

Federal Aquatic Resources Delineation Humboldt Bay Offshore Wind Heavy Lift Marine Terminal New Navy Base Road Eureka, California

Prepared for:

Moffatt & Nichol

Prepared by:



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Summary of Results

The purpose of this report is to document the presence and extent of waters of the U.S. within the study area of the Humboldt Bay Offshore Wind Heavy Lift Marine Terminal (project). Delineations were conducted in accordance with U.S. Army Corps of Engineers (USACE) methodology to determine potentially jurisdictional resources under the USACE for the purposes of Section 404 of the Clean Water Act.

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, 211.664 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.

In summary, 6.561 acres of aquatic resources were documented in the study area; this includes 1.363 acres of wetlands, of which 0.991 acres is potentially jurisdictional (adjacent to a Traditional Navigable Waterway [TNW]) and 0.372 acres are potential non-jurisdictional wetlands (not adjacent to a TNW). The remaining 5.198 acres are non-wetland waters (intertidal waters below the Mean Higher High Water [MHHW]) that potentially meet the criteria of waters of the U.S. (Table 1 and Appendix 1).

Table 1. Potentially Jurisdictional and Non-Jurisdictional Waters of the U.S. Summary

Aquatic Resource Type	Total Wetland Area (acres)	Potentially Jurisdictional Wetlands (acres)	Potentially Non-Jurisdictional Wetlands (acres)	Length (linear feet)		
		Wetlands				
Palustrine Forested Wetland	0.187	0.077	0.110	N/A		
Palustrine Scrub- Shrub Wetland	0.297	0.048	0.249	N/A		
Palustrine Emergent Wetland	0.066	0.052	0.013	N/A		
Estuarine Wetland	0.813	0.813	0	N/A		
Wetlands Subtotal 1.363		0.991ª	0.372	N/A		
Non-Wetland Waters						
Estuarine Intertidal	5.198	5.198	0	12,272		
Total Aquatic Resources	6.561	6.189ª	0.372	12,272		

^a Acreage calculations are based on square footage of each feature and may not add up due to rounding error.



In addition to the aquatic resource features summarized in the above table, there are other aquatic features that are also likely non-jurisdictional that are mapped within the study area. These features are human-induced with three wetland parameters that have formed within abandoned concrete foundations and stormwater conveyance infrastructure that was constructed to capture or convey stormwater from industrial infrastructure. These artificial human-induced features account for 0.552 acres of the study area, and are not included in the acreages shown in Table 1.

Roadside ditches, culverts, and culvert outfalls not having three wetland parameters were not mapped or given an area calculation.



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Abbreviations and Acronyms

Terms of Measurement

TermDefinition°CCelsius°FFahrenheitin/hrinches per hour

mmhos/cm millimhos per centimeter

sq ft square feet

Additional Terms

Term Definition AAD Alpha-alpha dipyridyl

CFR Code of Federal Regulations

CWA Clean Water Act

DBH Diameter at breast height

DI Drainage inlet

EPA U.S. Environmental Protection Agency

FAC facultative plant species

FACU facultative-upland plant species FACW facultative-wetland plant species

GPS Global positioning System

Ksat most limiting layer to transmit water

MF Manufacturing/Fabrication
MHHW Mean Higher High Water
MLLW Mean Lower Low Water

NADM North American Drought Monitor
NDMC National Drought Mitigation Center
NHD National Hydrography Dataset
NHD National Hydrography Dataset

NOAA National Oceanic and Atmospheric Administration

NRCS Natural Resources Conservation Service

NWI National Wetlands Inventory
O&M Operation and Maintenance
OBL obligate-wetland plant species
OHWM ordinary high water mark
RPW Relatively Permanent Waters
S&I Staging and Integration

TNW Traditional Navigable Waterway

TP test pit

UPL upland plant species

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

USGS U.S. Geological Survey

WETS Climate Analysis for Wetlands Tables WMVC Western Mountains, Valley, and Coast

WTD Wind Turbine Device



1.0 Introduction

SHN has prepared this Federal Aquatic Resources Delineation for the Humboldt Bay Harbor, Recreation, and Conservation District to document the presence and extent of potentially jurisdictional waters of the U.S. within the study area of the Humboldt Bay Offshore Wind Heavy Lift Marine Terminal (Project) in Eureka, California (Figure 1; Appendix 2). 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 in Appendix 2). It is less than one 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; Appendix 2). 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 CA 255 from U.S. Highway 101 in Eureka from the south or Arcata from the north.

1.2 Study Area

The study area encompasses 211.664 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 nonnative, 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. A 25.879-acre 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.

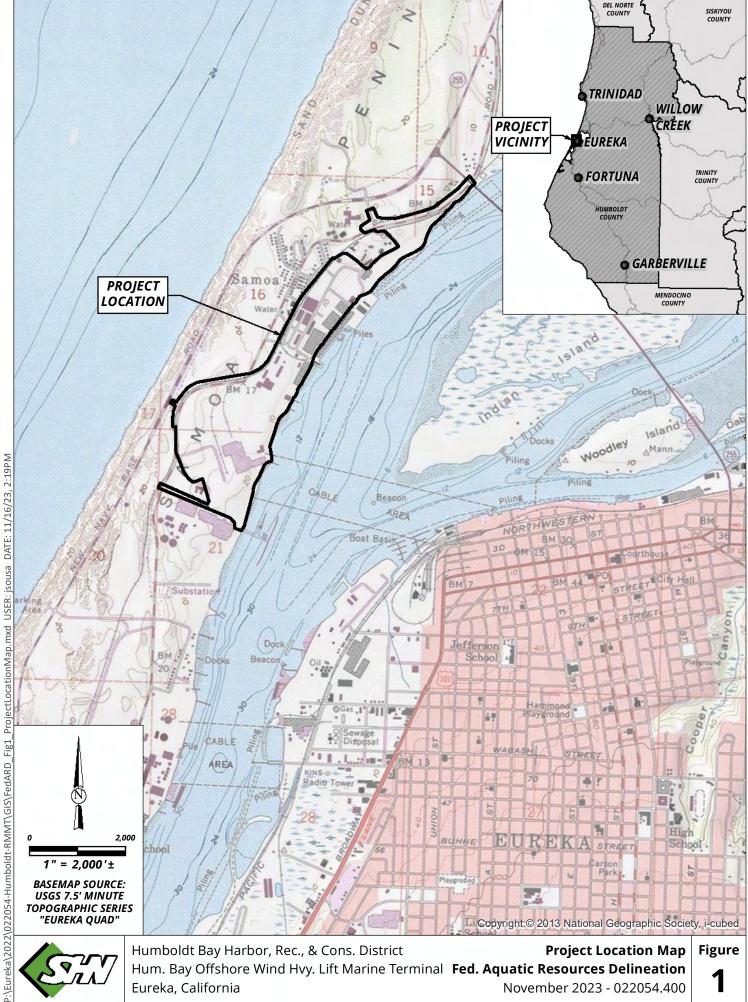
2.0 Project Description

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.

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.





Hum. Bay Offshore Wind Hvy. Lift Marine Terminal Fed. Aquatic Resources Delineation Eureka, California November 2023 - 022054.400

- 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 below:

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.
 - 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.
 - Stormwater systems.
- 4. Cut, fill, and site regrading in anticipation of sea level rise to obtain final ground elevations between +13 to +17 feet NAVD88 (such as: +12.66 to +16.66 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 (sq ft) 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' 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 approximate 6-acre wooden dock at Terminal I and No Name Dock.
- 2. Construct up to three wharfs totaling a maximum of approximately 2,500' 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' Mean Low Lower Water (MLLW) for deep draft cargo vessel access and WTD construction activities.
- 4. Dredge a sinking basin to approximately -60' MLLW to accommodate semi-submersible vessel operations for device float off.

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' 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 (USACE, 2010)
- U.S. Army Corps of Engineers Regulatory Guidance Letter No. 05-05 (USACE, 2005)
- The National Wetland Plant List: 2020 Wetland Ratings (USACE, 2020)
- Updated Map and Drawing Standards for the South Pacific Regulatory Program (USACE, 2016)



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 Definitions

Certain terms used throughout this report have specific meanings that relate to the wetland delineation process, as specified by case law, including the revised definition of waters under the conformity rule following the U.S. Supreme Court decision Sackett v. Environmental Protection Agency (2023), the 1987 Manual (Environmental Laboratory, 1987), and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: WMVC Region* (Version 2.0; USACE, 2010). These terms are described briefly below.

3.3.1 Waters of the U.S.

- (a) *Waters of the United States* means (as defined in 33 Code of Federal Regulations (CFR) Chapter II § 328.3):
 - (1) Waters which are:
 - (i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
 - (ii) The territorial seas; or
 - (iii) Interstate waters;
 - (2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;
 - (3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing, or continuously flowing bodies of water;
 - (4) Wetlands adjacent to the following waters:
 - (i) Waters identified in paragraph (a)(1) of this section; or
 - (ii) Relatively permanent, standing, or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;
 - (5) Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing, or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section.
- (b) The following are not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(2) through (5) of this section:



- (1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;
- (2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the U.S. Environmental Protection Agency (EPA);
- (3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;
- (4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;
- (5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;
- (6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;
- (7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and
- (8) Swales and erosional features (for example, gullies and small washes) characterized by low volume, infrequent, or short duration flow.
- (c) In this section, the following definitions apply:
 - (1) **Wetlands** means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.
 - (2) Adjacent means having a continuous surface connection.
 - (3) *High tide line* means the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.
 - (4) *Ordinary high water mark* means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.



(5) **Tidal waters** means those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by hydrologic, wind, or other effects.

3.3.1.1 Wetlands

In summary, for regulatory purposes, wetlands are defined as:

"Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (33 CFR Chapter II § 328.3)."

In order to qualify as jurisdictional waters of the U.S., a wetland must be "adjacent". The regulations define "adjacent" as follows:

"The term adjacent means "having a continuous surface connection" (33 CFR § 328.3(c) and 40 CFR §120.2)."

In addition to being adjacent, wetlands under USACE jurisdiction must contain all three wetland parameters—hydrophytic vegetation, hydric soils, and wetland hydrology. Wetlands with all three parameters are referred to as three-parameter wetlands. These wetlands must exhibit the following field indicators:

• A prevalence of hydrophytic vegetation (such as, "water loving" species with "obligate," "facultative wetland," or "facultative" wetland indicator status [USACE, 2020]);

Plant wetland indicator statuses from The National Wetland Plant List: 2020 Update of Wetland Ratings (USACE, 2020) are abbreviated as follows:

- OBL = Obligate wetland plants. Almost always occur in wetlands.
- FACW = Facultative wetland plants. Usually occur in wetlands but may occur in non-wetlands.
- FAC = Facultative plants. Occur in wetlands and non-wetlands.
- FACU = Facultative upland plants. Usually occur in non-wetlands but may occur in wetlands.
- UPL = Obligate upland plants. Almost never occur in wetlands.

For species not listed in the National Wetland Plant List, two dashes (--) are used in the text and tables of the report to indicate their absence in the list. These species can be assumed to be upland species. In order to complete calculations, the wetland determination data forms use UPL for these species.

- Hydric soils (such as, hydric soils listed by the NRCS and unclassified soils that are formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part; USDA-NRCS, 2018); and
- Wetland hydrology (evidence that episodes of inundation or soil saturation lasting more than a
 few days during the growing season have occurred repeatedly over a period of years and that the
 timing, duration, and frequency of wet conditions have been sufficient to produce a characteristic
 wetland plant community and hydric soil morphology).



In the WMVC Region, growing season dates are determined through onsite observations of the following indicators of biological activity in a given year: (1) aboveground growth and development of vascular plants, and/or (2) soil temperatures. Season dates may be approximated by using tables available from NRCS National Water and Climate Center (National Oceanic and Atmospheric Administration [NOAA], 2022) to determine the median dates of 28 degrees Fahrenheit (°F; -2.2 degree Celsius [°C]) air temperatures in spring and fall based on long-term records gathered at the nearest appropriate National Weather Service meteorological station (USDA-NRCS, 2022b). In coastal northern California, the growing season is year-round as a result of the maritime moderation of temperature.

3.3.1.2 Non-Wetland Waters of the U.S.

Non-wetland waters of the U.S., as described in this report, refer to ephemeral, intermittent, or perennial waterways and other waterbodies (lakes, ponds, and impoundments of jurisdictional waters) with a defined bed and bank, such as drainages, ditches, creeks, rivers, and lakes. This approximately translates to the bank-to-bank portion of waterbodies, up to the OHWM.

In 33 CFR Section 328.3 and 40 CFR Section 120.2, the OHWM for non-tidal rivers is defined as the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. The OHWM for a stream is usually determined through an examination of the recent physical evidence of surface flow in the stream channel. In dry land fluvial systems typical of desert areas, the most common physical characteristics indicating the OHWM for a channel usually include, but are not limited to, a clear, natural scour line impressed on the bank, recent bank erosion, destruction of native terrestrial vegetation, and the presence of litter and debris (USACE, 2014).

Non-wetland waters as described in this report also refer to intertidal areas including estuarine intertidal areas influenced by the ebb and flow of tidal waters. This approximately translates to the portion of intertidal areas below the MHHW.

In 33 CFR Section 328.3 and 40 CFR Section 120.2, tidal waters is defined as waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by hydrologic, wind, or other effects. The high tide line is the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide.

Non-wetland waters of the U.S. may lack hydrophytic vegetation or evidence of hydric soils.

3.3.2 Relatively Permanent Waters

Relatively permanent waters (RPWs) are standing or continuously flowing year-round or continuously during a certain time of the year bodies of water "forming geographic features" that are described as "streams, oceans, rivers, or lakes" and "wetlands with a continuous surface connection" to a relatively permanent body of water connected to a TNW (USEPA, 2021b).



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 federal guidelines to identify and map potential wetlands and waters of the U.S. and determine the extent of regulatory jurisdiction for USACE.

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 federal guidelines to identify and map potential wetlands and waters of the U.S. and determine the extent of regulatory jurisdiction for USACE.

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), and these areas were mapped as Estuarine Intertidal non-wetland waters. All potential waters of the U.S. were classified using the Cowardin classification system (Federal Geographic Data Committee, 2013).

3.4.2 MHHW Delineation Field Methods

The MHHW contour for this site calculated in NAD83 (NAVD88; 2011) as 6.65', as available from the Datums for 9418817, Samoa, Humboldt Bay CA (NOAA, 2023) within the vicinity of the project location. A contour for this elevation was generated from LiDAR elevation data (2019 survey, City of Eureka), 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 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 addition 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 long-term 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.

Table 2. Survey Personnel and Dates

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		

3.4.5 Delineation Field work Limitations

Wetland delineation fieldwork was conducted within a normal rainfall period during an extended period of drought for the 2022 delineation period, and during drier than normal conditions during the 2020 wetland delineation fieldwork, requiring additional scrutiny for hydrology. Additional methods to address the drought conditions are described in Section 3.4.2. 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, and remnants of 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, 2022). The climate in the study area is characterized by mild year-round temperatures and long wet winters. The mean maximum temperature is 59.2°F (15.1°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.

According to the WETS 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.

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

Rainfall Condition **Product** Month **WETS Condition** <30% > 70% received Weight Value Value (in.) April 28-May 15, 2020 Test Pit Excavation April 2020 Dry 2.45 4.35 2.05 1 3 3 March 2020 2 2 Dry 3.92 6.86 3.69 1 February 2020 6.84 0.60 1 Dry 3.34 **Total** Drier than Normala 6 May 16-June 4, 2020 Test Pit Excavation May 2020 Wet 0.72 2.02 4.73 3 3 9 April 2020 2.45 4.35 2.05 2 2 Dry 1 March 2020 Dry 3.92 6.86 3.69 1 1 1 Total Normala 12 August 5-13, 2020 Test Pit Excavation July 2020 Dry 0.05 0.18 0.03 1 3 3 1 2 2 June 2020 0.22 0.81 0.20 Dry May 2020 4.73 Wet 0.72 2.02 3 3 **Total** Drier than Normala 8 April 29-May 15, 2022 Test Pit Excavation April 2022 Wet 2.45 4.35 3 9 4.57 3 2 2 March 2022 3.92 6.86 1.49 1 Dry February 2022 3.34 6.84 0.51 1 Dry Total Normala 12 May 16-May 20, 2022 Test Pit Excavation May 2022 Normal 0.72 2.02 6 1.36 2 3 April 2022 Wet 2.45 4.35 4.57 3 2 6 6.86 1 1 March 2022 Dry 3.92 1.49 1 Normala 13 Total



Table 3. WETS Rainfall Data, 2020 and 2022, Hydrological Analysis

Fureka Humboldt County California

Month WETS Condition		<30%	> 70%	Rainfall received (in.)	Condition Value	Weight	Product Value
	July 29- <i>A</i>	lugust 2,	2022 Test	Pit Excavat	tion		
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	Normala	17

^a A sum of 6-9 prior to site investigation is considered a drier 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 two 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 3.4.2.

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, and 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 with 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 a continuous surface connection to Traditional Navigable Waterways (TNW). Additionally, anthropogenic disturbance has led



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

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

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

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 10.818 acres (Table 4).

Table 4. National Wetland Inventory Habitat Present in the Study Area

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 5.

Table 5. Soil Map Units in the Study Area

-	ible 3. Son wap offics in the study Area							
Soil Map Unit	Map Symbol	Textural Class	Drainage Class	Landform	Minor Components	Hydric Criteria	% of Study Area	
155	Samoa- Clambeach complex, 0-50 percent slopes	Sand	Samoa: Somewhat excessively drained Clambeach: very poorly drained	Dunes	Oxyaquic udipsamments, unvegetated	Samoa: No Clambeach: Yes	1.5	
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	

Source: USDA-NRCS, 2022b

4.8 Vegetation

The study area has a long industrial history which 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. Landcover composition including acreages and the percent cover of the study area occupied by each is listed below. Note the while the study area included 211.664 acres, a 25.879-acre area was not accessible; therefore, the percentages are out of a 185.785-acre area.

- Asphalt and pavement (mostly unvegetated): 109.59 acres (59.0%)
- Ruderal/non-native dominated: 48.99 acres (26.4%)
- Non-native grassland: 12.18 acres (6.6%)
- Coastal dune willow-Sitka willow thickets: 5.30 acres (2.9%)
- Intertidal (unvegetated): 4.52 acres (2.4%)
- Wax myrtle scrub: 1.81 acres (1%)
- Mid-high elevation salt marsh: 1.26 acres (0.7%)
- Beach pine forest: 0.62 acres (0.3%)
- Pacific willow groves: 0.55 acres (0.3%)
- Dune mat: 0.44 acres (0.2%)
- Low elevation salt marsh: 0.37 acres (0.2%)
- Pickleweed mats: 0.12 acres (<0.1%)
- Sand dune sedge marsh: 0.02 acres (<0.1%)
- Pacific silverweed marsh: 0.01 acres (<0.1%)

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-dominated species-dominated areas characterize 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 lupine, 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, except where the canopy is more dense. 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. The sand dune sedge marsh occurs in deflation plain wetlands west of the study area, and the portion of sand dune sedge marsh within the study area represents a small piece of the sand dune sedge marsh that occurs outside of 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 and it occurs in freshwater deflation plain wetlands.

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 non-native 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 section describes potential jurisdictional and non-jurisdictional aquatic resources as defined in section 404 of the Clean Water Act (CWA) that were delineated within the study area. Potential waters of the U.S. and potentially non-jurisdictional features 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 wetlands and other waters delineated within the study area, as well as a description of aquatic potentially non-jurisdictional features and non-aquatic features occurring in the study area. These aquatic results and the mapped extent of delineated features depicted on the figures in Appendices 1 and 2 are subject to verification by the USACE San Francisco District.

5.1 Wetlands

A total of 59,383 sq ft (1.363 acres) of three-parameter wetlands occur in the study area (Appendices 1 and 2), of which 43,163 sq ft (0.991 acres) are adjacent to a TNW and are potentially jurisdictional waters. An additional 16,220 sq ft (0.372 acres) are not adjacent to a TNW and are potentially non-jurisdictional waters. Three Palustrine Wetland types occur in the study area: Palustrine Forested Wetlands, Palustrine Scrub-shrub Wetlands, and Palustrine Emergent Wetlands. In addition, Estuarine Wetlands occur within the study area associated with Humboldt Bay. A total of 24 wetlands occur in the study area. Of these, four are Palustrine Forested Wetlands, 12 are Palustrine Scrub-shrub Wetlands, three are Palustrine Emergent Wetlands, and five are Estuarine Wetlands (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 acres) of Palustrine Forested Wetlands occur in the study area, of which 3,350 square feet (0.077 acres) are potentially jurisdictional waters adjacent to a TNW, and 4,800 sq ft (0.110 acres) are potentially non-jurisdictional waters and are not adjacent to a TNW (Appendices 1 and 2). Palustrine Forested Wetlands 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 acres) of Palustrine Scrub-shrub Wetlands occur in the study area, of which 2,097 square feet (0.048 acres) are potentially jurisdictional waters adjacent to a



TNW and 2,097 sq ft (0.048 acres) are potentially non-jurisdictional waters and are not adjacent to a TNW (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 acres) of Palustrine Emergent Wetlands occur in the study area, of which 2,284 square feet (0.052 acres) are potentially jurisdictional waters adjacent to a TNW, and 2,284 sq ft (0.0.052 acres) are potentially non-jurisdictional waters are not adjacent to a TNW (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 and all are potentially jurisdictional waters adjacent to a TNW. 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.

