegetation, Soil, or Hydrology _		"Normal Circumstances" present? Yes X No
e Vegetation, Soil, or Hydrology _		eeded, explain any answers in Remarks.)
		locations, transects, important features, e
	No Is the Sampled	d Area
	No within a Wetla	X
Perseries MICTO		(X _ X
TO an ted invelop Like	e approx 5-10 from	n woth dedge
IF excavar ingration	o approve o rom tes	WUBRAFUC IS
EGETATION – Use scientific names of	of plants.	J
30'	Absolute Dominant Indicator	Dominance Test worksheet:
ree Stratum (Plot size: 30')	<u>% Cover Species? Status</u>	Number of Dominant Species
		That Are OBL, FACW, or FAC: (A)
		Total Number of Dominant 3
		Species Across All Strata: (B
	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33</u> /(A)
apling/Shrub Stratum (Plot size: 5'		Prevalence index worksheet:
Rubus ursinus	THE FACE	Total % Cover of: Multiply by:
. Rubus armeniacus	13 T AC	OBL species x 1 =
•		FACW species x 2 =
*		FAC species x 3 =
	22 = Total Cover H	FACU species x 4 =
lerb Stratum (Plot size: 5')	011 ···	UPL species x 5 =
Antoxathum odoratum	84 Freu	Column Totals: (A) (I
Holcus Ignatus	-6 $+AC$	Prevalence Index = B/A =
Helminthettera echioides		Hydrophytic Vegetation Indicators:
Vicia sativa Geravium dissection	1 UPL	1 - Rapid Test for Hydrophytic Vegetation
Lotu corniculatus	FAC FAC	2 - Dominance Test is >50%
Junew Xielioides	T TOBL	3 - Prevalence Index is $\leq 3.0^1$
and the second		4 - Morphological Adaptations ¹ (Provide support data in Remarks or on a separate sheet)
*		5 - Wetland Non-Vascular Plants ¹
0		Problematic Hydrophytic Vegetation ¹ (Explain)
1		¹ Indicators of hydric soit and wetland hydrology must
	= Total Cover	be present, unless disturbed or problematic.
Voody Vine Stratum (Plot size: 5		
		Hydrophytic Vegetation
		Present? Yes No
(nt	= Total Covor	
6 Bare Ground in Herb Stratum	= Total Cover	

Western Mountains, Valleys, and Coast - Version 2.0

		Consulting Engin
SOIL		Sampling Point: 169 & Geologists, I
Profile Description: (Describe to the de	epth needed to document the indicator or confirm	the absence of indicators.)
Depth <u>Matrix</u>	Redox Features Color (moist) % Type ¹ Loc ²	Texture Remarks
(inches) Color (moist) %	<u>Color (moist)</u> <u>%</u> <u>Type</u> <u>Loc</u> ²	Remarks
0-1 101K-11 100		<u></u>
2-9 2.54 3/2 100		13
9-20 2.54 4/2 100		COGY LS
10-24+2.59 4/2 >90		w/charcoa/tslels
10 10 5/0 27		wixed fill
¹ Tuno: C=Concentration D=Depletion P	M=Reduced Matrix, CS=Covered or Coated Sand Gra	ains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to a		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histosof (A1) Histic Epipedon (A2)	Stripped Matrix (S6)	2 chrimitek (ATO) Red Parent Material (TF2)
Black Histic (A3)	Supper Matrix (SO) Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:		
Death /inches/i		
Depth (inches):		Hydric Soil Present? Yes No
Remarks;	att @ 187notes	
Remarks: Mixed fillsiils. Aspha	att @ 18 inches	
Remarks	att @ 187notes	
Remarks: MiXed filsiis. Apple HYDROLOGY Wetland Hydrology Indicators:		
Remarks: MXed filsils. Apple HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requ	ired; check all that apply).	Secondary Indicators (2 or more required)
Remarks: MXQO FILSTILS. Apple HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requ Surface Water (A1)	ired; check all that apply) Water-Stained Leaves (B9) (except	
Remarks: MXQO FILSTILS. Apple HYDROLOGY Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one requ</u> Surface Water (A1) High Water Table (A2)	ired; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<u>Secondary Indicators (2 or more required)</u> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Remarks: MXQO FILSTILS. Apple HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requ Surface Water (A1) High Water Table (A2) Saturation (A3)	ired; 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,
Remarks: WXed filsic. Apple HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requ Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	ired; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	<u>Secondary Indicators (2 or more required)</u> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Remarks: WXed films. Apple HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requind) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	ired; 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 (C9)
Remarks: MXed filsiic. Apple HYDROLOGY Wetland Hydrology Indicators: Apple Primary Indicators (minimum of one requination (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	ired; 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) Saturation Visible on Aerial Imagery (C9)
Remarks: MXed filsils. Apple HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requination (A1) — High Water Table (A2) — Saturation (A3) — Water Marks (B1) — Sediment Deposits (B2) — Drift Deposits (B3) — Algal Mat or Crust (B4)	ired: check all that apply) — Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along Living Roo — Presence of Reduced Iron (C4)	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 (C9) ats (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Remarks: MXQO FILSTILS. Apple HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requession 	ired; check all that apply) — Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along Living Roo — Presence of Reduced Iron (C4) — Recent Iron Reduction in Tilled Soils (C6)	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 (C9) (C9) Saturation (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Remarks: MX ed filsils. Apple HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requession of the second s	ired; check all that apply) — Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along Living Roo — Presence of Reduced Iron (C4) — Recent Iron Reduction in Tilled Soils (C6 — Stunted or Stressed Plants (D1) (LRR A)	Secondary Indicators (2 or more required)
Remarks: MXQO (ILSTIC. Apple HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requ 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	ired: check all that apply) — Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along Living Roo — Presence of Reduced Iron (C4) — Recent Iron Reduction in Tilled Solls (C6) — Stunted or Stressed Plants (D1) (LRR A) (B7) — Other (Explain in Remarks)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C9) Saturation (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Remarks: MXQO FILSTIC. Apple HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requination of the second s	ired: check all that apply) — Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along Living Roo — Presence of Reduced Iron (C4) — Recent Iron Reduction in Tilled Solls (C6) — Stunted or Stressed Plants (D1) (LRR A) (B7) — Other (Explain in Remarks)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) offs (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Remarks: MX ed filsils. Apple HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reque 	ired: check all that apply)	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 (C9) offs (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Remarks: MX ed filsils. Apple HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requession of the second s	ired; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches):A	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 (C9) offs (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Remarks: MX ed filstils. Apple HYDROLOGY Wetland Hydrology Indicators: Apple Primary Indicators (minimum of one requination of a stress (minimum of one requination of a stress (minimum o	ired: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (C6 Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): A	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 (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Remarks: MX ed filsils. Apple HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requession of the second s	ired: check all that apply) — Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along Living Roo — Presence of Reduced Iron (C4) — Recent Iron Reduction in Tilled Solls (C6) — Stunted or Stressed Plants (D1) (LRR A) (B7) — Other (Explain in Remarks) e (B8) — No Depth (inches):A	Secondary Indicators (2 or more required)
Remarks: MX ed filsils. Apple HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requession of the second s	ired: check all that apply)	
Remarks: MX ed filsik. Apple HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requession of the second se	ired; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7)Other (Explain in Remarks) e (B8) NoDepth (inches):A NoDepth (inches):A NoDepth (inches):A NoDepth (inches):A NoDepth (inches):A	

oject/Site: Humboldt Bay Harbor District-RMMT	Ci	ity/County: Humbold	t	_ Sampling Date: 5/17/2
plicant/Owner: Humboldt Bay Harbor District			State: CA	Sampling Point: 1P70
vestigator(s): Joseph Saler, Cindy Wilcox	S	ection, Township, Ra		
ndform (hillslope, terrace, etc.): Pairoula (S ph	-	ocal relief (concave,	convex, none); Nor	& Slope (%):
bregion (LRR): A, MLRA-4B				5676 Datum: WGS 84
il Map Unit Name: 1014-Orben land An				
e climatic / hydrologic conditions on the site typical				
e Vegetation, Soil, or Hydrology			"Normal Circumstances"	
e Vegetation, Soil, or Hydrology	-			
			eeded, explain any ansv	
JMMARY OF FINDINGS – Attach site	map showing s	ampling point	ocations, transect	ts, important features, e
lydrophytic Vegetation Present? Yes	No X	la dha Daarah		
lydric Soil Present? Yes X	- No	Is the Sampled within a Wetla		No
Vetland Hydrology Present? Yes Vemarks: WETS normal rainfall	No			
IP excavated in Hotsandy area.				
GETATION - Use scientific names of	nlants			
	-	Dominant Indicator	Dominance Test wo	rksheet:
ree Stratum (Plot size: 30'		Species? Status	Number of Dominant	4
			That Are OBL, FACW	
			Total Number of Dom	inant 🔽
	<u> </u>		Species Across All St	rata: <u>2</u> (B)
			Percent of Dominant	Species 707
apling/Shrub Stratum (Plot size: 5'		• Total Cover	That Are OBL, FACW	
Rybur unsinus	20	V FACY	Prevalence Index we	
uping arbonew	5	V UPL	Total % Cover of	
Rubius arminiacus				x 1 =
				x 2 = x 3 =
	00			x 4 =
erbiStratum (Plot size: 5')	-56_=	Total Cover 👫		x 5 =
Potatilla, anserina	20	V OBL		(A) (E
Polystichum muitum	20	FACU		
Equisetion avese	3	FAC	Hydrophytic Vegetat	ex = B/A =
JUNCIN brewering	5	FACW		r Hydrophytic Vegetation
Anthoxanthum odorating	30	V FACI	2 - Dominance Te	
			3 - Prevalence In	
				Adaptations ¹ (Provide support
				ks or on a separate sheet)
			5 - Wetland Non-	
),				ophytic Vegetation ¹ (Explain) oil and wetland hydrology must
		Total Course 39		sturbed or problematic.
loody Vine Stratum (Plot size: 5	=	Total Cover		
			Hydrophytic	2
	×		Vegetation	
Bare Ground in Herb Stratum 22k		Total Cover	Present? Y	'es No Ҳ
			1	

100 miles

C.	2	Ŀ.	
9	v	l	L.

Profile Desc	ription: (Describe	to the dept				or confirm	the absence of	of indicators.)
Depth	Matrix			K Features	3 Ture 1	1 = -2	Testure	Remarks
(inches)	Color (moist)	_%	Color (moist)	%	Type ¹	Loc ²	SL	<u>remarks</u>
0-2	2,51 31	100	Sec. all		_		36	
5-16	251 12	95	J.SYR 446	5	C	m	15	
16-26+	254/2	80	1.5XR4/6	2	<u> </u>	M	S	
		-	7.54R5/8	18	C	M		
-								
	-							
	-							
	<u>.</u>		51			·		
			<u></u>		· <u> </u>			
	oncentration, D=Dep					d Sand Gra		ation: PL=Pore Lining, M=Matrix.
-	Indicators: (Applic	able to all			ed.)			s for Problematic Hydric Soils ³ :
Histoso			Sandy Redox (Muck (A10) Parent Material (TF2)
	pipedon (A2) istic (A3)		Stripped Matrix Loamy Mucky N		() /evcent	MIRA 1)		Shallow Dark Surface (TF12)
	en Sulfide (A4)		Loamy Gleyed I			meror i,		r (Explain in Remarks)
	d Below Dark Surfac	e (A11)	Depleted Matrix		,			
	ark Surface (A12)		Redox Dark Su	rface (F6)				s of hydrophytic vegetation and
	Mucky Mineral (S1)		Depleted Dark 3		7)			id hydrology must be present,
	Gleyed Matrix (S4)		Redox Depress	ions (F8)			unless	disturbed or problematic.
	Layer (if present):							N
Type:							Hydric Soil	Present? Yes X No
Depth (in	iches):		<u> </u>				Hydric Soli	
Remarks:	1 cale	appear graphy		1	note	y hy table	dric soil 3 too do	enditions on account. P.
HYDROLO	OGY							
Wetland Hy	drology Indicators							
Primary Ind	icators (minimum of o	one required	<u>t; check all that appl</u>	y)				dary Indicators (2 or more required)
Surface	Water (A1)		Water-Sta	ined Leav	es (B9) (e	xcept	W	ater-Stained Leaves (B9) (MLRA 1, 2,
	ater Table (A2)			1, 2, 4A, a	and 4B)			4A, and 4B)
Saturat	ion (A3)		Salt Crust					rainage Patterns (B10)
	Marks (B1)		Aquatic In					ry-Season Water Table (C2)
	ent Deposits (B2)		Hydrogen					aturation Visible on Aerial Imagery (C9)
	posits (B3)			-	-	Living Roo		eomorphic Position (D2) hallow Aquitard (D3)
	lat or Crust (B4)		Presence			4) d Soils (C6		AC-Neutral Test (D5)
	posits (B5) Spil Crocke (B6))1) (LRR A		aised Ant Mounds (D6) (LRR A)
	e Soil Cracks (B6) tion Visible on Aerial	Imagen/ (B						rost-Heave Hummocks (D7)
	ly Vegetated Concav			plantin	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Field Obse		• • • • • • • •	~ .		1			
		res	No X Depth (in	iches): 🚺	I/A			N
Water Table			No 🔀 Depth (in		22			
Saturation F			No 🔀 Depth (in		9	Wet	and Hydrology	Present? Yes No
(includes ca	apillary fringe)							
Describe R	ecorded Data (stream	n gauge, me	onitoring well, aerial	photos, p	revious in:	spections),	if available;	
Remarks:	1.1	1	1 1	-1	(1.1		
	Elevated S	andyst	sils. No e	videnc	e of	hyd	rology.	
							0	

STA	
& Genlovists, Inc.	Western Mountains, Valleys, and Coast Region
Project/Site: Humboldt Bay Harbor District-RMMT City/	County: Humboldt Sampling Date: 5/17/22
Applicant/Owner: Humboldt Bay Harbor District	State: CA Sampling Point: TP 71
Investigator(s): Joseph Saler, Cindy Wilcox	tion, Township, Range:
Landform (hillslope, terrace, etc.): Pennula/Spit, baysie fill Loca	al relief (concave, convex, none): <u>None</u> Slope (%): <u>0-1</u>
Subregion (LRR): A, MLRA-4B	4903 Long: -124.185132 Datum: WGS 84
Soil Map Unit Name: 1014-Urbanland Anthraltic Xerorthen	ts assoc. 0-290 NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year?	
Are Vegetation, Soil, or Hydrology significantly distu	urbed?Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problem	
SUMMARY OF FINDINGS – Attach site map showing sar	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present? Yes No X	within a Wetland? Yes No Z
Remarks: WETS normal rainfall TP EXCAVATED in MPIMD, moved, fill, form	ner industrial.
VEGETATION – Use scientific names of plants.	

<u>Tree Stratum</u> (Plot size: <u>30'</u>) 1)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
2			Total Number of Dominant Species Across All Strata: (B)
4	1	= Total Cover	Percent of Dominant Species <u>337</u> (A/B)
1		<u> </u>	Prevalence Index worksheet:
2			Total % Cover of: Multiply by:
3			OBL species x 1 =
4			FACW species x 2 =
5	-		FAC species x 3 =
5'		= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 5')	15	1 FACU	UPL species x 5 = Column Totals: (A) (B)
1. Contacenia Mbata 2. Disticulis spicer 1	TE	V TACW	
3. Anhaxanhum Ocaratum	46		Prevalence Index = B/A =
4. HOUS MATUS	70	- FACU FAC	Hydrophytic Vegetation Indicators:
5 Briza Maxima	5		1 - Rapid Test for Hydrophytic Vegetation
6 Avena barbata	à là	- UPL	2 - Dominance Test is >50%
7 Lotus configurations	0	FAC	3 - Prevalence Index is ≤3.0 ¹
8 Tatelium Subarneum	8		 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9. GRANIM dispectrum	3	- UPL	5 - Wetland Non-Vascular Plants ¹
10. Medi cago Og Ymerona	T	FAIL	Problematic Hydrophytic Vegetation' (Explain)
11. Darkaus Catora	2		¹ Indicators of hydric soil and wetland hydrology must
II. Sources of Constant	173	Tatal Carle	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 5'	1//	= Total Cover 61.5	
1			Hydrophytic
2	-		Vegetation Vegetation
Q		= Total Cover	Present? Yes No 🔨
% Bare Ground in Herb Stratum	-	1	
Remarks:		10	
Oose Lebaceous veg. Regular!	> Man	red.	
J			

Redox Features	
Color (moist) % Type ¹ Loc ²	Texture Remarks
	Texture Remarks
	TE MULTIN
	rLS Mixed till.
	Norchets thoughout.
	poccess of the steld
	Grw Shells + fill more compacte
educed Matrix, CS=Covered or Coated Sand Gra	ains. ² Location: PL=Pore Lining, M=Matrix.
Rs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Sandy Redox (S5)	2 cm Muck (A10)
Stripped Matrix (S6)	Red Parent Material (TF2)
Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Matrix (F3)	
Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
_ Depleted Dark Surface (F7)	wetland hydrology must be present,
Redox Depressions (F8)	unless disturbed or problematic.
	Hydric Soil Present? Yes No
_	
check all that apply)	Secondary Indicators (2 or more required)
	Rs, unless otherwise noted.) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except MLRA 1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7)

4.4	and	4103	
4 A	апп	401	

- _ Drainage Patterns (B10)
- ____ Dry-Season Water Table (C2)
- ____ Saturation Visible on Aerial Imagery (C9)

In

- ____ Oxidized Rhizospheres along Living Roots (C3) ____ Geomorphic Position (D2)
 - Shallow Aquitard (D3)
 - FAC-Neutral Test (D5)

Surface Soil Cracks (B6) Inundation Visible on Aerial		Stunted or Stressed Plants (D1) (Other (Explain in Remarks)		ounds (D6) (LRR A) Hummocks (D7)
Sparsely Vegetated Concav	/e Surface (B8)			
Field Observations:		N/IN		
Surface Water Present?	Yes No 📈	Depth (inches):		
Water Table Present?	Yes No 📈	_ Depth (inches):N		1
Saturation Present? (includes capillary fringe)	Yes No	Depth (inches): 21 in	Wetland Hydrology Present?	Yes No
Describe Recorded Data (stream	n gauge, monitoring v	well, aerial photos, previous inspec	tions), if available:	
				6
Elevated fill p	hism.			

Recent Iron Reduction in Tilled Soils (C6)

MLRA 1, 2, 4A, and 4B)

Presence of Reduced Iron (C4)

____ Aquatic Invertebrates (B13)

____ Hydrogen Sulfide Odor (C1)

_ Salt Crust (B11)

US Army Corps of Engineers

High Water Table (A2)

Sediment Deposits (B2)

Algal Mat or Crust (B4)

_ Saturation (A3)

Water Marks (B1)

Drift Deposits (B3)

Iron Deposits (B5)

ject/Site: Humboldt Bay Harbor District-RMMT		City/County: Humboldt		Sampling Date: 5/17/2
blicant/Owner: Humboldt Bay Harbor District				Sampling Point: TP 72
estigator(s): Joseph Saler, Cindy Wilcox		Section, Township, Ra	nge:	
ndform (hillslope, terrace, etc.). from 1/ spit bayside	FIL	Local relief (concave,	convex, none):	Slope (%): 0-
				.77 Datum: WGS 84
Map Unit Name: 1014-Urban and Anth	raltic	Xenothents	6-290 NWI classifi	ication: <u>None</u>
climatic / hydrologic conditions on the site typical for this	time of ye	ar? Yes <u>X</u> No _	(If no, explain in I	Remarks.)
Vegetation, Soil, or Hydrology sig	nificantly	disturbed? Are "	Normal Circumstances"	present? Yes X No _
Vegetation, Soil, or Hydrology na	turally pro	blematic? (If ne	eded, explain any answ	ers in Remarks.)
IMMARY OF FINDINGS – Attach site map s	howing	sampling point l	ocations, transect	s, important features, e
				-,
	-	Is the Sampled		<
/etland Hydrology Present? Yes 🔀 No		within a Wetlar	id? Yes 🖊	No
emarks: WETS normal rainfall		1 or 1	II dan	station. No fidege
TP excavated in deprosed de	jacent	to let w	2017 Warst Abo	Valiante of artful
GETATION – Use scientific names of plants			6	0 000 14/1
· · · · · · · · · · · · · · · · · · ·	Absolute	Dominant Indicator	Dominance Test wor	kshoot.
		Species? Status	Number of Dominant	1
			That Are OBL, FACW	
			Total Number of Domi	inant 1
			Species Across All Sti	rata: (B)
		= Total Cover	Percent of Dominant S	
apling/Shrub Stratum (Plot size:			That Are OBL, FACW Prevalence Index wo	
			Total % Cover of:	
				x 1 =
			FACW species	x 2 =
			FAC species	
	1	= Total Cover		x 4 =
erb Stratum (Plot size: 5')	00	I GAL		x 5 =
Disticus seicata Potentila austrina	3	-V TALW		(A) (I
Atriplex prostrata	5	FAC		x = B/A =
Aar drum brachrightown	3	FACW	Hydrophytic Vegetat	Hydrophytic Vegetation
Agrortis stelonitera	10-	FAC	2 - Dominance Te	
			3 - Prevalence Ind	
			4 - Morphological	Adaptations ¹ (Provide support
				ks or on a separate sheet)
			5 - Wetland Non-	ophytic Vegetation ¹ (Explain)
)				oil and wetland hydrology must
	113	= Total Cover		sturbed or problematic.
oody Vine Stratum (Plot size: 5				
			Hydrophytic	
			Vegetation Present? Y	es No
Bare Ground in Herb Stratum	-	= Total Cover		
emarks:		1	the no tidege	1 1 1/11 1

		NY
	TP	aultin
Sampling Point:	15	Theolo

ŗ

Depth	Matrix		Redo	x Feature	9				
(inches)	Color (moist)	%	Color (moist)	%	Type'	Loc ²	Texture	Remark	s
0-2	7.54R 2.5/1	100		-	/	/	my		
2-14	104R 312	99	INR 4/10	1	C	m	15	al wood chu	nles complex
16-19+	104411	100					5		1
						_			
			=Reduced Matrix, CS LRRs, unless othe			d Sand G	Indicate	cation: PL=Pore Lining ors for Problematic Hy	
Histoso			Sandy Redox (m Muck (A10)	b.
	pipedon (A2)		Stripped Matrix					Parent Material (TF2)	
	istic (A3)		Loamy Mucky M			(MLRA 1)		y Shallow Dark Surface	
	en Sulfide (A4) d Belaux Dork Surfax	- /0.11)	Loamy Gleyed		2)		Oth	er (Explain in Remarks)
	d Below Dark Surfac ark Surface (A12)	æ (ATT)	Depleted Matrix Redox Dark Su				³ Indicate	ors of hydrophytic vege	tation and
	Mucky Mineral (S1)		Depleted Dark					and hydrology must be	
	Gleyed Matrix (S4)		Redox Depress		.,			ss disturbed or problem	
	Layer (if present):						1		
Type:								1	/
Depth (in	ches):						Hydric Soi	Present? Yes 🗡	No
			111			h	t		
Remarks;	- 11 0	tricte	d to low p	drt ,	arma				

Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1 High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2)	Wetland Hydrology Indicators:		
Field Observations: Surface Water Present? Yes No Depth (inches):	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)	 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 Roots (C Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 	 Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Water Table Present? Yes No X Depth (inches): V(A		Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Raised Ant Mounds (D6) (LRR A)
Saturation Present? Yes X No Depth (inches): Ves Wetland Hydrology Present? Yes No Present? Yes No Present? Yes No Present? Yes No Present? Yes Yes No Present? Yes Yes Yes Yes No Present? Yes	Saturation Present? Yes X No (includes capillary fringe)	Depth (inches): Netland I	

	City/County:		Sampling Date: 5/17/22
plicant/Owner: Humboldt Bay Harbor District		State: CA	Sampling Point: 1173
restigator(s): Joseph Saler, Cindy Wilcox Indform (hillslope, terrace, etc.): Poins a Spit, baysi de f bregion (LRR): A, MLRA-4B Il Map Unit Name: 1014-07ban land Anthrattic e climatic / hydrologic conditions on the site typical for this time a Vegetation, Soil, or Hydrology signific e Vegetation, Soil, or Hydrology natura	of year? Yes <u>No</u> No cantly disturbed? Are "Norm	x, none): <u>(anca)</u> g: <u>-124.185</u> <u>wb</u> NWI classific	Datum: WGS 84 cation: <u>Mone</u> emarks.) present? Yes <u>No</u> No
JMMARY OF FINDINGS – Attach site map show hydrophytic Vegetation Present? hydric Soil Present? Vetland Hydrology Present? Vetland Hydrology Present? No No No No No No No No No No	Is the Sampled Area within a Wetland?		* Meesca
EGETATION – Use scientific names of plants.			
201	Cover Species? Status Num	minance Test work mber of Dominant S at Are OBL, FACW,	pecies 🤇
		al Number of Domin ecies Across All Stra	

J			Species Across All Strata	а (В)
4	1	_ = Total Cover	Percent of Dominant Spe That Are OBL, FACW, or	
Sapling/Shrub Stratum (Plot size 5'			Prevalence Index work	
1			Total % Cover of:	Multiply by:
2			OBL species	x1=
3		· <u> </u>		x 2 =
4				x 3 =
5				x 4 =
Herb Stratum (Plot size; 5')		= Total Cover	and a state of the state of the state of the	x 5 =
1. Spating desitiona	20	U OBL		(A) (B)
2. Portetila asprina	8	OBL		
3. Atriplex prostrata	15	TAC	Prevalence index	= B/A =
1 Salicornia pacifica	15	001	- Ingalophyclo rogetation	and the state of the state of the state
5. Disticulis Solicity	3	FAC	1 - Rapid Test for Hy	
6. Hordern brachvattorm	Ť	FAC	Z - Dominance rest	
7. Lotus coniculatus	5	FAC		
8. FESTUCA ACCENTIS	18	PA		laptations ¹ (Provide supporting or on a separate sheet)
9. Agrostis, Stalenitora	30	FAU		
10. Stones hordeacent	2	FAC		hytic Vegetation ¹ (Explain)
11				and wetland hydrology must
	TIG	= Total Cover 23		
Woody Vine Stratum (Plot size: 5')	110		159	
1			Hydrophytic	
2	_		Vegetation	X
% Bare Ground in Herb Stratum	1	= Total Cover	Present? Yes	<u>No</u>
	1 1	- 1	1	
Dase herbaccars vertettion. 5 sa	trash	· indicator	species prevetac	conting for 61%
U t	T the	Covo.		J

	epth needed to document the indic	ator or confirm	the absence	e of indicators.)
epth <u>Matrix</u>	Redox Features			
inches) Color (moist) %		/pe' Loc ²	Texture	Remarks
1-3 10YR2/1 100	/		L	
-9 10VR3/1 100			15	101
1-24+ 2.54 2.5/ 90	matrix		45	davic material - By no h?
	Fill material -		17	
104R3(1 10				Occ. she els Charloal piece
		1		
Type: C=Concentration, D=Depletion, R	M-Raduoad Matrix, CS-Coupred or (Coated Sand Gr	aine ² l	ocation: PL=Pore Lining, M=Matrix.
lydric Soil Indicators: (Applicable to a		Coaled Sand Of		tors for Problematic Hydric Soils ³ :
				cm Muck (A10)
Histosol (A1) Histic Epipedon (A2)	Sandy Redox (S5) Stripped Matrix (S6)			ed Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (ex	xcept MLRA 1)		ery Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	i i i		ther (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)			tland hydrology must be present, ess disturbed or problematic.
Sandy Gleyed Matrix (S4) Restrictive Layer (if present):	Redox Depressions (F8)		uni T	ess disturbed of problematic.
Type: Depth (inches): emarks: NOT AIZ - 2.57/1	due to fill materia	l brough		oil Present? Yes <u>No</u>
Depth (inches):	owe to fill materia disturbed? Chose	l brought this sites		oil Present? Yes <u>No</u> it 0. material ecumda depression. Possibly
Depth (inches): lemarks: Not A12 - 2.51/1 on STG - becently	owe to fill materia disturbed? Chose	l brought this site		
Depth (inches): Remarks: Not Anz - 2.51/1 on site - lecently YDROLOGY	owe to fill materia disturbed? Chose	l brought this site		
Depth (inches):		l brought this site	tin, no	
Depth (inches): Remarks: NOT AT - 2.51/1 on STG - Lecently YDROLOGY Wetland Hydrology Indicators:			tin, no	it o.material accumula depression. Possibly
Depth (inches): Remarks: NOT AT - 2.57 ON STG - UCCENTU YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requ	ired; check all that apply)	B9) (except	tin, no	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Depth (inches): Remarks: Not Anz - 2.51 / 1 on STG - Lecently YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requ Surface Water (A1)	ired; check all that apply) Water-Stained Leaves (f MLRA 1, 2, 4A, and a Salt Crust (B11)	B9) (except 4B)	tin, no	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Depth (inches): Remarks: NO! AT - 2.51/1 ON SITE - Lecentury YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	ired; check all that apply) Water-Stained Leaves (f MLRA 1, 2, 4A, and a Salt Crust (B11) Aquatic Invertebrates (B	B9) (except 4B) 313)	tin, no	condary 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): Remarks: NO! An 2 - 2.51/1 on STG - Ulc emfly YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requind) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	ired; check all that apply) Water-Stained Leaves (f MLRA 1, 2, 4A, and - Salt Crust (B11) Aquatic Invertebrates (B Hydrogen Sulfide Odor (B9) (except 4B) 313) (C1)	fin, no Grthe	condary 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)
Depth (inches): Remarks: NO! Ar2 - 2.51/1 ON STG - UC CMHU YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requ Surface Water (A1) High Water Table (A2) Saturation (A3) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	ired; check all that apply) Water-Stained Leaves (f MLRA 1, 2, 4A, and Salt Crust (B11) Aquatic Invertebrates (B Hydrogen Sulfide Odor (Oxidized Rhizospheres a	B9) (except 4B) 313) (C1) along Living Ro	fin, no Grthe	condary 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)
Depth (inches): Remarks: Not Arz - 2.51 / 1 on STG - Lecently YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one request Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	ired; check all that apply) Water-Stained Leaves (f MLRA 1, 2, 4A, and a Salt Crust (B11) Aquatic Invertebrates (B Hydrogen Sulfide Odor (Oxidized Rhizospheres a Presence of Reduced Inverted In	B9) (except 4B) 813) (C1) along Living Ro on (C4)	fin, no for the sea	condary 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)
Depth (inches): Remarks: NO! Ar2 - 2.51) ON STG - LEC ENHU YDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one requination 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)	ired; check all that apply) Water-Stained Leaves (f MLRA 1, 2, 4A, and a Salt Crust (B11) Aquatic Invertebrates (B Hydrogen Sulfide Odor (Oxidized Rhizospheres a Presence of Reduced Ind Recent Iron Reduction in	B9) (except 4B) 313) (C1) along Living Ro on (C4) n Tilled Soils (C	ots (C3)	condary 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)
Depth (inches): Remarks: NO: Ar2 - 2.5()) ON STG - LCCENHU YDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one requinants) 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)	ired; check all that apply) Water-Stained Leaves (f MLRA 1, 2, 4A, and a Salt Crust (B11) Aquatic Invertebrates (B Hydrogen Sulfide Odor (Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction in Stunted or Stressed Pla	B9) (except 4B) (C1) along Living Ro on (C4) n Tilled Soils (C ints (D1) (LRR 4	ots (C3)	condary 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)
Depth (inches): Iemarks: NOY ATZ - 2.5Y / I ON STG - LCC EMHU YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one reque 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	ired; check all that apply) Water-Stained Leaves (f MLRA 1, 2, 4A, and Salt Crust (B11) Aquatic Invertebrates (B Hydrogen Sulfide Odor (Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction ir Stunted or Stressed Plai (B7) Other (Explain in Remar	B9) (except 4B) (C1) along Living Ro on (C4) n Tilled Soils (C ints (D1) (LRR 4	ots (C3)	condary 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)
Depth (inches): Remarks: NO! Ar2 - 2.51/1 ON STG - Lecentury YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reque Surface Water (A1) High Water Table (A2) Saturation (A3) Vater 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	ired; check all that apply) Water-Stained Leaves (f MLRA 1, 2, 4A, and Salt Crust (B11) Aquatic Invertebrates (B Hydrogen Sulfide Odor (Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction ir Stunted or Stressed Plai (B7) Other (Explain in Remar	B9) (except 4B) (C1) along Living Ro on (C4) n Tilled Soils (C ints (D1) (LRR 4	ots (C3)	condary 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)
Depth (inches): Remarks: NO! Ar2 - 2.51) ON STG - LEC ENHU YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requination of a 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:	ired; check all that apply) Water-Stained Leaves (f Salt Crust (B11) Aquatic Invertebrates (B Hydrogen Sulfide Odor (Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction ir Stunted or Stressed Plai r (B7) Other (Explain in Remar xe (B8)	B9) (except 4B) (C1) along Living Ro on (C4) n Tilled Soils (C ints (D1) (LRR 4	ots (C3)	condary 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)
Depth (inches): Remarks: NO1 Ar2 - 2.51 Jr ON 576 - LC CMHU YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requinants) 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? Yes	ired; check all that apply) Water-Stained Leaves (f Salt Crust (B11) Aquatic Invertebrates (B Hydrogen Sulfide Odor (Oxidized Rhizospheres a Presence of Reduced Ire Recent Iron Reduction ir Stunted or Stressed Plan (B7) Other (Explain in Remar xe (B8) Depth (inches):/A	B9) (except 4B) (C1) along Living Ro on (C4) n Tilled Soils (C ints (D1) (LRR 4	ots (C3)	condary 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)
Depth (inches): Remarks: NO! Ar 2 - 2.51 / 1 ON STG - UC CMHW YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reque 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? Yes Water Table Present? Yes	ired; check all that apply) Water-Stained Leaves (f Salt Crust (B11) Aquatic Invertebrates (B Hydrogen Sulfide Odor (Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction ir Stunted or Stressed Plai r (B7) Other (Explain in Remar xe (B8) No Depth (inches):	B9) (except 4B) 313) (C1) along Living Ro on (C4) n Tilled Soils (C ints (D1) (LRR # rks)	tin, no for the second below found	condary 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)
Depth (inches): Remarks: NO1 AT - 2.51 Ju ON 5T6 - LC CMHU YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requinants) 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? Yes	ired; check all that apply)	B9) (except 4B) 313) (C1) along Living Ro on (C4) n Tilled Soils (C ints (D1) (LRR A rks) 13 ⁴ 2000/et	ots (C3)	condary 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)

low tide,

ologists, Inc. oject/Site: Humboldt Bay Harbor District-RMMT	City/C	County: Humboldt	1	Sampling Date: 5/17/2
plicant/Owner: Humboldt Bay Harbor District			State: CA	
vestigator(s): Joseph Saler, Cindy Wilcox		on, Township, Rai		
ndform (hillslope, terrace, etc.): PNINA Spt, B	ayside til Local	I relief (concave, d	convex, none): None	Slope (%):
ibregion (LRR): A, MLRA-4B	Lat:40.8	14275	_ Long: <u>124</u> . 185	450 Datum: WGS 84
il Map Unit Name: 1014 - Urban land Anth	raltic senorth	ients assoc	. 0-290 NWI classifie	cation: none
e climatic / hydrologic conditions on the site typical fo	r this time of year? Y	′es <u>X</u> № _	(If no, explain in F	Remarks.)
e Vegetation, Soil, or Hydrology	significantly distur	bed? Are "	"Normal Circumstances"	present? Yes 🔼 No _
e Vegetation, Soil, or Hydrology	naturally problema	atic? (If ne	eeded, explain any answe	ers in Remarks.)
UMMARY OF FINDINGS – Attach site m	ap showing san	apling point k	ocations, transects	, important features, e
Hydrophytic Vegetation Present? Yes				,,
tydric Soil Present? Yes		Is the Sampled		
Vetland Hydrology Present? Yes	No	within a Wetlan	nd? Yes	No /
Remarks: WETS normal rainfall	les 1	1)	x i h	-11 SPO TO 15
TP excavated inslightly rais	sed onea abo	re wetlan	ld W/i Willow	Ath. noticed and
				wollong cond
EGETATION – Use scientific names of p		ninant Indicator	Dominance Test work	rohaati
ree Stratum (Plot size: 30')	<u>% Cover</u> Spe		Number of Dominant S	
Salix, losiphdra	50 V	FACW	That Are OBL, FACW,	
Salix hocheriona	_ <u>30</u> _	FACW	Total Number of Domir	nant 🖌
Morpha Califonica		FACW	Species Across All Stra	ata: 🚺 (B
·	90 = To	45 Course 45	Percent of Dominant S	
apling/Shrub Stratum (Plot size: 5	40 = 10	otal Cover 15	That Are OBL, FACW,	
Rubus insinus	-10 ν	FACU	Prevalence Index wor Total % Cover of:	
Rubus armanacus	20 1	FAC		x1=
Q	· ·			x 2 =
			FAC species	x 3 =
	30 = To	otal Cover	FACU species	x 4 =
lerb Stratum (Plot size: 5')	05		Contract of the second se	x 5 =
Contadoria jubata	_ 1 <u>5</u> _×	- FACU,	Column Totals:	(A) (
Equiseting agrigation			Prevalence Index	c = B/A =
Juncus ethorus U		TACW	Hydrophytic Vegetati	
				Hydrophytic Vegetation
			2 - Dominance Tes	
			3 - Prevalence Ind	
				Adaptations ¹ (Provide suppor s or on a separate sheet)
			5 - Wetland Non-V	ascular Plants ¹
0			Problematic Hydro	phytic Vegetation ¹ (Explain)
1				il and wetland hydrology mus
Vopdy Vine Stratum (Plot size: 5')	<u>29</u> = Tot	tal Cover	be present, unless dist	urbed or problematic.
VUDUY VINC OLIALUIN (POLISIZE:)	40 -	- FACU		
te dom heliv		10001	Hydrophytic Vegetation	V
Hedera helix				
Hedora helix		tal Cover	Present? Ye	es No

N

S	Ô	I	
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Sampling Point: TP7 Greekogists, Inc

rione Dead	inpuon. (Describe to		needed to document the indicator or confir	In the about of maleaterely
Depth	Matrix		Redox Features	
(inches)	Color (moist)		Color (moist)% Type ¹ Loc ²	Peat Wwood Church KS
0-1	10YR 2/1	100 -		
2-3	104Rall	100		ms
3-9	0YR2/1	00		LS
9-24+	INVR4/1	90 10	14/2 10 C M	5
	ivit-ipi-	<u> </u>		
ii 			· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
. <u> </u>				
1Type: C=C	oncentration D=Deplet	tion RM=Re	educed Matrix, CS=Covered or Coated Sand C	Grains. ² Location: PL=Pore Lining, M=Matrix.
			Rs, unless otherwise noted.)	Indicators for Problematic Hydric Solls ³ :
Histosol			Sandy Redox (S5)	2 cm Muck (A10)
	oipedon (A2)		Stripped Matrix (S6)	Red Parent Material (TF2)
	istic (A3)		_ Loamy Mucky Mineral (F1) (except MLRA 1	
	en Sulfide (A4)		Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
	d Below Dark Surface ((A11)	Depleted Matrix (F3)	
Thick Da	ark Surface (A12)		Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy N	lucky Mineral (S1)		Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy G	Gleyed Matrix (S4)		Redox Depressions (F8)	unless disturbed or problematic.
Restrictive	Layer (if present):			
Туре:			-	
Depth (in	ches):			Hydric Soil Present? Yes No
Remarks:				
			. 1	
HYDROLO	GY			
	GY drology Indicators:			
Wetland Hy		e required; c	heck all that apply)	Secondary Indicators (2 or more required)
Wetland Hy Primary India	drology Indicators: cators (minimum of one	e required; c		Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hy Primary India Surface	drology Indicators: cators (minimum of one Water (A1)	e required; c	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Primary India Surface High Wa	drology Indicators: cators (minimum of one Water (A1) ater Table (A2)	e required; c	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hy Primary India Surface High Wa Saturati	drology Indicators: cators (minimum of one Water (A1) ater Table (A2) on (A3)	e required; c	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Wetland Hy <u>Primary India</u> Surface High Wa Saturati Water M	drology Indicators: cators (minimum of one Water (A1) ater Table (A2) on (A3) Marks (B1)	e required; c	 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 Hy <u>Primary India</u> Surface High Wa Saturati Water M Sedime	drology Indicators: cators (minimum of one Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2)	e required; c	 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 (C9)
Wetland Hy Primary India Surface High Wa Saturation Water Ma Sediment Drift Dep	drology Indicators: cators (minimum of one Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)	e required; c	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 R	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) cots (C3) Geomorphic Position (D2)
Wetland Hy Primary India Surface High Wa Saturatii Water M Sedimen Drift Dep Algal Ma	drology Indicators: cators (minimum of one Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	e required; c	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 R Presence of Reduced Iron (C4)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) cots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hy <u>Primary India</u> Surface High Wa Saturati Water M Sedimel Drift Dep Algal Ma Iron Dep	drology Indicators: cators (minimum of one Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	e required; c	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 R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (0	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) cots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) C6) FAC-Neutral Test (D5)
Wetland Hy Primary India Surface High Wa Saturatii Water M Sedimen Drift Dep Algal Ma iron Dep Surface	drology Indicators: cators (minimum of one Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)	۶	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 R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) cots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) C6) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary India Surface High Wa Saturati Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundati	drology Indicators: cators (minimum of one Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial Im	agery (B7)	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 R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) cots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) C6) FAC-Neutral Test (D5)
Wetland Hy Primary India Surface High Wa Saturatii Water M Sedimer Drift Deg Algal Ma iron Deg Surface Inundati Sparsel	drology Indicators: cators (minimum of one Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial Im y Vegetated Concave S	agery (B7)	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 R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) cots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) C6) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary India Surface High Wa Saturatii Water M Sedimel Drift Deg Algal Ma iron Deg Surface Inundati Sparsel; Field Obser	drology Indicators: cators (minimum of one Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial Im y Vegetated Concave S rvations:	nagery (B7) Surface (B8)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) cots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) C6) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary India Surface High Wa Saturatii Water M Sedimen Drift Deg Algal Ma iron Deg Surface Inundati Sparsely Field Obser Surface Wat	drology Indicators: cators (minimum of one Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial Im y Vegetated Concave S rvations: ter Present? Yes	hagery (B7) Surface (B8) s No	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (0 Stunted or Stressed Plants (D1) (LRR Other (Explain in Remarks))	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) cots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) C6) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary India Surface High Wa Saturati Water M Sedimer Drift Deg Algal Ma Iron Deg Surface Inundati Sparselt Field Obser Surface Water Table	drology Indicators: cators (minimum of one Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) boosits (B5) Soil Cracks (B6) ion Visible on Aerial Im y Vegetated Concave S rvations: ter Present? Yes	nagery (B7) Surface (B8) s No s No	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (0 Stunted or Stressed Plants (D1) (LRR Other (Explain in Remarks))	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) cots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) C6) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hy Primary India Surface High Wa Saturation Water M Sediment Drift Deg Algal Ma Iron Deg Surface Inundati Sparsely Field Obser Surface Water Vater Table Saturation P	drology Indicators: cators (minimum of one Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) boosits (B5) Soil Cracks (B6) ion Visible on Aerial Im y Vegetated Concave S rvations: ter Present? Yes Present? Yes	hagery (B7) Surface (B8) s No	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (0 Stunted or Stressed Plants (D1) (LRR Other (Explain in Remarks))	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) cots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) C6) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A)
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Project/Site: Humboldt Bay Harbor District-RMMT	City/County: Humboldt	Sampling Date: 5/18/22
Applicant/Owner: Humboldt Bay Harbor District	State:	CA Sampling Point: 1775
Investigator(s): Joseph Saler, Cindy Wilcox	Section, Township, Range:	
Landform (hillslope, terrace, etc.): Phinsula Spit, pays	Local relief (concave, convex, none)	5light concerts Slope (%): 2-5
Subregion (LRR): A, MLRA-4B	Lat: 40. 814273 Long: -12	4.187155 Datum: WGS 84
Soil Map Unit Name: Woanland - Anthralt	ic xevorthents 0-2010 N	WI classification:
Are climatic / hydrologic conditions on the site typical for th		
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "Normal Circu:	mstances" present? Yes No
Are Vegetation, Soil, or Hydrology	naturally problematic? (If needed, explain	any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing sampling point locations, t	ransects, important features, etc
Hydrophytic Vegetation Present? Yes	No	* Meets CCL
Hydric Soil Present? Yes	No is the Sampled Area	V 1-0
Wetland Hydrology Present? Yes X	within a Wetland?	Yes No 🔨 🕂 tol

VEGETATION - Use scientific names of plants.