5.1.1 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 Rubusdominated 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 the Palustrine Forested Wetlands as a result of the dense shade. Herbaceous cover



within Palustrine Forested Wetlands averaged 11-percent cover; conversely, average bare soil (including litter) 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 wide 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.

Two of the four Palustrine Forested Wetlands within the study area are considered potentially non-jurisdictional isolated features, and two are potentially jurisdictional wetlands with a continuous surface connection to Humboldt Bay, a TNW.

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 is potentially jurisdictional as it has a continuous surface connection 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 is potentially non-jurisdictional because it 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 is potentially jurisdictional and 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 is potentially non-jurisdictional because it 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.

5.1.2 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 is 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 wide 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). Geomorphic positions allowing for water to collect and pool, and the persistent saturation is likely a primary driver 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.

Eight of the 12 Palustrine Scrub-shrub Wetlands within the study area are considered potentially non-jurisdictional isolated features, while the remaining four Palustrine Scrub-shrub Wetlands are potentially jurisdictional with a continuous surface connection to Humboldt Bay, a TNW.

All Palustrine Scrub-shrub Wetlands are human-induced or manipulated 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 CA 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 is potentially jurisdictional and has direct connectivity 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 CA255 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 is potentially jurisdictional and has direct connectivity 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 highwater 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 occur within the wetland and conditions have naturalized; however, the existing wetland 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 is potentially jurisdictional and 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 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 extremely compacted soils that prevent infiltration. The slight depression and an elevated DI allow water to pool before it drains into the DI. The surrounding area is elevated, level, and well drained, and wetland conditions are restricted to the lowest elevations of the depression adjacent to the DI. 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 naturalized 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 is potentially jurisdictional and 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 is potentially non-jurisdictional 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 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 is potentially non-jurisdictional with no direct aboveground connectivity to any wetlands or other waters and is elevated over three 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 is potentially non-jurisdictional 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, 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 human-induced 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 is potentially non-jurisdictional with 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 are all potentially non-jurisdictional and 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 humaninduced 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, is potentially non-jurisdictional with 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.



5.1.3 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.

Two of the three Palustrine Emergent Wetlands within the study area are potentially non-jurisdictional isolated features, and Wetland 17 is potentially jurisdictional with a continuous surface connection to Humboldt Bay, a TNW.

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 is potentially non-jurisdictional with no direct aboveground connectivity to a TNW, but it 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 is potentially non-jurisdictional with no direct aboveground connectivity to a TNW, but it 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 is potentially jurisdictional and 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 which 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.

5.1.4 Estuarine Wetlands

There are five Estuarine Wetlands (Wetlands 01, 03, 15, 18, and 23; Appendices 1 and 2) representing over half of the wetland area present within the study area. These wetlands vary in size from 56 square feet to 23,957 square feet and all are potentially jurisdictional and 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. All field data with details for each Estuarine Wetland is included in Appendix 4. Photographs 11 through 16 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), 2cm of Muck (A10), 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 five 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 five Estuarine Wetlands within the study area are potentially jurisdictional and have a continuous surface connection to Humboldt Bay, a TNW. 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 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 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 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 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 directly connected 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 nonnative 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 and TP73 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 six 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.

5.2 Non-Wetland Waters

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

5.2.1 Estuarine Intertidal Shoreline

These include Estuarine Intertidal Shoreline 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 11 and 17 through 19 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 feet and a total of 14,971 square feet (0.344 acres) 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 5.1.4. 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 sediment.



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. 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.

5.3 Potentially Non-Jurisdictional Artificial Human-Induced Features

Several artificial aquatic features occur in the study area that are not believed to be jurisdictional features. 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. Potentially non-jurisdictional artificial human-induced 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 (Table 6; Appendix 5, Photos 20 through 26). The following paragraphs describe these features and include a rational for why they are not likely jurisdictional.



Table 6. Potentially Non-jurisdictional Artificial Human-induced Wetlands and Other Waters in the Study Area

the study			
Aquatic Resource Name	Cowardin Type ^a	Central Location (latitude/ longitude) Datum WGS 84	Area (square feet)
Concrete Vault and Foundation	PFO1Erx0n	40.819480°, -124.183669°	667
Drying shed Foundations	PEM1Brx0n	40.816284°, -124.186059°	15,398
Stormwater Collection System	None	40.806902°, -124.191117°	7,991
	24,055 (0.552 acres)		

^a Cowardin Codes:

PFO1Es0n Palustrine forested broad-leaved deciduous seasonally flooded/saturated artificial substrate

excavated freshwater wetland with mineral soils

PEM1Brx0n Palustrine Emergent persistent temporarily seasonally saturated artificial substrate excavated

freshwater wetland with mineral soils

A concrete vault and foundation occur in the northwest portion of the study area. 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 not believed to be jurisdictional due to its entirely artificial nature and limited wetland value because of the surrounding concrete surfaces. 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. 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 occupy approximately 15,398 square feet within the former drying shed foundations. While these features have all three wetland parameters present, they are not believed to be jurisdictional due to their entirely artificial nature and limited wetland value because of the surrounding concrete surfaces. 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. The current configuration of this feature 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, with hydric soils absent, indicating 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; however, light industrial use such as log storage, mariculture, and soil storage utilizing this feature for stormwater capture is ongoing. The stormwater feature 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 two-parameter stormwater feature conditions and TP86, TP87, and TP88 for surrounding upland conditions. Because the entire feature as it currently exists is artificial and was constructed through upland for stormwater conveyance and lacks hydric soils, it is not believed to be jurisdictional.

5.4 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.

5.4.1 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.



5.4.2 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.

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Potential Wetlands and Other Waters in the Study Area

Potential Jurisdictional Wetland Waters of the U.S. in the Study Area									
Aquatic Resource Name ¹	Cowardin Code/Name²	Centroid Location (latitude, longitude) Datum WGS 84	Aquatic Resource Area (square feet)	Adjacent to a TNW	Notes ³				
	Palustrine Forested Wetland								
Wetland 05	PFO1Es0n	40.820908°, -124.177560°	2,377	Yes	Continuously saturated and seasonally flooded, with rare tidal incursion. It has direct above ground connectivity to Humboldt Bay a TNW. Naturally occurring, but human altered.				
Wetland 09	PFO1Hx+h0n	40.819948°, -124.178740°	973	Yes	Permanently flooded wetland. Direct Connectivity to Humboldt Bay, a TNW, through a decayed culvert. Human induced within an excavated channel with an impoundment structure at the outfall preventing tidal influence.				
Palu									
		Palustri	ine Scrub-S	hrub Wetlar	nd .				
Wetland 02	PSS3F+Dx0+3n	40.824092°, -124.174216°	71	Yes	Semi permanently flooded and continuously saturated wetland. Connected to Wetland 3 and Humboldt Bay a TNW through culverts under Vance Avenue and the railroad. A tidegate at the outfall of the culvert under Vance Ave limits brackish water incursion. Naturally occurring, human altered.				
Wetland 04	PSS1Bx0n	40.822749°, -124.175590°	341	Yes	Seasonally saturated wetland. Connected to Humboldt Bay via a culvert under the railroad fill prism. Human induced and excavated.				
Wetland 07	PSS1Cx0n	40.820672°, -124.178977°	702	Yes	Seasonally flooded wetland. Connected to Humboldt Bay, a TNW, through a DI and culvert system including wetlands 8 and 9. Human induced and excavated for stormwater management purposes.				



Potential Jurisdictional Wetland Waters of the U.S. in the Study Area							
Aquatic Resource Name ¹	Cowardin Code/Name²	Centroid Location (latitude, longitude) Datum WGS 84	Aquatic Resource Area (square feet)	Adjacent to a TNW	Notes ³		
Wetland 08	PSS4Ex0n	40.820253°, -124.178992	983	Yes	Continuously saturated and seasonally flooded wetland. Connected to Humboldt Bay, a TNW, through a culvert system including wetlands 7 and 9. Human induced and excavated for stormwater management purposes.		
Palustri	ne Scrub-shrub Wo	etland Subtotal ⁴	2,097 (0.048 acres)				
		Palust	rine Emerg	ent Wetland			
Wetland 17	PEM1Es0n	40.815370°, -124.185282°	2,284	Yes	Continuously saturated and seasonally flooded wetland. Connected to Humboldt Bay, a TNW, through a DI are culvert system during storm events. Human-induced.		
Palustri	Palustrine Emergent Wetland Subtotal ⁴						
		E	stuarine W	etland			
Wetland 01	E2EM1N3g	40.822387°, -124.175569°	23,957	Yes	Regularly flooded tidal saltmarsh wetland. Part of the Humboldt Bay tidal saltmarsh and has direct connectivity to Humboldt Bay, a TNW. Naturally occurring and minimally altered.		
Wetland 03	E2US+EM1N3n	40.823083°, -124.175129°	9,193	Yes	Regularly flooded tidal saltmarsh wetland. Part of the Humboldt Bay tidal saltmarsh and has direct connectivity to Humboldt Bay, a TNW through a culvert without a tide gate under the railroad fill prism. Naturally occurring, but human altered. Occurs between Vance Ave and the Railroad.		



Potential Jurisdictional Wetland Waters of the U.S. in the Study Area						
Aquatic Resource Name ¹	Cowardin Code/Name²	Centroid Location (latitude, longitude) Datum WGS 84	Aquatic Resource Area (square feet)	Adjacent to a TNW	Notes ³	
Wetland 15	E2US+EM1N3n	40.817998°, -124.181074°	704	Yes	Regularly flooded tidal saltmarsh wetland. Part of the Humboldt Bay tidal saltmarsh and has direct connectivity to Humboldt Bay, a TNW. Naturally occurring but significantly altered by past industrial activity.	
Wetland 18	E2EM1Px3n	40.814823°, -124.185240°	1,522,	Yes	Irregularly flooded tidal wetland. Has direct connectivity to Humboldt Bay, a TNW through a culvert without a tide gate. Human induced and manipulated. Wetland occurs within a shallow depression of a former industrial building footprint.	
Wetland 23	E2FO3Nx3n	40.811575°, -124.187987°	56	Yes	Regularly flooded tidal wetland. Has direct connectivity to Humboldt Bay, a TNW through a culvert without a tide gate. Human induced and manipulated. Wetland occurs in a sinkhole created by the collapse of the culvert.	
	Estuarine Wetland Subtotal ⁴		35,432 (0.813 acres)			
Potential Jurisdictional Wetland Waters Total ⁴		43,163 (0.991 acres)				



	Potential Non-Jurisdictional Wetland Waters in the Study Area							
Aquatic Resource Name ¹	Cowardin Code/Name²	Centroid Location (latitude, longitude) Datum WGS 84	Aquatic Resource Area (square feet)	Adjacent to a TNW	Notes ³			
Palustrine Forested Wetland								
Wetland 06	PFO3E0n	40.821393°, -124.17954658°	1,486	No	Continuously saturated and seasonally flooded isolated wetland. No connectivity to other wetlands or waters. Human altered.			
Wetland 19	PFO1Es0n	40.814307°, -124.185636°	3,314	No	Continuously saturated and seasonally flooded isolated wetland. No connectivity to other wetlands or waters. Human induced.			
Palu	Palustrine Forested Wetland Subtotal (0.110 acres)							
		Palustri	ine Scrub-S	hrub Wetlaı	nd			
Wetland 10	PSS1+4Bs0n	40.819808°, -124.179274°	3,212	No	Seasonally saturated wetland. No connectivity to other wetlands or waters. Human induced.			
Wetland 11	PSS1A+Bs+x0n	40.819633°, -124.179077°	204	No	Seasonally saturated wetland. No connectivity to other wetlands or waters. Human induced and excavated.			
Wetland 14	PSS1Bs0n	40.819467°, -124.180612°	434	No	Seasonally saturated wetland. No connectivity to other wetlands or waters. Human induced.			
Wetland 16	PSS1Cx0n	40.818528°, -124.184824°	3,951	No	Seasonally flooded wetland. No connectivity to other wetlands or waters. Human induced and excavated for stormwater management.			
Wetland 20	PSS1Cs0n	40.814230°, -124.187096°	169	No	Seasonally flooded wetland. No connectivity to other wetlands or waters. Human induced.			
Wetland 21	PSS1Cs0n	40.814050°, -124.187968°	2,504	No	Seasonally flooded wetland. No connectivity to other wetlands or waters. Human induced.			



	Potential Non-Jurisdictional Wetland Waters in the Study Area							
Aquatic Resource Name ¹	Cowardin Code/Name ²	Centroid Location (latitude, longitude) Datum WGS 84	Aquatic Resource Area (square feet)	Adjacent to a TNW	Notes ³			
Wetland 22	PSS1Cs0n	40.813890°, -124.188198°	105	No	Seasonally flooded wetland. No connectivity to other wetlands or waters. Human induced.			
Wetland 24	PSS/EM1B0n	40.809907°, -124.195697°	258	No	Seasonally saturated, deflation plain wetland. Isolated, with no above ground connectivity to a TNW. Naturally occurring and minimally disturbed.			
Palustr	ine Scrub-Shrub \	Wetland Subtotal	10,837 (0.249 acres)					
		Palust	rine Emerg	ent Wetland				
Wetland 12	PEM1A+Bs0n	40.819388°, -124.179667°	502	No	Temporarily flooded and seasonally saturated wetland. Connected to Wetland 13 via a culvert, but no connectivity to Humboldt Bay or other TNW. Human-induced.			
Wetland 13	PEM1A+Bx0n	40.819189°, -124.179666°	81	No	Temporarily flooded and seasonally saturated wetland. Connected to Wetland 12 via a culvert, but no connectivity to Humboldt Bay or other TNW. Human-induced and excavated for stormwater management purposes.			
Palus	Palustrine Emergent Wetland Subtotal							
Potential Non-Jurisdictional Wetland Waters Total ⁴		16,220 (0.372 acres)						

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

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



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 $^{^{\}mathrm{1}}$ Data forms were collected for some of these features as shown on the maps in Appendix A.

²Cowardin Codes:

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
PEM1Es0n	Palustrine Emergent persistent seasonally flooded/saturated spoils freshwater wetland with mineral soils
PFO1Es0n	Palustrine forested broad-leaved deciduous seasonally flooded/saturated spoils freshwater wetland with mineral soils
PFO3E0n soils	Palustrine forested broad-leaved evergreen seasonally flooded/saturated freshwater wetland with mineral
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 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.



³ Flow connections to TNW are assumed except in the limited areas where access allowed investigation. ⁴ 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.

	Potential Non-wetland Waters of the U.S. in the Study Area							
Aquatic Resource Name	Cowardin Code/Name ¹ Code/Name ¹ Datum WGS 84		Aquatic Resource Area (square feet)	Aquatic Resource Length (linear feet)	Notes ⁴			
Estuarine	Intertidal Shor							
MHHW 01	E2US3N, E2AB3N	40.823699°, -124.174337°	14,971	1,394	TNW			
MHHW 02 E2US3N, 40.814588°, E2AB3N -124.184641°		211,444	10,878	TNW				
	Estuarin	e Intertidal Subtotal ²	226,415 (5.198 acres)	12,272 (2.324 miles)				
Non-Wetland Waters Total			226,415 (5.198 acres)	12,272 (2.324 miles)				

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

Estuarine

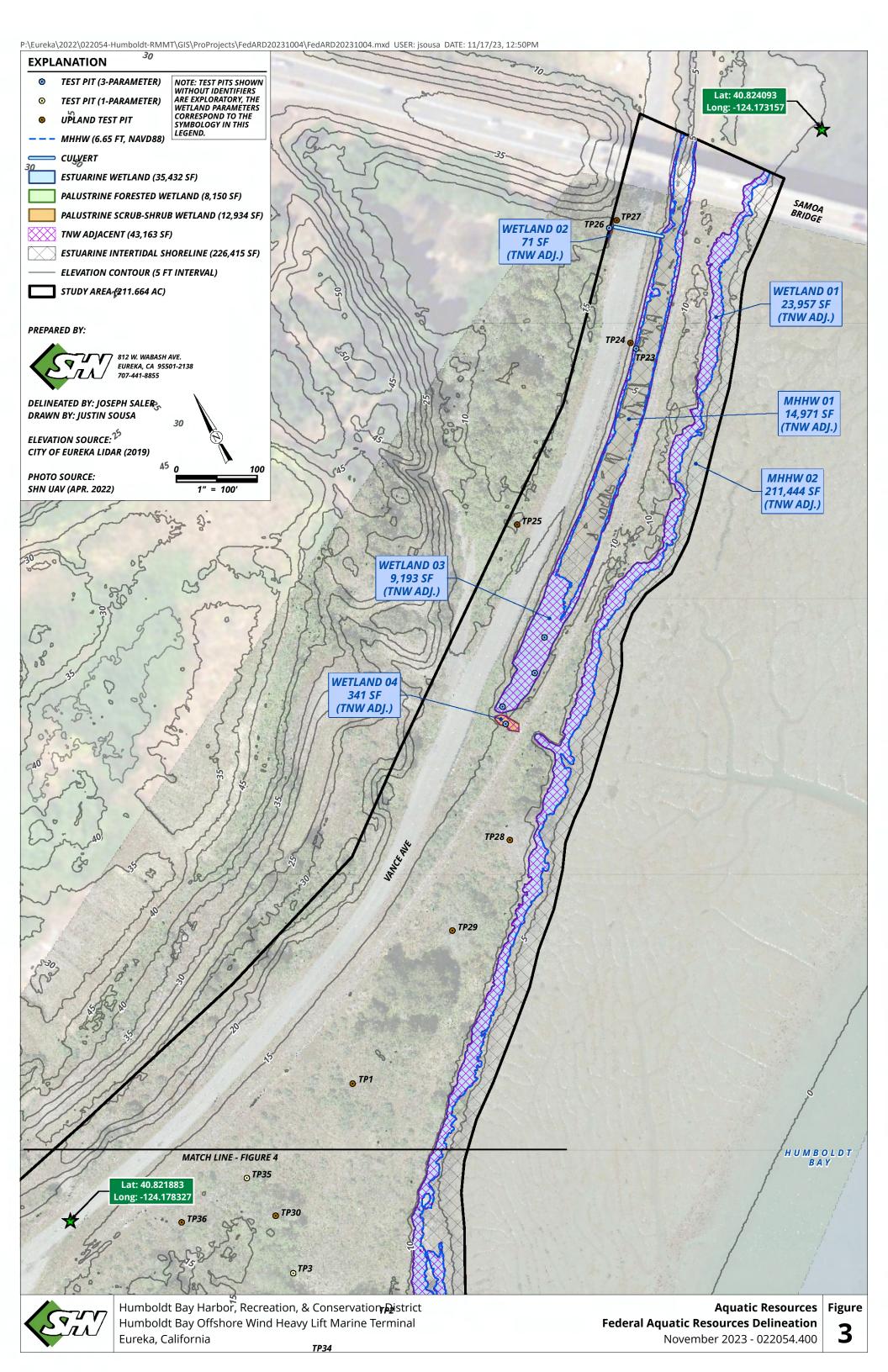
E2AB3N Estuarine, Intertidal, Aquatic bed, Rooted Vascular, Regularly Flooded
E2US3N Estuarine, Intertidal, Unconsolidated Shore, Mud, Regularly Flooded

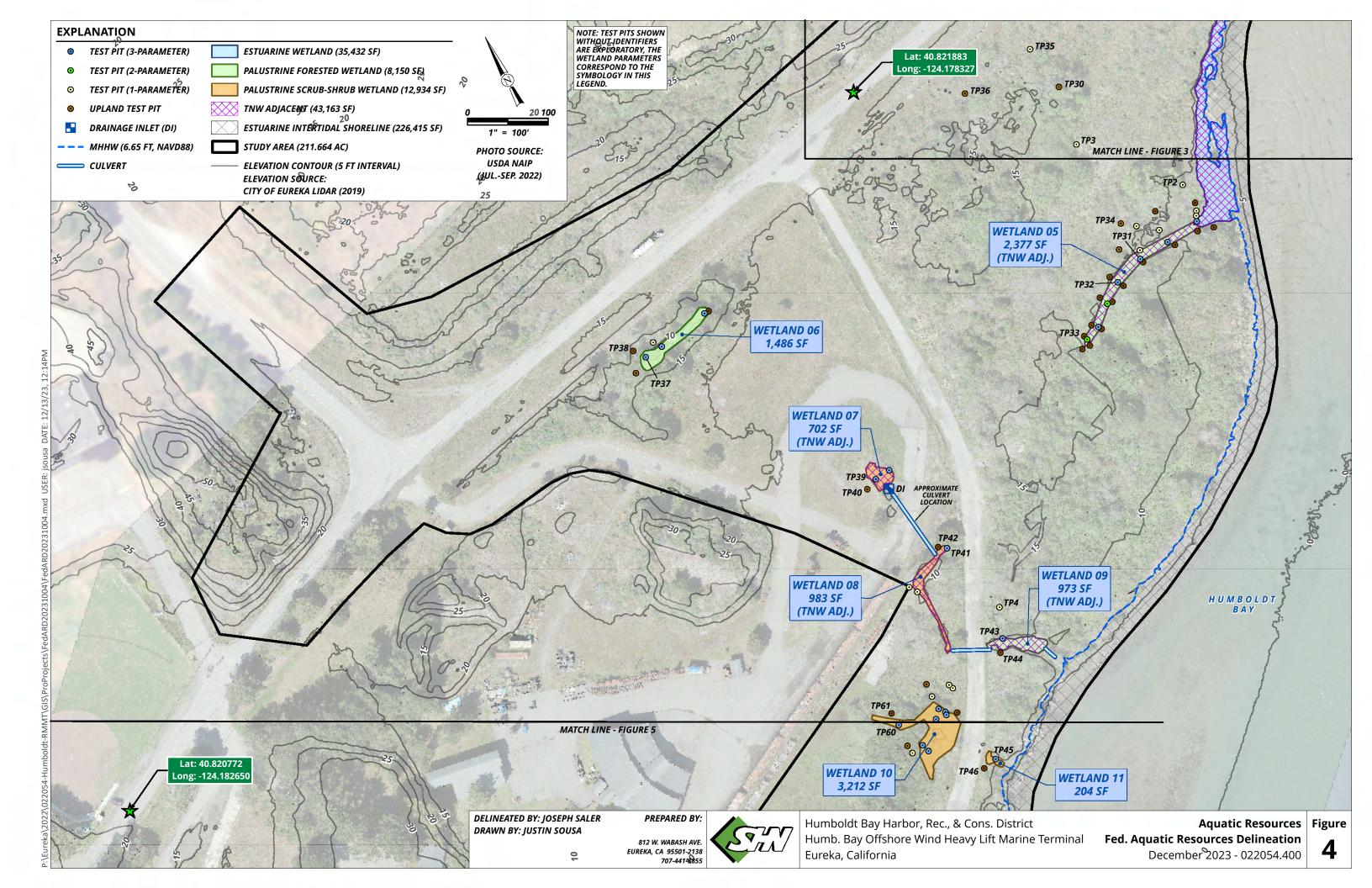


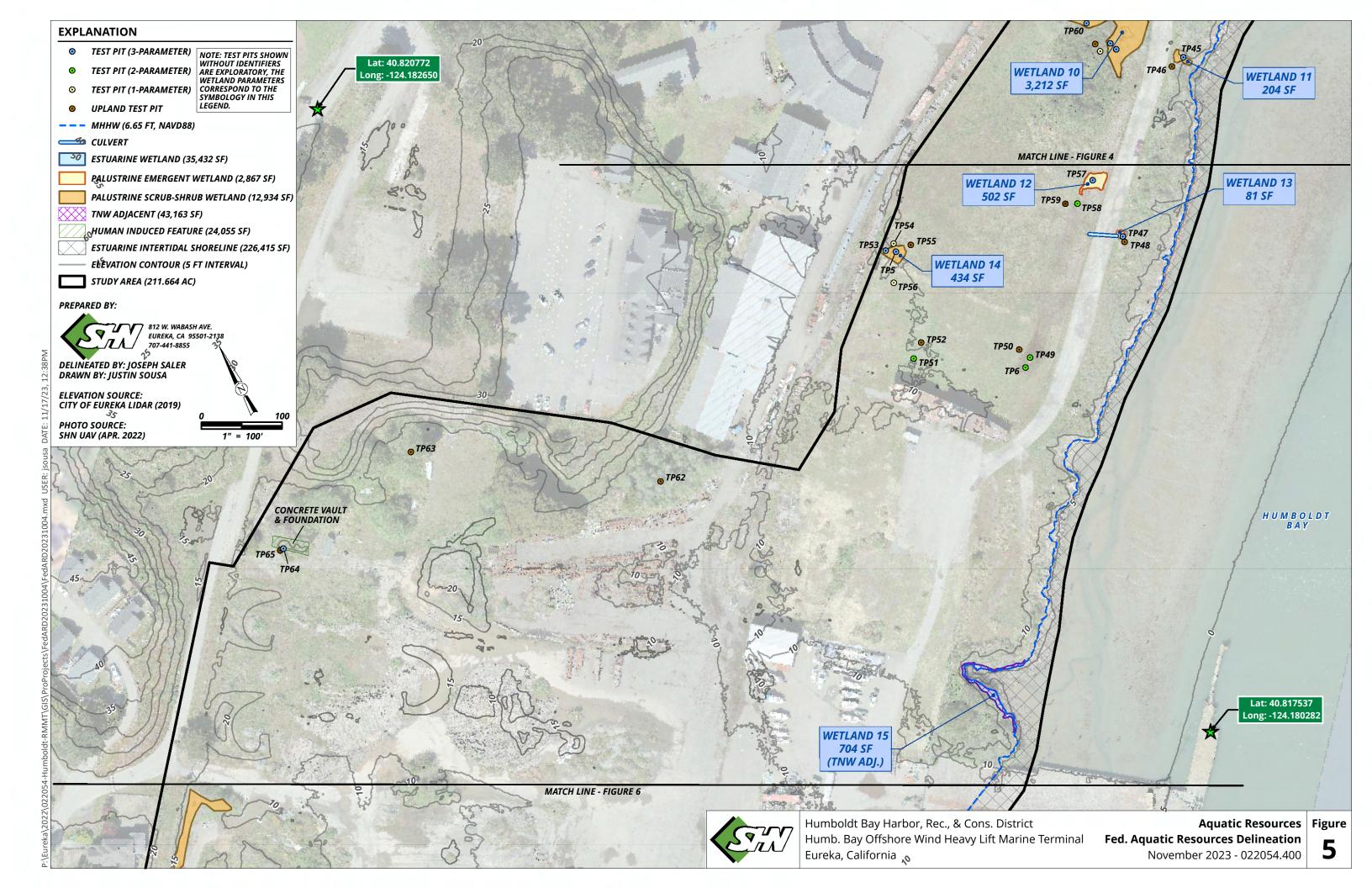
¹ Cowardin Codes:

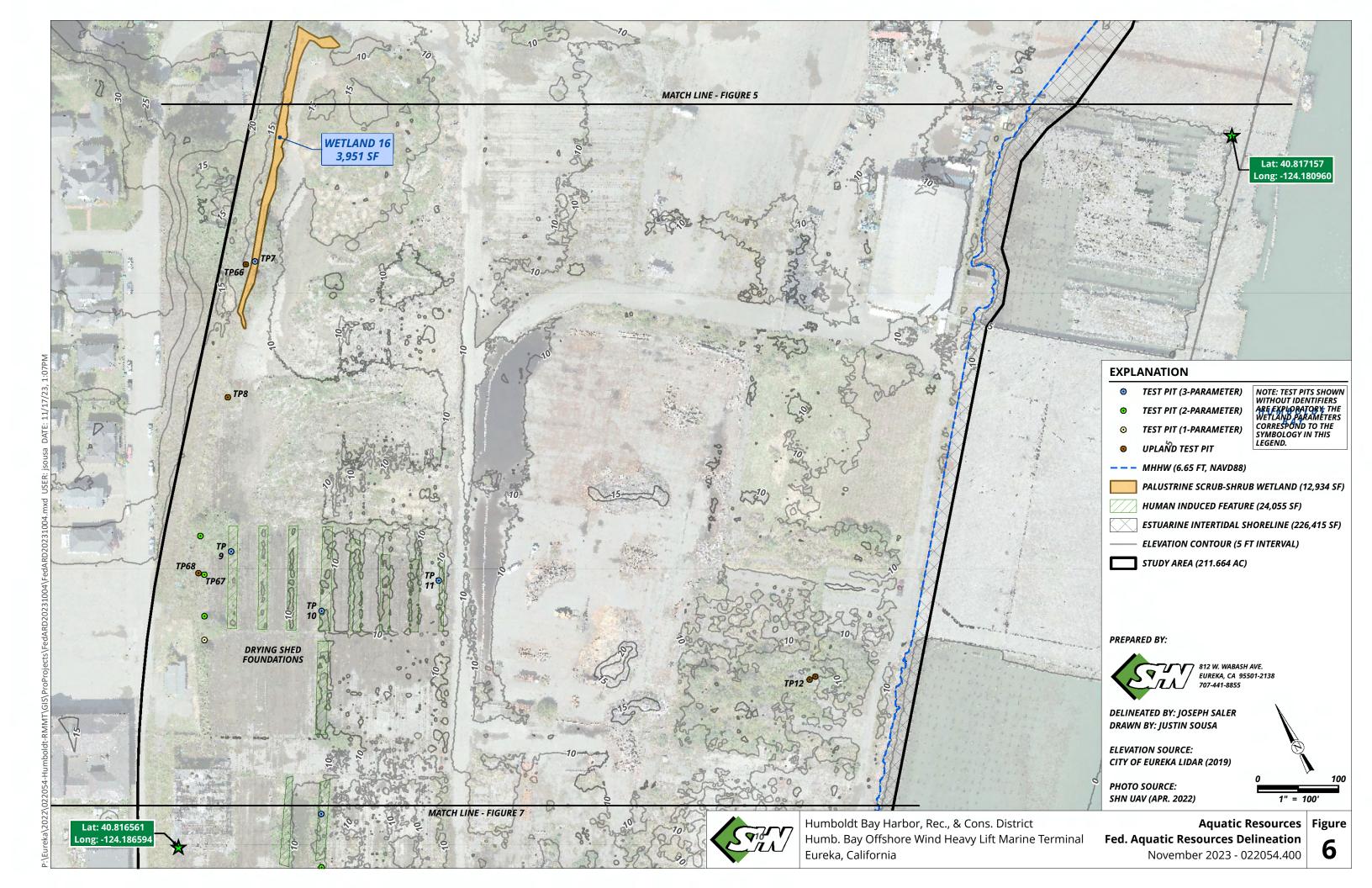
² Square footage presented in the table was rounded to the nearest whole number. Due to this the total acreage and square footage do not always match in the "Total" rows.