24/2	Absolute	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30'	% Cover	Species? Status	Number of Dominant Species
1. Salix hopkeriona	80	V FACW.	That Are OBL, FACW, or FAC:
2. Salix sitchasis	15	CAC W	
MMM			Total Number of Dominant 3
3			Species Across All Strata:
4	-		Percent of Dominant Species
~	95	= Total Cover 415	That Are OBL, FACW, or FAC:
Sapling/Shrub Stratum (Plot size: 5)		10	Prevalence Index worksheet:
1			
2			Total % Cover of:Multiply by:
3			OBL species x 1 =
4			FACW species x 2 =
			FAC species x 3 =
5			FACU species x 4 =
Herb Stratum (Plot size: 5')		= Total Cover	UPL species x 5 =
1 Eleacharis macrostachia	15	N/ (062)	Column Totals: (A) (B)
2. And comiculate	- 10-	- FMC	
V		TNU	Prevalence Index = B/A =
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5			Z 2 - Dominance Test is >50%
6			
7			3 - Prevalence Index is ≤3.0 ¹
		<u> </u>	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
8			
9			5 - Wetland Non-Vascular Plants ¹
10			Problematic Hydrophytic Vegetation ¹ (Explain)
11			¹ Indicators of hydric soil and wetland hydrology must
	25	= Total Cover 125	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 5')		- I otal 00/01 5	4
1			This day with a first
2			Hydrophytic Vegetation
£.			Vegetation Present? Yes No
% Bare Ground in Herb Stratum		= Total Cover	
	1	•	
Eleocharis Macrostachya is not 1	isted in.	ACDE Manua	al however obs. of this
species in the north coast re	Alan sus	last facw	or OBL designation and it is the ated
) v	0	J
US Army Corps of Engineers			Western Mountains, Valleys, and Coast - Version 2.0

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1.

rofile Description: (Describe to the de	pth needed to document the indicator or confirm	Sampling Point: TP15 & Good
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-3 104R 2/1 100	////	Peak
5-4 104R311 100		1.15
		Griss Helister Helister
8-14 2.542.5/1 100	<u>Fill</u>	COGTIS Minicks, charcoal, bottom ach
bleck charrai ash?	/ / / /	-
14-36 2.542.511	////	S
1-00 LIS 0011		<u> </u>
	·	
	A=Reduced Matrix, CS=Covered or Coated Sand Gr	ains. ² Location: PL=Pore Lining, M=Matrix.
lydric Soil Indicators: (Applicable to al		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Type:		
Depth (inches):	rgenic 2.54 2.5% color is send	Hydric Soil Present? Yes No
Depth (inches): Remarks: 5497888 @ 36". AIT - NOTO YDROLOGY	rgenic 2.54 2.5% color is send	
Depth (inches): Remarks: 549 Act @ 36". AIT - NOTO YDROLOGY Wetland Hydrology Indicators:		d color pm
Depth (inches): Remarks: SHOPED & 36 ¹¹ Att - noto YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require	ed; check all that apply)	Secondary Indicators (2 or more required)
Depth (inches): Remarks: SHOPED & 36 ¹¹ AIT - NOTO YDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1)	ed; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
Depth (inches): Remarks: SHOPED 0 36'. AIT - NOTO YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2)	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Depth (inches): Remarks: SHOKED & 36 ¹ . AIT - NOTO YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3)	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Depth (inches): Remarks: SHOPKA & 36 ¹ Att - noto YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Depth (inches): Remarks: SHOPED & 36 ¹ Attr - noto YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	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 (C9)
Depth (inches): Remarks: SHOPED & 36 ¹ AIT - NOTO YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	ed; check all that apply) — Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along Living Roo	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 (C9) ots (C3) Geomorphic Position (D2)
Depth (inches): Remarks: SHOKE & 36 ¹ AIT - NOTO YDROLOGY Netland Hydrology Indicators: Primary 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)	ed; check all that apply) — Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along Living Roo — Presence of Reduced Iron (C4)	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 (C9) ots (C3) Z Geomorphic Position (D2) Shallow Aquitard (D3)
Depth (inches): Remarks: SHOPED 0 36 ¹ . AIT - NOTO YDROLOGY Wetland Hydrology Indicators: Primary 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)	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (inches): Remarks: SHOKED & 36 ¹ . AIT - NOTO YDROLOGY Wetland Hydrology Indicators: Primary 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)	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A	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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Depth (inches): Remarks: Step Ad & 36'. At 7 - woto YDROLOGY Wetland Hydrology Indicators: Primary 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 (ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) B7) Other (Explain in Remarks)	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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (inches):	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) B7) Other (Explain in Remarks)	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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Depth (inches): Remarks: SHOKA & 36 th AIT - NOTO YDROLOGY Wetland Hydrology Indicators: Primary 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:	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A B7) Other (Explain in Remarks) (B8)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Depth (inches): Remarks: SHORDLOGY Wetland Hydrology Indicators: Primary 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? Yes	red; check all that apply)	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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Depth (inches):	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A B7) Other (Explain in Remarks) (B8) No Depth (inches): N/A Depth (inches): N/A	A color pm 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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Depth (inches):	ed; check all that apply)	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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Depth (inches):	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A B7) Other (Explain in Remarks) (B8) No Depth (inches): N/A Depth (inches): N/A	A color pm 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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
Depth (inches):	ed; check all that apply)	A color pm 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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
Depth (inches):	ed; check all that apply)	A color pm 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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No

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oject/Site: Humboldt Bay Harbor District-RMMT	C	ity/County: Humboldt	Sampling Date: 5/18/2
plicant/Owner: Humboldt Bay Harbor District			State: CA Sampling Point: 1776
vestigator(s): Joseph Saler, Cindy Wilcox		ection, Township, Rai	
ndform (hillslope, terrace, etc.): Philodal Spit, E	Baxsidetill L	ocal relief (concave, o	convex, none): <u>None</u> Slope (%): 0-
bregion (LRR): A, MLRA-4B	Lat: <u>40.</u>		Long: -124. 187374 Datum: WGS 84
il Map Unit Name: 1014-Urbanland Ant	hraftic Xer.	orthents assoc	C. 0-2% NWI classification: NONC
e climatic / hydrologic conditions on the site typical fi	or this time of year	? Yes X No_	(If no, explain in Remarks.)
e Vegetation, Soil, or Hydrology	significantly di	isturbed? Are "	'Normal Circumstances" present? Yes 🔀 No 🔄
e Vegetation, Soil, or Hydrology			eded, explain any answers in Remarks.)
V			ocations, transects, important features, e
lydrophytic Vegetation Present? Yes	No No	Is the Sampled	Area
lydric Soil Present? Yes X Vetland Hydrology Present? Yes		within a Wetlar	X
Remarks: WETS normal rainfall			
TP excavated in Grex obnyste	1 Datch di	althestall	
IF EXCAUDEC IN CAPER UCTIONS	i pro Jon	Jul Stohile.	
EGETATION – Use scientific names of	plants.	0	
201	Absolute	Dominant Indicator	Dominance Test worksheet:
ree Stratum (Plot size: 30')	% Cover	Species? Status	Number of Dominant Species
Salix hookeriana	10	- them	That Are OBL, FACW, or FAC:
			Total Number of Dominant 3
		-	Species Across All Strata:
	90	= Total Cover	Percent of Dominant Species 67%
apling/Shrub Stratum (Piot size: 5')	10		That Are OBL, FACW, or FAC:
Baccharis Daularis	5	V UPL	Total % Cover of:Multiply by:
Morella Californica		+ACVV	OBL species x 1 =
·			FACW species x 2 =
			FAC species x 3 =
·	15	Tatal One	FACU species x 4 =
erb Stratum (Plot size: 5')		= Total Cover	UPL species x 5 =
Carex ophypta	90	V OBL	Column Totals: (A) (
Vicia sotiva	1	UPL	Prevalence Index = B/A =
Vicia villosa	2	UPL	Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominance Test is >50%
			3 - Prevalence Index is ≤3.0 ¹
			4 - Morphological Adaptations ¹ (Provide support
			data in Remarks or on a separate sheet)5 - Wetland Non-Vascular Plants ¹
			Problematic Hydrophytic Vegetation ¹ (Explain)
D,			¹ Indicators of hydric soil and wetland hydrology must
10 ₂	00	Total Cover	be present, unless disturbed or problematic.
loody Vine Stratum (Plot size: 5')	_12	1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 -	
Hedera helix		FACY	Hydrophytic
•			Vegetation Present? Yes No
Bare Ground in Herb Stratum 17*	_1=	Total Cover	
bare Ground in Herb Stratum			

Profile Description: (Describe to the de	pth needed to docum	ent the i	ndicator	or confirm	n the absence	of indicators.)
Depth Matrix	Redox	Features			-	
(inches) Color (moist) %	Color (moist)	_%	Type'	Loc ²	Texture	Remarks
0-8 10YR3/1 100	Town itt		-		Peat	
<u>8-24+ 10 YR4/1 60</u>	7.5 YR 4/6	40	0	JV1	2	7.5YR5/8 brick fillchuls
	and the second second					
· · · · · · · · · · · · · · · · · · ·						~
						2
		_				
¹ Type: C=Concentration, D=Depletion, RM	I=Deduced Matrix CC			d Sand C	2 o	antion: BI - Boro Lining M-Metrix
Hydric Soil Indicators: (Applicable to a				ia Sana G		cation: PL=Pore Lining, M=Matrix. ors for Problematic Hydric Soils ³ :
						n Muck (A10)
Histosol (A1) , Histic Epipedon (A2)	Sandy Redox (S Stripped Matrix					Parent Material (TF2)
Black Histic (A3)	Loamy Mucky M) (excep	MLRA 1		y Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed M					er (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix					
Thick Dark Surface (A12)	Redox Dark Sur	face (F6)			^a Indicate	ors of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark S	,	7)			and hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depress	ions (F8)			unles	ss disturbed or problematic.
Restrictive Layer (if present):						
Туре:						
Depth (inches):					Hydric Soi	Present? Yes X No
Remarks:						
HYDROLOGY Wetland Hydrology Indicators:						
Primary Indicators (minimum of one require	ed: check all that analy	a			Seco	ndary Indicators (2 or more required)
			an (20) //	waant		Water-Stained Leaves (B9) (MLRA 1, 2,
Surface Water (A1)	Water-Stai			xcept	`	
High Water Table (A2)	Salt Crust	1, 2, 4A, a (B11)	anu 46)		r	4A, and 4B) Drainage Patterns (B10)
Saturation (A3)	Aquatic Inv		e (B13)			Dry-Season Water Table (C2)
Water Marks (B1)	Aquatic Im					Saturation Visible on Aerial Imagery (C9)
Sediment Deposits (B2)				Living Ro		Geomorphic Position (D2)
Drift Deposits (B3)	Oxidized F			-		
Algal Mat or Crust (B4)	Presence of Presen				1	Shallow Aquitard (D3) FAC-Neutral Test (D5)
Iron Deposits (B5)	Recent Iro					
Surface Soil Cracks (86)	Stunted or			/I) (LRR /		Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery (plain in Re	imarks)		^	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface	(00)					
Field Observations:	No X Depth (ind	hack N	ALV			
Surface Water Present? Yes		cnes):	JIK _			
Water Table Present? Yes				-		
Saturation Present? Yes	No 🔼 Depth (ind	ches):	A V	- Wet	tland Hydrolog	gy Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, i	monitoring well, aerial ;	photos, pr	evious in	spections)	, if available:	
	U					
Remarks:				- 1	1	4
Sloping, no evidence of	pooling or			stan	ding wa	ater at any time.

Dject/Site: Humboldt Bay Harbor District-RMMT	City/County	r. Humboldt	_ Sampling Date: 5/18 21
plicant/Owner: Humboldt Bay Harbor District		State: CA	
estigator(s): Joseph Saler, Cindy Wilcox	Section, To	wnship, Range:	
ndform (hillslope, terrace, etc.): Anisula, Spit bregion (LRR): <u>A, MLRA-4B</u>	Local relie	f (concave, convex, none): Cancel	7129 Datum: WGS 84
I Map Unit Name: 1014-Urbanland Anthr	altic Xcrothents 1	1550C. 0-290 NWI classi	fication: none
e climatic / hydrologic conditions on the site typical f	or this time of year? Yes	X_ No (If no, explain in	Remarks.)
e Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances"	' present? Yes 🗶 No 🔜
e Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any answ	vers in Remarks.)
JMMARY OF FINDINGS – Attach site n	an showing samplin	a point locatione transport	s important fosturos, et
			a, important reatures, etc
lydrophytic Vegetation Present? Yes X lydric Soil Present? Yes Yes X Vetland Hydrology Present? Yes X		ne Sampled Area nin a Wetland? Yes	No_ <u>×</u> 1-p defini
emarks: WETS normal rainfall		4.1.	L A AL
TP excorated in depression la	w point. Depression	n exists between con	setel as a halt
			<u> </u>
GETATION – Use scientific names of	plants.		
ree Stratum (Plot size: 30'		Indicator Dominance Test wo	-
Salix hookeriana	<u>% Cover</u> <u>Species?</u>	Number of Dominant	
Set MA HONOTONIA		That Are OBL, FACW	/, or FAC: (A)
	· · ·	Total Number of Dom Species Across All St	
- \	30 = Total Co	Ver Percent of Dominant That Are OBL, FACW	
apling/Shrub Stratum (Plot size: 5')		Prevalence Index we	
		Total % Cover of	
			x 1 =
	<u> </u>	FACW species	x 2 =
		FAC species	x 3 =
	= Total Co	ver	x 4 =
erb Stratum (Plot size: 5')	110	UPL species	x 5 =
Lotus corniculatus	_ 4º _ Y		(A) (B)
Elenchonis macrostachya		NL (OBL) Prevalence Inde	ex = B/A =
Runex Crispus	<u> </u>	Hydrophytic Vegeta	
Alopecury Metha exterium	- 15		Hydrophytic Vegetation
Agrostis stolovera	-45 -		
Julia alounda		3 - Prevalence In	
		data in Remai	Adaptations ¹ (Provide supporting ks or on a separate sheet)
		5 - Wetland Non-	Vascular Plants ¹
la			ophytic Vegetation ¹ (Explain)
			oil and wetland hydrology must sturbed or problematic.
	= Total Co	ver 222 ver present, unless dis	
1		201 C	
l			
1		Hydrophytic Vegetation	\vee
foody Vine Stratum (Plot size: 5')	= Total Co	Vegetation	/es 🗶 No

		24
SOIL		Sampling Point: TP 7 Cooling
	lepth needed to document the indicator or confirm	
Depth Matrix	Redox Features	200 X 7 X 200 20 Y 20
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-05 10YR3/2 100	////	SiL Recent sectioned deposit
2.5-5 IOVR Z/2 100	////	MuP
5-12 10YR 4/1 100		Gels
1 21 25411 70	75V 11/2 20 C M	
12-21 2.27 9/1 70	L.71 VL 30 C M	<u> </u>
21-24+2.542.3/1 100		2
¹ Type: C=Concentration D=Depletion I	RM=Reduced Matrix, CS=Covered or Coated Sand Gra	ains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)		³ Indicators of hydrophytic vegetation and
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Redox Dark Surface (F6) Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Mucky Millerar (CT) Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Type:		
Depth (inches):		Hydric Soil Present? Yes No 📈
		•
IYDROLOGY		
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one requ	lired; check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
👗 Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along Living Roo	ots (C3) 👗 Geomorphic Position (D2)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soils (C6	
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRR A)	
Inundation Visible on Aerial Imagery		Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surfa		
Field Observations:	No X Double (Inchard) N/A	
Surface Water Present? Yes	No Depth (inches): A No Depth (inches): A	
Water Table Present? Yes		and Hydrology Present? Yes 📈 No
Saturation Present? Yes (includes capillary fringe)		
Describe Recorded Data (stream gauge	, monitoring well, aerial photos, previous inspections),	ir availadie:
Remarks:		
TP excerted at lows (lat within depression appears to	s have received sedimet
(and I tail	s and development.	
trom war by Nin 1000	, water more hady.	

roject/Site: Humboldt Bay Harbor District-RMM⊺	City/County: Humbold	t	_ Sampling Date: 5/19/2
oplicant/Owner: Humboldt Bay Harbor District		State: CA	Sampling Point: TP78
	Section, Township, Re		
andform (hillslope, terrace, etc.): Reninsula s			
ubregion (LRR): A, MLRA-4B			
oil Map Unit Name: 1014-Urbanland Anthra			
re climatic / hydrologic conditions on the site typical for			
re Vegetation, Soil, or Hydrology			present? Yes 📈 No 🔜
re Vegetation, Soil, or Hydrology		eeded, explain any answ	
UMMARY OF FINDINGS – Attach site ma			
Hydrophytic Vegetation Present? Yes			X
Hydric Soil Present? Yes			X
Vetland Hydrology Present? Yes	No within a Wetla	nd? Yes	
Remarks: WETS normal rainfall	0 1 1 1 1 10	1 41	
TP excavated ~ 5ft from 3p	not an Ledge, slightly e	clevated.	
EGETATION – Use scientific names of pl	ants.		(4
Tree Stratum (Plot size: 30')	Absolute Dominant Indicator % Cover Species? Status	Dominance Test wor	
Salix Sterhasis	70 Jacob FACW	Number of Dominant That Are OBL, FACW	
			-
3		Total Number of Dom Species Across All St	
1		Percent of Dominant \$	
Continue (Plat size, 5)	= Total Cover	That Are OBL, FACW	
Sapling/Shrub Stratum (Plot size: 5')	11 FACIL	Prevalence Index wo	orksheet:
Marella Californica	4 FACW	Total % Cover of:	
3			x 1 =
ł			x 2 =
ō		and the second	x 3 = x 4 =
lash Stratum (Olaticiza, 5	-15 = Total Cover $\frac{25}{7}$	The second se	x 4 =
Antexantin (Plot size: 5')	17 V ENU	Mar Carles All Pall And	(A) (E
Holeys langtys	6 FAC		
Contadoria inhata	15 FACU	Hydrophytic Vegetat	ex = B/A =
			r Hydrophytic Vegetation
·		2 - Dominance Te	
L			
·			Adaptations ¹ (Provide support
B			ks or on a separate sheet)
		5 - Wetland Non-	
0		2	ophytic Vegetation ¹ (Explain)
11	38		oil and wetland hydrology must sturbed or problematic.
Noody Vine Stratum (Plot size: 5')	38 = Total Cover $\frac{19}{1.6}$		
		Hydrophytic	
2	<u></u>	Vegetation	
% Bare Ground in Herb Stratum	= Total Cover	Present? Y	'es No 🔀

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		SYAN
Sampling Point:	TP-	7 6 Geologists, Inc

Depth <u>Matrix</u> inches) Color (moist)	% Color (moist)	ox Feature %		Loc ²	Texture		Remarks	3
					mus		1	
	30 7.54R 4/4	15	(m		-	ledos color in	ineucosuldo
the devine t	10 YR 4/6	15	1	m	-		curr con in	104
pe: C=Concentration, D=Depletio dric Soil Indicators: (Applicable				ed Sand G			on: PL=Pore Lining, for Problematic Hy	
Histosol (A1)	Sandy Redox (luck (A10)	
Histic Epipedon (A2)	Stripped Matrix		4) /				arent Material (TF2)	(TE12)
Black Histic (A3)	Loamy Mucky			INILKA 1			hallow Dark Surface (Explain in Remarks)	
Hydrogen Sulfide (A4) Depleted Below Dark Surface (A)	Loamy Gleyed (11) Depleted Matri		-)		_ (omer ((explain in riemarks)	
Thick Dark Surface (A12)	Redox Dark Si	. ,)		³ Indic	cators	of hydrophytic veget	ation and
Sandy Mucky Mineral (S1)	Depleted Dark						hydrology must be p	
_ Sandy Gleyed Matrix (S4)	Redox Depres						listurbed or problema	
estrictive Layer (if present):								
Туре:								
Depth (inches):					Hydric S	Soil Pr	resent? Yes 🔼	No
						1		
/DROLOGY Vetland Hydrology Indicators:	required; check all that and				56	econd	any Indicators (2 or m	
/DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one r			/es (B9) (i	except	<u>S</u> e		ary Indicators (2 or m er-Stained Leaves (6	
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one r _ Surface Water (A1)	Water-Sta	ained Leav		except	<u>Se</u>	_ Wat	er-Stained Leaves (F	
'DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one r _ Surface Water (A1) _ High Water Table (A2)	Water-Sta MLRA	ained Leav 1, 2, 4A,		except	_	_ Wat	er-Stained Leaves (B IA, and 4B)	B9) (MLRA 1, 2,
DROLOGY Tetland Hydrology Indicators: rimary Indicators (minimum of one r _ Surface Water (A1)	Water-Sta MLRA Salt Crus	ained Leav 1, 2, 4A,	and 4B)	except	_	_ Wat 4 _ Drai	er-Stained Leaves (F	39) (MLRA 1, 2 ,
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one r Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-St MLRA Salt Crus Aquatic In	ained Leav A 1, 2, 4A, It (B11)	and 4B) es (B13)	except	_	_ Wat _ _ Drai _ Dry-	er-Stained Leaves (F IA, and 4B) inage Patterns (B10)	B9) (MLRA 1, 2 , ∋ (C2)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one r Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Sta MLRA Salt Crus Aquatic Ia Hydroger	ained Leav 1, 2, 4A, It (B11) nvertebrate n Sulfide O	and 4B) es (B13))dor (C1)	except	-	_ Wat _ Drai _ Dry- _ Sati	er-Stained Leaves (F I A, and 4B) inage Patterns (B10) -Season Water Table	B9) (MLRA 1, 2, ∋ (C2) rial Imagery (C9)
/DROLOGY /etland Hydrology Indicators: <u>rimary Indicators (minimum of one r</u> Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Sta MLRA Salt Crus Aquatic lo Hydroger Oxidized Presence	ained Leav 1, 2, 4A, t (B11) nvertebrate n Sulfide O Rhizosphe e of Reduc	and 4B) es (B13) dor (C1) eres along ed Iron (C	J Living Ro		_ Wat _ Drai _ Dry- _ Sati _ Geo	er-Stained Leaves (B I A, and 4B) inage Patterns (B10) Season Water Table uration Visible on Ae	B9) (MLRA 1, 2, ∋ (C2) rial Imagery (C9)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one r _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) _ Sediment Deposits (B2) _ Drift Deposits (B3)	Water-Sta MLRA Salt Crus Aquatic lo Hydroger Oxidized Presence	ained Leav 1, 2, 4A, t (B11) nvertebrate n Sulfide O Rhizosphe e of Reduc	and 4B) es (B13) dor (C1) eres along ed Iron (C) Living Ro		_ Wat _ Drai _ Dry _ Sati _ Gec _ Sha	er-Stained Leaves (B I A, and 4B) inage Patterns (B10) -Season Water Table uration Visible on Ae omorphic Position (D	B9) (MLRA 1, 2, ∋ (C2) rial Imagery (C9)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Sta MLRA Salt Crus Aquatic la Hydroger Oxidized Presence Recent Ir Stunted o	ained Leav 1, 2, 4A, t (B11) nvertebrate a Sulfide O Rhizosphe of Reduct on Reduct or Stressed	and 4B) es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (I	J Living Ro		Wat Dra Dry Satr Gec Sha FAC	er-Stained Leaves (F IA, and 4B) inage Patterns (B10) Season Water Table uration Visible on Ae morphic Position (D2) Illow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6)	B9) (MLRA 1, 2, ⇒ (C2) rial Imagery (C9) 2)) (LRR A)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one r _ 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	Water-Standard Water-Standard Water-Standard With Million	ained Leav 1, 2, 4A , t (B11) nvertebrate Sulfide O Rhizosphe of Reduct on Reduct	and 4B) es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (I) Living Ro (4) ed Soils (C		Wat Dra Dry Satr Gec Sha FAC	er-Stained Leaves (E IA, and 4B) inage Patterns (B10) Season Water Table uration Visible on Ae unorphic Position (D3) Illow Aquitard (D3) C-Neutral Test (D5)	B9) (MLRA 1, 2, ⇒ (C2) rial Imagery (C9) 2)) (LRR A)
DROLOGY fetIand Hydrology Indicators: fimary Indicators (minimum of one of 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 Sur	Water-Standard Water-Standard Water-Standard With Million	ained Leav 1, 2, 4A, t (B11) nvertebrate a Sulfide O Rhizosphe of Reduct on Reduct or Stressed	and 4B) es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (I) Living Ro (4) ed Soils (C		Wat Dra Dry Satr Gec Sha FAC	er-Stained Leaves (F IA, and 4B) inage Patterns (B10) Season Water Table uration Visible on Ae morphic Position (D2) Illow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6)	B9) (MLRA 1, 2, ⇒ (C2) rial Imagery (C9) 2)) (LRR A)
DROLOGY tetland Hydrology Indicators: <u>timary Indicators (minimum of one r</u> 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 Surface Su	Water-Standard W	ained Leav A 1, 2, 4A, It (B11) nvertebrate Sulfide O Rhizosphe of Reduct on Reduct or Reduct or Stressec colain in R	and 4B) es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (I emarks)) Living Ro (4) ed Soils (C		Wat Dra Dry Satr Gec Sha FAC	er-Stained Leaves (F IA, and 4B) inage Patterns (B10) Season Water Table uration Visible on Ae morphic Position (D2) Illow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6)	B9) (MLRA 1, 2, ⇒ (C2) rial Imagery (C9) 2)) (LRR A)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one r 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 Surface Water Present? Yes	Water-Sta MLRA Salt Crus Aquatic la Hydroger Oxidized Presence Recent lr Stunted c gery (B7) Other (E) Inface (B8)	ained Leav 1, 2, 4A, t (B11) nvertebrate a Sulfide O Rhizosphe e of Reduct on Reduct or Stressed kplain in Re- nches):	and 4B) es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (I emarks)) Living Ro (4) ed Soils (C		Wat Dra Dry Satr Gec Sha FAC	er-Stained Leaves (F IA, and 4B) inage Patterns (B10) Season Water Table uration Visible on Ae morphic Position (D2) Illow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6)	B9) (MLRA 1, 2, ⇒ (C2) rial Imagery (C9) 2)) (LRR A)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one r	Water-Sta MLRA Salt Crus Aquatic la Hydroger Oxidized Presence Recent Ir Stunted c Stunted c gery (B7) Other (E) Inface (B8)	ained Leav 1, 2, 4A, 1, 4A, 1, 	and 4B) es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (I emarks) N/A N/A	g Living Ro 34) ed Soils (C D1) (LRR /	oots (C3)	_ Wat _ Drai _ Dry- _ Satu _ Gec _ Sha _ FAC _ Rais _ Fros	er-Stained Leaves (E IA, and 4B) inage Patterns (B10) Season Water Table uration Visible on Ae omorphic Position (D) illow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) st-Heave Hummocks	 B9) (MLRA 1, 2, e (C2) rial Imagery (C9) 2) (LRR A) (D7)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one r	Water-Sta MLRA Salt Crus Aquatic la Hydroger Oxidized Presence Recent lr Stunted c gery (B7) Other (E) Inface (B8)	ained Leav 1, 2, 4A, 1, 4A, 1, 	and 4B) es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (I emarks)	g Living Ro 34) ed Soils (C D1) (LRR /	oots (C3)	_ Wat _ Drai _ Dry- _ Satu _ Gec _ Sha _ FAC _ Rais _ Fros	er-Stained Leaves (F IA, and 4B) inage Patterns (B10) Season Water Table uration Visible on Ae morphic Position (D2) Illow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6)	B9) (MLRA 1, 2, ⇒ (C2) rial Imagery (C9) 2)) (LRR A)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Alga! Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imag Sparsely Vegetated Concave Su Field Observations: Surface Water Present? Yes Water Table Present? Yes	Water-Sta MLRA Salt Crus Aquatic la Hydroger Oxidized Presence Recent lr Stunted c gery (B7) Other (E) Inface (B8)	ained Leav 1, 2, 4A, t (B11) nvertebrate a Sulfide O Rhizosphe of Reduct or Reduct or Reduct or Stressec kplain in Re- nches): nches):	and 4B) es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (I emarks) N/A N/A N/A	g Living Ro 34) ed Soils (C D1) (LRR /	oots (C3) ================================	Wat	er-Stained Leaves (E IA, and 4B) inage Patterns (B10) Season Water Table uration Visible on Ae omorphic Position (D) illow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) st-Heave Hummocks	 B9) (MLRA 1, 2, e (C2) rial Imagery (C9) 2)) (LRR A) (D7)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one of 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 Surface Water Present? Yes_ Water Table Present? Yes_ Saturation Present? Saturation Present? Yes_ Saturation Present? Saturation Present? Yes_ Saturation Present? Yes_ Saturation Present? Yes_ Saturation Present? Y	Water-Sta MLRA Salt Crus Aquatic lo Hydroger Oxidized Presence Recent Ir Stunted c Stunted c gery (B7) Other (E) Inface (B8) No Depth (i Depth (i Depth (i	ained Leav 1, 2, 4A, it (B11) nvertebrate a Sulfide O Rhizosphe e of Reduct or Reduct or Reduct or Stressed (plain in Re- nches): nches): I photos, p	and 4B) es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (I emarks) N/A N/A N/A N/A N/A	g Living Ro 24) ed Soils (C D1) (LRR / 	bots (C3)	Wat Dra Dry Satr Satr Geo FAC Rais Fros	er-Stained Leaves (E IA, and 4B) inage Patterns (B10) Season Water Table uration Visible on Ae morphic Position (D) illow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) st-Heave Hummocks	B9) (MLRA 1, 2, e (C2) rial Imagery (C9) 2)) (LRR A) s (D7)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one of 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 Imag Sparsely Vegetated Concave Su Field Observations: Surface Water Present? Yes Saturation Presen	Water-Sta MLRA Salt Crus Aquatic lo Hydroger Oxidized Presence Recent Ir Stunted c Stunted c gery (B7) Other (E) Inface (B8) No Depth (i Depth (i Depth (i	ained Leav 1, 2, 4A, it (B11) nvertebrate a Sulfide O Rhizosphe e of Reduct or Reduct or Reduct or Stressed (plain in Re- nches): nches): I photos, p	and 4B) es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (I emarks) N/A N/A N/A N/A N/A	g Living Ro 24) ed Soils (C D1) (LRR / 	bots (C3)	Wat Dra Dry Satr Satr Geo FAC Rais Fros	er-Stained Leaves (E IA, and 4B) inage Patterns (B10) Season Water Table uration Visible on Ae omorphic Position (D) illow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) st-Heave Hummocks	B9) (MLRA 1, 2, e (C2) rial Imagery (C9) 2)) (LRR A) e (D7)