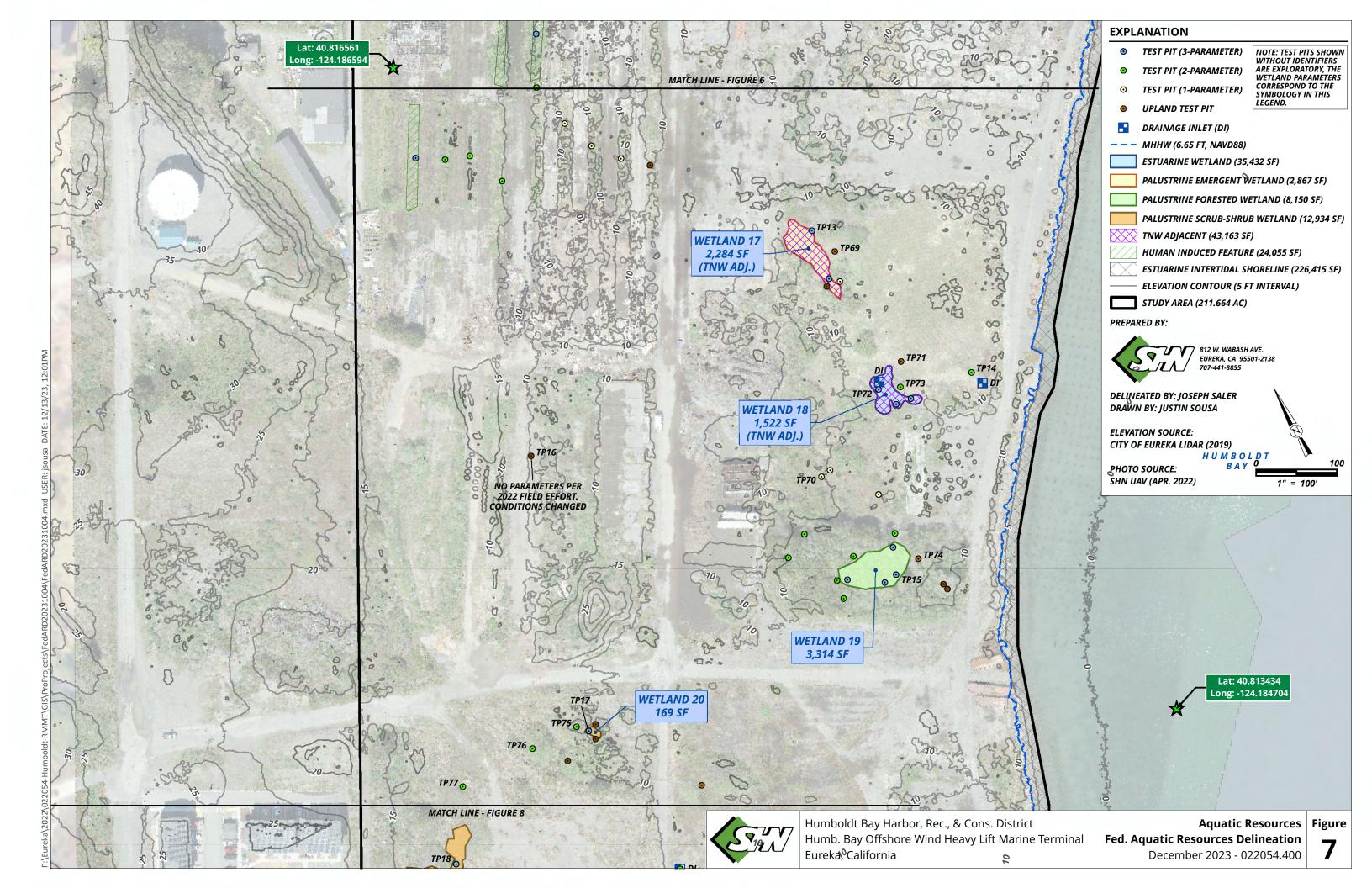
Aquatic Resources Delineation Maps

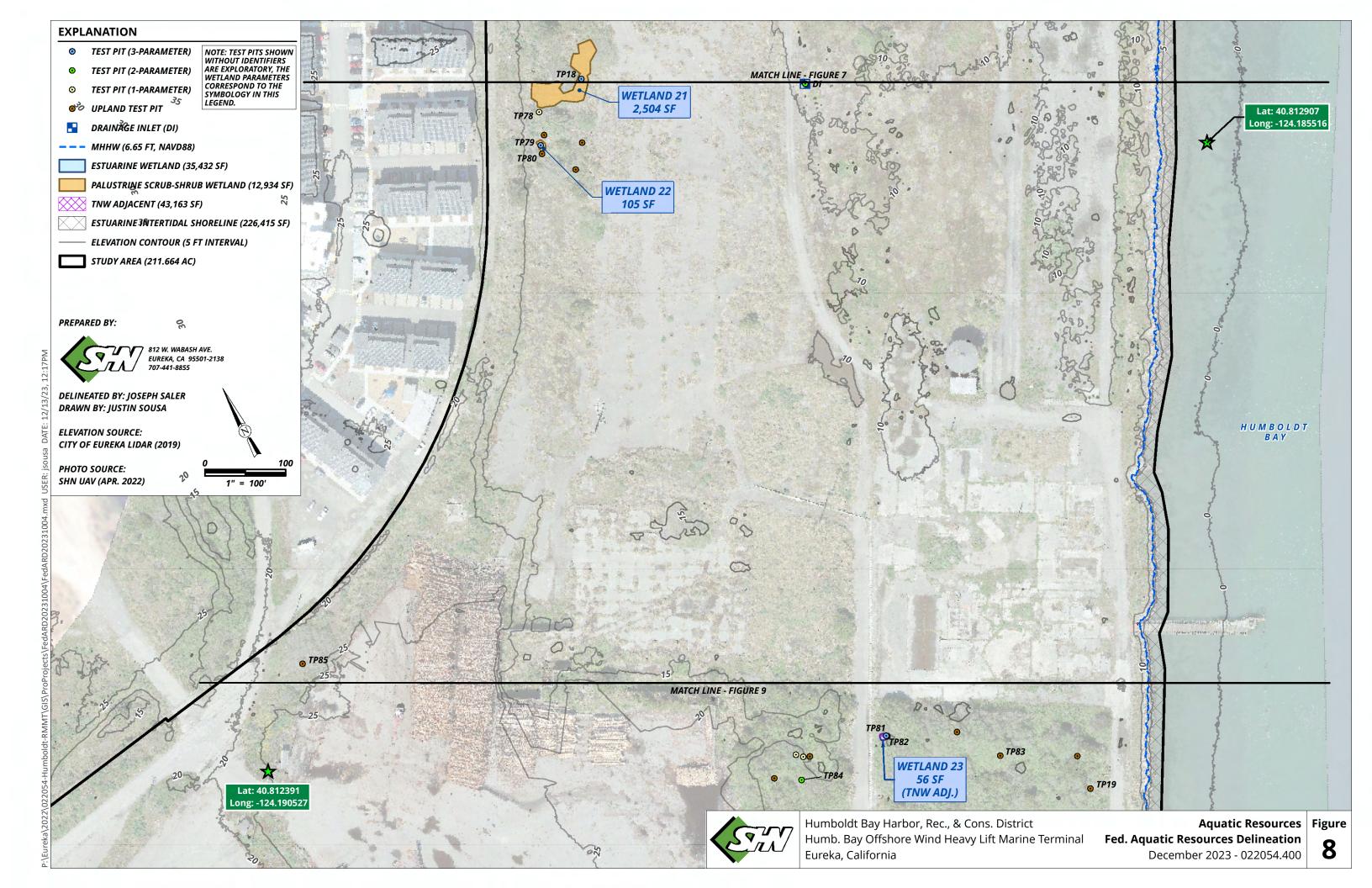


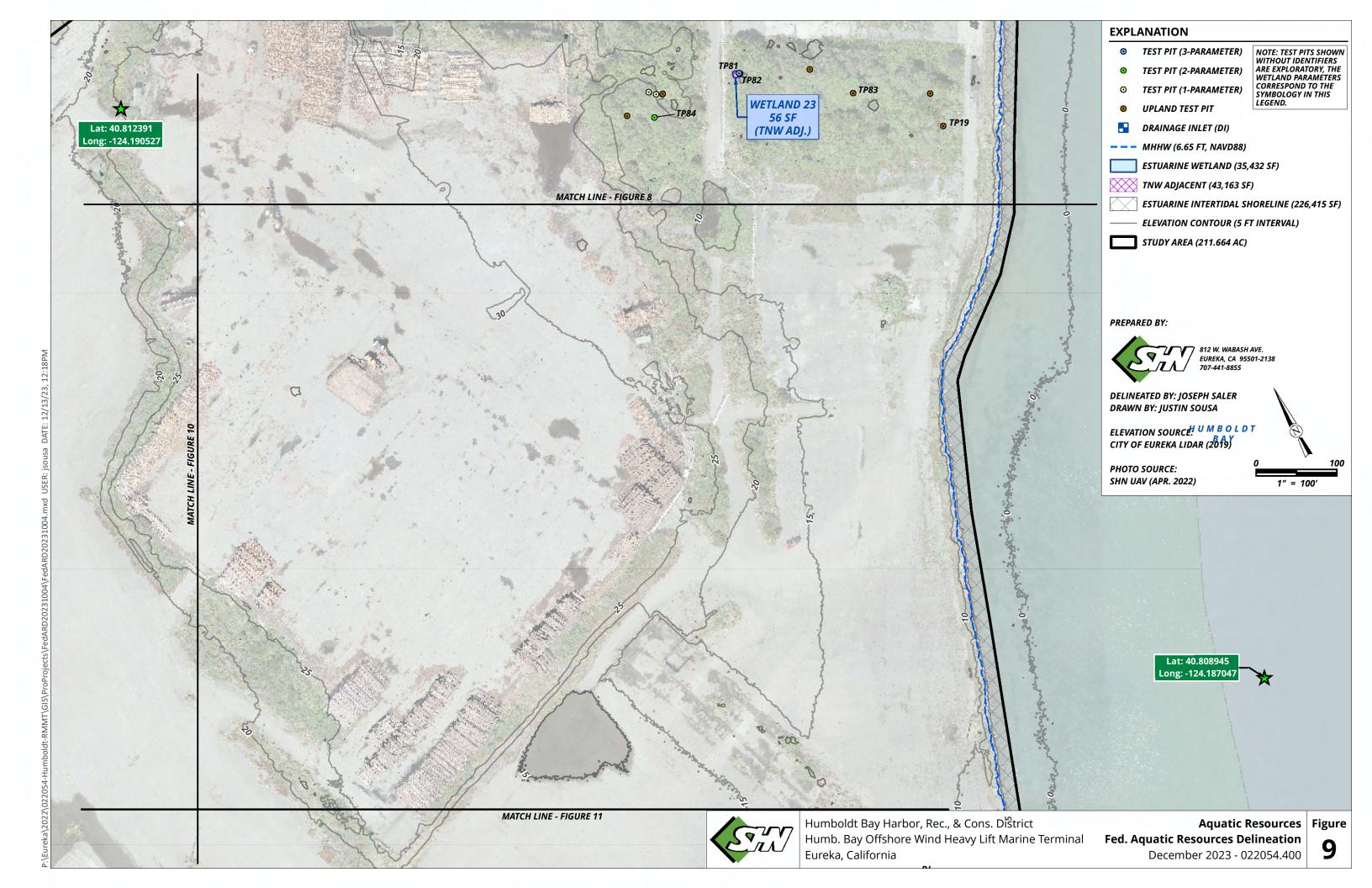


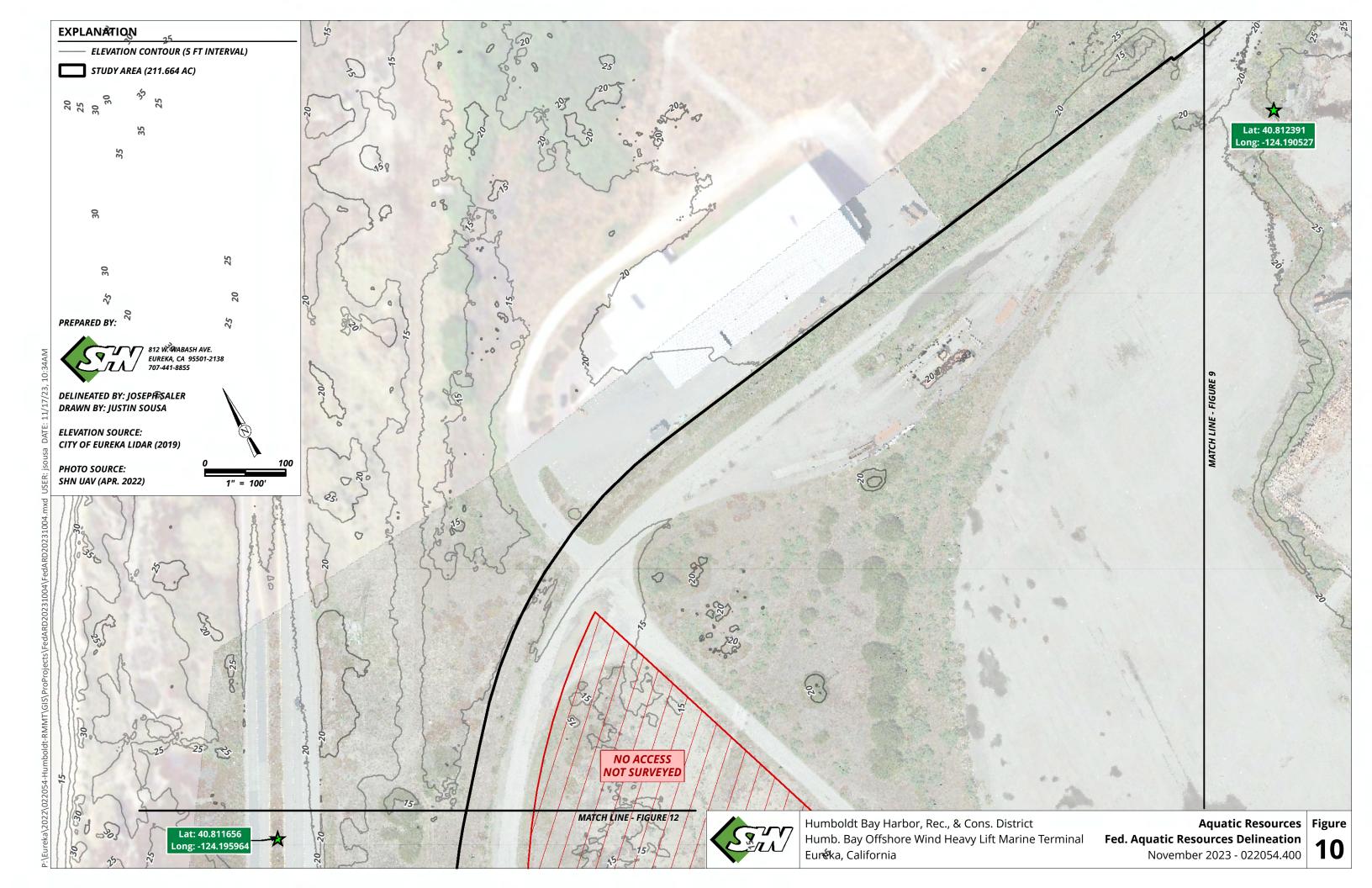


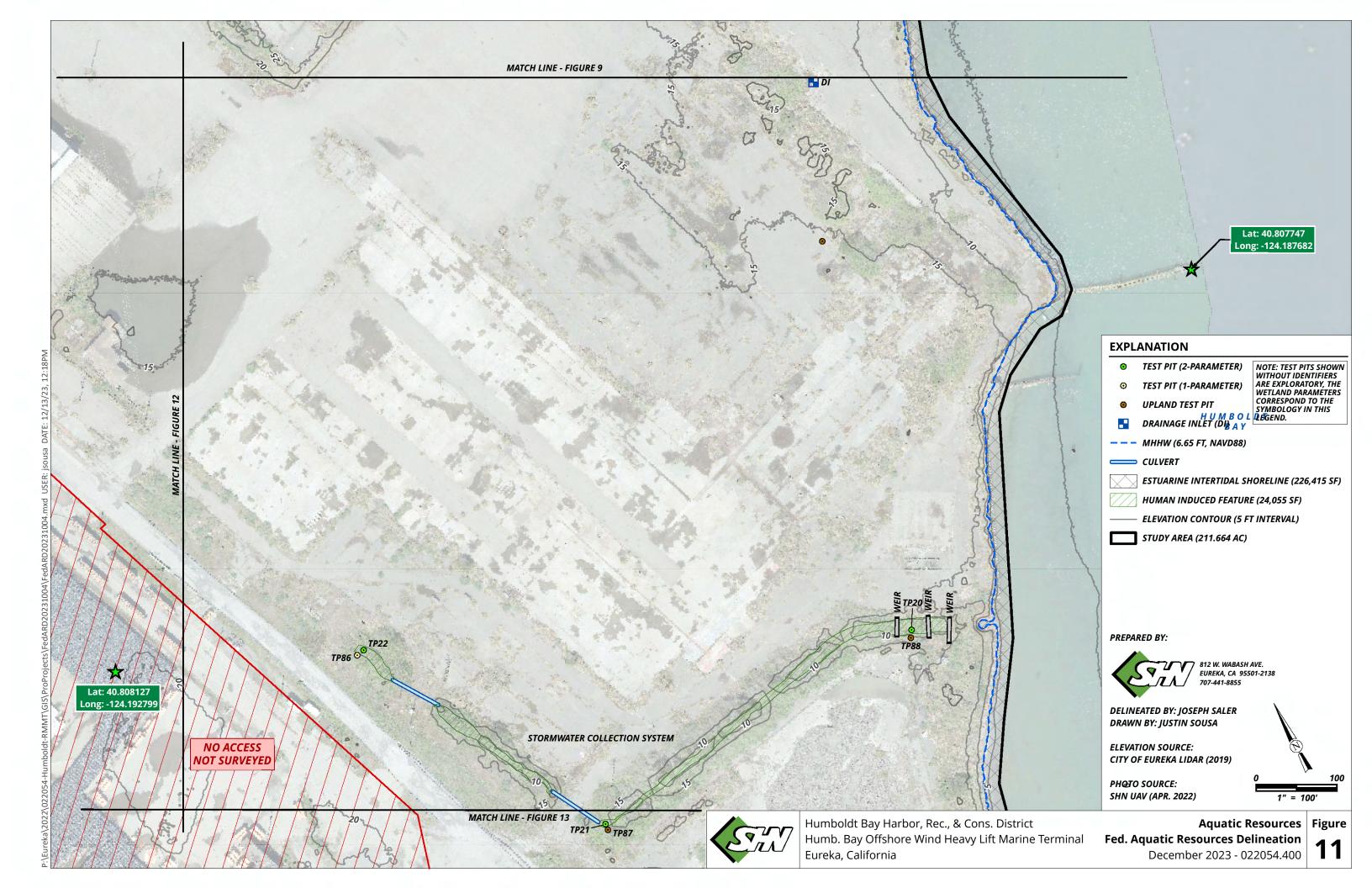


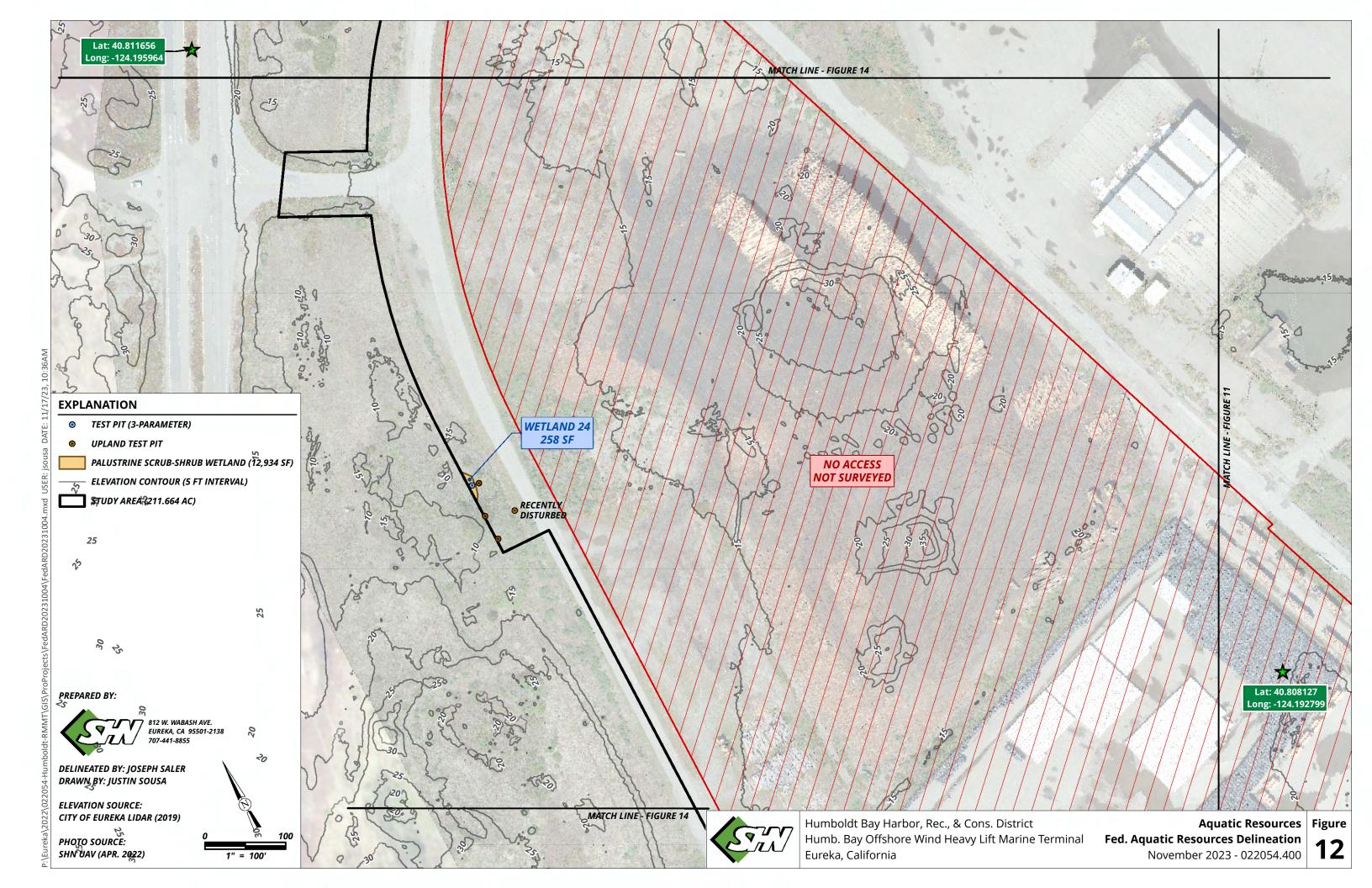


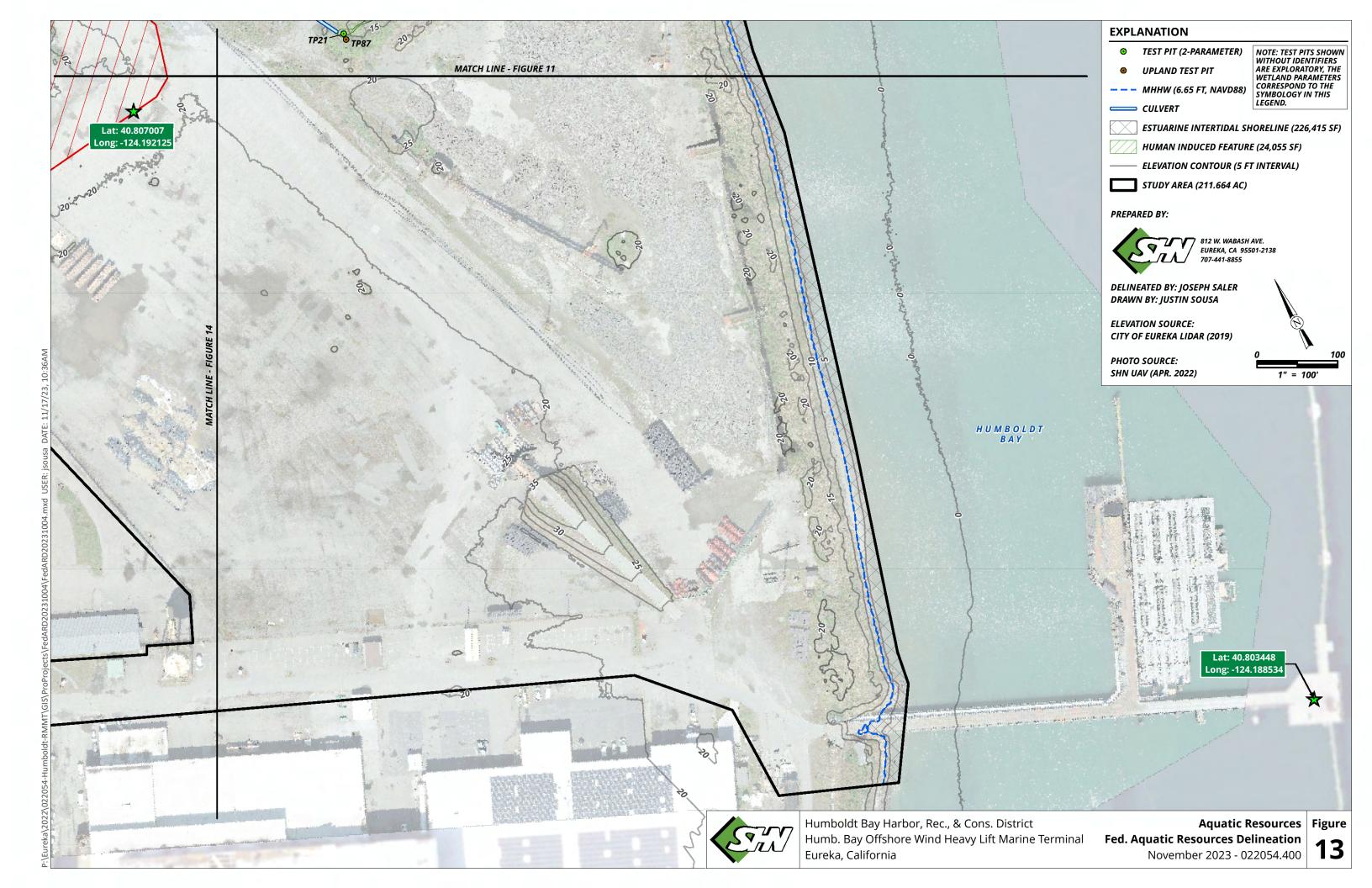


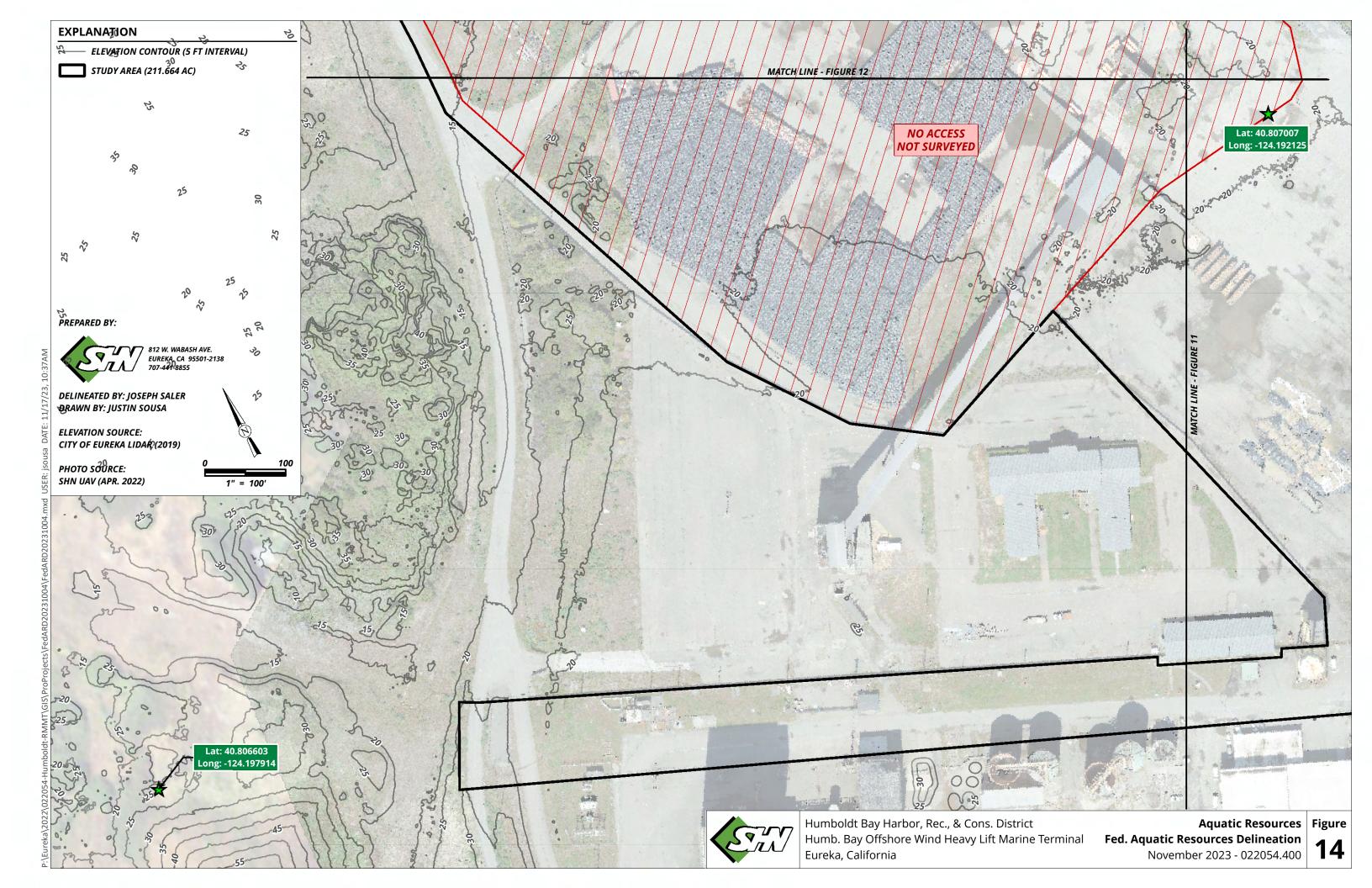




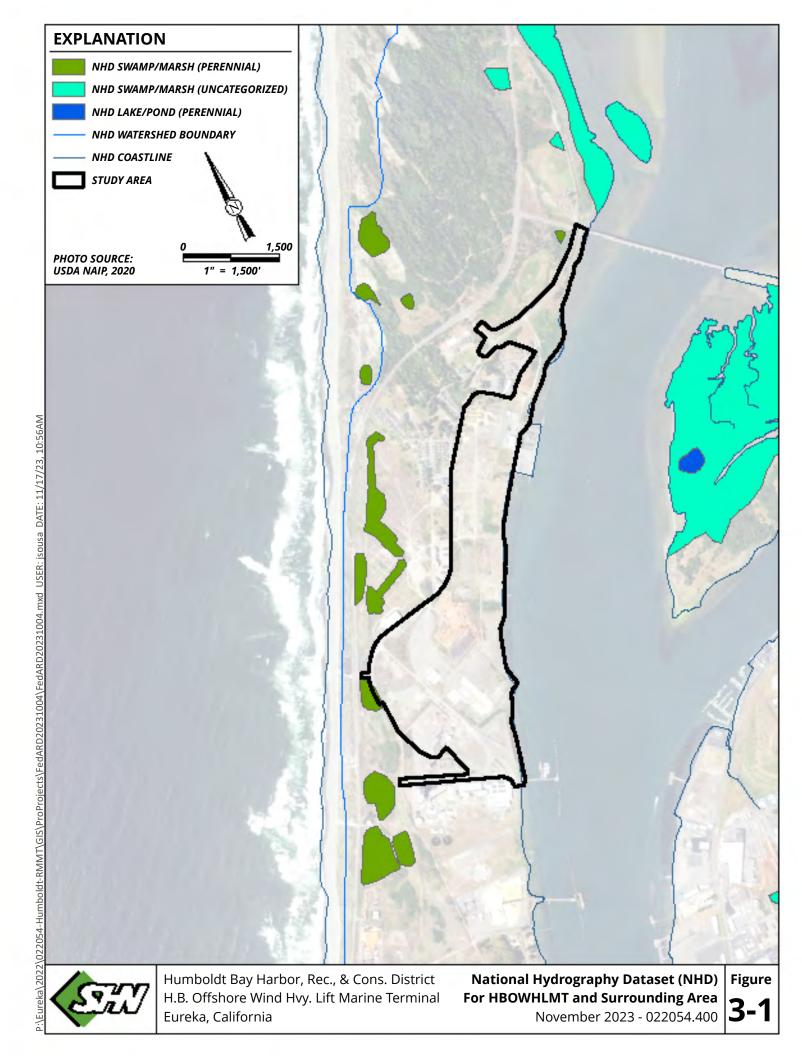


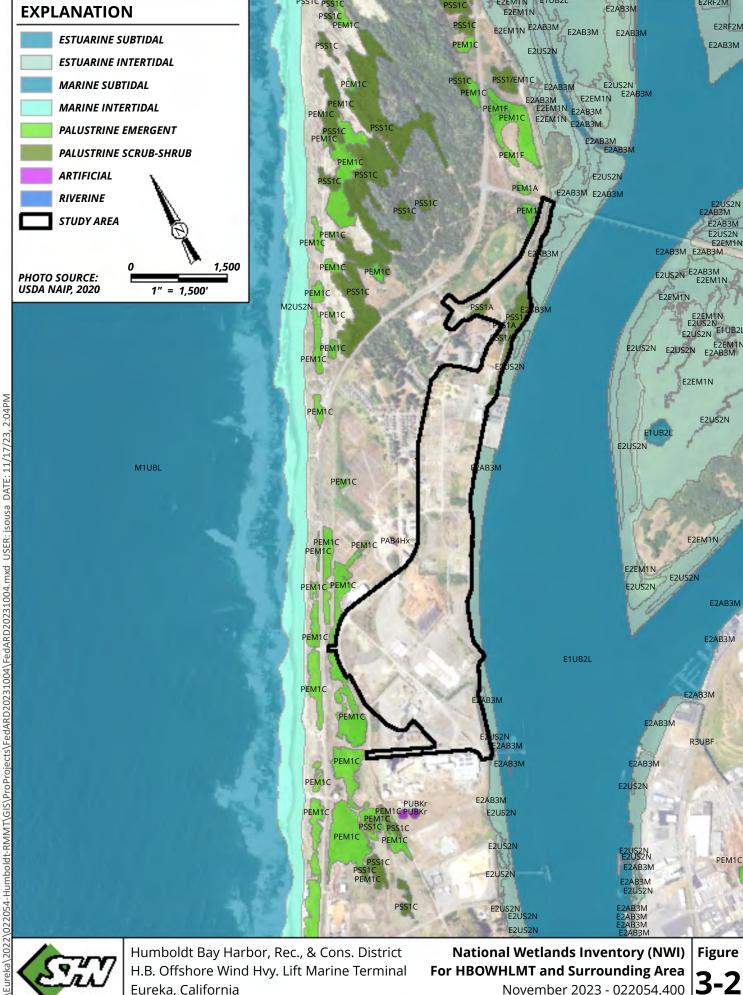






Hydrography
Dataset, National
Wetland Inventory,
Soil, and Drought
Monitoring Maps