oject/Site: Humboldt Bay Harbor District-RMMT		City/County: _	Humboldt	t Sampling Date:
oplicant/Owner: Humboldt Bay Harbor District				State: CA Sampling Point: TP19
vestigator(s): Joseph Saler, Cindy Wilcox		Section, Town	nship, Ra	ange:
andform (hillslope, terrace, etc.): RNNU 14/5	pit	Local relief (c	concave,	convex, none): Cancave Slope (%): 0-
				Long: -124, 188202 Datum: WGS 84
				SOC. 0-290NWI classification: hone
e climatic / hydrologic conditions on the site typ			/	
e Vegetation, Soil, or Hydrology				"Normal Circumstances" present? Yes X No
e Vegetation, Soil, or Hydrology				
				eeded, explain any answers in Remarks.)
UMMARY OF FINDINGS – Attach si	te map showing	sampling	point l	ocations, transects, important features, e
Hydrophytic Vegetation Present? Yes _				N
Hydric Soil Present? Yes			Sampled a Wetlar	Y
Vetland Hydrology Present? Yes				
Remarks: WETS normal rainfall	· · · ltod	anala		Bost described as PSSICsOg.
TI excavated at low point	IN 12010161	apro:	7100/	por acciment is adding
EGETATION – Use scientific names				
LOCTATION - Use scientific fidmes		Dessinget	16 4	
ree Stratum (Plot size: 30')	Absolute <u>% Cover</u>	Dominant Ir Species?		Dominance Test worksheet: Number of Dominant Species
·				Number of Dominant Species 3 That Are OBL, FACW, or FAC: (A)
				Total Number of Dominant
·				Species Across All Strata:
•				Percent of Dominant Species (0.5)
Sapling/Shrub Stratum (Plot size: 5'		= Total Cove	F	That Are OBL, FACW, or FAC:
Alow rubra		1	FAC	Prevalence Index worksheet:
· · · · · · · · · · · · · · · · · · ·				Total % Cover of:Multiply by:
*				OBL species x 1 =
•				FACW species x 2 =
				FAC species x 3 =
5 '		= Total Cove	г	FACU species x 4 =
Herb Stratum (Plot size: 5')	50	. / 5	Chr	UPL species x 5 = Column Totals: (A)
Potestilla avening			AC	
Carex objusta	25		BL	Prevalence Index = B/A =
Lysimarlia armosts	10		FAC	Hydrophytic Vegetation Indicators:
Trifelium reas	2		DAG	1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
low conjulate	6	-	FAC	3 - Prevalence Index is $\leq 3.0^{1}$
Gergium dispectum	2		UPL	4 - Morphological Adaptations ¹ (Provide supporti
Motha pylegium	1		OBL	data in Remarks or on a separate sheet)
\				5 - Wetland Non-Vascular Plants ¹
0				Problematic Hydrophytic Vegetation ¹ (Explain)
			50	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	100	= Total Cover	120	The provent, unless distances of problematic
1				
1 (Plot size: 5'	_)			
1 (Plot size: 5'				Hydrophytic Vegetation
1 (Plot size: 5'		= Total Cover		

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	19-1
	CIN
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		Samping Foldt.
Profile Description: (Describe to the o	lepth needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-7 10 YR 3/1 101		Reat
7-24+ 2.54 4/1 70	7.5YR 4/6 30 C M	.<
	RM=Reduced Matrix, CS=Covered or Coated Sand Gra	ains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to		Indicators for Problematic Hydric Soils ³ :
•		
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loarny Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)		3
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:		X
Depth (inches):		Hydric Soil Present? Yes Mo
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one req	uired; check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Water Marks (B1)		
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along Living Roo	
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soils (C6) X FAC-Neutral Test (D5)
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRR A)	Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imager	(B7) Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surfa		
Field Observations:		
	No X Depth (inches): N/A	
Water Table Present? Yes	No Z Depth (inches):	X
Saturation Present? Yes	No X Depth (inches): N/A Wetla	and Hydrology Present? Yes 🔼 No
(includes capillary fringe)		9
Describe Recorded Data (stream gauge	e, monitoring well, aerial photos, previous inspections),	IT available:
Remarks:	I A THE ALL AND ADDRESS	
TP excavated within	small, isolated depression	
IT EXCAVATED WITHIN	or and route and a	

oject/Site: Humboldt Bay Harbor District-RMMT	City/County: Humbo	ldt	_ Sampling Date: 5/14/02
oplicant/Owner: Humboldt Bay Harbor District		State: CA	_ Sampling Point: TP 30
vestigator(s): Joseph Saler, Cindy Wilcox	Section, Township,		
Indform (hillslope, terrace, etc.): Prisona, S	pit. Local relief (concav	e, convex, none):	و Slope (%):
bregion (LRR): A, MLRA-4B	Lat: 40,813864	Long: 124. 188	213 Datum: WGS 84
bil Map Unit Name: 1014-Urban Land And	thraltic Xerorthents a sta	OC. O-290 NWI class	ification: none
e climatic / hydrologic conditions on the site typical	for this time of year? Yes $_$ No) (If no, explain in	Remarks.)
e Vegetation, Soil, or Hydrology	significantly disturbed? Ar	e "Normal Circumstances	present? Yes X No
e Vegetation, Soil, or Hydrology		needed, explain any answ	wers in Remarks.)
UMMARY OF FINDINGS - Attach site			
		riocations, transec	ts, important reatures, er
	No Is the Sampl	ed Area	\checkmark
Wetland Hydrology Present? Yes			No 🔼
		1 1	10110000
TP excavated within raised e	area surrounding 3p dep	nosland wetlin	9. Condition albread
	1 -1 -0		of upland inthis are
EGETATION – Use scientific names of	f plants.		
Free Stratum (Plot size: 30')	Absolute Dominant Indicato		orksheet:
Alous Mora	<u>% Cover Species?</u> Status		
		-	
		Total Number of Don Species Across All S	
ka			
E!	= Total Cover	Percent of Dominant That Are OBL, FACV	
Sapling/Shrub Stratum (Plot size: 5'	5 PACI	Prevalence Index w	orksheet:
- Lupinus arbareus	7-2 1 110	Total % Cover o	f: Multiply by:
Rubu wreinw	18 V FALL	OBL species	x 1 =
Rubus principaciós	3 FAC		x 2 =
		FAC species	
E'	= Total Cover		x 4 = x 5 =
Herb Stratum (Plot size: 5')	711 11 FAC.		X3 (A) (B
Granium dissection		_	
Lotus corniculatus	TO FAC		ex = B/A =
Sunchus oleraceus	2 UPL	 Hydrophytic Vegeta 1 Rapid Test for 	rtron Indicators: Ar Hydrophytic Vegetation
Dancus carota	6 FAC	2 - Dominance T	
Bronw Wondrus	I UPL	3 - Prevalence Ir	
۹ <u>ــــــ</u> ـــــ			al Adaptations ¹ (Provide supportin
l		data in Rema	rks or on a separate sheet)
J		_ 5 - Wetland Non	
0		-	rophytic Vegetation ¹ (Explain)
1	TA7		soil and wetland hydrology must sturbed or problematic.
Noody Vine Stratum (Plot size: 5'	Total Cover		
		- Hydrophytic	×
		Vegetation	V
Q	= Total Cover	Present?	Yes No
% Bare Ground in Herb Stratum			

	19-1
	EIN
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Depth <u>Matrix</u>		sui needed to docu	ment the	ndicator	or confirm	the abs	ence of	indicators.)	
			x Feature						
nches) Color (moist)	%	Color (moist)	%	_Type ¹ _	Loc ²	Textu	ure	Remarks	
0-5 10YR3/1	100		-	-	-	P			
-24+ 2.5× 4/1	90	2.5 / 4/2	10	C	M	<	1	esphaltchunk	
				·	. <u></u> i				
				·	. <u> </u>				
	•	-							
ype: C=Concentration, D=Dep	letion RM	=Reduced Matrix C	S=Covere	d or Coate	d Sand Gr	ains	² l ocai	ion: PL=Pore Lining, M=Matrix.	
dric Soil Indicators: (Application)					a band di			for Problematic Hydric Soils ³	:
Histosol (A1)		Sandy Redox (2 cm l	Muck (A10)	
Histic Epipedon (A2)		Stripped Matrix						arent Material (TF2)	
Black Histic (A3)		Loamy Mucky I	Mineral (F	1) (excep	t MLRA 1)			Shallow Dark Surface (TF12)	
_ Hydrogen Sulfide (A4)		Loamy Gleyed		2)		_	Other	(Explain in Remarks)	
_ Depleted Below Dark Surface	e (A11)	Depleted Matri				٩.			
_ Thick Dark Surface (A12)		Redox Dark Su				°In		of hydrophytic vegetation and	
Sandy Mucky Mineral (S1)		Depleted Dark		-7)				I hydrology must be present, disturbed or problematic.	
Sandy Gleyed Matrix (S4) Strictive Layer (if present):		Redox Depres	50115 (FO)			1	unicaa	disturbed of problematic.	
Type:									
Depth (inches):						Hydrid	c Soil P	resent? Yes No	X
emarks:						- ny an			
DROLOGY									
/etland Hydrology Indicators:		t stands that a					0		
/etland Hydrology Indicators: rimary Indicators (minimum of o								ary Indicators (2 or more require	
fetland Hydrology Indicators: rimary Indicators (minimum of o _ Surface Water (A1)		Water-Sta	ained Leav				Wa	ter-Stained Leaves (B9) (MLRA	
fetland Hydrology Indicators: rimary Indicators (minimum of o _ Surface Water (A1) _ High Water Table (A2)		Water-Sta MLRA	ained Leav 1, 2, 4A,				Wa	ter-Stained Leaves (B9) (MLRA 4A, and 4B)	
fetland Hydrology Indicators: rimary Indicators (minimum of o _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3)		Water-Sta MLRA Salt Crus	ained Leav . 1, 2, 4A , t (B11)	and 4B)			Wa	ter-Stained Leaves (B9) (MLRA 4 A, and 4B) iinage Patterns (B10)	
fetland Hydrology Indicators: rimary Indicators (minimum of o _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1)		Water-Sta MLRA Salt Crus Aquatic Ir	ained Leav 1 , 2, 4A , t (B11) tvertebrate	and 4B) es (B13)			Wa Dra Dry	ter-Stained Leaves (B9) (MLRA 4 A, and 4B) iinage Patterns (B10) /-Season Water Table (C2)	1, 2,
/etland Hydrology Indicators: rimary Indicators (minimum of o _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) _ Sediment Deposits (B2)		Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen	ained Leav 1 , 2, 4A , t (B11) ivertebrate Sulfide C	and 4B) es (B13) edor (C1)	P U		Wa Dra Dry Sal	ter-Stained Leaves (B9) (MLRA 4A, and 4B) tinage Patterns (B10) 7-Season Water Table (C2) turation Visible on Aerial Imagery	1, 2,
/etland Hydrology Indicators: rimary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Water-Sta MLRA Salt Crusi Aquatic Ir Hydrogen Oxidized	ained Leav 1, 2, 4A, t (B11) nvertebrate Sulfide C Rhizosphe	and 4B) es (B13) edor (C1) eres along	Living Roo		Wa Dra Dry Sal Ge	ter-Stained Leaves (B9) (MLRA 4A, and 4B) iinage Patterns (B10) r-Season Water Table (C2) ruration Visible on Aerial Imageny omorphic Position (D2)	1, 2,
Vetland Hydrology Indicators: rimary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized Presence	ained Leav 1, 2, 4A , t (B11) ivertebrate Sulfide C Rhizosphe of Reduc	and 4B) es (B13) edor (C1) eres along ed Iron (C	Living Roo 4)	ots (C3)	Wa Dra Sal Ge Sha	ter-Stained Leaves (B9) (MLRA 4A, and 4B) iinage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagen omorphic Position (D2) allow Aquitard (D3)	1, 2,
Vetland Hydrology Indicators: rimary Indicators (minimum of o 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-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent In	ained Leav 1, 2, 4A , t (B11) ivertebrate Sulfide C Rhizosphe of Reduct on Reduct	and 4B) es (B13) edor (C1) eres along ed Iron (C ion in Tille	Living Roc 4) ed Soils (C6	ots (C3) 5)	Wa Dra Dry Sal Ge Sha FA	ter-Stained Leaves (B9) (MLRA 4 A, and 4B) inage Patterns (B10) -Season Water Table (C2) turation Visible on Aerial Imagen omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5)	1, 2,
/etland Hydrology Indicators: rimary Indicators (minimum of o 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)	one require	Water-Sta MLRA Salt Crusi Aquatic Ir Hydrogen Oxidized Presence Recent In Stunted o	ained Leav 1, 2, 4A , t (B11) nvertebrate Sulfide C Rhizosphe of Reduct on Reduct on Reduct or Stressed	and 4B) es (B13) edor (C1) eres along ed Iron (C ion in Tille Plants (E	Living Roo 4)	ots (C3) 5)	Wa Dra Dry Sat Ge Sha FA	ter-Stained Leaves (B9) (MLRA 4 A, and 4B) inage Patterns (B10) -Season Water Table (C2) turation Visible on Aerial Imagen omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A)	1, 2,
fetland Hydrology Indicators: rimary Indicators (minimum of o 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 I	one require	Water-Sta MLRA Salt Crusi Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted o S7) Other (Ex	ained Leav 1, 2, 4A , t (B11) nvertebrate Sulfide C Rhizosphe of Reduct on Reduct on Reduct or Stressed	and 4B) es (B13) edor (C1) eres along ed Iron (C ion in Tille Plants (E	Living Roc 4) ed Soils (C6	ots (C3) 5)	Wa Dra Dry Sat Ge Sha FA	ter-Stained Leaves (B9) (MLRA 4 A, and 4B) inage Patterns (B10) -Season Water Table (C2) turation Visible on Aerial Imagen omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5)	1, 2,
/etland Hydrology Indicators: rimary Indicators (minimum of o 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 I Sparsely Vegetated Concave	one require	Water-Sta MLRA Salt Crusi Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted o S7) Other (Ex	ained Leav 1, 2, 4A , t (B11) nvertebrate Sulfide C Rhizosphe of Reduct on Reduct on Reduct or Stressed	and 4B) es (B13) edor (C1) eres along ed Iron (C ion in Tille Plants (E	Living Roc 4) ed Soils (C6	ots (C3) 5)	Wa Dra Dry Sat Ge Sha FA	ter-Stained Leaves (B9) (MLRA 4 A, and 4B) inage Patterns (B10) -Season Water Table (C2) turation Visible on Aerial Imagen omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A)	1, 2,
Vetland Hydrology Indicators: rimary Indicators (minimum of o 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 I Sparsely Vegetated Concave ield Observations:	one require	Water-Sta MLRA Salt Crusi Aquatic Ir Hydrogen Oxidized Presence Recent In Stunted of S7) Other (Ex (B8)	ained Leav 1, 2, 4A, t (B11) invertebrate Sulfide C Rhizosphe of Reduct on Reduct on Reduct plain in R	and 4B) es (B13) edor (C1) eres along ed Iron (C ion in Tille Plants (E	Living Roc 4) ed Soils (C6	ots (C3) 5)	Wa Dra Dry Sat Ge Sha FA	ter-Stained Leaves (B9) (MLRA 4 A, and 4B) inage Patterns (B10) -Season Water Table (C2) turation Visible on Aerial Imagen omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A)	1, 2,
Vetland Hydrology Indicators: rimary Indicators (minimum of o 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 I Sparsely Vegetated Concave ield Observations: Surface Water Present? Y	Imagery (E e Surface /es	Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent In Stunted of 37) Other (Ex (B8)	ained Leas 1, 2, 4A, t (B11) invertebrate Sulfide C Rhizosphe of Reduct on Reduct on Reduct plain in R 	and 4B) es (B13) edor (C1) eres along ed Iron (C ion in Tille Plants (E	Living Roc 4) ed Soils (C6	ots (C3) 5)	Wa Dra Dry Sat Ge Sha FA	ter-Stained Leaves (B9) (MLRA 4 A, and 4B) inage Patterns (B10) -Season Water Table (C2) turation Visible on Aerial Imagen omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A)	1, 2,
Vetland Hydrology Indicators: rimary Indicators (minimum of o 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 I Sparsely Vegetated Concave ield Observations: urface Water Present? Y Vater Table Present? Y	Imagery (E e Surface Yes	Water-Sta MLRA Salt Crusi Aquatic Ir Hydrogen Oxidized Presence Recent In Stunted of 37) Other (Ex (B8) No Depth (ir Depth (ir	ained Leav 1, 2, 4A, 1 (B11) avertebrate of Reduct of Red	and 4B) es (B13) dor (C1) eres along ed Iron (C ion in Tille d Plants (E emarks)	Living Roc 4) ed Soils (C6 01) (LRR A	ots (C3) 5) .)	Wa Dra Sal Ge Sha FA Ra Fro	ter-Stained Leaves (B9) (MLRA 4A, and 4B) sinage Patterns (B10) r-Season Water Table (C2) suration Visible on Aerial Imagery omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A) ist-Heave Hummocks (D7)	1, 2,
Vetland Hydrology Indicators: rimary Indicators (minimum of of a 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 I Sparsely Vegetated Concave ield Observations: urface Water Present? Y Vater Table Present? Y iaturation Present? Y	Imagery (E e Surface /es /es	Water-Sta MLRA Salt Crusi Aquatic Ir Hydrogen Oxidized Presence Recent In Stunted of 37) Other (Ex (B8) No Depth (ir No Depth (ir Depth (ir	ained Leav 1, 2, 4A, 1, 4, 4A, 1, 4, 4, 4A, 1, 4, 4, 4A, 4A, 4A, 4A, 4A, 4A, 4A, 4A, 	and 4B) es (B13) dor (C1) eres along ed Iron (C ion in Tille d Plants (E emarks) N/A N/A N/A	Living Roc 4) ed Soils (C6 01) (LRR A	ots (C3) 5) 1) land Hyd	Wa Dra Sal Ge Sha FA Ra Fro	ter-Stained Leaves (B9) (MLRA 4 A, and 4B) inage Patterns (B10) -Season Water Table (C2) turation Visible on Aerial Imagen omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A)	1, 2,
Vetland Hydrology Indicators: rimary Indicators (minimum of of a 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 I Sparsely Vegetated Concave ield Observations: urface Water Present? Y Vater Table Present? Y iaturation Present? Y	Imagery (E e Surface /es /es	Water-Sta MLRA Salt Crusi Aquatic Ir Hydrogen Oxidized Presence Recent In Stunted of 37) Other (Ex (B8) No Depth (ir No Depth (ir Depth (ir	ained Leav 1, 2, 4A, 1, 4, 4A, 1, 4, 4, 4A, 1, 4, 4, 4A, 4A, 4A, 4A, 4A, 4A, 4A, 4A, 	and 4B) es (B13) dor (C1) eres along ed Iron (C ion in Tille d Plants (E emarks) N/A N/A N/A	Living Roc 4) ed Soils (C6 01) (LRR A	ots (C3) 5) 1) land Hyd	Wa Dra Sal Ge Sha FA Ra Fro	ter-Stained Leaves (B9) (MLRA 4A, and 4B) sinage Patterns (B10) r-Season Water Table (C2) suration Visible on Aerial Imagery omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A) ist-Heave Hummocks (D7)	1, 2,
Vetland Hydrology Indicators: rimary Indicators (minimum of o 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 1 Sparsely Vegetated Concave ield Observations: Surface Water Present? Y Vater Table Present? Y saturation Present? Y includes capillary fringe) Vescribe Recorded Data (streameter)	Imagery (E e Surface /es /es	Water-Sta MLRA Salt Crusi Aquatic Ir Hydrogen Oxidized Presence Recent In Stunted of 37) Other (Ex (B8) No Depth (ir No Depth (ir Depth (ir	ained Leav 1, 2, 4A, 1, 4, 4A, 1, 4, 4, 4A, 1, 4, 4, 4A, 4A, 4A, 4A, 4A, 4A, 4A, 4A, 	and 4B) es (B13) dor (C1) eres along ed Iron (C ion in Tille d Plants (E emarks) N/A N/A N/A	Living Roc 4) ed Soils (C6 01) (LRR A	ots (C3) 5) 1) land Hyd	Wa Dra Sal Ge Sha FA Ra Fro	ter-Stained Leaves (B9) (MLRA 4A, and 4B) sinage Patterns (B10) r-Season Water Table (C2) suration Visible on Aerial Imagery omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A) ist-Heave Hummocks (D7)	1, 2,
Vetland Hydrology Indicators: trimary Indicators (minimum of o 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 I Sparsely Vegetated Concave Surface Water Present? Y Vater Table Present?	Imagery (E e Surface /es /es	Water-Sta MLRA Salt Crusi Aquatic Ir Hydrogen Oxidized Presence Recent In Stunted of 37) Other (Ex (B8) No Depth (ir No Depth (ir Depth (ir	ained Leav 1, 2, 4A, 1, 4, 4A, 1, 4, 4, 4A, 1, 4, 4, 4A, 4A, 4A, 4A, 4A, 4A, 4A, 4A, 	and 4B) es (B13) dor (C1) eres along ed Iron (C ion in Tille d Plants (E emarks) N/A N/A N/A	Living Roc 4) ed Soils (C6 01) (LRR A	ots (C3) 5) 1) land Hyd	Wa Dra Sal Ge Sha FA Ra Fro	ter-Stained Leaves (B9) (MLRA 4A, and 4B) sinage Patterns (B10) r-Season Water Table (C2) suration Visible on Aerial Imagery omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A) ist-Heave Hummocks (D7)	1, 2,
Vetland Hydrology Indicators: rimary Indicators (minimum of o 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 I Sparsely Vegetated Concave ield Observations: urface Water Present? Y vater Table Present? Y aturation Present? Y ncludes capillary fringe) rescribe Recorded Data (streamed)	Imagery (E e Surface /es /es	Water-Sta MLRA Salt Crusi Aquatic Ir Hydrogen Oxidized Presence Recent In Stunted of 37) Other (Ex (B8) No Depth (ir No Depth (ir Depth (ir	ained Leav 1, 2, 4A, 1, 4, 4A, 1, 4, 4, 4A, 1, 4, 4, 4A, 4A, 4A, 4A, 4A, 4A, 4A, 4A, 	and 4B) es (B13) dor (C1) eres along ed Iron (C ion in Tille d Plants (E emarks) N/A N/A N/A	Living Roc 4) ed Soils (C6 01) (LRR A	ots (C3) 5) 1) land Hyd	Wa Dra Sal Ge Sha FA Ra Fro	ter-Stained Leaves (B9) (MLRA 4A, and 4B) sinage Patterns (B10) r-Season Water Table (C2) suration Visible on Aerial Imagery omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A) ist-Heave Hummocks (D7)	1, 2,
fetland Hydrology Indicators: rimary Indicators (minimum of o	Imagery (E e Surface /es /es	Water-Sta MLRA Salt Crusi Aquatic Ir Hydrogen Oxidized Presence Recent In Stunted of 37) Other (Ex (B8) No Depth (ir No Depth (ir Depth (ir	ained Leav 1, 2, 4A, 1, 4, 4A, 1, 4, 4, 4A, 1, 4, 4, 4A, 4A, 4A, 4A, 4A, 4A, 4A, 4A, 	and 4B) es (B13) dor (C1) eres along ed Iron (C ion in Tille d Plants (E emarks) N/A N/A N/A	Living Roc 4) ed Soils (C6 01) (LRR A	ots (C3) 5) 1) land Hyd	Wa Dra Sal Ge Sha FA Ra Fro	ter-Stained Leaves (B9) (MLRA 4A, and 4B) sinage Patterns (B10) r-Season Water Table (C2) suration Visible on Aerial Imagery omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A) ist-Heave Hummocks (D7)	1, 2,