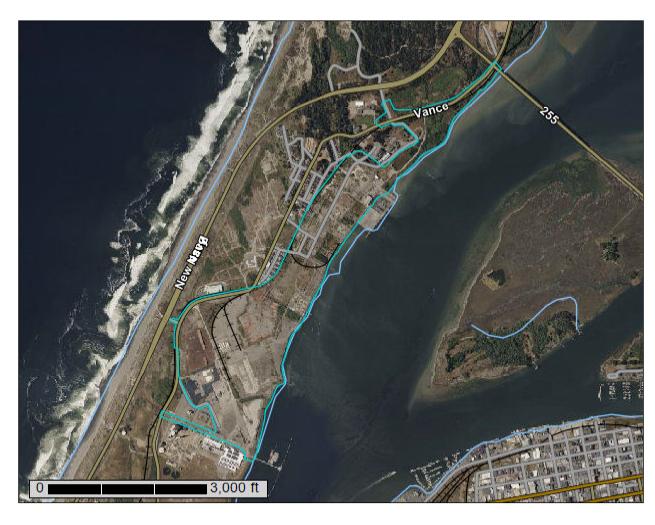
Eureka, California



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.



MAP LEGEND

Area of Interest (AOI) Area of Interest (AOI) Soils Soil Map Unit Polygons Soil Map Unit Lines Soil Map Unit Points **Special Point Features** Blowout (0) Borrow Pit \boxtimes Clay Spot **Closed Depression** Gravel Pit Gravelly Spot Landfill Lava Flow Marsh or swamp Mine or Quarry Miscellaneous Water Perennial Water Rock Outcrop Saline Spot Sandy Spot Severely Eroded Spot Sinkhole

Slide or Slip Sodic Spot



MAP INFORMATION

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

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

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Humboldt County, Central Part, California Survey Area Data: Version 9, Sep 1, 2022

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

Date(s) aerial images were photographed: Jun 1, 2022—Jun 19, 2022

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.

Map Unit Legend

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 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

Settina

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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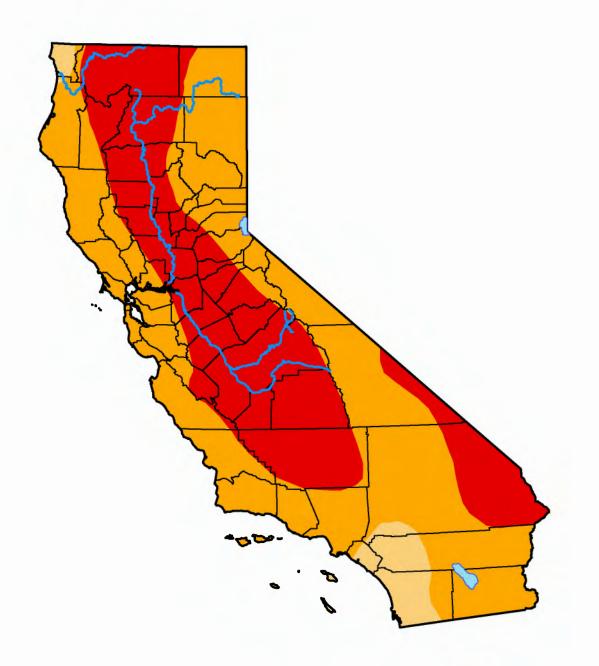
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U.S. Drought Monitor

California

April 26, 2022

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



Intensity:

None

D0 Abnormally Dry

D1 Moderate Drought

D2 Severe Drought

D3 Extreme Drought

D4 Exceptional Drought

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









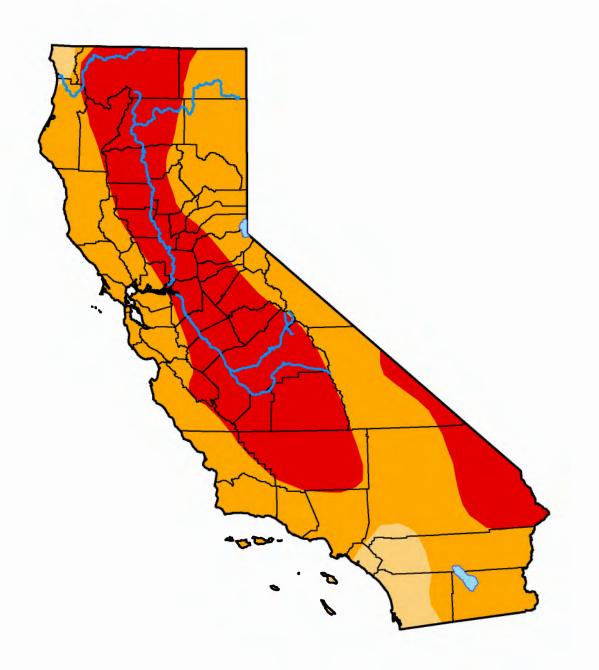
droughtmonitor.unl.edu

U.S. Drought Monitor

California

May 3, 2022

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



Intensity:

None

D0 Abnormally Dry

D1 Moderate Drought

D2 Severe Drought

D3 Extreme Drought

D4 Exceptional Drought

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

U.S. Drought Monitor

California

May 10, 2022
ased Thursday, May. 12, 20

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



Intensity:

None

D0 Abnormally Dry

D1 Moderate Drought

D2 Severe Drought

D3 Extreme Drought

D4 Exceptional Drought

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

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM - W	estern Mountains, Valleys, and Coast Region
Project/Site: RMT 1 Qity/Co	unty: Humboldt Sampling Date: 3/5/20
Applicant/Owner: Humboldt Bay Harbor District	State: A Sampling Point:
Investigator(s): 5. 50(er, 5. 10)(g) Section.	Township, Range: Secs. 15, 16+21, 75 N, R1W, HBM
Landform (hillslope, terrace, etc.): Bayside fill Local re	elief (concave, convex, none): None Slope (%):
Subregion (LRR): AMLRA-4B Lat: 40.82	1879° Long: -124. 76923° Datum: W6584
	cortents aush Jenwi classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	i No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbe	d? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soll, or Hydrology naturally problematic	c? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing samp	ling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	a the Complet Area
Hydric Soil Present?	s the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present? Yes No X Remarks: WEB data diver than normal	
WED data and may have	
VEGETATION – Use scientific names of plants.	
	nant Indicator Dominance Test worksheet:
Tree Stratum (Plot size:)	- Number of Dominant Species
1	That Are OBL, FACW, or FAC: (A)
2	Total Number of Dominant
3.	Species Across All Strata: (B)
	Percent of Dominant Species I Cover That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:	/ That File Obe, Friend, Or Frie.
1. Rupus Nrsinus	Total % Cover of: Multiply by:
2	OBL species x 1 =
3	FACW species x 2 =
4	FAC species x 3 =
= Tota	FACU species x 4 =
Herb Stratum (Plot size:)	UPL species x5 =
1 Anthoxanthum adoratum 82 V	Column Totals: (A) (B)
2 Holas lan atus	Prevalence Index = B/A =
3. Achillea millefolium 3	Hydrophytic Vegetation Indicators:
4. Plantago lan ceolota 5. Cirsium vulgare 3	
6. Daycus curreto	2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹
7. Lotus corniculation	4 - Morphological Adaptations¹ (Provide supporting
8	data in Remarks or on a separate sheet)
9	5 - Wetland Non-Vascular Plants ¹
10	Problematic Hydrophytic Vegetation1 (Explain)
11	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	Cover A.6
1	Hydrophytic
2.	Vegetation
- W	Cover Yes No
% Bare Ground in Herb Stratum	
Remarks: Likeer	

Sampling Point: TP 1

Depth Matrix	epth needed to document the Indicator or confin Redox Features	
(inches) Color (moist) %	Color (moist) % Type Loc ²	Texture Remarks
0-6 10482/2 100		SL
6-12 25,311 60	25 V3/3 40 C M	1.5
2-15 2.53/1 50	2.5 \3 /3. 50 C M	T
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	25/825/10 (0)	VICTO -
5-13 1.5 N/ 90	7.74K25/4 10 C PL	Ver D
3-24+10VR 3/3 60	10YK4/1, 30 D M	
	2.5 y 2.5/1 0 (M	
	· — — — — — — — — — — — — — — — — — — —	
	M=Reduced Matrix, CS=Covered or Coated Sand G	
lydric Soil Indicators: (Applicable to a	all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Solis ³ :
Histosoi (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	
Hydrogen Sulfide (A4)	Loarny 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
Thick Dark Surface (A12) 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
YDROLOGY		
YDROLOGY Netland Hydrology Indicators:	rod: check all that apply)	Secondary Indicators (2 or more required)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one regul		Secondary Indicators (2 or more required)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi 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 Netland 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)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10)
YDROLOGY Netland 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)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
YDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one requi 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)
YDROLOGY 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)	Water-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 Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9, oots (C3) Geomorphic Position (D2)
Primary Indicators: Primary Indicators (minimum of one regul 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) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Primary Indicators: Primary Indicators (minimum of one requition 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 Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Primary Indicators: Primary Indicators (minimum of one requition 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	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A)
POROLOGY 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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 6) (B7) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Print 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 6) (B7) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one regules 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 of 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 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) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A)
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 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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 6 (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) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one regules 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 of 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 6) (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) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Primary Indicators (minimum of one reguling Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Ves Saturation Present? Ves	Water-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 6) (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) Dots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Shallow Aquitard (D5) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Primary Indicators (minimum of one reguling Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Ves Saturation Present? Ves	Water-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 6) (B7) Other (Explain in Remarks) (B8) Depth (inches): No Depth (inches): Wer	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Dots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Shallow Aquitard (D5) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 6) (B7) Other (Explain in Remarks) (B8) Depth (inches): No Depth (inches): Wer	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Dots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Shallow Aquitard (D5) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 6) (B7) Other (Explain in Remarks) (B8) Depth (inches): No Depth (inches): Wer	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 pots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Shallow Aquitard (D5) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

WEILAND DETERMINATION D	A I A FURI	M – Meżrelli Moń	intains, valleys, and Coast Region
Project/Site: RMT 1		City/County: Humbo	Sampling Date: 8/5/20
Applicant/Owner Humbold Bay Harbor	listrict	A CONTRACTOR OF THE CONTRACTOR	State: CA Sampling Point: TP 2
Investigator(s): Sam Paly, Joseph Sale		Section, Township, Ra	nge: SeLs. 15, 16+21, TSN, RIW, HBM
Landform (hillslope, terrace, etc.): Baxi de Fill			convex, none): Nove Slope (%): 0-1
Subregion (LRR): A. MLRA, 418	Lat: 4	0.821110°	Long: -124.177423° Datum: WGS8
Soil Map Unit Name: 1014- Uchan Land-Anthra	ltic Xeron	rthents Anon.	0-21/2 NWI classification: PSS1C
Are climatic / hydrologic conditions on the site typical for the	his time of yea	er? Yes 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 prof	blematic? (If ne	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	sampling point le	ocations, transects, important features, etc.
1 1 1	No	1- 41- 01-4	
	No	is the Sampled within a Wetlan	
	No		
Remarks: WETS data drier than 1 * 2022 updatedgps equipment 40	.921107%	124.177106	
A P P P P P P P P P P P P P P P P P P P			
VEGETATION – Use scientific names of pla	nts.		
- 30ft	Absolute	Dominant Indicator	Dominance Test worksheet:
1. Morel 4 (Alivernica)	% Cover	Species? Status	Number of Dominant Species
2 Satix lasiandra	50	FACW	That Are OBL, FACW, or FAC:
3		17,000	Total Number of Dominant Species Across All Strata: (B)
4	- Ta-ab		I
Sapling/Shrub Stratum (Plot size: 51)	100%	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
1. Rubas as Menacus	60	V FAC	Prevalence Index worksheet:
2. Rubus unsinus	10	FACU	Total % Cover of: Multiply by:
3			OBL species x 1 =
4			FACW species x 2 = FAC species x 3 =
5	- 40	16	FACU species x 4 =
Herb Stratum (Plot size: 5H)	-10	= Total Cover	UPL species x 5 =
1. Caret Obrupta	20_	UBL	Column Totals: (A) (B)
2.			Prevalence Index = B/A =
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5 6			2 - Dominance Test is >50%
7.			3 - Prevalence Index s ≤3.01 4 - Morphological Adaptations1 (Provide supporting
8			data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants1
10			Problematic Hydrophytic Vegetation¹ (Explain)
11	101	Total Cover	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	10 /	= Total Cover	
1			Hydrophytic
2	1	4,424	Vegetation Present? Yes No
% Bare Ground in Herb Stratum 80 %	_	≍ Total Cover	100
Remarks:			
* Little			

Sampling Point: TP 2

Profile Description: (Describe to the d	epth needed to document the Indicator or	confirm the	absence o	f Indicators.)
Depth Matrix	Redox Features Color (moist) % Type ¹	Loc²	Taytura	Remarks
(inches) Color (moist) %	Color (moist)%Type'	LOC	Texture	Remarks
0-9 10VR 2/1 100			<u> </u>	
9-11 10483/1 100		- 1	5	
11-20+ 104R 2/1 95	7.5 YR 2.5/3 5 C	PI	GV1-5	Very Compacted
11-20, 10/1 15		TE A	100	vay surpactes
	·			
	·			
	M=Reduced Matrix, CS=Covered or Coated	Sand Grains		ation: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to	all LRRs, unless otherwise noted.)		Indicator	s for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)		2 cm	Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)		Red F	Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except N	(LRA 1	Very	Shailow 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	s of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		wetlan	d hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)		unless	disturbed or problematic.
Restrictive Layer (If present):				
Туре:				· · · · · · · · · · · · · · · · · · ·
Depth (inches):		H	lydric Soll F	Present? Yes No X
Remarks:				
YDROLOGY Wetland Hydrology Indicators:			_	. 1
Primary Indicators (minimum of one requ	red; check all that apply)		Second	dary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (exc	cept	Wa	ater-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)		-	4A, and 4B)
Saturation (A3)	Salt Crust (B11)		De	ainage Patterns (B10)
- ' '				y-Season Water Table (C2)
Water Marks (B1)	Aquatic Invertebrates (B13)			y-Geason Water Table (C2) ituration Visible on Aerial Imagery (C9)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	/		
Drift Deposits (B3)	Oxidized Rhizospheres along Li		· —	eomorphic Position (D2)
Algal Mat or Crust (B4)	Presence of Reduced fron (C4)		11	iallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tilled		-	C-Neutral Test (D5)
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1)) (LRR A)		aised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery	(B7) Other (Explain in Remarks)		Fr	ost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface	e (B8)			
Field Observations:	V 100			
Surface Water Present? Yes	No Depth (inches): No	-1		
Water Table Present? Yes	No Depth (inches): W/A	-		
Saturation Present? Yes	No Depth (inches): N/A	Wetland	l Hydrology	Present? Yes No 🔼
(includes capillary fringe)	monitoring well, aerial photos, previous inspi	ections) if a	vailable:	
Describe Recorded Data (stream gauge,	monitoring well, aenai priotos, previous inspi	eccona), ii a	vanavie.	
Remarks:				

WEILAND DETERMINATION DATA FORM - Western Mou	ntains, Valleys, and Coast Region
Project/Site: RMT 1 City/County: Hww	Sampling Date: 8/5/20
Applicant/Owner: Hymboldt Bay Harbor Oistrict	State: _CA Sampling Point: TP 3
Investigator(s): Jorgh Jaler San Poly Section, Township, Rai	nge: Secs. 12,16+21, T5N, RIW, HBM
Landform (hillslope, terrace, etc.): Baysine fill Local relief (concave, of the concave)	convex, none): Nove Slope (%): 0-1
Subregion (LRR): A, MLRA, 415 Lat: 40.821389°	Long: -124.177534 Datum: WGS 8
Soil Map Unit Name: 1014 - Urban Lang - Anthraftic Xerortherts Assn.	0-2 1/2 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 ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sampling point k	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No Is the Sampled	
Wetland Hydrology Present? Yes No Within a Wetlan	
Remarks: Phalatis dominates a longe area around the TP w WETS data drier than normal	ith similar conditions
VEGETATION – Use scientific names of plants.	
Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	Number of Dominant Species 7
1,	That Are OBL, FACW, or FAC: (A)
3.	Total Number of Dominant 3
4.	Species Across All Strata: (B)
= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 67 //6 (A/B)
Sapling/Shrub Stratum (Plot size: 544) = Total Cover	Prevalence Index worksheet:
1. Rubys amenticus 7 1 FAC 2. Rubys urstrus 5	Total % Cover of: Multiply by:
2 PACH	OBL species x 1 =
4	FACW species x 2 =
5.	FAC species x 3 =
TCI 2 = Total Cover 5	FACU species x 4 =
Herb Stratum (Plot size: 2.4	UPL species x 5 =
1. Phalasis avand in acea 100 FACW	Column Totals: (A) (B)
2. Vicia tatrasperma 5 NL	Prevalence Index = B/A =
3. Galium aparine 2 FACU 4. Anthox anthum adoratum 3 FACU	Hydrophytic Vegetation Indicators:
5. Holcus langtys 2 FAC	1 - Rapid Test for Hydrophytic Vegetation
	2 - Dominance Test is >50%
7	3 - Prevalence Index is ≤3.0¹
8	4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
9	5 - Wetland Non-Vascular Plants ¹
10	Problematic Hydrophytic Vegetation ¹ (Explain)
11	Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size)	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:) 1	Under the die
2.	Hydrophytic Vegetation
= Total Cover	Present? Yes No
% Bare Ground in Herb Stratum	
Remarks:	

	epth needed to document the indicator or confirm	- 1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type Loc2	Texture Remarks
0-13 10yR 2/2 100		SL
13-21 2.54 3/2 60	2.5 × 4/4 35 C M	45
	10YR 2/1 5 C M	
Just Noet of		1 C ET IL NOVA LO 30
21-25+ 12-5/ 15	2.5y4/4 10 CM	LS till with luxed debas
. ,	2.5 × 3/2 5 D N	+ Wood
		v <u> </u>
¹ Type: C=Concentration, D=Depletion, R	M=Reduced Matrix, CS=Covered or Coated Sand G	rains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soll 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)	
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:		V
Depth (inches):		Hydric Soll Present? Yes No
Remarks:		
LHYDROLOGY	Ţ.	
		· ·
Wetland Hydrology Indicators:	ired: 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	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one requirements) 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 requi 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 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)	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 requi 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 requi 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 Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2)
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) Algat 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) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
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) Algat 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 Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algat 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	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A)
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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C 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) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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) Algat 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 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) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algat 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 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) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) 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) Algat 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 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) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) 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 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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A (B7) Other (Explain in Remarks) (B8) Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A)
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^ <u> </u>	IA FURM	- western wou	ntains, valleys, and Coast Region
Project/Site: RM7 1	City	//County: Hum	Sampling Date: 8-5-2
Applicant/Owner: Humboldt Bay Harbor Dis			State: A Sampling Point: TP 4
Investigator(s): J. Jaler, 5. Polly	Se	ction, Township, Rar	nge: Sec. 15, 16+21, T5N, R1W, HBM
Landform (hillslope, terrace, etc.); Bayside, Fill			convex, none): Con Cave Slope (%): 2
Subregion (LRR): A MLRA-48	Lat: 40.		Long: -124. 178753 Datum: W658
28/11 1 1 1 1 1 1	ic Xeror		. 0-2% NWI classification: PSS1C
Are climatic / hydrologic conditions on the site typical for this	time of year?		(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology si			Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology n	aturally proble		eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing sa	ampling point lo	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No			
Hydric Soil Present? Yes No	X	is the Sampled within a Wetlan	
Wetland Hydrology Present? Yes No		Within a wetian	TesNo
Remarks: WETS data drier than how	rmal		
VEGETATION – Use scientific names of plant	le		
CO CI		ominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 304+	(23 F2)	pecies? Status	Number of Dominant Species 3
1. Frangula purshian a	83 -	FAC	That Are OBL, FACW, or FAC: (A)
2 Morella Calfarniza	12	FACW	Total Number of Dominant
3. 54/1X hooveriang 4. 5a/1X (45 ian dry var. lasiandry	60	FACIL	Species Across All Strata: (B)
	101	Total Cover 50.5	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 51+	-	10.1	That Are OBL, FACW, or FAC: (A/B)
1. Rubus armenia cus		FAC	Prevalence Index worksheet: Total % Cover of: Multiply by:
2			OBL species x 1 =
3			FACW species x 2 =
4	-		FAC species x 3 =
	8 =	Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 2+1	Ik	/ David	UPL species x 5 =
1 Corta deria jubata	<u> </u>	+ ACU	Column Totals: (A) (B)
2			Prevalence Index = B/A =
3			Hydrophytic Vegetation Indicators:
4 5			1 - Rapid Test for Hydrophytic Vegetation
6			2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹
7			4 - Morphological Adaptations¹ (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	<u> </u>		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 5(+)	=T	otal Cover	
1. Hedera helix	10	FACY	Hydrophytic
2			Vegetation
% Bare Ground in Herb Stratum 96%	_ 0 =⊤	otal Cover	Present? Yes No No
% Bare Ground in Herb Stratum			