	City/County: Humbold	t	_ Sampling Date: 05/19/-
plicant/Owner: Humboldt Bay Harbor District			_ Sampling Point: TP 81
	Section, Township, Ra	inge:	
ndform (hillslope, terrace, etc.): PAINASSIA	Local relief (concave,	convex, none):	<u>ave</u> Slope (%): 2
bregion (LRR): A, MLRA-4B	t: 40.811574	_ Long: 124,18	7973 Datum: WGS 84
bregion (LRR): <u>A. MLRA-48</u> Il Map Unit Name: <u>1014-Urbanland Anthrattic Xa</u>	crorthents assoc	0-290 NWI classi	fication: None
e climatic / hydrologic conditions on the site typical for this time			
e Vegetation, Soil or Hydrology signifie		End to a serie set the test of the	present? Yes 📈 No 🔜
e Vegetation, Soil, or Hydrology natura		eeded, explain any answ	
JMMARY OF FINDINGS – Attach site map sho		ocations, transect	ts, important features, et
ydrophytic Vegetation Present? Yes No		Aroa 🔪	2
ydric Soil Present? Yes No /etland Hydrology Present? Yes No	within a Wetla		No
vetiand Hydrology Present? Yes <u>X</u> No			
to here a line line in the side	cum 11 file	and allowed	Bot describer
TP excavated in erostonal depression	CANSED BY TAIL	re or anners	Tidal. of E2FO3N
GETATION – Use scientific names of plants.			
Abs	olute Dominant Indicator	Dominance Test wo	rksheet:
ree Stratum (Plot size: 30') %C	Cover Species? Status	Number of Dominant	
Morella Californica 5	tACW	That Are OBL, FACW	
Salix lariandra St	J V FACU	Total Number of Dom	inant – –
· · · · · · · · · · · · · · · · · · ·		Species Across All St	
		Percent of Dominant	Species d
apling/Shrub Stratum (Plot size: 5)	= Total Cover	That Are OBL, FACW	
		Prevalence Index wo	
		Total % Cover of	
			x 1 =
			x 2 =
			× 3 =
erb Stratum (Plot size: 5')	Total Cover		x 4 = x 5 =
			X U (B
			ex = B/A =
		Hydrophytic Vegeta	
		2 - Dominance Te	Hydrophytic Vegetation
		3 - Prevalence In	
			Adaptations ¹ (Provide supportin
			ks or on a separate sheet)
		5 - Wetland Non-	Vascular Plants ¹
l		Problematic Hydr	ophytic Vegetation ¹ (Explain)
s			oil and wetland hydrology must
	Total Cover	be present, unless dis	turbed or problematic.
boody Vine Stratum (Plot size: 5')			
		Hydrophytic	
		Vegetation Present? Y	es No
Bare Ground in Herb Stratum	= Total Cover		
		10	

SOIL		and the second sec
		Sampling Point: TP Consulting E
	n needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix	Redox Features	Service and Servic
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Remarks
0-2 2.542.5/2 100		MUP
1-16 2542.5/ 307	1 minut	LS Mixed croded til
2.544/1 35 m	ixed matrices	LS Mixed prodectilly
<u>1.57 K 2.5/1 201</u>		P perpochet, mixed ended
		0 / / / / / / / / / / / / / / / / / / /
· · · · · · · · · · · · · · · · · · ·		
		alian Stranding Di-Dave Lining Mathematic
	Reduced Matrix, CS=Covered or Coated Sand Gr	ains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: (Applicable to all L		-
Histosol (A1)	Sandy Redox (S5) Stripped Matrix (S6)	2 cm Muck (A10) Red Parent Material (TF2)
Histic Epipedon (A2) Black Histic (A3)	Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	<u> </u>
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):	á.	
Туре:		\checkmark
Depth (inches):	_	Hydric Soil Present? Yes X No
from ~ 30yrs dgo. Saltu	later influence from broken	n culvert. problematic-with
this type of hydrology - an	ticipate hydric indicators	n culvert. problematic-with
		Hydric Soil Present? Yes <u>No</u> m fly ach & wood chips becompare n culvert. problematic-with
Wetland Hydrology Indicators:	10 0	
Wetland Hydrology Indicators: Primary Indicators (minimum of one required	; check all that apply)	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1)	; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2)	; 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)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3)	<u>; check all that apply)</u> <u> </u>	Secondary Indicators (2 or more required) X Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	; 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)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	; 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 (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	; 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 Row	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 (C9) ots (C3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	 <u>check all that apply</u> <u>Water-Stained Leaves (B9) (except</u> <u>MLRA 1, 2, 4A, and 4B)</u> Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Room Presence of Reduced Iron (C4) 	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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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)	 <u>check all that apply</u> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) 	Secondary Indicators (2 or more required) X Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) X Geomorphic Position (D2) Shallow Aquitard (D3) 6) X
Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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)	 <u>check all that apply</u> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A) 	Secondary Indicators (2 or more required) X Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7	 <u>check all that apply</u>) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) 	Secondary Indicators (2 or more required) X Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) X Geomorphic Position (D2) Shallow Aquitard (D3) 6) X
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7 Sparsely Vegetated Concave Surface (E)	 <u>check all that apply</u>) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) 	Secondary Indicators (2 or more required) X Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7 Sparsely Vegetated Concave Surface (E) Field Observations:	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 88)	Secondary Indicators (2 or more required) X Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7 X Sparsely Vegetated Concave Surface (E Field Observations: Surface Water Present?	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) 88) No Depth (inches):	Secondary Indicators (2 or more required) X Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7 Sparsely Vegetated Concave Surface (E Field Observations: Surface Water Present? Yes Yes	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 Rou Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 88) 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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7 Sparsely Vegetated Concave Surface (B7 Field Observations: Surface Water Present? Yes Naturation Present? Yes	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 Rou Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 88) No Depth (inches):	Secondary Indicators (2 or more required) X Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7 X Sparsely Vegetated Concave Surface (E Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes Mater Table Present? Yes	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 Rou Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 88) 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 (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) FAC-Neutral Test (D5) a) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7 X Sparsely Vegetated Concave Surface (E Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes Mater Table Present? Yes	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 88) No Depth (inches): No Depth (inches):	Secondary Indicators (2 or more required) X Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7 X Sparsely Vegetated Concave Surface (E Field Observations: Surface Water Present? Yes Naturation Present? Yes Saturation Present? Yes	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) 38) No Depth (inches): No Depth (inches): Strategie Wet nitoring well, aerial photos, previous inspections),	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7 X Sparsely Vegetated Concave Surface (E Field Observations: Surface Water Present? Yes Naturation Present? Yes Naturation Present? Yes Saturation Present? Yes Naturation Present? Yes Surface Saturation Present? Yes	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 88) No Depth (inches): No Depth (inches):	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)

roject/Site: Humboldt Bay Harbor District-RMMT	Cit	y/County: Humboldt		_ Sampling Date: <u>5/19/2</u>
pplicant/Owner: Humboldt Bay Harbor District				_ Sampling Point: TP 8
vestigator(s): Joseph Saler, Cindy Wilcox			nge:	
andform (hillslope, terrace, etc.): PRINCULA / SPIT				Slope (%): 0 ·
ubregion (LRR): <u>A, MLRA-4B</u>				57969 Datum: WGS 8
oil Map Unit Name: 1014 - Urbanland An	thialtic	Xero thents,	ASOR. 1-2 WWI classif	ication: none
re climatic / hydrologic conditions on the site typical for	this time of year?	Yes X No	(if no, explain in	Remarks.)
re Vegetation, Soil, or Hydrology	_ significantly dis	turbed? Are '	"Normal Circumstances"	present? Yes X No
re Vegetation, Soil, or Hydrology	_ naturally proble	matic? (If ne	eded, explain any answ	ers in Remarks.)
UMMARY OF FINDINGS – Attach site ma				
			ocations, transect	s, important reatures, e
Hydrophytic Vegetation Present? Yes		Is the Sampled	Area	
Hydric Soil Present? Yes Wetland Hydrology Present? Yes		within a Wetlan		No <u></u>
Remarks: WETS normal rainfall	1	11 1 110	Inter the con	a strang of
Te excavated justantside vosio	nal 31 W	etland. W		presetative of
Juit such a dista	derrosion	or	of willow of	atch.
EGETATION Use scientific names of pl	ants.			
<u>30'</u>		ominant Indicator	Dominance Test wor	ksheet:
Tree Stratum (Plot size: 30') 1. Morela (alitornica)	<u>% Cover</u> S	pecies? Status	Number of Dominant S	
2. Salix logiandra	60	FACW	That Are OBL, FACW	, or FAC: (A
3		1000	Total Number of Domi Species Across All Str	
4.				
	- 00	Total Cover	Percent of Dominant S That Are OBL, FACW	
Sapling/Shrub Stratum (Plot size: 5')	30	V CALL	Prevalence Index wo	
1. Kulbus Ursinus 2. Rubus armeniacus		FAC TAC	Total % Cover of:	Multiply by:
3.		110	OBL species	x 1 =
4.				x 2 =
5.				x 3 =
	35 =	Total Cover		x 4 =
Herb Stratum (Plot size: 5')	12	CACIL		x 5 =
1. Polystichun Munitum		TACU		(A) (
2				x = B/A =
3 4			Hydrophytic Vegetat	
5			2 - Dominance Te	Hydrophytic Vegetation
3			3 - Prevalence Inc	
			a second a s	Adaptations ¹ (Provide support
3			data in Remark	ks or on a separate sheet)
9			5 - Wetland Non-V	
10				ophytic Vegetation ¹ (Explain)
11			Indicators of hydric so be present, unless dis	bil and wetland hydrology mus turbed or problematic.
Woody Vine Stratum (Plot size: 5')	2_=	Total Cover		
1			Hydrophytic	
2			Vegetation	
% Bare Ground in Herb Stratum88 🗡	1	Total Cover	Present? Y	es No
& Bare Ground in Herb Stratum NA /			1	

	19-1
TO	2 Donsulting Enginee
lampling Point: 胆	Ceologists, Inc

$\begin{array}{c c} \text{pth} & \underline{\text{Matrix}} \\ \hline \text{ches} & \underline{\text{Color}(\text{moist})} & \underline{\%} \\ \hline -3.6 & 2.5 & 3/1 & 100 \\ \hline \end{array}$		the absence of indicators.)
26 2512/1 120	Redox Features	
36 203 43/1 100	<u>Color (moist)</u> % <u>Type1</u> Loc2	Texture Remarks
		SL_ HII.
pe: C=Concentration, D=Depletion, RM-	=Reduced Matrix, CS=Covered or Coated Sand Gra	ains. ² Location: PL=Pore Lining, M=Matrix.
dric Soil Indicators: (Applicable to all	LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ² :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	3
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.
strictive Layer (if present): -		
Туре:	_	×
Depth (inches):		Hydric Soil Present? Yes No
DROLOGY atland Hydrology Indicators:		
mary Indicators (minimum of one require		
mary moleators (minimari or one regains	d; check all that apply)	Secondary Indicators (2 or more required)
		and the second se
Surface Water (A1)	Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
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, 4A, and 4B)
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) Drainage Patterns (B10)
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)
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 (C9)
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 Roo	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 ots (C3) Geomorphic Position (D2)
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 Roo Presence of Reduced Iron (C4) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
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 Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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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 (B	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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 (B Sparsely Vegetated Concave Surface (Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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 (B Sparsely Vegetated Concave Surface (Eld 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 Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) T) Other (Explain in Remarks) B8)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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 (B Sparsely Vegetated Concave Surface (Eld Observations: rface 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 Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) B8) 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 ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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 (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (Id Observations: rface Water Present? Yes ater Table 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 Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) 7) Other (Explain in Remarks) B8) No Depth (inches): No	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (eld Observations: rface Water Present? Yes ater Table Present? Yes turation Present? Yes turation 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 Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) B8) No Depth (inches): NA Depth (inches): NA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Saturation Visible on Aerial Imagery (C9 Saturation (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (eld Observations: rface Water Present? Yes ater Table Present? Yes turation Present? Yes turation 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 Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) 7) Other (Explain in Remarks) B8) No Depth (inches): No	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Saturation Visible on Aerial Imagery (C9 Saturation (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 (B Sparsely Vegetated Concave Surface (eld Observations: rface 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 Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) B8) No Depth (inches): NA Depth (inches): NA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Saturation Visible on Aerial Imagery (C9 Saturation (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

roject/Site: Humboldt Bay Harbor District-RMMT	City	/County: Humboldt		_ Sampling Date: 5	19/22
pplicant/Owner: Humboldt Bay Harbor District			State: CA	_ Sampling Point: 1	P83
vestigator(s): Joseph Saler, Cindy Wilcox	Sec	tion, Township, Ra	nge:		-
andform (hillslope, terrace, etc.): <u>Reninsula spi</u>	ł Loc	cal relief (concave, o	convex, none):Nov	Slope	(%): 0-
ubregion (LRR): A, MLRA-4B	Lat: 40. 6	511343	Long: -124.18	7553 Datum:	WGS 84
oil Map Unit Name: 1014-Urbanland An	thealtic ye	workents Assoc	. 1-2010 NWI classi	fication: non-e	
re climatic / hydrologic conditions on the site typical for	this time of year?	Yes X No	(If no, explain in	Remarks.)	
re Vegetation, Soil, or Hydrology	_ significantly dist	urbed? Are "	Normal Circumstances	present? Yes	No
re Vegetation, Soil, or Hydrology	naturally problem		eded, explain any ansv		
UMMARY OF FINDINGS – Attach site ma	n chowing ca	moling point k	ocatione transact	e important feat	
		T	ocations, transect	is, important lear	ures, e
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes		Is the Sampled	Area		
Wetland Hydrology Present? Yes			nd? Yes	No <u> </u>	
Remarks: WETS normal rainfall				(1)	11
TP excavated within center of	wellay last	-1 CANditi	and Febresentati	10, of willow	Pott
11 EVENING WITHE CREW OF	and the base	JE- CONTRACT	and of our		1 -
EGETATION – Use scientific names of pl	ants.				
Tree Stratum (Plot size: 30'		ominant Indicator	Dominance Test wo	rksheet:	
1. Saix hookpring		Status	Number of Dominant		/ 81
2		1.64	That Are OBL, FACW		(A)
3			Total Number of Dom Species Across All St		(B)
4					
51	95 =1	Total Cover	Percent of Dominant That Are OBL, FACW		, (A
Sapling/Shrub Stratum (Plot size: 5')	70 1	- FACU	Prevalence Index we		
2		11/00[Total % Cover of	Multiply b	I <u>V:</u>
3.				x 1 =	
4				x 2 =	
5				x 3 =	
5		Total Cover		x 4 =	
Herb Stratum (Plot size: 5')				x 5 = (A)	
		· · · · ·	Prevalence Inde Hydrophytic Vegeta	ex = B/A =	_
				Hydrophytic Vegetation	00
			2 - Dominance To		211
			3 - Prevalence In		
	<u> </u>		4 - Morphologica	Adaptations ¹ (Provide	support
	<u> </u>			ks or on a separate sh	ieet)
	_\		5 - Wetland Non-		
D				ophytic Vegetation ¹ (E oil and wetland hydrole	
11	+-	atal Cours		sturbed or problematic.	
Noody Vine Stratum (Plot size: 5'	=	otal Cover			
			Hydrophytic	Υ.	,
2	×		Vegetation	es No	
8 Bare Ground in Herb Stratum	=T	otal Cover	Present? Y	es No <u>^</u>	-
🕫 Bare Ground in Herb Stratum I 🎽 🎽					

	TP 82 consulting Engine
	Sampling Point: 11 0 & Geologists, In
Profile Description: (Describe to the depth needed to document the indicator or confile	rm the absence of indicators.)
Depth Matrix Redox Features (inches) Color (moist) % Type ¹ Loc ²	- Texture Remarks
0-7 104R 41 100 / / /	1 mu Reat not insitu material #
9-9 blackaghalt 100	Bollat
9-18 2.54 3/2 100	arco.13 very compacted
18-24+ 10 yk 4 13 to	Grw
<u>2.57 3/2 30 / / / / / / / / / / / / / / / / / / </u>	mixed matrix
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand	Grains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ¹ :
Histosol (A1) Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Red Parent Material (TF2)
Black Histic (A3) ND Loamy Mucky Mineral (F1) (except MLRA	1) Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Depleted Matrix (F3)	31-diantary of hydrophytic vecetation and
Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,
Sandy Mucky Mineral (ST) Beplate Bark Sundse (T7)	unless disturbed or problematic.
Restrictive Layer (if present):	
Туре:	
Depth (inches):	Hydric Soil Present? Yes No
Remarks: Plat in this a rea is from decomposed woodchi not from leaf litter devived from onsite vegetation - n This material is placed on very compected gravel per	ot using A2 or A3. ~ 30 the old d. Typical for this willow patch.
HYDROLOGY	
Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required: check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1) Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
	4A, and 4B)
Saturation (A3) Salt Crust (B11)	Drainage Patterns (B10) Dry-Season Water Table (C2)
Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Oxidized Rhizospheres along Living R	
Algal Mat or Crust (B4) Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5)
Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR	A) Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface (B8)	
Field Observations:	
Surface Water Present? Yes No X Depth (inches): NA	× 1
Water Table Present? Yes No X Depth (inches): MA	
	etland Hydrology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections	s), if available;
Beceive recorded bate (arean gauge, montoring wort acted protoe) previous inspection.	
Remarks:	1.
well drained, raised, representative of willow p	atch.

oject/Site: Humboldt Bay Harbor District-RMMT		City/County	y: Humboldt		Sampling Date:	5/19/2
oplicant/Owner: Humboldt Bay Harbor District				State: CA	Sampling Point:	TP84
vestigator(s): Joseph Saler, Cindy Wilcox				nge:		
Indform (hillslope, terrace, etc.): Reniscula spi	-	Local relie	f (concave,	convex, none):	ncane sk	ope (%): 2-
ubregion (LRR): A, MLRA-4B	Lat: <u>4</u> 0	.81156	6	Long: -124.188	3 400 Date	um: WGS 84
Dil Map Unit Name: 1014-Urban land the	raltic X4	erother	15 450	SOL 1-210NWI class	ification: hon	e
e climatic / hydrologic conditions on the site typical for			11	(If no, explain in	11	
e Vegetation, Soil, or Hydrology				Normal Circumstances		No
e Vegetation, Soil, or Hydrology				eded, explain any ansi		
UMMARY OF FINDINGS – Attach site ma	ip snowing	sampin	ig point i	ocations, transec		
Hydrophytic Vegetation Present? Yes X		ls ti	he Sampled	i Area		* Meets C
Hydric Soil Present? Yes			hin a Wetla		No 📈	_ 1-p defi
Remarks: WETS normal rainfall						
Fly ash basin						
EGETATION – Use scientific names of pl	ants.					
	Absolute		t Indicator	Dominance Test wo	orksheet:	
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Number of Dominant		
Salix hookeriona	40		TAN	That Are OBL, FACV	V, or FAC:	(A
and the second		-	THU	Total Number of Don		(5
3 H				Species Across All S		(B
		= Total C	over	Percent of Dominant That Are OBL, FACV	Species 75	·/- (A
Sapling/Shrub Stratum (Plot size: 5')	20		0.0	Prevalence Index w		/ (A
Rubus armaiacus	_ 30		HAC	Total % Cover o		ly by:
Rubur wainw	_ 10	<i>ν</i>	TACU	OBL species		
		4		FACW species	x 2 =	
				FAC species	x 3 =	
	40	= Total Co		FACU species	x 4 =	
ferb Stratum (Plot size: 5			over	UPL species		
		×		Column Totals:	(A)	(
				Prevalence Ind	ex ≐ B/A =	
3			· <u> </u>	Hydrophytic Vegeta		
·			·	1 - Rapid Test fo		tation
		-	-	2 - Dominance T		
				3 - Prevalence Ir		
·	<u></u>	2		4 - Morphologica	al Adaptations' (Pro Irks or on a separati	
La	1		·	5 - Wetland Non	•	
0					Irophytic Vegetation	¹ (Explain)
1		-		¹ Indicators of hydric :	soil and wetland hyd	frology must
2	/	- Total Co	ver	be present, unless di	isturbed or problem	atic.
Noody Vine Stratum (Plot size: 5')						
				Hydrophytic	\sim	
				Vegetation	Х	
6 Bare Ground in Herb Stratum <u>1007</u>		= Total Co	•	Present?	Yes No	

a.

			STA
Sampling Point:	T	081	Consulting Engine & Geologists, In

Profile Description: (Describe to the de	pth needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist) %	<u>Color (moist)</u> % <u>Type¹</u> <u>Loc²</u>	Texture Remarks
0-15 N2.5/ 100	blecker, but no color chip	Sich fly ash turning into soil
15-27 2.54/2 97	104R416 3 C m	5
· · · · · · · · · · · · · · · · · · ·		
	A=Reduced Matrix, CS=Covered or Coated Sand Gra	
Hydric Soil Indicators: (Applicable to a		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2) Very Shallow Dark Surface (TF12)
Biack Histic (A3) Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1) (except MLRA 1) Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:		Hydric Soil Present? Yes No 🖌
Depth (inches):		Hydric Soil Present? Yes No 🗶
Remarks:		the action of the
Ash brought in & forme	la basin around site. Not i tions.	AIL . NOT Organic matter
the Comen in calle care ha law	Cas	
P TUOVELIN SI THE COVERIAL	tions.	
p provincia si ta contribu	tions.	
HYDROLOGY	tions.	
HYDROLOGY	tions.	
		Secondary Indicators (2 or more required)
HYDROLOGY Wetland Hydrology Indicators:		
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require	ed; check all that apply)	Secondary Indicators (2 or more required)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1)	ed; check all that apply) Water-Stained Leaves (B9) (except	<u>Secondary Indicators (2 or more required)</u> Water-Stained Leaves (B9) (MLRA 1, 2,
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2)	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<u>Secondary Indicators (2 or more required)</u> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3)	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	 <u>Secondary Indicators (2 or more required)</u> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4)	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 (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
HYDROLOGY Wetland Hydrology Indicators: Primary 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)	ed; check all that apply) — Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along Living Roo — Presence of Reduced Iron (C4) — Recent Iron Reduction in Tilled Soils (C6)	 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 (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
HYDROLOGY Wetland Hydrology Indicators: Primary 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)	ed: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A)	 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 (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology Indicators: Primary 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 (ed; check all that aoply)	 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 (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	ed; check all that aoply)	 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 (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	ed; check all that apply)	 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 (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) B7) Other (Explain in Remarks) (B8) 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 (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	ed; check all that apply)	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 (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	ed; check all that apply)	 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 (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	ed; check all that apply)	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 (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	ed; check all that apply)	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 (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	ed; check all that apply)	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 (C9) ts (C3) Secondrphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	ed; check all that apply)	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 (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	ed; check all that apply)	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 (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	ed; check all that apply)	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 (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

oject/Site: Humboldt Bay Harbor District-RMMT	City	/County: Humboldt		Sampling Date: 5 /20 2
oplicant/Owner: Humboldt Bay Harbor District				_ Sampling Point:
vestigator(s): Joseph Saler, Cindy Wilcox	Sec	tion, Township, Ra	nge:	
Indform (hillslope, terrace, etc.): PRINSULA, SPT	Loo	al relief (concave, c	convex, none): <u>Non</u>	L Slope (%): 0~
		12666	Long:124.1	90179 Datum: WGS 84
bil Map Unit Name: 1014-Urban land An-	hvaltic Len	orthents As	50C.OV NWI class	ification: none
e climatic / hydrologic conditions on the site typical fo		1		and the second
e Vegetation, Soil, or Hydrology	significantly dist	urbed? Are "	Normal Circumstances	" present? Yes 📈 No
e Vegetation, Soil, or Hydrology			eded, explain any ans	
UMMARY OF FINDINGS - Attach site m	an chowing ca			
	~ /		ocations, transec	ts, important reatures, e
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes		Is the Sampled	Area	N
Wetland Hydrology Present? Yes		within a Wetlar	nd? Yes_	No <u>X</u>
Remarks: WETS normal rainfall		1 1	())	IN .
TPexcavated within willi	WOAT &	porestative	e at conditions	Hanein
il cicque con milling and	- hick. 1	4.0.0000		Ineciali
EGETATION – Use scientific names of p	lants.			
ree Stratum (Plot size: 30')		ominant Indicator	Dominance Test wo	orksheet:
Salix, hoskeriana	90	FACW	Number of Dominant	
Morella californica		FACW	That Are OBL, FACV	4.4
Canalican			Total Number of Don Species Across All S	
F	100 =1	Total Cover	Percent of Dominant That Are OBL, FACV	Species 50% (A
Sapling/Shrub Stratum (Plot size: 5')	25	1 ENC	Prevalence Index w	
RIDW USIN	- 1		Total % Cover of	f: Multiply by:
			OBL species	x1=
·				x 2 =
				x 3 =
	37 =1	otal Cover	all an all and a second s	x 4 =
lerb Stratum (Plot size 5')		1.5		x5=
				(A) (I
				ex = B/A =
			Hydrophytic Vegeta	
			2 - Dominance T	r Hydrophytic Vegetation
			3 - Prevalence Ir	
			Annual State	I Adaptations ¹ (Provide support
	<u> </u>		data in Rema	rks or on a separate sheet)
- <u></u>	<u> </u>		5 - Wetland Non-	
0				rophytic Vegetation ¹ (Explain)
1,				soil and wetland hydrology musi sturbed or problematic.
Voody Vine Stratum (Plot size: 5')	= T	otal Cover		
Hedera helix	6	FACY	Hydrophytic	
·			Vegetation	\checkmark
6 Bare Ground in Herb Stratum60 *	6 = т	otal Cover	Present?	res No 🔼
Bare Ground in Herb Stratum INV /				

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1

Sampling Point: TP 8 Consulting Enginer

Profile Description: (Describe to the dep	th needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix	edox Features	
(inches) Color (moist) %	Color (moist) % Type Loc ²	Texture Remarks
0-2 7.5YR 2.5/1 100		Pert
2-8 0 YR 2/1 100	/ ///	Sia
8-16+ 10YR 3/2 70		GrSL
10YR 4/6 20		INIXP of fill
104R 4/1 10	<u> </u>	
	· · · · · · · · · · · · · · · · · · ·	
		21 antion: DI = Data Lising M=Matrix
	Reduced Matrix, CS=Covered or Coated Sand Gra L BBo, uplose otherwise poted >	ains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: (Applicable to all		-
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10) Red Parent Material (TF2)
Histic Epipedon (A2)	Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Black Histic (A3)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
— Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:		\mathbf{V}
Depth (inches):		Hydric Soil Present? Yes No
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:		· · · · · · · · · · · · · · · · · · ·
Primary Indicators (minimum of one require		Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along Living Root	
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soils (C6)	
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRR A)	
Inundation Visible on Aerial Imagery (E	 Other (Explain in Remarks) 	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface	(B8)	
Field Observations:	N/A N/A	
Surface Water Present? Yes	No Depth (inches): N/A	
Water Table Present? Yes	No Depth (inches):/A	
Saturation Present? Yes	No X Depth (inches): N/A Wetla	and Hydrology Present? Yes No X
(includes capillary fringe)		March 1997
Describe Recorded Data (stream gauge, m	ionitoring well, aerial photos, previous inspections),	IT available:
Well Jrained fillsoils	. Immediately adj. to rai	ilroadtracks.
1		

oject/Site: Humboldt Bay Harbor District-RMMT	City/County: Hun	nboidt	Sampling Date: 7/29/2
plicant/Owner: Humboldt Bay Harbor District		State: CA	Sampling Point: 1986
vestigator(s): Joseph Saler, Cindy Wilcox	Section, Townshi		
ndform (hillslope, terrace, etc.): Dain (Craft	Sofe Local relief (cond	cave, convex, none): None	Slope (%): 4(
ibregion (LRR): A, MLRA-4B	Lat: 40.807815	Cong: -124.1917	96° Datum: WGS 84
il Map Unit Name: Urban land - Anthra	utic Xerorthentsa	1550. 0-3% NWI classific	cation: none
e climatic / hydrologic conditions on the site typical for	or this time of year? Yes	No X (If no, explain in F	lemarks.)
e Vegetation, Soil, or Hydrology		Are "Normal Circumstances"	
e Vegetation, Soil, or Hydrology		(If needed, explain any answe	
and and the second s			
UMMARY OF FINDINGS – Attach site m	hap showing sampling po	oint locations, transects	, important features, e
lydrophytic Vegetation Present? Yes X	_ No le the Sar	npled Area	12
Hydric Soil Present? Yes		Vetland? Yes	No
Wetland Hydrology Present? Yes Remarks: WETS normal rainfall 11			
to excavated on slope immediately	v above drainage wo	ur within ovcavat	of sommater lead
Nexcauce of style investore	SPP, TP2D for	dirainaderiva y condition	Se die monte inter
EGETATION – Use scientific names of p			
	Absolute Dominant Indic	ator Dominance Test worl	sheet.
ree Stratum (Plot size: 30')	<u>% Cover</u> Species? Stat		
Sallx losi andra	_ <u>98 _ FF</u>	That Are OBL, FACW,	
·		Total Number of Domin	ant 7
		Species Across All Stra	- 1
۵ <u></u>		Percent of Dominant S	necies (-77
	<u> 역</u> ठ = Total Cover	That Are OBL, FACW,	
Rubus Ormeniacus	45 1 54	C Prevalence Index wor	ksheet:
. Kotos othoyottoo		Total % Cover of:	Multiply by:
·		OBL species	x 1 =
			x 2 =
i		FAC species	
	45_= Total Cover		× 4 =
lert Stratum (Plot size: 5')	7 / 11		x 5 =
		<u>ҚЩ</u> Column Totals:	(A) (
		Prevalence Index	: = B/A =
·		Hydrophytic Vegetati	on Indicators:
·			Hydrophytic Vegetation
h			
*			
*			Adaptations ¹ (Provide suppor s or on a separate sheet)
· ·		5 - Wetland Non-V	ascular Plants ¹
0		Problematic Hydro	phytic Vegetation ¹ (Explain)
1			il and wetland hydrology mus
	= Total Cover	be present, unless dist	urbed or problematic.
Voody Vine Stratum (Plot size:)			
		Hydrophytic	
·	<u> </u>	Vegetation Present? Ye	es 🔀 No
& Bare Ground in Herb Stratum 93*	= Total Cover		
	1 11741	· · /-	
litter modult over ~50% a	cover w/~ 43%. b	ae 5015.	
		ciated Stopes.	

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SOIL	100		Sampling Point: 1P 39 Geologists,
Profile Description: (Describe to the	depth needed to document the indicator or confirm	the absence	of indicators.)
Depth Matrix	Redox Features		
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture	Remarks
0-7.5 104R312 101	<u>></u>	15	deposition surface on slope
7.5-13 7.54R 312 10	0	L	burger garbage Surhage
13-20+ 104R 314 10		ads	fill very comparted
15 10 10 11 10		Je m	11 Jourpected
¹ Type: C=Concentration D=Depletion.	RM=Reduced Matrix, CS=Covered or Coated Sand Gr	rains. ² Lo	cation: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to			ors for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)		m Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)		d Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)		ry Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Oth	ner (Explain in Remarks)
Depleted Below Dark Surface (A11		9.	
Thick Dark Surface (A12)	Redox Dark Surface (F6)		ors of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		and hydrology must be present,
Sandy Gleyed Matrix (S4) Restrictive Layer (if present):	Redox Depressions (F8)	unie	ss disturbed or problematic.
Type:			
Depth (inches):		Hydric Sol	Present? Yes No V
HYDROLOGY			
Wetland Hydrology Indicators:			
, , , , , , , , , , , , , , , , , , ,			
Primany Indicators (minimum of one rec	uired: check all that annh/)	Sec	undary Indicators (2 or more required)
Primary Indicators (minimum of one rec			ondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except		Water-Stained Leaves (B9) (MLRA 1, 2,
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, 4A, and 4B)
 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) Drainage Patterns (B10)
 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)
 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 (C9)
 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 Roc 	 	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)
 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 Roc Presence of Reduced Iron (C4) 	 Dots (C3)	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)
 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) 		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
 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) 	 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
 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 	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A y (B7) Other (Explain in Remarks)		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
 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) 	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A y (B7) Other (Explain in Remarks)		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
 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 	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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A y (B7) Other (Explain in Remarks) ince (B8)		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
 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 Surfate 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A y (B7) Other (Explain in Remarks) ice (B8) 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) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
 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 Surfa Field Observations: Surface Water Present? Yes Water Table 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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A y (B7) Other (Explain in Remarks) rece (B8) Depth (inches): NA Depth (inches): NA	bts (C3)	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)
 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 Surfa Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) 	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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A y (B7) Other (Explain in Remarks) ice (B8) Depth (inches): NA No Depth (inches): NA Depth (inches): NA Weth		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)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Aigal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial imager Sparsely Vegetated Concave Surfate Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) 	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 Rod Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A y (B7) Other (Explain in Remarks) rece (B8) Depth (inches): NA Depth (inches): NA		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)
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 Surfate Field Observations: Surface Water Present? Yes Water Table Present? Yes Water Table Present? Yes Gaturation Present? Yes Cincludes capillary fringe) Describe Recorded Data (stream gauge	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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A y (B7) Other (Explain in Remarks) nee (B8) No Depth (inches):A No Depth (inches):A Wet1 e, monitoring well, aerial photos, previous inspections),		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)
 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 Surfations: Surface Water Present? Yes Saturation Present? Yes Saturation Present? Yes Gaturation Present? Yes Gaturation Present? Yes Surface Copillary fringe) Describe Recorded Data (stream gauge 	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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A y (B7) Other (Explain in Remarks) ice (B8) Depth (inches): NA No Depth (inches): NA Depth (inches): NA Weth		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)

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oject/Site: Humboldt Bay Harbor District-RMMT	Ci	ity/County: Humboldt	Sampling Date: 7/29/
plicant/Owner: Humboldt Bay Harbor District	1 ⁿ -		State: CA Sampling Point: TP 8
vestigator(s): Joseph Saler, Cindy Wilcox	S	ection, Township, Ra	
ndform (hillslope, terrace, etc.): Drainage way			convex, none): Slope Slope (%): 35
bregion (LRR): A, MLRA-4B			Long: -124. [91 132" Datum: WGS 84
il Map Unit Name: Urbanland - An-thra	He Xeron	the moto acco	Long Data Data
		1	
e climatic / hydrologic conditions on the site typical for			
e Vegetation, Soil, or Hydrology			Normal Circumstances" present? Yes X No
e Vegetation, Soil, or Hydrology	_ naturally probl	ematic? (If ne	eded, explain any answers in Remarks.)
JMMARY OF FINDINGS – Attach site ma	ap showing s	ampling point le	ocations, transects, important features, et
Average Station Present? Yes	NoX		N
lydric Soil Present? Yes		is the Sampled	
Vetland Hydrology Present? Yes	No X	within a Wetlar	nd? Yes No
emarks: WETS normal rainfall	TPPX	tavoted on k	lone of articipage in drip oneway
upland pit to TP21 (Rm	12) 60	chanyator	lone of anthropogenic drain ageway
		210.14/00044	Cellector
GETATION – Use scientific names of pl	lants.		
ree Stratym (Plot size: 30'	and the second s	Dominant Indicator Species? Status	Dominance Test worksheet:
Morella, Californica	45	IACW	Number of Dominant Species (A)
Salix losiandra	45	V FACW	10
			Total Number of Dominant L Species Across All Strata: (B)
	<u> 90</u> -	Total Cover	Percent of Dominant Species 50% (A/E
Plot size: 5')	25	1 Chall	Prevalence Index worksheet:
Rubus Ursinus	_ 4)	- JACH	Total % Cover of:Multiply by:
			OBL species x 1 =
			FACW species x 2 =
			FAC species x 3 =
-	25	Total Cover	FACU species x 4 =
erb Stratum, (Plot size: 5')	<u> </u>	×	UPL species x 5 =
Polystichum munitum	<u> </u>	1 FACU	Column Totals: (A) (B
1			Prevalence index = B/A =
			Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominance Test is >50%
			3 - Prevalence Index is ≤3.0 [†]
			4 - Morphological Adaptations ¹ (Provide supportin
			data in Remarks or on a separate sheet)
			5 - Wetland Non-Vascular Plants ¹
)			Problematic Hydrophytic Vegetation ¹ (Explain)
		Total O	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
loody Vine Stratum (Plot size:)		Total Cover	
			Hydrophytic
	<u> </u>		Vegetation
Bare Ground in Herb Stratum 95*		Total Cover	Present? Yes No

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Sampling Point: 1997 & Geologists, Inc

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Profile Desc	ription: (Describe to	o the depth n	eeded to docu	ment the i	ndicator	or confirm	the absence	e of indicato	rs.)	
Depth	Matrix			x Feature	S					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-0.5	7.5 YR2.5/2	[0]			_					
0.5-26+	2.5/4/2	99		/	1	1	S			
00 -0	1/10 3/1	1 -				-	6-1	acc. inst	Sta-	
		<u> </u>		-	·		JIL_	all m	NAICHI	
	and the second second									
	· · · · · · · · · · · · · · · · · · ·				12			-		
			_							
1Tuno: C=Cc	oncentration, D=Deple	tion RM=Re	duced Matrix C	S=Covere	d or Coste	d Sand Gra	ains 21	cation: PI =1	Pore Lining, M	/=Matrix
	ndicators: (Applica								lematic Hydr	
Histosol			Sandy Redox		,			m Muck (A10	-	
-	. ,		Stripped Matrix	. ,				d Parent Mat		
Black Hi	hipedon (A2) etic (A3)		Loamy Mucky	• •	1) (except	MLRA 1)			ark Surface (*	TE12)
_	n Sulfide (A4)		Loamy Gleyed					her (Explain í	-	
	Below Dark Surface	(A11)	Depleted Matr	-	-/		_ •		, , ,	
	ark Surface (A12)		Redox Dark S		1		³ Indica	tors of hydror	hytic vegetat	ion and
	lucky Mineral (S1)		Depleted Dark						y must be pre	
	ileyed Matrix (S4)		Redox Depres						or problemat	
	Layer (if present):						1	_		
Type:							192			
			-				Libertain Co.	il Present?	Yes	
	ches):		-				Hyunc 30	ii Present?	Tes	
Remarks:										

Wetland Hydrology Indicators:		x** *			
Primary Indicators (minimum of one required; ch	Secondary Indicators (2 or more required)				
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) 	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) (LR Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) s (C6) FAC-Neutral Test (D5)			
Water Table Present? Yes No Saturation Present? Yes No	X Depth (inches): N/A X Depth (inches): N/A	Wetland Hydrology Present? Yes No			
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Dry, well-drained slope of arthropogenic dainate way for stormwater affection					
	· U _ J	/			