		Sampling Point: TP 4
Control of the Contro	pth needed to document the indicator or confirm	the absence of Indicators.)
Depth (inches) 7.5 yR 2.5/4 100 100 100 100 100 100 100 100 100 10	Redox Features Color (moist) % Type¹ Loc²	Texture Organic Marter SL VGrSL Stell, connote, dean's press Decomposing Wood
Type: C=Concentration, D=Depletion, RM Hydric Soil Indicators: (Applicable to ad Histosol (A1) Histic Epipedon (A2)	M=Reduced Matrix, CS=Covered or Coated Sand Gra II LRRs, unless otherwise noted.) Sandy Redox (S5) Stripped Matrix (S6)	ains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2)
Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	Loarny Mucky Mineral (F1) (except MLRA 1) Loarny Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)	Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
4.1.41		
Type: Depth (inches):	phobic	Hydric Soil Present? Yes No
Type:	phobic	Hydric Soil Present? Yes No
Depth (inches):	phobic	Hydric Soil Present? Yes No
Type:	ed: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A)	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 (C3) (C3) (C3) (C3) (C3) (C3) (C3) (C3)
Type:	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A)	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)

WEILAND DETERMINATION DA	I A FORM – Western Moui	ntains, valleys, and Coast Region
Project/Site: RMT 1	City/County: Samod	Hymbol Sampling Date: 4/30/20
Applicant/Owner: Hymbold Bay Horbor Dist	nct	State: A Sampling Point: TP 5
Investigator(s): Josephalet, San Poly		nge: Sec. 15, 16+21, TSN, RIW, HBM
Landform (hillslope, terrace, etc.): Coostal till	Local relief (concave, o	convex, none): Concave Stope (%): 0-
Subregion (LRR): A MLRA~4B	_ Lat: 40.819423°	Long: -124. 180 709° # Datum: W&S 84
Soil Map Unit Name: 1014-Urban Land-Antivati	ic Xerorthets Assn. O-	-2% NWI classification: None
Are climatic / hydrologic conditions on the site typical for this	s time of year? Yes No _	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology s	ignificantly disturbed? Are "	Normal Circumstances" present? Yes 🔼 No
Are Vegetation, Soil, or Hydrology n	naturally problematic? (If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing sampling point lo	ocations, transects, important features, etc.
	o Is the Sampled	A
	within a Wotlan	A
Wetland Hydrology Present? Yes N Remarks: WETS data drier than normal	0	
of 2022 updated gas equipment =	40.819471/-124.180605	0
VEGETATION – Use scientific names of plan	ts.	
Tree Stratum (Riot size: 30 ft	Absolute Dominant Indicator	Dominance Test worksheet:
1. Salix horis and	% Cover Species? Status FACW	Number of Dominant Species That Are OBL, FACW, or FAC:
2		Total Number of Dominant
3		Species Across All Strata: (B)
4	25 = Total Cover	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 5 (1)	1	That Are OBL, FACW, or FAC: (A/B)
1. Kybin armeniacus	16 V FAC	Prevalence Index worksheet: Total % Cover of: Multiply by:
2		OBL species x 1 =
3.		FACW species x 2 =
4		FAC species x 3 =
5	TO = Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 54+		UPL species x 5 =
1. Potestila assorina	15 OBL	Column Totals: (A) (B)
2. Latur cogniculation	40 V FAC	Prevalence Index = B/A =
3. Arthoxathun oboratum	- S +ACU	Hydrophytic Vegetation Indicators:
4. Tritolium repos	30 FAC	1 - Rapid Test for Hydrophytic Vegetation
5. Ranimonius report	1 FAC	2 - Dominance Test is >50%
6 Festuca aryndinacea	7 - AC	3 - Prevalence Index is ≤3.0¹
7. How another	TAC TAC	4 - Morphological Adaptations (Provide supporting
8 Symphystrichum Chilese	1 XNLOR	data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants ¹
9. Eleochatis machastachya 10. Agrostis Stoloniteta	- INC	Problematic Hydrophytic Vegetation ¹ (Explain)
11 Top docky Maritimum	7 - 10	Indicators of hydric soil and wetland hydrology must
II. III GLOWN IN CONTINUES	107 = Total Cover 53.5	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:	104 = Total Cover 21.4	
1		Hydrophytic
2		Vegetation Present? Yes No
% Para Ground in Harb Stratum	= Total Cover	riesents res NO
Remarks: 4 Clanchen's macrostachua 13	not listed in Mean	to manual however the dishi-
Species in the Northcoast regi	on suggest stary was	Ph decian a tran bis to andide
such.	17/0000	or gradient & 17 Theaten 6

Sampling Point: TP 5

Profile Description: (Describe to the dep	th needed to document the indicator or conf	firm the absence of indicators.)				
Depth Matrix	Redox Features					
(inches) Color (moist) %	Color (moist) % Type¹ Loc²					
0-5 10YR 2/1 100		Mu.S				
5-16 INV 25/1 05	7.5 VR 2.5/2 10 C PL	178				
2 10 10 12.71 10	1312.7/2					
~	10 y R 3/1 5 C M					
16+ Rock -		Rocle Roch + Brick				
10.		touth trace this				
	=Reduced Matrix, CS=Covered or Coated Sand	Grains. ² Location: PL=Pore Lining, M=Matrix.				
Hydric Soil Indicators: (Applicable to all	LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :				
Histosol (A1)	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)	PA - P Comment of the Land				
Thick Dark Surface (A12)	Redox Dark Surface (F6)	3Indicators 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):						
Type:						
Depth (inches):		Hydric Soil Present? Yes No				
Remarks:		Trydic Soil Flesence Tes 10				
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)	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)				
	Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery					
Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (D2)						
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3) (C6) X FAC-Neutral Test (D5)				
Iron Deposits (B5)						
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRF					
Inundation Visible on Aerial Imagery (B	7) Other (Explain in Remarks)	Frost-Heave Hummocks (D7)				
Sparsely Vegetated Concave Surface (B8)					
Field Observations:	11					
Surface Water Present? Yes	No Depth (inches): N/A					
Water Table Present? Yes	No Depth (inches): MA	V. 1				
Saturation Present? Yes		/etland Hydrology Present? Yes No				
(includes capillary fringe)	Dopar (monda).	Total I Juliology I Total I 163 NO				
	onitoring well, aerial photos, previous inspection	ns), if available:				
Remarks:						

WETERIAD DETERMINATION DATA FORM - Western Wight	ntains, valleys, and Coast Region
Project/Site: RMT1 City/County: Samoa	Humbolat Sampling Date: 4/30/20
Applicant/Owner: Hunkoldt Bay Harbor District	State: CA Sampling Point: TP 6
Investigator(s): Sam Polly, Joseph Taler Section, Township, Rai	nge: Sev. 15, 16, +21, T5N, RIW, HBM
	convex, none): Concave Slope (%): 0-1
Subregion (LRR): A, MURA 48 Lat: 40.818893°	Long: -124.180425 Datum: W65 84
Soil Map Unit Name: 1014 - Urban Land - Anthrolltic Xerorthents Assn. 0-	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 ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point k	ocations, transects, important features, etc.
Hydric Soil Present? Hydric Soil Present? Yes No Is the Sampled	* Meets CCC
Hydric Soil Present? Wetland Hydrology Present? Yes No Is the Sampled within a Wetland No	A
Remarks 1 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	The state of the second
Comparted industrial site. Heavily Mamphated. Mave	
grave. Asphalt under finder of soil /till. WET	sdata drier than normal
VEGETATION - Use scientific names of plants.	
Absolute Dominant Indicator Tree Stratum (Plot size:) % Cover Species? Status	Dominance Test worksheet:
1	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2.	Total Number of Dominant
3	Species Across All Strata: (B)
4	Percent of Dominant Species (707%
Sapling/Shrub Stratum (Plot size:)	That Are OBL, FACW, or FAC: 100/ (A/B)
1	Prevalence Index worksheet:
2	
3	OBL species x 1 = FACW species x 2 =
4	FAC species x 3 =
= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 5+1)	UPL species x 5 =
1. Mentra pulegium 25 V OBL	Column Totals: (A) (B)
2 testuca porendis 25 FAC	Prevalence Index = B/A =
3. Rumps thispin 3 FAC	Hydrophytic Vegetation Indicators:
5 Planago lanceolata 2 FACU	1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
6. Briza Maxima 1 5 NL	3 - Prevalence Index is ≤3.0¹
7. Geranium dissection 1 NL	4 - Morphological Adaptations¹ (Provide supporting
8 Tritolium subtaraneum 6 NL	data in Remarks or on a separate sheet)
9. Linimbiens 1	5 - Wetland Non-Vascular Plants ¹
10. Igolepis cernya 3 OBL 11. Lotus cerniculatus 2 FAC	Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must
75 = Total Cover 37.5	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	
1	Hydrophytic
2	Vegetation Present? Yes No
% Bare Ground in Herb Stratum 30%	
Remarks:	

Depth Matrix		Redo	x Features	3				
(inches) Color (moist)	% Co	olor (moist)	- %	Type	Loc2	Texture	Remarks	
7-15 10 YR 2/1	00			1	/	VGr60	See below.	
E-17" 10 VA 471	100				/	Rock	River run Cabale + &	de
5-11 10 ye 9/1	100				-	KOCK	KIND IM COPOLE, TE	ma
			-		-	-		
						i), (
							14	
					-	V.	- :	
						60		
Type: C=Concentration, D=Dep	letion, RM=Redu	ced Matrix, CS	S=Covered	d or Coate	d Sand G		ocation: PL=Pore Lining, M=Matr	
lydric Soil Indicators: (Applic	able to all LRRs	, unless othe	rwise note	ed.)		Indica	tors for Problematic Hydric Soll	s':
Histosol (A1)	8	Sandy Redox (S5)			2	cm Muck (A10)	
Histic Epipedon (A2)	\$	Stripped Matrix	(S6)				ed Parent Material (TF2)	
Black Histic (A3)	L	oamy Mucky I	Mineral (F	1) (except	MLRA 1) <u> </u>	ery Shallow Dark Surface (TF12)	
Hydrogen Sulfide (A4)	t	oamy Gleyed	Matrix (F2)		_ 0	ther (Explain in Remarks)	
Depleted Below Dark Surfac	e (A11) [Depleted Matrix	x (F3)					
Thick Dark Surface (A12)		Redox Dark Su	ırface (F6)			³ indica	itors of hydrophytic vegetation and	
Sandy Mucky Mineral (S1)	[Depleted Dark	Surface (F	7)		we	tland hydrology must be present,	
Sandy Gleyed Matrix (S4)	f	Redox Depress	sions (F8)			uni	ess disturbed or problematic.	
Restrictive Layer (if present):								
Type:								
Depth (inches):						Hydric Sc	oil Present? Yes No	
Remarks:		-	1.25			-		
Decomposed wood	Material	inely !	log de	PCH.				
YDROLOGY		inely I	109 016	P.CH.				
YDROLOGY Wetland Hydrology Indicators:		7)	PCH.	-			
YDROLOGY Wetland Hydrology Indicators:		7)	PCH.		Sec.	condary Indicators (2 or more requ	-100
YDROLOGY Wetland Hydrology Indicators:		7	J Iv>		except	Sec	condary Indicators (2 or more requ Water-Stained Leaves (B9) (MLF	-100
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of c		eck all that app	J Iv>	es (B9) (e	except	Sec	THE RESERVE OF THE PERSON OF T	-100
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of o		eck all that app	ly) nined Leav	es (B9) (e	except	Sec	Water-Stained Leaves (B9) (MLF	-100
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of of Surface Water (A1) High Water Table (A2) Saturation (A3)		ck all that app Water-Sta MLRA Selt Crust	ly) nined Leav	es (B9) (s		Sec	Water-Stained Leaves (B9) (MLR 4A, and 4B)	-100
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of of Surface Water (A1) High Water Table (A2) Saturation (A3)		ck all that app Water-Sta MLRA Salt Crust	Iv) ained Leav 1, 2, 4A, 6	es (B9) (s and 4B) es (B13)			Water-Stained Leaves (B9) (MLR 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagi	A 1, 2,
YDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of of a Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		ck all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen	ained Leav 1, 2, 4A, 6 t (B11)	es (B9) (e and 4B) es (B13) dor (C1)	4		Water-Stained Leaves (B9) (MLR 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)	A 1, 2
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of of of surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		weck all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I	ined Leav 1, 2, 4A, a t (B11) avertebrate i Sulfide Or Rhizosphe	es (B9) (e and 4B) es (B13) dor (C1) eres along	Living Ro		Water-Stained Leaves (B9) (MLR 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagi	A 1, 2
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of continuous of continuous continuous of continuous		eck all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I	ined Leav 1, 2, 4A, a t (B11) invertebrate is Sulfide Or Rhizosphe	es (B9) (6 and 4B) es (B13) dor (C1) eres along ed Iron (C	Living Ro	oots (C3) X	Water-Stained Leaves (B9) (MLR 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Image Geomorphic Position (D2)	A 1, 2
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of control of contr		eck all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro	ained Leav 1, 2, 4A, a t (B11) nvertebrate s Sulfide Or Rhizosphe of Reduce	es (B9) (6 and 4B) es (B13) dor (C1) eres along ed Iron (C ion in Tille	Living Ro 4) d Soils (0		Water-Stained Leaves (B9) (MLR 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Image Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)	t A 1, 2 ,
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of control of contr	: one required; che	eck all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o	ained Leav 1, 2, 4A, a t (B11) evertebrate s Sulfide Or Rhizosphe of Reduce on Reduction stressed	es (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C ion in Tille I Plants (E	Living Ro 4) d Soils (0		Water-Stained Leaves (B9) (MLR 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Image Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR 4)	t A 1, 2,
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of of continuous	: one required; che	eck all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o	ained Leav 1, 2, 4A, a t (B11) nvertebrate s Sulfide Or Rhizosphe of Reduce	es (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C ion in Tille I Plants (E	Living Ro 4) d Soils (0		Water-Stained Leaves (B9) (MLR 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Image Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)	t A 1, 2 ,
YDROLOGY Wetland Hydrology Indicators: Primary 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 Sparsely Vegetated Concav	: one required; che	eck all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o	ained Leav 1, 2, 4A, a t (B11) evertebrate s Sulfide Or Rhizosphe of Reduce on Reduction stressed	es (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C ion in Tille I Plants (E	Living Ro 4) d Soils (0		Water-Stained Leaves (B9) (MLR 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Image Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR 4)	t A 1, 2 ,
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of 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 Sparsely Vegetated Concav Field Observations:	imagery (B7)	water-Sta MLRA Selt Crust Aquatic In Hydrogen Oxidized In Presence Recent Inc Stunted o Other (Ex	ly) ained Leav 1, 2, 4A, 4 t (B11) avertebrate a Sulfide Or Rhizosphe of Reduce on Reduction r Stressed	es (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C ion in Tille I Plants (D emarks)	Living Ro 4) d Soils (0 1) (LRR		Water-Stained Leaves (B9) (MLR 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Image Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR 4)	t A 1, 2 ,
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of continuous primary primary Indicators (minimum of continuous primary primary Indicators (minimum of continuous primary Indicat	Imagery (B7) ve Surface (B8)	eck all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o Other (Ex	ained Leavent (B11) avertebrate of Sulfide Or Reduce on Reduction Stressed on Reduction	es (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C ion in Tille I Plants (E emarks)	Living Ro 4) d Soils (0 11) (LRR		Water-Stained Leaves (B9) (MLR 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Image Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR 4)	t A 1, 2,
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of of control of co	Imagery (B7) ve Surface (B8) Yes No Yes No	weck all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o Other (Ex	ained Leav 1, 2, 4A, at (B11) invertebrate in Sulfide Or Rhizosphe of Reduction or Stressed inches):	es (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C ion in Tille I Plants (E emarks)	Living Ro 4) d Soils (0 11) (LRR	oots (C3) X	Water-Stained Leaves (B9) (MLR 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Image Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A Frost-Heave Hummocks (D7)	t A 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of control 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 Sparsely Vegetated Concaver Field Observations: Surface Water Present? Water Table Present?	Imagery (B7) ve Surface (B8)	eck all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o Other (Ex	ained Leav 1, 2, 4A, at (B11) invertebrate in Sulfide Or Rhizosphe of Reduction or Stressed inches):	es (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C ion in Tille I Plants (E emarks)	Living Ro 4) d Soils (0 11) (LRR	oots (C3) X	Water-Stained Leaves (B9) (MLR 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Image Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR 4)	t A 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of 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 Sparsely Vegetated Concav Field Observations: Surface Water Present? Water Table Present? Saturation Present?	Imagery (B7) ve Surface (B8) Yes No Yes No Yes No	water-Sta MLRA Selt Crust Aquatic In Hydrogen Oxidized I Presence Recent Inc Stunted o Other (Ex	ained Leaven 1, 2, 4A, at (B11) Invertebrate in Sulfide Or Reduction Reduction Stressed in Inches):	es (B9) (eand 4B) es (B13) dor (C1) eres along ed Iron (C ion in Tille I Plants (D emarks)	Living Ro 4) d Soils (0 11) (LRR	coots (C3) X	Water-Stained Leaves (B9) (MLR 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Image Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A Frost-Heave Hummocks (D7)	A 1, 2,
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of 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 Sparsely Vegetated Concav Field Observations: Surface Water Present? Water Table Present? Saturation Present?	Imagery (B7) ve Surface (B8) Yes No Yes No Yes No	water-Sta MLRA Selt Crust Aquatic In Hydrogen Oxidized I Presence Recent Inc Stunted o Other (Ex	ained Leaven 1, 2, 4A, at (B11) Invertebrate in Sulfide Or Reduction Reduction Stressed in Inches):	es (B9) (eand 4B) es (B13) dor (C1) eres along ed Iron (C ion in Tille I Plants (D emarks)	Living Ro 4) d Soils (0 11) (LRR	coots (C3) X	Water-Stained Leaves (B9) (MLR 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Image Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A Frost-Heave Hummocks (D7)	t A 1, 2,
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of 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 Sparsely Vegetated Concav Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (stream	Imagery (B7) ve Surface (B8) Yes No Yes No Yes No	water-Sta MLRA Selt Crust Aquatic In Hydrogen Oxidized I Presence Recent Inc Stunted o Other (Ex	ained Leaven 1, 2, 4A, at (B11) Invertebrate in Sulfide Or Reduction Reduction Stressed in Inches):	es (B9) (eand 4B) es (B13) dor (C1) eres along ed Iron (C ion in Tille I Plants (D emarks)	Living Ro 4) d Soils (0 11) (LRR	coots (C3) X	Water-Stained Leaves (B9) (MLR 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Image Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A Frost-Heave Hummocks (D7)	A 1, 2,
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of 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 Sparsely Vegetated Concav Field Observations: Surface Water Present? Water Table Present? Saturation Present?	Imagery (B7) ve Surface (B8) Yes No Yes No Yes No	water-Sta MLRA Selt Crust Aquatic In Hydrogen Oxidized I Presence Recent Inc Stunted o Other (Ex	ained Leaven 1, 2, 4A, at (B11) Invertebrate in Sulfide Or Reduction Reduction Stressed in Inches):	es (B9) (eand 4B) es (B13) dor (C1) eres along ed Iron (C ion in Tille I Plants (D emarks)	Living Ro 4) d Soils (0 11) (LRR	coots (C3) X	Water-Stained Leaves (B9) (MLR 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Image Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A Frost-Heave Hummocks (D7)	A 1, 2,
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of 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 Sparsely Vegetated Concav Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (stream	Imagery (B7) ve Surface (B8) Yes No Yes No Yes No	water-Sta MLRA Selt Crust Aquatic In Hydrogen Oxidized I Presence Recent Inc Stunted o Other (Ex	ained Leaven 1, 2, 4A, at (B11) Invertebrate in Sulfide Or Reduction Reduction Stressed in Inches):	es (B9) (eand 4B) es (B13) dor (C1) eres along ed Iron (C ion in Tille I Plants (D emarks)	Living Ro 4) d Soils (0 11) (LRR	coots (C3) X	Water-Stained Leaves (B9) (MLR 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Image Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A Frost-Heave Hummocks (D7)	A 1, 2,