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HYDROLOGY

pject/Site: Humboldt Bay Harbor District-RMMT	City	/County: Humboldt		_ Sampling Date:
plicant/Owner: Humboldt Bay Harbor District			State: CA	Sampling Point: TP 88
estigator(s): Joseph Saler, Cindy Wilcox		tion, Township, Ran		
ndform (hillslope, terrace, etc.): <u>Peninsu</u>	la spit Lor	cal relief (concave, co	onvex, none): None	Slope (%): 5
bregion (LRR); A, MLRA-4B	Lat: 40.8	(07040	Long: ~124,189	535" Dotum: WGS 84
I Map Unit Name: Urbanland - An	Abrothe Kerorthe	mts assoc. 0.	390 slope NWI classifi	cation: none
climatic / hydrologic conditions on the site typ				
Vegetation, Soil, or Hydrolog				present? Yes X No
• Vegetation, Soil, or Hydrolog			ded, explain any answe	
JMMARY OF FINDINGS - Attach s		impling point lo	cations, transects	s, important features, e
	No	In the Complete		
		Is the Sampled A within a Wetland	i? Yes	No
	No			
emarks: WETS normal rainfall	Stormwood con	1evonce text	Ne See TP2	0 for conditions
of Cov ball of	at b	ottam of fee	ture.	
GETATION – Use scientific names				
		ominant Indicator	Dominance Test work	(sheet:
ee Stratum (Plot size: 30')	% Cover Sr	pecies? Status	Number of Dominant S	
Salixhookeriana	62		That Are OBL, FACW,	
			Total Number of Domir	nant 3
			Species Across All Stra	ata: (B
	0		Percent of Dominant S	
pling/Shrub Stratum (Plot size: 5			That Are OBL, FACW,	01 FAC: (A
Rubus ursinus	30	FACU	Prevalence Index wor	
			Total % Cover of:	Multiply_by: x 1 =
				x 2 =
			FAC species	
	<u>30</u> = T			x 4 =
arb Stratum (Plot size: 5')	<u> </u>	oral Cover I		x 5 =
Juneus Aturus	5	FACW	Column Totals:	(A) (i
Briza, Maxima	30	V UPL	Prevalence Index	: = B/A =
Holeus Lanatus	2	- FAC	Hydrophytic Vegetatio	
Vicia sativa	<u> </u>	UPL	1 - Rapid Test for I	Hydrophytic Vegetation
Raphonus Softwas		UPL	2 - Dominance Tes	st is >50%
symphystrichum chilose		FAC	3 - Prevalence Inde	ex is ≤3.0 ¹
			4 - Morphological A	Adaptations ¹ (Provide support s or on a separate sheet)
			5 - Wetland Non-V	
·				phytic Vegetatión ¹ (Explain)
				il and wetland hydrology must
~	43 = T	otal Cover 25	be present, unless dist	urbed or problematic.
oody Vine Stratum (Plot size:)	6.0	4	
	<u> </u>		Hydrophytic	X
			Vegetation	s No X
		1.1.0	Present? Ye	S NO / N
Bare Ground in Herb Stratum	= To	otal Cover	Present? Ye	

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SOIL

Sampling Point: TP 88

ting Engines

Profile Description: (Describe to the dep	oth needed to document the indicate	or or contirm	the absence of	moreators.)
Depth Matrix	Redox Features	Loc ²	Toxture	Remarks
(inches) Color (moist) %	Color (moist) % Type		Texture	Remains
0-3 2.5y 3/2 100			12-	
3-27 54 4/3 00		$\leq \leq$.	2	
12.0 P 1.0 P	A local in	W		
	and the second second		<i>i</i>	
		·		
	· ·	·		
<u> </u>				2
	19-14 I			
		ated Sand Cra	21 conti	on: PL=Pore Lining, M=Matrix.
¹ Type: C=Concentration, D=Depletion, RM Hydric Soil Indicators: (Applicable to al		ated Sand Gia	Indicators	for Problematic Hydric Soils ³ :
		34		luck (A10)
Histosol (A1)	Sandy Redox (S5) Stripped Matrix (S6)			arent Material (TF2)
Histic Epipedon (A2) Black Histic (A3)	Loamy Mucky Mineral (F1) (exc	ent MI RA 1)		hallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	oprincipality		Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)			,
Thick Dark Surface (A12)	Redox Dark Surface (F6)		³ Indicators	of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		wetland	hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)		uniess d	listurbed or problematic.
Restrictive Layer (if present):				
Туре:	1.14			
Depth (inches):			Hydric Soil Pr	esent? Yes No
Remarks:				
Uniform 3 and.		+ t		•
Uniform 3 and.		р. С		3*
Uniform 3 and.		ь. . с ¹		
Uniform 3 and. HYDROLOGY	ed; check all that apply)	e.		ary Indicators (2 or more required)
HYDROLOGY Wetland Hydrology Indicators:	ed; check all that apply) Water-Stained Leaves (B9) (except	Wai	er-Stained Leaves (89) (MLRA 1, 2,
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require			Wai	
Uniform Sandi HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1)	Water-Stained Leaves (B9		Wai	er-Stained Leaves (89) (MLRA 1, 2,
Writer M Sands. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9 MLRA 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebrates (B13)	3) 3)	Wai Dra Dry	er-Stained Leaves (B9) (MLRA 1, 2, 5A, and 4B) inage Patterns (B10) -Season Water Table (C2)
High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9 MLRA 1, 2, 4A, and 4E Salt Crust (B11)	3) 3)	Wai Dra Dry Sat	er-Stained Leaves (B9) (MLRA 1, 2, \$A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9)
Writer M Sands. 	Water-Stained Leaves (B9 MLRA 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebrates (B13)	3) 3) 1)	Wai Dra Dry Sat	er-Stained Leaves (B9) (MLRA 1, 2, 5A, and 4B) inage Patterns (B10) -Season Water Table (C2)
Victor M Sands. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	 Water-Stained Leaves (B9 MLRA 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C)) 1) Ding Living Roo	— Wai — Dra — Dry — Sat ts (C3) — Geo	er-Stained Leaves (B9) (MLRA 1, 2, iA, and 4B) inage Patterns (B10) Season Water Table (C2) uration Visible on Aerial Imagery (C9) pmorphic Position (D2) illow Aquitard (D3)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Leaves (B9 MLRA 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebrates (B13 Hydrogen Sulfide Odor (C Oxidized Rhizospheres ak)) 1) ong Living Roo (C4)	— Wai — Dra — Dry — Sat ts (C3) — Geo — Sha) — FAC	er-Stained Leaves (B9) (MLRA 1, 2, iA, and 4B) inage Patterns (B10) Season Water Table (C2) uration Visible on Aerial Imagery (C9) pmorphic Position (D2) illow Aquitard (D3) C-Neutral Test (D5)
	Water-Stained Leaves (B9 MLRA 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebrates (B13 Hydrogen Sulfide Odor (C Oxidized Rhizospheres ald Presence of Reduced Iron)) 1) ong Living Roo (C4) Filled Soils (C6	Wai Dra Dry Sat ts (C3) Sat Sha Sha FAC	er-Stained Leaves (B9) (MLRA 1, 2, 3A, and 4B) inage Patterns (B10) Season Water Table (C2) uration Visible on Aerial Imagery (C9) omorphic Position (D2) illow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
	Water-Stained Leaves (B9 MLRA 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebrates (B13 Hydrogen Sulfide Odor (C Oxidized Rhizospheres ald Presence of Reduced Iron Recent Iron Reduction in 1 Stunted or Stressed Plants B7) Other (Explain in Remarks)) 1) ong Living Roo (C4) Filled Soils (C6 s (D1) (LRR A)	Wai Dra Dry Sat ts (C3) Sat Sha Sha FAC	er-Stained Leaves (B9) (MLRA 1, 2, iA, and 4B) inage Patterns (B10) Season Water Table (C2) uration Visible on Aerial Imagery (C9) pmorphic Position (D2) illow Aquitard (D3) C-Neutral Test (D5)
	Water-Stained Leaves (B9 MLRA 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebrates (B13 Hydrogen Sulfide Odor (C Oxidized Rhizospheres ald Presence of Reduced Iron Recent Iron Reduction in 1 Stunted or Stressed Plants B7) Other (Explain in Remarks)) 1) ong Living Roo (C4) Filled Soils (C6 s (D1) (LRR A)	Wai Dra Dry Sat ts (C3) Sat Sha Sha FAC	er-Stained Leaves (B9) (MLRA 1, 2, 3A, and 4B) inage Patterns (B10) Season Water Table (C2) uration Visible on Aerial Imagery (C9) omorphic Position (D2) illow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology Indicators: Primary 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:	Water-Stained Leaves (B9 MLRA 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebrates (B13 Hydrogen Sulfide Odor (C Oxidized Rhizospheres ald Presence of Reduced Iron Recent Iron Reduction in 1 Stunted or Stressed Plants B7) Other (Explain in Remarks (B8))) 1) ong Living Roo (C4) Filled Soils (C6 s (D1) (LRR A)	Wai Dra Dry Sat ts (C3) Sat Sha Sha FAC	er-Stained Leaves (B9) (MLRA 1, 2, 3A, and 4B) inage Patterns (B10) Season Water Table (C2) uration Visible on Aerial Imagery (C9) omorphic Position (D2) illow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
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Site Photographs

5



Photograph 1: An example of a Palustrine Forested Wetland- Wetland 05, located near TP31. Photograph taken on May 5, 2022.



Photograph 2: An example of a Palustrine Forested Wetland- Wetland 06, located near TP37. Photograph taken on May 5, 2022.





Photograph 3: An example of a Palustrine Forested Wetland- Wetland 09, located near TP43. Photograph taken on May 12, 2022.



Photograph 4: An example of a Palustrine Scrub-Shrub Wetland- Wetland 07, located near TP39. Photograph taken May 5, 2022.





Photograph 5: An example of a Palustrine Scrub-Shrub Wetland- Wetland 08, located near TP41. Photograph taken May 5, 2022.



Photograph 6: An example of a Palustrine Scrub-Shrub Wetland- Wetland 11, located near TP45. Photograph taken May 12, 2022.





Photograph 7: An example of a Palustrine Scrub-Shrub Wetland- Wetland 14, located near TP53. Photograph taken May 12, 2022.



Photograph 8: An example of a Palustrine Scrub-Shrub Wetland- Wetland 21, located near TP78. Photograph taken May 19, 2022.





Photograph 9: An example of a Palustrine Emergent Wetland- Wetland 12, located near TP57. Photograph taken May 13, 2022.



Photograph 10: An example of a Palustrine Emergent Wetland- Wetland 13, located near TP47. Photograph taken May 12, 2022.





Photograph 11: An example of an Estuarine Wetland- Wetland 03, located near TP23. Photograph taken April 29, 2022.



Photograph 12: An example of an Estuarine Wetland- Wetland 03, located near TP23. Photograph taken July 6, 2022.





Photograph 13: An example of an Estuarine Wetland- Wetland 01, with Pt. Reyes Bird's Beak in the foreground. Photograph taken July 7, 2022.



Photograph 14: An example of an Estuarine Wetland- Wetland 01, located above the MHHW in the northern portion of the study area. Photograph taken July 6, 2022.





Photograph 15: An example of an Estuarine Wetland- Wetland 23, located near TP81. Photograph taken May 19, 2022.



Photograph 16: Artificial aquatic feature at TP64 and TP65- an abandoned concrete vault and foundation that has developed into a three-parameter wetland.





Photograph 17: Artificial aquatic feature- abandoned drying shed foundations beginning to incorporate three parameters. Photograph taken May 28, 2020.



Photograph 18: Artificial aquatic feature- abandoned drying shed foundations beginning to incorporate three parameters. Photograph taken May 28, 2020.





Photograph 19: Artificial aquatic feature- stormwater collection system at TP86. Culvert drains impervious surfaces formerly used for chip storage. Photograph taken on June 28, 2022.



Photograph 20: Artificial aquatic feature- stormwater collection system near TP87. One of several stormwater culverts that drain into this feature. Photograph taken on June 29, 2022.





Photograph 21: Artificial aquatic featurestormwater collection system near TP88. Photograph taken on August 2, 2022.



Photograph 22: Artificial aquatic featurestormwater collection system near TP88, near one of weirs before the entrance to Humboldt Bay. Photograph taken on August 2, 2022.





Photograph 23: An example of Estuarine Intertidal Shoreline, looking west toward Wetland 15. Note narrow band of estuarine wetland between the MHHW and upland conditions. Photograph taken April 5, 2022.



Photograph 24: An example of Estuarine Intertidal Shoreline, east of Wetland 03, looking across Humboldt Bay towards Eureka. Photograph taken July 7, 2022.





Photograph 25: An example of Estuarine Intertidal Shoreline with saltmarsh vegetation within armored shoreline, east of TP71, looking north. Note MHHW demarked roughly by the wrack line between the saltmarsh vegetation and upland ruderal vegetation. Photograph taken July 8, 2022.



Photograph 26: An example of Estuarine Intertidal Shoreline, with armored shoreline east of TP71, looking east towards Eureka. Photograph taken August 2, 2022.





Photograph 27: Typical vegetation type in OF1, OF2, OF3, and OF4, adjacent to Palustrine Forested or Scrub-shrub Wetlands. Taken near TP34 on May 4, 2022.



Photograph 28: Typical vegetation type in OF1, OF2, OF3, and OF4, adjacent to Palustrine Forested or Scrub-shrub Wetlands. Taken near TP61 on May 13, 2022.





Photograph 29: Typical vegetation type in OF5, OF6, OF7, and OF8, adjacent to Palustrine Emergent Wetlands. Taken near TP49 on May 12, 2022.



Photograph 30: Typical vegetation type in OF5, OF6, OF7, and OF8, adjacent to Palustrine Emergent/Palustrine Scrub-shrub Wetlands. Taken near TP53 on May 12, 2022.





Photograph 31: Typical vegetation type in OF5, OF6, OF7, and OF8, adjacent to Palustrine Emergent Wetlands. Taken near TP51 on May 12, 2022.



Photograph 32: Wetland OF9 in swale between the artificial aquatic features (drying racks) and an upland berm. Shovel is at upland TP68, taken on May 14, 2022.





Photograph 33: Typical vegetation for OF11, a one-parameter feature (hydrophytic vegetation) adjacent to a Palustrine Scrub-shrub Wetland, taken near TP69 on May 17, 2022.



Photograph 34: Typical vegetation for OF12, a two-parameter feature (hydrophytic vegetation and hydrology), taken near TP71 on May 17, 2022.





Photograph 35: Typical vegetation for OF14, a two-parameter feature (hydrophytic vegetation and hydrology), taken at TP75 on May 18, 2022.





Photograph 36: Typical vegetation for OF15, a two-parameter feature taken near TP76 on May 18, 2022.



Photograph 37: Typical vegetation for OF16, two-parameter feature (hydrophytic vegetation and hydrology), taken near TP77 on May 18, 2022.





Photograph 38: Typical vegetation for OF17, a one-parameter hydric soil feature, taken near TP78 on May 19, 2022.



Photograph 39: Typical vegetation for OF18, a two-parameter feature (hydrophytic vegetation and hydrology), taken near TP84 on May 19, 2022. Note black fly ash on soil surface.



Plant List

6

Scientific Name	Common Name	Family	Native?
	Trees		
Acacia melanoxylon	blackwood acacia	Fabaceae	¹
Alnus rubra	red alder	Betulaceae	Y ²
Cordyline australis	cabbage tree	Laxmanniaceae	N ³
Eucalyptus globulus	bluegum	Myrtaceae	I
Hesperocyparis macrocarpa	Monterey cypress	Cuppressaceae	N
llex aquifolium	English holly	Aquifoliaceae	I
Malus fusca	Oregon apple	Rosaceae	Y
Malus pumila	wild apple	Rosaceae	N
Picea sitchensis	Sitka spruce	Pinaceae	Y
Pinus contorta var. <i>contorta</i>	beach pine	Pinaceae	Y
Pinus radiata	Monterey pine	Pinaceae	N
Populus trichocarpa	black cottonwood	Salicaceae	Y
Prunus cerasifera	wild plum	Rosaceae	
Prunus persica	wild peach	Rosaceae	N
Pseudotsuga menziesii var.	· · ·		
menziesii	Douglas fir	Pinaceae	Y
Salix hookeriana	coast willow	Salicaceae	Y
<i>Salix lasiandra</i> var. <i>lasiandra</i>	pacific willow	Salicaceae	Y
Salix scouleriana	Scouler's willow	Salicaceae	Y
Salix sitchensis	Sitka willow	Salicaceae	Y
	Shrubs		
Arctostaphylos uva-ursi	bear mat	Ericaceae	Y
<i>Baccharis pilularis</i> ssp.			
consanguinea	coyote brush	Asteraceae	Y
<i>Ceanothus prostrates</i> var.			
prostratus	mahala mat	Rhamnaceae	Y
Cistus salvifolius	rock rose	Cistaceae	N
Cotoneaster franchetii	Franchet's cotoneaster	Asteraceae	I
Cotoneaster lacteus	milk flower cotoneaster	Asteraceae	I
Cotoneaster simonsii	Simon's cotoneaster	Asteraceae	N
Crataegus monogyna	English hawthorn	Rosaceae	I
Cydonia oblonga	quince	Rosaceae	N
Cytisus scoparius	Scotch broom	Fabaceae	I
Elaeagnus ebbingei	lemon leaf	Elaeagnaceae	N
Escallonia rubra	red escallonia	Grossulariaceae	N
<i>Frangula purshiana</i> ssp. <i>purshiana</i>	cascara	Rhamnaceae	Y
Fuchsia magellanica	hardy fuchsia	Onagraceae	N
Garrya elliptica	coast silk tassel	Garryaceae	Y
Genista monspessulana	French broom	Fabaceae	
Juniperus chinensis	Chinese juniper	Cupressaceae	N
, Lavandula stoechas	French lavender	Lamiaceae	N
Ligustrum ovalifolium	California privet	Oleaceae	N
Lonicera involucrata var. ledebourii	coast twinberry	Caprifoliaceae	Y
Lupinus arboreus	yellow bush lupine	Fabaceae	N
Morella californica	California wax myrtle	Myricaceae	Y
Ribes menziesii var. menziesii	canyon gooseberry	Grossulariaceae	Y
Ribes sanguineum var. glutinosum	flowering currant	Grossulariaceae	Y



Scientific Name	Common Name	Family	Native?
Rosa rubiginosa	sweetbriar	Rosaceae	N
Rosa sp.			Y
Rubus armeniacus	Himalayan berry	Rosaceae	1
Rubus ursinus	California blackberry	Rosaceae	Y
Vaccinium ovatum	evergreen huckleberry	Ericaceae	Y
	Ferns and Allies		
A <i>thyrium filix-femina</i> var.			
cyclosorum	western lady fern	Woodsiaceae	Y
Dryopteris arguta	California wood fern	Dryopteridaceae	Y
Equisetum arvense	common horsetail	Equisetaceae	Y
Equisetum laevigatum	smooth scouring rush	Equisetaceae	Y
<i>Equisetum telmateia</i> ssp. <i>braunii</i>	giant horsetail	Equisetaceae	Y
<i>Pentagramma triangularis</i> ssp.	8.0		
triangularis	gold back fern	Pteridaceae	Y
Polypodium californicum	California polypody	Polypodiaceae	Y
Polypodium glycyrrhiza	licorice fern	Polypodiaceae	Y
Polystichum munitum	sword fern	Dryopteridaceae	Y
<i>Pteridium aquilinum</i> var.		J i i i i i i i i i i	
pubescens	bracken fern	Pteridaceae	Y
Sceptridium multifidum	leather grape fern	Ophioglossaceae	Y
, Woodwardia fimbriata	western chain fern	Blechnaceae	Y
	Sedges and Rushes	5	
Carex harfordii	Harford's sedge	Cyperaceae	Y
Carex leptopoda	slender foot sedge	Cyperaceae	Y
Carex obnupta	slough sedge	Cyperaceae	Y
Carex pansa	sand dune sedge	Cyperaceae	Y
Cyperus eragrostis	tall flatsedge	Cyperaceae	Y
Eleocharis macrostachya	spikerush	Cyperaceae	Y
Isolepis cernua	low clubrush	Cyperaceae	Y
<i>Juncus balticus</i> ssp. <i>ater</i>	Baltic rush	Juncaceae	Y
luncus bolanderi	Bolander's rush	Juncaceae	Y
luncus breweri	Brewer's rush	Juncaceae	Y
Juncus bufonius var. bufonius	toad rush	Juncaceae	Y
luncus capitatus	leafy bracted dwarfrush	Juncaceae	 N
<i>Juncus effusus</i> ssp. <i>pacificus</i>	common rush	Juncaceae	Y
luncus ensifolius	sword leaf rush	Juncaceae	Y
luncus hesperius	coast rush	Juncaceae	Y
luncus lescurii	dune rush	Juncaceae	 У
luncus patens	spreading rush	Juncaceae	Y
luncus patens	spreading rush	Julicaceae	1
phaeocephalus	brown headed rush	Juncaceae	Y
luncus xiphioides	iris-leaved rush	Juncaceae	Y
Luzula subsessilis	Pacific woodrush	Juncaceae	Y
Schoenoplactus americanus	chairmakers bulrush	Cyperaceae	Y
Schoenoplectus pungens var.			· · ·
longispicatus	three square	Cyperaceae	Y
Scirpus microcarpus	panicled bulrush	Cyperaceae	Y
	Grasses		



Scientific Name	RMMT Biological Assessment, Common Name	Family	Native?
Agrostis stolonifera	creeping bentgrass	Poaceae	
Aira caryophyllea	silver hairgrass	Poaceae	N
Alopecurus geniculatus	marsh foxtail	Poaceae	Y
Ammophila arenaria	European beachgrass	Poaceae	
Anthoxanthum odoratum	sweet vernal grass	Poaceae	
Avena barbata	wild oat	Poaceae	
Briza maxima	large quaking grass	Poaceae	
Briza minor	small quaking grass	Poaceae	N
Bromus diandrus	ripgut brome	Poaceae	
Bromus hordeaceus	soft chess	Poaceae	
Bromus racemosus	smooth brome	Poaceae	N
Bromus sitchensis var. carinatus	California brome	Poaceae	Y
Cortaderia jubata	jubata grass	Poaceae	
Cynodon dactylon	bermuda grass	Poaceae	
Cynosurus echinatus	dogtail grass	Poaceae	
Dactylis glomerata	orchard grass	Poaceae	
<i>Deschampsia caespitosa</i> ssp.			· ·
holciformis	coast tufted hairgrass	Poaceae	Y
Digitaria sanguinalis	hairy crabgrass	Poaceae	N
Distichlis spicant	salt grass	Poaceae	Y
<i>Elymus mollis</i> ssp. <i>mollis</i>	American dune grass	Poaceae	Y
Festuca arundinacea	tall fescue	Poaceae	I
Festuca bromoides	brome fescue	Poaceae	N
Festuca idahoensis	Idaho fescue	Poaceae	Y
Festuca myuros	six-weeks grass	Poaceae	
Festuca perennis	Italian wildrye	Poaceae	
<i>Festuca rubra</i> ssp. <i>pruinosa</i>	red fescue	Poaceae	Y
<i>Gastridium phleoides</i>	nit grass	Poaceae	N
Glyceria declinata	waxy mannagrass	Poaceae	
Holcus lanatus	velvet grass	Poaceae	
<i>Hordeum brachyantherum</i> ssp.			
brachyantherum	meadow barley	Poaceae	Y
Hordeum marinum var.	,		
gussoneanum	barley	Poaceae	N
Hordeum murinum ssp. murinum	wall barley	Poaceae	N
Panicum acuminatum	panic grass	Poaceae	Y
Parapholis incurva	sicklegrass	Poaceae	N
Phalaris arundinacea	canary reedgrass	Poaceae	1
Poa annua	annual bluegrass	Poaceae	N
Poa confinus	beach bluegrass	Poaceae	Y
Poa trivialis	rough bluegrass	Poaceae	N
Polypogon monspeliensis	annual beardgrass	Poaceae	1
Rytidoperma penicillatum	hairy oatgrass	Poaceae	I
Spartina densiflora	dense-flowered cordgrass	Poaceae	1
	Herbs		
Abronia latifolia	yellow sand verbena	Nyctaginaceae	Y
Achillea millefolium	yarrow	Asteraceae	Y