	ATA FORM – Western Mou	ntains, Valleys, and Coast Region
Project/Site: PMT 1	Gity/County: Samo 4	Humbold Sampling Date: 5/28/20
Applicant/Owner: Humbold Bay Harbor		State: CA Sampling Point TP 7
Investigator(s): Sam Polly, Joseph Saler	Section, Township, Rai	nge: Secs, 15, 16+21, T5N, RIW, HBM
Landform (hillslope, terrace, etc.): Bayside Industr	a 11/ Local relief (concave, o	convex, nane): Carcave Slope (%): 0-
Subregion (LRR): A, MLRA - 4B	Lat: 40.818232	Long: 124.185142 Datum: W6.58
Soil Map Unit Name: 014 - 1500 Land - Arthra	tic Xerorthents Assn.	0-22 NWI classification: None
Are climatic / hydrologic conditions on the site typical for th	is 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, Soil, or Hydrology	naturally problematic? (If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map		ocations, transects, important features, etc.
	No Is the Sampled	Aroa
	No is the Sampled within a Wetlan	
Remarks: Water Conditions have formed in a		od boiled or DSICA
Mottand Condition have sormed a	IN BOXCAVARCO WINE. O	or wanted as 135 Loxuy.
Aborgand Comeclivity possible	over estimate and ino NI	er .
VEGETATION – Use scientific names of plan		, i
Tree Stratum (Plot size: 30++	Absolute Dominant Indicator <u>% Cover Species? Status</u>	Dominance Test worksheet: Number of Dominant Species
1. DOLLY PSION LOOK VON LOSION WA	50 FACW	That Are OBL, FACW, or FAC: (A)
2. Salix sitchasis	50 FACW	Total Number of Dominant
3		Species Across All Strata: (B)
Sanling/Shruh Stratum (Blat size: 5ff	Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Saping/Shido Shatom (Plot size.		That Are OBL, FACW, or FAC: (A/B) Prevalence Index worksheet:
1. Kubus armeniacus	15 FAC	Total % Cover of: Multiply by:
2-		OBL species x 1 =
3. 4		FACW species x 2 =
5.		FAC species x 3 =
50	= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 544	70 / OBL	UPL species x 5 =
2. Egystem organic	TAC FAC	Column Totals: (A) (B)
3. Romancialus repens	R FAC	Prevalence Index = B/A = Hydrophytic Vegetation Indicators:
4. Cortadoria jubata	15 PACU	1 - Rapid Test for Hydrophylic Vegetation
5		2 - Dominance Test is >50%
6		3 - Prevalence Index is ≤3.01
7		4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9		5 - Wetland Non-Vascular Plants ¹
10	Car	Problematic Hydrophytic Vegetation ¹ (Explain)
11.		¹ Indicators of hydric soil and wetland hydrology must
West West State of St	44 = Total Cover 21	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:) 1.	8.8	
2.		Hydrophytic Vegetation
	Total Cover	Present? Yes No
% Bare Ground in Herb Stratum 56%.	•	
itter		

DepthMatrix	Daday Frahasa	
(inches) Color (moist) %	Redox Features Color (moist) % Type Loc²	Texture Remarks
M-4 10 YR2/2 10		ms applicables
11 04 10 10 11	OFVOET 2 OM DI	The state of the chief
4-29+10 42511 4+	23/2011 3 KM PL	
		•
		:
		· · · · · · · · · · · · · · · · · · ·
	RM=Reduced Matrix, CS=Covered or Coated Sand G	
lydric 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)	3Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Type:		
Depth (inches):		Hydric Soll Present? Yes No
Beptil (merice):		
YDROLOGY		
Wetland Hydrology Indicators: Primary Indicators (minimum of one req	uired; check all that apply)	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators:		Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1)	Water-Stained Leaves (B9) (except	X Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one req 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: □rimary Indicators (minimum of one req 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 requestriance 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 requestriance 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 requestriance 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 Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 ots (C3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requirement 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) (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) Ots (C3) Shallow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requestriance 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) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requestry 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) 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 requestry) 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 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) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requestry 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) (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) 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 requestriance 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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 4) y (B7) Other (Explain in Remarks) ce (B8)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Pattems (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 requirement Indicators (minimum of one requirement Indicators (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 Surfateld 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) y (B7) Other (Explain in Remarks) ce (B8)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Pattems (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 requirement Indicators (minimum of one requirement 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) Inundation Visible on Aerial Imager Sparsely Vegetated Concave Surfated 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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 4) y (B7) Other (Explain in Remarks) ce (B8) Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Pattems (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 Imager Sparsely Vegetated Concave Surfateld Observations: Surface Water Present? Water Table 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 Ro Presence of Reduced iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 4) y (B7) Other (Explain in Remarks) No Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Pattems (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 requestriance) 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 Present? 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 y (B7) Other (Explain in Remarks) No Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Pattems (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 requirement 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 Imager Sparsely Vegetated Concave Surface Water Present? Water Table 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 Ro Presence of Reduced iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 4) y (B7) Other (Explain in Remarks) No Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Pattems (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 requestriance 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 Present? Water Table Present? Yes Saturation Present? Yes Saturation 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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 4) y (B7) Other (Explain in Remarks) rec (B8) No Depth (inches): 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) 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 requirement 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 Imager Sparsely Vegetated Concave Surface Water Present? Water Table 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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 4) y (B7) Other (Explain in Remarks) rec (B8) No Depth (inches): 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) 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 requestriance 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 Present? Water Table Present? Yes Saturation Present? Yes Saturation 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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 4) y (B7) Other (Explain in Remarks) rec (B8) No Depth (inches): No Depth (inches): Wet	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Pattems (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 requestriants) 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 Present? Water Table Present? Yes Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes Sincludes 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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 4) y (B7) Other (Explain in Remarks) rec (B8) No Depth (inches): No Depth (inches): Wet	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Pattems (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 requestriance 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 Present? Water Table Present? Yes Saturation Present? Yes Saturation 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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 4) y (B7) Other (Explain in Remarks) rec (B8) No Depth (inches): 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) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

· ·	DATA FURWI - Western Mou	intains, valleys, and Coast Region
Project/Site: RMT I	City/County: Somo	Humbold Sampling Date: 5/28/20
Applicant/Owner: Humboldt Bay Harbor !	District	State: CA Sampling Point: TP 8
Investigator(s): Joseph Saler, 5m Poll	Section, Township, Ra	ange: Secs. 15, 16+21, 15N, RIW, HBN
Landform (hillslope, terrace, etc.): Bayoide indus	Local relief (concave,	convex, none): None Slope (%): 5
Subregion (LRR): AMLKA-4B	Lat: 40.817.876	Long: -124.185509 Datum: W65 8
Soil Map Unit Name: 1014 - Urban Land - Art	traffic Xeror thents Ason	0-2% NWI classification: None
Are climatic / hydrologic conditions on the site typical for	r this time of year? Yes <u> </u>	(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 ne	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site ma	ap showing sampling point	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes		f Area
Hydric Soil Present? Yes Wetland Hydrology Present? Yes		
Remarks. Former industrial area		at earl of Railroad bed.
VEGETATION – Use scientific names of p	lants.	
Tree Stratum (Plot size:)	Absolute Dominant Indicator	Dominance Test worksheet:
1	% Cover Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2.		
3.		Total Number of Dominant Species Across All Strata: (B)
4		Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 5	= Total Cover	That Are OBL, FACW, or FAC: (A/B)
1. Rubus arminacus	10 V FAC	Prevalence Index worksheet:
2		
3		FACW species x 2 =
4		FAC species x 3 =
-(1	Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 54+	50 / 54(1)	UPL species x 5 =
1. Anthoxantrum adoration	10 NL	Column Totals: (A) (B)
2. Briza maxima 3. Bromu por deaceus	1. FACU	Prevalence Index = B/A =
4. HOLCH MARKS	TO FAC	Hydrophytic Vegetation Indicators:
5. Junew Refusio	2 FACW	1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
6. Cortadora jubata		3 - Prevalence Index is ≤3.01
7. Trifolium repus	TAC	4 - Morphological Adaptations ¹ (Provide supporting
8. Latur comiculatur	- 3 - FAC	data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants
9. Equisiting devigation	= 1 FACW 5 MPL	5 - Wettarid Norr-Vascular Flams Problematic Hydrophytic Vegetation¹ (Explain)
11.		Indicators of hydric soil and wetland hydrology must
	98 = Total Cover 49	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:) 1	14.0	
2		Hydrophytic Vegetation
	= Total Cover	Present? Yes No
% Bare Ground in Herb Stratum 2/		
indinara;		

rofile Description: (Describe to the deposition) Depth Matrix	Redox Features		
nches) Color (moist) %	Color (moist) % Type ¹ Loc	Texture	Remarks
-24+ 5 Y 2.5/2 100		- LS	
	·		
			<u> </u>
		_	
Type: C=Concentration D=Depletion RM	=Reduced Matrix, CS=Covered or Coated San	nd Grains. 21	Location: PL=Pore Lining, M=Matrix.
ydric Soil Indicators: (Applicable to all		Indica	ators for Problematic Hydric Soils ¹ :
Histosol (A1)	Sandy Redox (S5)		cm Muck (A10)
_ Histic Epipedon (A2)	Stripped Matrix (S6)		led Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLR		'ery Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)		•
Thick Dark Surface (A12)	Redox Dark Surface (F6)	3Indic	ators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		etland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	un	less disturbed or problematic.
estrictive Layer (if present):			
Туре:			<u> </u>
Danille (imphes):		Hydric S	oil Present? Yes No 🔼
Depth (inches):emarks:			
Peptri (riches):			
YDROLOGY Vetland Hydrology Indicators:			
YDROLOGY		Se	condary Indicators (2 or more required)
YDROLOGY Vetland Hydrology Indicators:			condary Indicators (2 or more required) Water-Stained Leaves (89) (MLRA 1, 2
YDROLOGY Vetland Hydrology Indicators: Surface Water (A1)	ed; check all that apply)		
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2)	ed; check all that apply) Water-Stained Leaves (B9) (except		Water-Stained Leaves (B9) (MLRA 1, 2
YDROLOGY Vetland Hydrology Indicators: Surface Water (A1)	ed: check all that apply) 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 Marks (B1)	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	t	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
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)	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)	_	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
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)	ed; check all that apply) Water-Stained Leaves (B9) (except	g Roots (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)
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)	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 Presence of Reduced 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 Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3)
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)	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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil	g Roots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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)	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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soit Stunted or Stressed Plants (D1) (L1)	g Roots (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)
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 (I	ed; check all that apply) Water-Stained Leaves (B9) (exception of the property of the propert	g Roots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Process Process 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 (I Sparsely Vegetated Concave Surface	ed; check all that apply) Water-Stained Leaves (B9) (exception of the property of the propert	g Roots (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)
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 (Incompleted Surface) Sparsely Vegetated Concave Surface	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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil Stunted or Stressed Plants (D1) (L1 37) Other (Explain in Remarks)	g Roots (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)
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 (I Sparsely Vegetated Concave Surface Field Observations:	ed; check all that apply) Water-Stained Leaves (B9) (except MRA 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 Soil Stunted or Stressed Plants (D1) (LI Other (Explain in Remarks) (B8)	g Roots (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)
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 (Incompleted Surface) Sparsely Vegetated Concave Surface	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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil Stunted or Stressed Plants (D1) (LI Stressed Plants (D1) (LI ST) Other (Explain in Remarks) No Depth (inches):	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 Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 (I Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Ves	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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil Stunted or Stressed Plants (D1) (LI Stunted or Stressed Plants (D1) (LI ST) Other (Explain in Remarks) No Depth (inches):	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 Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary 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 (I Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Includes capillary fringe)	ed; check all that apply) Water-Stained Leaves (B9) (except MRA 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 Soil Stunted or Stressed Plants (D1) (LI Other (Explain in Remarks) (B8) No Depth (inches): NA	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 Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Primary 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 (I Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Includes capillary fringe)	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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil Stunted or Stressed Plants (D1) (LI Stressed Plants (D1) (LI ST) Other (Explain in Remarks) No Depth (inches):	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 Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 (I Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Ves	ed; check all that apply) Water-Stained Leaves (B9) (except MRA 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 Soil Stunted or Stressed Plants (D1) (LI Other (Explain in Remarks) (B8) No Depth (inches): NA	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 Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Primary 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 (I Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Includes capillary fringe)	ed; check all that apply) Water-Stained Leaves (B9) (except MRA 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 Soil Stunted or Stressed Plants (D1) (LI Other (Explain in Remarks) (B8) No Depth (inches): NA	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 Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 (I Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Ves	ed; check all that apply) Water-Stained Leaves (B9) (except MRA 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 Soil Stunted or Stressed Plants (D1) (LI Other (Explain in Remarks) (B8) No Depth (inches): NA	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 Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

WEILAND DETERMINATION DA	TA FORM -	Western Mou	ntains, Valleys, and Coast Region 🚽
Project/Site: RMT 1	City/	County: Humb	Sampling Date: 05/28/2
	istrict		State: CA Sampling Point. TP 9
Investigator(s): Som Polly Toseph Soiler		ion, Township, Ra	nge: Secs 15, 16,+21, T5N, RIW, HBM
Landform (hillslope, terrace, etc.): Baysi de Industri	al till Loca	al relief (concave,	convex, none):
Subregion (LRR): A MLRA, 4B	_ Lat: 40.8	17361	Long: -124.185823 Datum: WG5 8
Soil Map Unit Name: 1914 - Urban Land - Anthraft	il Xerort	200	1.0-2% NWI classification: None
Are climatic / hydrologic conditions on the site typical for this	*	Yes No _	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology s	ignificantly distu	rbed? Are	'Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology n	aturally problem	natic? (If ne	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing sar	mpling point le	ocations, transects, important features, etc.
	0	Is the Familia	1/
	o	Is the Sampled within a Wetlar	
Remarks:			74
			*
		9	
VEGETATION – Use scientific names of plan	ts.		
Tree Stratum (Plot size: 30 ft)	Absolute Doi % Cover Spe	minant Indicator	Dominance Test worksheet:
1. Salix hookeriana	25	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2 Salix sitch ensis	0	FACW	
3			Total Number of Dominant Species Across All Strata: (B)
4	25	125	Percent of Dominant Species 100 1/
Sapling/Shrub Stratum (Plot size: 5++	= To	otal Cover 17.5	That Are OBL, FACW, or FAC:
1. Salix lusiandra	5	FACW.	Prevalence Index worksheet:
2. Salix howkerson 4	10 1	FACW	
3. Satix Sitchesis		FACW	OBL species x 1 = FACW species x 2 =
4			FAC species x 3 =
5	17	10 Cause 9.5	FACU species x 4 =
Herb Stratum (Plot size: 5++)	= 10	otal Cover 3.4	UPL species x 5 =
1. Equifetum gerigatum	21	HACW	Column Totals: (A) (B)
2. Patentilla ansering spp Pacifica	15	OBL	Prevalence Index = B/A =
4. Agrostis stolantera	34	FAC FAC	Hydrophytic Vegetation Indicators:
5. Juneus effuses	20	FACW	1 - Rapid Test for Hydrophytic Vegetation
6. Anthoxanthum odoratum	2	FACU	2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.01
7. Holeus langtys		FAC	4 - Morphological Adaptations ¹ (Provide supporting
8.			data in Remarks or on a separate sheet)
9	· · · · · · · · · · · · · · · · · · ·		5 - Wetland Non-Vascular Plants¹
11.			Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must
1	118 = To	tal Cover 59	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:		23.6	6
1,	-		Hydrophytic
2	- 1 0	tal Cover	Vegetation Present? Yes No
% Bare Ground in Herb Stratum	= 10	tai Cover	
Remarks: Numerow Willow Sorpling	5 Wood		n.
14 more on william a should	proov	a.	