Scientific Name	RMMT Biological Assessment, S Common Name	Family	Native?
Acmispon americanus var.			
americanus	American bird's foot trefoil	Fabaceae	Y
Acmispon parviflorus	hill lotus	Fabaceae	Y
Agapanthus praecox	African lily	Liliaceae	N
Alisma lanceolatum	lanceleaf water plantain	Alismataceae	N
Alisma triviale	northern water plantain	Alismataceae	Y
Allium triquetrum	white flowered onion	Alliaceae	N
Ambrosia chamissonis	silver beachweed	Asteraceae	Y
Anaphalis margaritacea	pearly everlasting	Asteraceae	Y
Angelica lucida	seacoast angelica	Apiaceae	Y
Anthemis cotula	dog fennel	Asteraceae	I
Aphanes occidentalis	lady's mantle	Rosaceae	Y
Arctotheca prostrata	creeping capeweed	Asteraceae	· ·
Armeria maritima ssp. californica	sea thrift	Plumbaginaceae	
Artemisia douglasii	California mugwort	Asteraceae	і Ү
-			Y
Artemisia pycnocephala	beach sagewort	Asteraceae	
Atriplex prostrata	fat-hen	Chenopodiaceae	N
Baccharis glutinosa	saltmarsh baccharis	Asteraceae	Y
Barbarea vulgaris	yellow rocket	Brassicaceae	N
Bellardia trixago	Mediterranean linseed	Orobanchaceae	
Bellis perennis	English daisy	Brassicaceae	N
Bergenia crassifolia	elephant ear saxifrage	Saxifragaceae	N
Brassica nigra	black mustard	Brassicaceae	
Brassica rapa	common mustard	Brassicaceae	
Cakile maritima	sea rocket	Brassicaceae	
Calandrinia menziesii	red maids	Montiaceae	Y
<i>Callitriche heterophylla</i> var.			
heterophylla	starwort	Plantaginaceae	Y
Calystegia silvatica	false bindweed	Convolvulaceae	N
Calystegia soldanella	beach morning glory	Convolvulaceae	Y
<i>Camissoniopsis cheiranthifolia</i> ssp.			
cheiranthifolia	beach evening primrose	Onagraceae	Y
Capsella bursa-pastoris	shepherd's purse	Brassicaceae	N
Cardamine oligosperma	bittercress	Brassicaceae	Y
Cardionema ramosissimum	sand mat	Caryophyllaceae	Y
<i>Carduus pycnocephalus</i> ssp.			
pycnocephalus	Italian thistle	Asteraceae	
Carpobrotus chilensis	seafig	Aizoaceae	I
Carpobrotus edulis	iceplant	Aizoaceae	
<i>Castilleja ambigua</i> var.			
humboldtiensis	Humboldt Bay owl's clover	Orobanchaceae	Y
Castilleja attenuata	narrowleaf owl's clover	Orobanchaceae	Y
Centranthus ruber	red valerian	Valerianaceae	N
<i>Cerastium fontanum</i> ssp. <i>vulgare</i>	small mouse-ear	Caryophyllaceae	N
Chloropyron maritimum	Point Reyes bird's-beak	Orobanchaceae	Y
Cirsium arvense	Canada thistle	Asteraceae	
Cirsium vulgare	bull thistle	Asteraceae	
<i>Claytonia parviflora</i> ssp. <i>parviflora</i>	narrowleaf miner's lettuce	Monitaceae	Y
<i>Claytonia perfoliata</i> ssp. <i>perfoliata</i>	miner's lettuce	Montiaceae	Y



 $P:\ Eureka\ 2022\ 022054-Humboldt-RMMT\ 400-TA1-4-Studies\ Rpts\ TA1-Drafts\ Appendix\ Data\ Appendix\ 6-Plant\ List\ Plants\ Observed.\ dox$

Scientific Name	Common Name	Family	Native?
Claytonia rubra	redstem spring beauty	Montiaceae	Y
Conium maculatum	poison hemlock	Apiaceae	I
<i>Corethrogyne filaginifolia</i> var.			
californica	California sandaster	Asteraceae	Y
Cotula coronopifolia	brass buttons	Asteraceae	I
Crassula connata	sand pygmy weed	Crassulaceae	Y
Crocosmia x crocosmiiflora	montbretia	Liliaceae	I
Cryptantha leiocarpa	coast cryptantha	Boraginaceae	Y
<i>Cuscuta pacifica</i> var. <i>pacifica</i>	dodder	Convolvulaceae	Y
Daucus carota	Queen Anne's lace	Apiaceae	N
Daucus pusillus	American wild carrot	Apiaceae	Y
Dipsacus fullonum	teasel	Dipsacaceae	1
Epilobium brachycarpum	annual fireweed	Onagraceae	Y
<i>Epilobium ciliatum</i> ssp. <i>ciliatum</i>	willowherb	Onagraceae	Y
Epilobium densiflorum	willow herb	Onagraceae	Y
Epipactis gigantea	stream orchid	Orchidaceae	Y
Erigeron canadensis	Canada horseweed	Asteraceae	Y
Eriogonum latifolium	coast buckwheat	Polygonaceae	Y
Erodium cicutarium	coast heron's bill	Geraniaceae	1
Erodium moschatum	white stem filaree	Geraniaceae	N
Eschscholzia californica	California poppy	Papaveraceae	Y
Euphorbia oblongata	eggleaf spurge	Euphorbiaceae	N
Euphorbia peplus	petty spurge	Euphorbiaceae	N
Foeniculum vulgare	fennel	Apiaceae	- I
Fragaria chiloensis	beach strawberry	Rosaceae	Y
Fumaria officinalis	fumitory	Papaveraceae	N
Galium aparine	cleaver plant	Rubiaceae	Y
Galium parisiense	wall bedstraw	Rubiaceae	N
Gamochaeta ustulata	featherweed	Asteraceae	Y
Geranium dissectum	cutleaf geranium	Geraniaceae	I
Geranium molle	cranes bill geranium	Geraniaceae	N
Geranium robertianum	Robert's geranium	Geraniaceae	N
<i>Grindelia stricta</i> var. <i>stricta</i>	coastal gumplant	Asteraceae	Y
Helminthotheca echioides	bristly ox-tongue	Asteraceae	1
Hirschfeldia incana	hoary mustard	Brassicaceae	1
Hyacinthoides non-scripta	blue bells	Asparagaceae	N
<i>Hypericum perforatum</i> ssp.			
perforatum	Klamathweed	Hypericaceae	I I
Hypochaeris glabra	smooth cat's ear	Asteraceae	I
Hypochaeris radicata	hairy cat's-ear	Asteraceae	I
laumea carnosa	marsh jaumea	Asteraceae	Y
Lamium purpureum	purple dead nettle	Lamiaceae	N
Lapsana communis	common nipplewort	Asteraceae	N
Lathyrus latifolius	sweet pea	Fabaceae	N
Lathyrus littoralis	beach pea	Fabaceae	Y
Lemna minor	smaller duckweed	Araceae	Y
Leontodon saxatilis	hawkbit	Asteraceae	N
Lepidium didymum	lesser swinecress	Brassicaceae	N



Scientific Name	RMMT Biological Assessment, S Common Name	Family	Native?
Leucanthemum vulgare	oxeye daisy	Asteraceae	
Limonium californicum	marsh rosemary	Plumbaginaceae	Y
Linum bienne	flax	Linaceae	N
Lobularia maritima	sweet alyssum	Brassicaceae	
Lotus corniculatus	bird's foot trefoil	Fabaceae	N
Lupinus bicolor	annual lupine	Fabaceae	Y
Lupinus rivularis	riverbank lupine	Fabaceae	Y
Lysimachia arvensis	scarlet pimpernel	Myrsinaceae	N
Lythrum hyssopifolia	Hyssop loosestrife	Lythraceae	
Malva nicaeensis	bull mallow	Malvaceae	N
Malva parviflora	cheeseweed mallow	Malvaceae	N
Malva pseudolavatera	Cretan mallow	Malvaceae	N
Matricaria discoidea	pineapple weed	Asteraceae	Y
Medicago polymorpha	bur clover	Fabaceae	
Melilotus albus	white sweet clover	Fabaceae	 N
Melilotus indicus	annual yellow sweetclover	Fabaceae	N
Mentha pulegium	pennyroyal	Lamiaceae	
Modiola caroliniana	Carolina bristle mallow	Malvaceae	N
Myosotis discolor	forget-me-not	Boraginaceae	N
Nasturtium officinale	watercress	Brassicaceae	Y
Navarretia squarrosa	skunkweed	Polemoniaceae	Y
Nuttallanthus canadensis	toad flax	Scrophulariaceae	Y
<i>Oenanthe sarmentosa</i>	water parsley	Apiaceae	Y
Oenothera glazioviana	red sepal primrose	Onagraceae	N
Oxalis corniculata	creeping woodsorrel	Oxalidaceae	N
Oxalis pes-caprae	Bermuda buttercup	Oxalidaceae	1
Oxalis purpurea	purple wood sorrel	Oxalidaceae	N
Parentucellia viscosa	yellow glandweed	Orobanchaceae	
Persicaria hydropiper	common smartweed	Polygonaceae	N
Petrorhagia dubia	windmill pink	Caryophyllaceae	N
<i>Piperia elegans</i> ssp. <i>elegans</i>	elegant piperia	Orchidaceae	Y
Plantago coronopus	buck's horn plantain	Plantaginaceae	N
Plantago elongata	coastal plantain	Plantaginaceae	Y
Plantago erecta	California plantain	Plantaginaceae	Y
Plantago lanceolata	English plantain	Plantaginaceae	1
Plantago major	common plantain	Plantaginaceae	N
Plantago maritima	maritime plantain	Plantaginaceae	Y
Platystemon californicus	cream cups	Papaveraceae	Y
Plectritis congesta ssp. congesta	sea blush	Valeriancaeae	Y
<i>Polycarpon tetraphyllum</i> var.			
tetraphyllum	Four-leaved allseed	Caryophyllaceae	N
<i>Polygonum aviculare</i> ssp. <i>aviculare</i>	prostrate knotweed	Polygonaceae	N
Polygonum paronychia	dune knotweed	Polygonaceae	Y
<i>Potentilla anserina</i> ssp. <i>pacifica</i>	silverweed	Rosaceae	Y
Pseudognaphalium luteoalbum	Jersey cudweed	Asteraceae	N
Ranunculus muricatus	buttercup	Ranunculaceae	N
Ranunculus repens	creeping buttercup	Ranunculaceae	
, Raphanus sativus	wild radish	Brassicaceae	



Scientific Name	Common Name	Family	Native?
Rumex acetosella	sheep sorrel	Polygonaceae	
Rumex conglomeratus	clustered dock	Polygonaceae	N
Rumex crispus	curly dock	Polygonaceae	
Rumex salicifolius	willow dock	Polygonaceae	Y
Sagina apetala	dwarf pearlwort	Caryophyllaceae	N
Sagina decumbens	western pearlwort	Caryophyllaceae	Y
Sagina procumbens	pearlwort	Caryophyllaceae	Y
Salicornia depressa	pickleweed	Chenopodiaceae	Y
, Salicornia pacifica	pickleweed	Chenopodiaceae	Y
Sanicula crassicaulis	Pacific sanicle	Apiaceae	Y
Scrophularia californica	bee plant	Scrophulariaceae	Y
Sedum album	white stonecrop	Crassulaceae	N
Senecio glomeratus	cutleaf burnweed	Asteraceae	
Senecio minimus	coast burnweed	Asteraceae	N
Senecio vulgaris	common groundsel	Asteraceae	N
Silene gallica	common catchfly	Caryophyllaceae	N
Silybum marianum	blessed milk thistle	Asteraceae	Y
Solanum americanum	common nightshade	Solanaceae	Y
Solanum aviculare	New Zealand nightshade	Solanaceae	
Solidago spathulata	dune goldenrod	Asteraceae	Y
Sonchus asper	prickly sow thistle	Asteraceae	N
Sonchus oleraceus	sow thistle	Asteraceae	N
Sparaxis tricolor	wandflower	Iridaceae	N
Spergula arvensis	corn spurry	Caryophyllaceae	N
Spergula marina	saltmarsh sand spurry	Caryophyllaceae	Y
Spergularia rubra	pink sand-spurry	Caryophyllaceae	N
Spiranthes romanzoffiana	hooded ladies tresses	Orchidaceae	Y
Stachys arvensis	field hedgenettle	Lamiaceae	N
Stachys rigida var. rigida	rough hedge nettle	Lamiaceae	Y
Symphyotrichum chilense	pacific aster	Asteraceae	Y
Tanacetum bipinnatum	dune tansy	Asteraceae	Y
Tanacetum parthenium	feverfew	Asteraceae	N
<i>Taraxacum officinale</i> ssp. <i>officinale</i>	dandelion	Asteraceae	N
Trifolium arvense	rabbit foot clover	Fabaceae	N
Trifolium dubium	shamrock clover	Fabaceae	N
Trifolium fragiferum	strawberry clover	Fabaceae	N
Trifolium glomeratum	clustered clover	Fabaceae	N
Trifolium repens	white clover	Fabaceae	N
Trifolium subterraneum	subterranean clover	Fabaceae	N
Triglochin maritima	seaside arrow grass	Juncaginaceae	Y
<i>Triphysaria eriantha</i> ssp. <i>eriantha</i>	butter n' eggs	Orobanchaceae	Y
Tropaeolum majus	garden nasturtium	Tropaeolaceae	N
Typha latifolia	cattail	Typhaceae	Y
Verbascum blattaria	moth mullein	Scrophulariaceae	N
Veronica arvensis	speedwell	Plantaginaceae	N
<i>Vicia hirsuta</i>	hairy vetch	Fabaceae	N
<i>Vicia sativa</i> ssp. <i>sativa</i>	spring vetch	Fabaceae	N
Vicia villosa ssp. villosa	hairy vetch	Fabaceae	N



Scientific Name	Common Name	Family	Native?
Vinca major	large vinca	Apocynaceae	I
Zantedeschia aethiopica	calla lily	Araceae	
Zeltnera muehlenbergii	Muhlenberg's centaury	Gentianaceae	Y
Zostera marina	eelgrass	Zosteraceae	Y
	Vines		
Hedera helix	English ivy	Araliaceae	1
Lonicera hispidula	pink honeysuckle	Caprifoliaceae	Y
Toxicodendron diversilobum	poison oak	Anacardiaceae	Y
	Lichens, Bryophytes, Fu	ngi	
Alsia californica	California alsia	Leucodontaceae	Y
A <i>nthocerotophyta</i> sp.	hornwort species	Anthocerotophyta	Y?
Antitrichia californica	California antitrichia moss	Leucodontaceae	Y
Armellea mellea	honey fungus	Physalacriaceae	Y
Bryum argenteum	silver bryum	Bryaceae	Y
Ceratodon purpureus	purple shank moss	Ditrichaceae	Y
Cetraria chlorophylla	foliose lichen	Parmeliaceae	Y
Cladonia cariosa	split peg lichen	Cladoniaceae	Y
Cladonia chlorophaea	mealy pixie cup lichen	Cladoniaceae	Y
Cladonia concinna	slender ladder lichen	Cladoniaceae	Y
Cladonia coniocraea	powderhorn lichen	Cladoniaceae	Y
Cladonia portentosa	coastal reindeer lichen	Cladoniaceae	Y
Cladonia verruculosa	warty reindeer lichen	Cladoniaceae	Y
Frullania nisquallensis	millipede liverwort	Frulaniaceae	Y
Gemmabryum caespiticum	gemmabryum moss	Bryaceae	Y
Homalothecium arenarium	golden curl moss	Brachytheciaceae	Y
Hypogymnia heterophylla	tube lichen	Parmeliaceae	Y
lsothecium cristatum	cristate moss	Lembophyllaceae	Y
Kindbergia oregana	feather moss	Brachytheciaceae	Y
Orthotrichum consimile	orthotrichum moss	Orthotrichaceae	Y
Parmotrema perlatum	black stoneflower	Parmeliaceae	Y
Physconia perisidiosa	appressed foliose lichen	Phyciaceae	Y
Polytrichum commune	common haircap moss	Polytrichaceae	Y
Porella navicularis	tree ruffle liverwort	Porellaceae	Y
Ramalina menziesii	lace lichen	Ramalinaceae	Y
Tortula muralis	sidewalk moss	Pottiaceae	Y
Usnea cornuta	beard lichen	Parmeliaceae	Y
346 Species			51% Native



Wetland Datapoint Descriptions

7

Datapoint ID	Туре	Associated Feature	Latitude (Datum-WGS 84)	Longitude (Datum-WGS 84)
TP1	Upland	Upland	40.821879°	-124.176923°
TP2	Upland	Upland	40.821107°	-124.177186°
TP3	Upland	Upland	40.821389°	-124.177534°
TP4	Upland	Upland	40.820092°	-124.178753°
TP5	Wetland	Wetland 14	40.819471°	-124.180605°
TP6	Coastal Feature	OF 07	40.818893°	-124.180425°
TP7	Wetland	Wetland 16	40.818233°	-124.185136°
TP8	Upland	Upland	40.817859°	-124.185512°
TP9	Artificial Aquatic Feature	Drying Shed Human Induced Feature	40.817383°	-124.185802°
TP10	Artificial Aquatic Feature	Drying Shed Human Induced Feature	40.817066°	-124.185555°
TP11	Artificial Aquatic Feature	Drying Shed Human Induced Feature	40.816984°	-124.185024°
TP12	Upland	Upland	40.816128°	-124.183728°
TP13	Wetland	Wetland 17	40.815435°	-124.185233°
TP14	Coastal Feature	OF 12	40.814764°	-124.184870°
TP15	Wetland	Wetland 19	40.814260°	-124.185571°
TP16	Wetland	Upland (conditions changed)	40.815168°	-124.186805°
TP17	Wetland	Wetland 20	40.814242°	-124.187113°
TP18	Wetland	Wetland 21	40.814034°	-124.187908°
TP19	Upland	Upland	40.811108°	-124.187255°
TP20	Artificial Aquatic Feature	Stormwater Feature	40.807064°	-124.189517°



Datapoint ID	Туре	Associated Feature	Latitude (Datum-WGS 84)	Longitude (Datum-WGS 84)
TP21	Artificial Aquatic Feature	Stormwater Feature	40.806915°	-124.191134°
TP22	Artificial Aquatic Feature	Stormwater Feature	40.807821°	-124.191760°
TP23	Wetland	Wetland 03	40.823699°	-124.174337°
TP24	Upland	Wetland 03	40.823726°	-124.174348°
TP25	Upland	Upland	40.823340°	-124.175161°
TP26	Wetland	Wetland 02	40.824108°	-124.174208°
TP27	Upland	Wetland 02	40.824121°	-124.174162°
TP28	Upland	Upland	40.822388°	-124.175811°
TP29	Upland	Upland	40.822197°	-124.176220°
TP30	Upland	Upland	40.821591°	-124.177492°
TP31	Wetland	Wetland 05	40.820944°	-124.177503°
TP32	Wetland	Wetland 05	40.820907°	-124.177639°
TP33	Upland	Wetland 05	40.820793°	-124.177880°
TP34	Upland	OF 01	40.821082°	-124.177511°
TP35	Upland	Upland	40.821749°	-124.177533°
TP36	Upland	Upland	40.821711°	-124.177883°
TP37	Wetland	Wetland 06	40.821384°	-124.179684°
TP38	Upland	Wetland 06	40.821421°	-124.179723°
TP39	Wetland	Wetland 07	40.820668°	-124.178999°
TP40	Upland	Wetland 07	40.820650°	-124.179053°
TP41	Wetland	Wetland 08	40.820351°	-124.178848°
TP42	Upland	Wetland 08	40.820367°	-124.178882°
TP43	Wetland	Wetland 09	40.819992°	-124.178802°
TP44	Upland	Wetland 09	40.819952°	-124.178839°
TP45	Wetland	Wetland 11	40.819634°	-124.179067°
TP46	Upland	Wetland 11	40.819624°	-124.179131°



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Datapoint ID	Туре	Associated Feature	Latitude (Datum-WGS 84)	Longitude (Datum-WGS 84)
TP47	Wetland	Wetland 13	40.819178°	-124.179663°
TP48	Upland	Wetland 13	40.819159°	-124.179666°
TP49	Coastal Feature	OF 07	40.818947°	-124.180274°
TP50	Upland	OF 07	40.818988°	-124.180302°
TP51	Coastal Feature	OF 08	40.819118°	-124.180744°
TP52	Upland	OF 08	40.819156°	-124.180682°
TP53	Wetland	Wetland 14	40.819489°	-124.180644°
TP54	Coastal Feature	OF 06	40.819499°	-124.180599°
TP55	Upland	Wetland 14/OF 06	40.819469°	-124.180532°
TP56	Upland	Upland	40.819379°	-124.180675°
TP57	Wetland	Wetland 12	40.819395°	-124.179674°
TP58	Coastal Feature	OF 05	40.819346°	-124.179781°
TP59	Upland	Wetland 12/OF 05	40.819364°	-124.179829°
TP60	Wetland	Wetland 10	40.819883°	-124.179390°
TP61	Upland	Wetland 10	40.819930°	-124.179396°
TP62	Upland	Upland	40.819122°	-124.182003°
TP63	Upland	Upland	40.819585°	-124.182949°
TP64	Artificial Aquatic Feature	Concrete Vault Human Induced Feature	40.819481°	-124.183652°
TP65	Upland	Concrete Vault Human Induced Feature	40.819480°	-124.183669°
TP66	Upland	Wetland 16	40.818237°	-124.185179°
TP67	Coastal Feature	OF 09	40.817353°	-124.185955°
TP68	Upland	OF 09	40.817366°	-124.185976°
TP69	Upland	Wetland 17	40.815338°	-124.185182°



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Datapoint ID	Туре	Associated Feature	Latitude (Datum-WGS 84)	Longitude (Datum-WGS 84)
TP70	Upland	Upland	40.814670°	-124.185678°
TP71	Upland	OF 12	40.814903°	-124.185132°
TP72	Wetland	Wetland 18	40.814851°	-124.185277°
TP73	Coastal Feature	OF 12	40.814826°	-124.185185°
TP74	Upland	Wetland 19/ OF 13	40.814275°	-124.185450°
TP75	Coastal Feature	OF 14	40.814273°	-124.187155°
TP76	Coastal Feature	OF 15	40.814272°	-124.187374°
TP77	Coastal Feature	OF 16	40.814261°	-124.187729°
TP78	Coastal Feature	OF 17	40.813996°	-124.188143°
TP79	Wetland	Wetland 22	40.813892°	-124.188202°
TP80	Upland	Wetland 22	40.813864°	-124.188213°
TP81	Wetland	Wetland 23	40.811574°	-124.187973°
TP82	Upland	Wetland 23	40.811570°	-124.187969°
TP83	Upland	Upland	40.811343°	-124.187553°
TP84	Coastal Feature	OF 18	40.811566°	-124.188400°
TP85	Upland	Upland	40.812666°	-124.190178°
TP 86	Upland	Stormwater Feature	40.807810°	-124.191782°
TP 87	Upland	Stormwater Feature	40.806902°	-124.191117°
TP 88	Upland	Stormwater Feature	40.807035°	-124.189522°





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