	the indicator or confirm the absence of indicators.)
Depth Matrix Redox Fea	
(inches) Color (moist) % Color (moist) %	
0-3 7.5 YK 2-7/1 100	Peat Sod (Jungur 10015)
3-12 N2,5/ 96 104R3/1 4	C M CobrCoD Industrial till
10-25t N3/ 100	
100	
	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Cov	vered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise	
Histosol (A1) Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2) Stripped Matrix (S6)	Red Parent Material (TF2)
	al (F1) (except MLRA 1) Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix	
Depleted Below Dark Surface (A11) Depleted Matrix (F3)	
Thick Dark Surface (A12) Redox Dark Surface	· ·
Sandy Mucky Mineral (S1) Depleted Dark Surfac	, ,
Sandy Gleyed Matrix (S4) Redox Depressions ((F8) unless disturbed or problematic.
Restrictive Layer (if present):	
Туре:	
Depth (inches):	Hydric Soil Present? Yes No
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
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; check all that apply) Surface Water (A1) Water-Stained	Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Water-Stained MLRA 1, 2,	Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained High Water Table (A2) Saturation (A3) Salt Crust (B11)	
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained High Water Table (A2) Salt Crust (B11 Water Marks (B1) Aquatic Inverted	Leaves (B9) (except 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained High Water Table (A2) Salt Crust (B11 Saturation (A3) Salt Crust (B11 Water Marks (B1) Aquatic Invertel Sediment Deposits (B2) Hydrogen Sulfice	Leaves (B9) (except 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Leaves (B9) (except 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; check all that apply) Surface Water (A1)	Leaves (B9) (except 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; check all that apply) Surface Water (A1)	Leaves (B9) (except 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; check all that apply) Surface Water (A1)	Leaves (B9) (except 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Educed Iron (C4) duction in Tilled Soils (C6) seed Plants (D1) (LRR A) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) seed Plants (D1) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Leaves (B9) (except 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Educed Iron (C4) duction in Tilled Soils (C6) Seed Plants (D1) (LRR A) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) 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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Project/Ste: Moderation Moder	WETLAND DETERMINATION DA	TA FORM -	Western Mou	ntains, Valleys, and Coast Region
Applicant/Owner: Whole Day Hole Day Ho	Project/Site: RMT_1	City/C	County: Samoa	Humbold Sampling Date: 5/28/20
Section Township Range Ra	Applicant/Owner: My Mold Bay Harbor	Ostoct		
Landform (nillalope, lerrace, etc.): 84/5/16 Tolunt 1	Investigator(s): Joseph Saler, Som Pall	/ Section	on, Township, Rai	nge: Secs, 15, 16+21, T5N, R1W, HB/
Soil Map Unit Name: 014 Unit Name: 0	Landform (hillslope, terrace, etc.): Bayoide Industria			/ ' ' ' ' ' ' ' '
Soil Map Unit Name: 014-Use on the site typical for his time of year? Yes No (If no explain in Remarks) No (If no explain in Remarks in Remarks) No (If no explain in Remarks and No (If no explain in Remarks) No (If no explain in Remarks) No (If no explain in Remarks and No (If no explain in Remarks and No (If no explain in Remarks and No (If no explain in Remarks) No (If no explain in Remarks and No (If no explain in Remarks) No (If no explain in Remarks and No (If no explain in Remarks and No (If no explain in Remarks and No (If no explain in Remarks) No (If no explain in Remarks and No (If no explain in Remarks	Subregion (LRR): A, MLRA, 4B	Lat: 40.81	70,75	Long: -124.185550 Datum: WG5 84
Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No Are Vegetation Soil or Hydrology maturally 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 within a Wettand? Yes No Wetland Hydrology Present? Yes No No Is the Sampled Area within a Wettand? Yes No No No Is the Sampled Area within a Wettand? Yes No No No Is the Sampled Area within a Wettand? Yes No No No Is the Sampled Area within a Wettand? Yes No No No Is the Sampled Area within a Wettand? Yes No No No Is the Sampled Area within a Wettand? Yes No No No Is the Sampled Area within a Wettand? Yes No No No Is the Sampled Area within a Wettand? Yes No No No Is the Sampled Area within a Wettand? Yes No No No Is the Sampled Area within a Wettand? Yes No No No Is the Sampled Area within a Wettand? Yes No No No Is the Sampled Area within a Wettand? Yes No No No Is the Sampled Area within a Wettand? Yes No No No Is the Sampled Area within a Wettand? Yes No No No No Is the Sampled Area within a Wettand? Yes No No No Is the Sampled Area within a Wettand? Yes No	14.1111/11/11/11/11			
Are Vegetation	Are climatic / hydrologic conditions on the site typical for thi	s time of year? Y	es No_	(If no, explain in Remarks.)
SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Hydric Soil Present? Hydric Soil Present? Yes No within a Wetland? Yes No within a Wetland? Vegetand Hydrology Present? No within a Wetland? No	Are Vegetation, Soil, or Hydrology s	significantly distur	bed? Are "	Normal Circumstances" present? Yes No
Hydrophytic Vegetation Present? Hydrophytic Vegetation Present? Yes No Welland Hydrology Present? Yes No Welland? Absolute Dominant Indicators That Are OBL, FACW, or FAC. An United of Dominant Species That Are OBL, FACW, or FAC. Total Number of Dominant Species That Are OBL, FACW, or FAC. Total Number of Dominant Species That Are OBL, FACW, or FAC. Total Number of Dominant Species That Are OBL, FACW, or FAC. Total Number of Dominant Species That Are OBL, FACW, or FAC. Total Number of Dominant Species That Are OBL, FACW, or FAC. Total Number of Dominant Indicators That Are OBL, FACW, or FAC. Total Number of Dominant Indicators That Are OBL, FACW, or FAC. Total Number of Dominant Indicators That Are OBL, FACW, or FAC. Total Number of Dominant Indicators That Are OBL, FACW, or FAC. Total Number of Dominant Indicators That Are OBL, FACW, or FAC. Total Number of Dominant Indicators That Are OBL, FACW, or FAC. Total Number of Dominant Indicators That Are OBL, FACW, or FAC. Total Number of Dominant Indicators That Are OBL, FACW, or FAC. Total Number of Dominant Indicators That Are OBL, FACW, or FAC. Total Number of Dominant Indicators That Are OBL, FACW, or FAC. Total Number of Dominant Indicators That Are OBL, FACW, or FAC. Total Number of Dominant Indicators That Are OBL, FACW, or FAC. Total Number of Dominant Indicators That Are OBL, FACW, or FAC. Total Number of Dominant Indicators That Are OBL, FACW, or FAC. Total Number of Dominant Indicators That Are OBL, FACW, or FAC. Total Number of Dominant Indicators That	Are Vegetation, Soil, or Hydrology r	naturally problema	atic? (If ne	eded, explain any answers in Remarks.)
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Tree Stratum (Plot size: Species Species Species Status	VEGETATION – Use scientific names of plan		sinnet Indicates	Danisana Takundahari
That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species Across All Strata: Secret Across All Strata: FACW Sabing/Shrub Stratum (Plot size: 1. Salix hocket and 2. Salix Asignate 3. Secret Across All Strata: Secret Across All Strata: FACW Prevalence Index worksheet: Total X cover of: Multiply by: OBL species X,1 = FAC Species X,2 = FAC Species X,3 = FACU species X,3 = FACU species X,4 = UPL species X,5 = Column Totals: (A) (B) Prevalence Index = BIA = Hydrophytic Vegetation Model Across All Strata: Species Across All Strata: Total X cover of: Multiply by: OBL FACW FEW species X,1 = FACW species X,2 = FAC species X,3 = FACU species X,5 = Column Totals: (A) (B) Prevalence Index = BIA = Hydrophytic Vegetation Model Across All Strata: Total Cover Total Cover Total Cover Total Cover That Are OBL, FACW, or FAC: (B) Prevalence Index worksheet: Total Cover of: Multiply by: OBL Prevalence Index or Strata (B) Prevalence Index = BIA = Hydrophytic Vegetation Yes and Across All Strata: Species Across	Tree Stratum (Plot size:)			
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Species Across All Strata: Species Acros All Strata: Species Across All Acrosl Across All Acrosl Across All Acrosl Acrosl All Acrosl Acros	2.			Total Number of Dominant
Sapling/Shrub Stratum (Plot size: 5ft	3.			
Sapling/Shrub Stratum (Plot size: 5ft	4			Percent of Dominant Species 1771
Total % Cover of: Multiply by: Comparison Cover of: Multiply by:	Sanling/Shruh Stratum (Plot size: 544	= To	tal Cover	That Are OBL, FACW, or FAC: (A/B)
Total % Cover of: Multiply by: Collaboration Collaboratio	1 Salix hastorians	8 4	/ FACW	Prevalence Index worksheet:
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FACU species X 4 =	4.			
Herb Stratum (Plot size: 51	5	- 10		
1. Schelbape (This angle) 2. Triglochia Maritimum 3. Junior Stratum 4. Later Conciculation 5. Later Conciculation 6. Which is provided to the stratum (Plot size: 1. Schelbape (This angle) 7. Hold of the stratum (Plot size: 1. Schelbape (This angle) 8. Agrostis Stratum (Plot size: 1. Schelbape (This angle) 9. Equipped (This angle) 10. The stratum (Plot size: 11. Schelbape (This angle) 12. Equipped (This angle) 13. The stratum (Plot size: 14. Schelbape (This angle) 15. Schelbape (This angle) 16. Schelbape (This angle) 17. Hold of the stratum (Plot size: 18. Schelbape (This angle) 19. Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 10. The stratum (Plot size: 11. Schelbape (This angle) 12. Schelbape (This angle) 13. The stratum (Plot size: 14. Schelbape (This angle) 15. Schelbape (This angle) 16. Schelbape (This angle) 17. Hydrophytic Vegetation (Explain) 18. Schelbape (This angle) 19. Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 19. Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 10. Schelbape (This angle) 10. Schelbape (This angle) 11. Schelbape (This angle) 12. Schelbape (This angle) 13. Schelbape (This angle) 14. Hydrophytic Vegetation (Provide supporting data in Remarks or on a separate sheet) 15. Schelbape (This angle) 16. Schelbape (This angle) 17. Schelbape (This angle) 18. Schelbape (This angle) 18. Schelbape (This angle) 19. Sche	564	= To	tal Cover	
Prevalence Index = B/A = Supplied of the provided by the pr		5	OBL	
3	2 Tri slockia Maritmush	4	NR.	
4	3 JIN W ett Was	13		
Solution State Solution S		R		
3 - Prevalence Index is \$3.0°		1	OBL	
8. Agrostis stomand 9. Edwiselin (sevication) 10. Stown Phaeocephalw 11	6. Junea Xiphioides	2	OBL	
9. Equise in line in the stratum (Plot size: 10. Woody Vine Stratum (Plot size: 11	7. Holey Idnatus	2	FAC	4 - Morphological Adaptations (Provide supporting
10. Through Problematic Hydrophytic Vegetation¹ (Explain) 11				
11		5		
Woody Vine Stratum (Plot size:			+ACW	
1	11	FC -	15	
1	Woody Vine Stratum (Plot size:	26_= Tot	tal Cover	
2				Hydrophytic
% Bare Ground in Herb Stratum 44 * = Total Cover Remarks: 1.1	2			Vegetation
Kellaks.	114 *	= Tot	tal Cover	Present? Yes No
Kellaks.	% Bare Ground in Herb Stratum	-		
	Remarks.			

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tor or confirm the absence of indicators.)
e Loc² Texture Remarks
MP
Pl GGLS
pated Sand Grains. ² Location: PL=Pore Lining, M=Matrix.
Indicators for Problematic Hydric Soils ³ :
2 cm Muck (A10)
Red Parent Material (TF2)
cept MLRA 1) Very Shallow Dark Surface (TF12)
Other (Explain in Remarks)
³ Indicators of hydrophytic vegetation and
wetland hydrology must be present,
unless disturbed or problematic.
Hydric Soil Present? Yes No
Secondary Indicators (2 or more required)
)) (except Water-Stained Leaves (B9) (MLRA 1, 2,
(except Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
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)
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)
Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Cong Living Roots (C3) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Cong Living Roots (C3) Geornorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) S (D1) (LRR A) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, 2) And Application (B10) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (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) Geornorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) S (D1) (LRR A) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, 4B, 4B, 4B, 4B, 4B, 4B, 4B, 4B, 4B, 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) Geornorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) S (D1) (LRR A) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, 4B, 4B, 4B, 4B, 4B, 4B, 4B, 4B, 4B, 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) Geornorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) S (D1) (LRR A) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, 4B, 4B, 4B, 4B, 4B, 4B, 4B, 4B, 4B, 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) Ong Living Roots (C3) Geornorphic Position (D2) Shallow Aquitard (D3) Tilled Soils (C6) FAC-Neutral Test (D5) S (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No No No Wetland Hydrology Present?
Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) S (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Ong Living Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Tilled Soils (C6) FAC-Neutral Test (D5) S (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No No No Wetland Hydrology Present? Yes
Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Ong Living Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Tilled Soils (C6) FAC-Neutral Test (D5) S (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No No No Wetland Hydrology Present? Yes
Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Ong Living Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Tilled Soils (C6) FAC-Neutral Test (D5) S (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No No No Wetland Hydrology Present? Yes
Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Ong Living Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Tilled Soils (C6) FAC-Neutral Test (D5) S (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No No No Wetland Hydrology Present? Yes

WETLAND DETERMINATION DA	TA FORM -	Western Mou	ntains, Valleys, and Coast Region
Project/Site: RMT 1	CibyC	Samoa	/Humbold Sampling Date: 5/28/20
	SARCT CILLY	ounty.	10
Investigator(s): Sam Polly Juser Suler		. Township Day	State: CA Sampling Point: 1P11 nge: Secs. 15 16 +21, T3N, R1W, HB/
Landform (hillslope, terrace, etc.): Baysi de Industri	1 1 7 1 1		
A III O A III O			convex, none): Un (AV) Slope (%): 0
	11 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		Long: ~124.185236 Datum:W6.5 84
10			NWI classification: NONE
Are climatic / hydrologic conditions on the site typical for this			
Are Vegetation, Soil, or Hydrology si			Normal Circumstances" present? Yes No
Are Vegetation, Soit, or Hydrology n.	aturally problema	atic? (If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map s	showing san	pling point l	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		-	
Hydric Soil Present? Yes No	P	Is the Sampled	
		within a Wetlan	d? Yes No
Remarks:			
VEGETATION – Use scientific names of plant	<u> </u>		
VEGETATION – Use scientific frames of plant		ninant Indicator	Danisa Tankana Indonésia
Tree Stratum (Plot size:)	Absolute Don <u>% Cover</u> Spe		Dominance Test worksheet: Number of Dominant Species
1			That Are OBL, FACW, or FAC:
2.			Total Number of Dominant
3.			Species Across All Strata:(B)
4			Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 54+	= To	tal Cover	That Are OBL, FACW, or FAC:
1. Salix Sitchesis	12 4	/ FAC	Prevalence Index worksheet:
2. Salix hocheriana	2	FACW	Total % Cover of: Multiply by:
3. Rubus armeniacus	14 V	JAC -	OBL species x 1 =
4			FACW species x 2 =
5			FACULTY X 3 =
Herb Stratum (Plot size: 54+)	28_ = To	tal Cover	FACU species x 4 =
1. E Wiset in allique	20 1	FACW	UPL species x 5 = Column Totals: (A) (B)
2. Law conculation	10	FAC	
3. Mertra alegium	1	OBL	Prevalence Index = B/A =
4. Holeus langus	4	FAC	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
5. Iriglockin Maritima	5	OBL	2 - Dominance Test is >50%
6. Festica nyunos	1	FACU	3 - Prevalence Index is ≤3.0¹
7. Isolepis Cernua	3	OBL	4 - Morphological Adaptations ¹ (Provide supporting
8. Riza Maxima	4 _	NL.	data in Remarks or on a separate sheet)
9. Leantodan Saxatilis	10 0	FACU	5 - Wetland Non-Vascular Plants ¹
10. Plantago lanceolata	6	-FACU	Problematic Hydrophytic Vegetation¹ (Explain)
11. Trifolium dubium	2 -	TACU	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	67_= Tot	al Cover 31.5	, , , , , , , , , , , , , , , , , , ,
1			Hydrophytic
2			Vegetation
% Bare Ground in Herb Stratum 33*	= Tot	al Cover	Present? Yes No
Remarks: 1			
Liter + Thatch			

_	-		
•	"		
-	.,	ш	_

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 (mojst) % Type¹ Loc²	Texture Remarks
$0-5$ 2.5 $\frac{1}{2}$) 54R3/4 30 0 PL	12
$5-8$ $5 \times 3/1 \times 3$	7.5 VR 3/4 17 C PL	L5
2-74+ N25/ 80	10VR 3/4 20 C Wel	< · ·
5 21 10 2.01 00	101107120 0 111	3
		**
		2 2
	RM=Reduced Matrix, CS=Covered or Coated Sand Gra o all LRRs, unless otherwise noted.)	ins. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
	Sandy Redox (S5)	2 cm Muck (A10)
Histosol (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		_ ` ` .
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
YDROLOGY		
Netland Hydrology Indicators: Primary Indicators (minimum of one rea	nuired: check all that anniv)	Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Sunace water (A1) High Water Table (A2)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1)	Salt Clust (B11) Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9
· · · · ·	LINGUAGE DUMOS CUCH COLL	
LIGHT LIPOORITE (HCC)		
Drift Deposits (B3) Algal Mat or Crust (B4)	Oxidized Rhizospheres along Living Room	ts (C3) X Geomorphic Position (D2)
Algal Mat or Crust (B4)	 Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) 	ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Algal Mat or Crust (B4) Iron Deposits (B5)	 Oxidized Rhizospheres along Living Roof Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) 	ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	 Oxidized Rhizospheres along Living Roof Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) 	ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image	Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) ry (B7) Other (Explain in Remarks)	ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surf	Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) ry (B7) Other (Explain in Remarks)	ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surf	Oxidized Rhizospheres along Living Roof Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) ry (B7) Other (Explain in Remarks) ace (B8)	ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surf Field Observations: Surface Water Present? Yes	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) Oce (B8)	ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surf Field Observations: Surface Water Present? Water Table Present? Yes	Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) ry (B7) Other (Explain in Remarks) ace (B8) No Depth (inches):	ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surf Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes	Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) ry (B7) Other (Explain in Remarks) ace (B8) No Depth (inches): Ir	ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surf Field Observations: Surface Water Present? Water Table Present? Saturation Present? Yes Situration Present? Ves Situration Present?	Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) ry (B7) Other (Explain in Remarks) ace (B8) No Depth (inches):	ts (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
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surf Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gaug	Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) ry (B7) Other (Explain in Remarks) ace (B8) Depth (inches): WA No Depth (inches): Wetla	ts (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
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surf Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes (includes capillary fringe)	Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) ry (B7) Other (Explain in Remarks) ace (B8) Depth (inches): WA No Depth (inches): Wetla	ts (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
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surf Field Observations: Surface Water Present? Water Table Present? Saturation Present? Yes Includes capillary fringe) Describe Recorded Data (stream gaug	Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) ry (B7) Other (Explain in Remarks) ace (B8) Depth (inches): WA No Depth (inches): Wetla	ts (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
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surf Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Cincludes capillary fringe) Describe Recorded Data (stream gauge	Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) ry (B7) Other (Explain in Remarks) ace (B8) Depth (inches): WA No Depth (inches): Wetla	ts (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

WETLAND DETERMINATION DA	TA FORM – Western Mou	ntains, Valleys, and Coast Region
Project/Site: RMT 1	City/County: Samod	Humbald Sampling Date: 6/4/20
Applicant/Owner: Humbalt, Bay Horbor	District	State: CA Sampling Point: TPI2
Investigator(s): Tosell Saler Sam Poly	Section, Township, Rai	ngo: Secs, 15, 16, +21, 75 N, RIW, HB/
Landform (hillslope, terrace, etc.): Bay Side +11	Local relief (concave,	convex, none): Slope (%): 0-1
Subregion (LRR): A, MLRA - 4B	Lat: 40.8.16/28°	Long: -124. 183728° Datum: WGS8
Soil Map Unit Name: 1014 - Urban Land - Anthra	tic Xerorthets 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 Hydrologys	ignificantly disturbed? Are *	Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology n	aturally problematic? (If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing sampling point le	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		
Hydric Soil Present? Yes No. Wetland Hydrology Present? Yes No.		
Remarks: 210% of normal may precip		muni precip.
VEGETATION – Use scientific names of plant	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 A)	% Cover Species? Status	Number of Dominant Species
- Satix hochering	80 V FACW	That Are OBL, FACW, or FAC: (A)
2		Total Number of Dominant
3		Species Across All Strata: (B)
4	40	Percent of Dominant Species 7.0 /
Sapling/Shrub Stratum (Plot size:)	= Total Cover	That Are OBL, FACW, or FAC: (A/B)
1 RUBUS Uranus	40 V FACU	Prevalence Index worksheet:
2 Rypu ampiacus	8 FAC	Total % Cover of: Multiply by:
3. Thex aguitain	2 FACU	OBL species x1 =
4		FACW species x 2 = FAC species x 3 =
5		FACU species x4 =
Herb Stratum (Plot size: 5)	50 = Total Cover 4	UPL species x5 =
1 Bramus Carinatus	2 / NL	Column Totals: (A) (B)
2. Cortaderia jubata	FACIL	97.16
3.		Prevalence Index = B/A = Hydrophytic Vegetation Indicators:
4		1 - Rapid Test for Hydrophytic Vegetation
5		2 - Dominance Test is >50%
6		3 - Prevalence Index is ≤3.0¹
7		4 - Morphological Adaptations (Provide supporting
8		data in Remarks or on a separate sheet)
9		5 - Wetland Non-Vascular Plants
10		Problematic Hydrophytic Vegetation ¹ (Explain)
11.		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 51)	= Total Cover 1.6	bo process, amade distance of producting di
1. Hedera helix	5 / facu	Mission wheatle
2.		Hydrophytic Vegetation
	5 = Total Cover	Present? Yes No
% Bare Ground in Herb Stratum 90%		
Remarks: Leaf liter		
port trijet		

Depth Matrix	oth needed to document the indicator or confirm Redox Features	
(inches) Color (moist) %	Color (moist) % Type Loc2	Texture Remarks
1-5 10 VR 2/1 10/1		
F 11 10 10 2 12 100		23 Some Cobbe
5-11 10 YK3/2 100	TAULOSIU II O TO TA	LS GOINE COOPE
1-24+ 104R 4/1 60	10 YR 3/4 40 C M	LS
1 1 1 1 1 1		
	·	
	=Reduced Matrix, CS=Covered or Coated Sand G	
lydric Soil Indicators: (Applicable to all	I 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)	
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):		
Type:		2.0
Depth (inches):		Hydric Soll Present? Yes No
Deptil (Inches).		1190110 00117 10001117 1100
Wetland Hydrology Indicators:		
Netland Hydrology Indicators:		Secondary Indicators (2 or more required)
Netland Hydrology Indicators:	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		
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) Salt Crust (B11)	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 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 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 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 obts (C3) Geomorphic Position (D2)
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 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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled 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 oots (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 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 Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 obts (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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR 4) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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	mains, valleys, and Coast Region
Project/Site: RMT 1 City/County: Same	a / H Mboldt Sampling Date: 6/4/20
Applicant/Owner: Humboldt Bay Harbor District	State: (A Sampling Point: TP 13
Investigator(s): Som Poly 1 Joseph Saler Section, Township, Ra	nge: Secs. 15, 16,+21, T5N, RIW, HBM
Landform (hillslope, terrace, etc.): Baysi de til Local relief (conçave,	convex, none); (M) (AVE Slope (%): 0-1
Subregion (LRR): A, MLRA - 48 Lat: 40.8[5435]	Long: -124.185233 Datum: WG5 8
	. 0-21/2 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 n	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	1 Ann
Hydric Soil Present? Yes No Is the Sampler within a Wetla	^
wetland Hydrology Present? Yes No	
Wood vegetation recently cut managed wetland	occurs in depression, best may transition to 1855.
VEGETATION – Use scientific names of plants.	
Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2.	F-0
3.	Total Number of Dominant Species Across All Strata: (B)
4	Percent of Dominant Species //
Sapling/Shrub Stratum (Plot size: 511) = Total Cover	That Are OBL, FACW, or FAC: (A/B)
1 Rubus, ursinus 12 FACU	Prevalence Index worksheet:
2. Salix hookeriana 10 FACU	/Total % Cover of: Multiply by:
3.	OBL species x 1 = FACW species x 2 =
4	FAC species x3=
5	FACU species x4=
Herb Stratum (Plot size: 5ft,)	UPL species x 5 =
1. Eleocharis macrostochya, 4 * NLCO	(A)(B)
2 Pertentilla auserina Sp. paritica 12 OBL	Prevalence Index = B/A =
3. Equisetium arywe 25 FAC	Hydrophytic Vegetation Indicators:
4. Lollis, arniculativ 50 FAC	1 - Rapid Test for Hydrophytic Vegetation
5. Agrantis Stolantora 25 V FAC	2 - Dominance Test is >50%
6. Rushex Cristus I FAC	3 - Prevalence Index is ≤3.0¹
7.	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
9.	5 - Wetland Non-Vascular Plants¹
10	Problematic Hydrophytic Vegetation¹ (Explain)
11.	¹ Indicators of hydric soil and wetland hydrology must
= Total Cover 51.2	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	
1	Hydrophytic Vegetation
2 = Total Cover	Present? Yes No
% Bare Ground in Herb Stratum	
Remarks: A Electronis macrostacinya is not listed in USACE species in the northcourt region suggest observation	menual; however, obs of this
species in the northcourt region suggest obser FACW	designation distreated as such.

Depth (inches) Color (moist) % Color (moist) % Type¹ Loc² Texture Rem Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.	: Hydric Soils³: F2)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 1	: Hydric Soils³: F2)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Variable Variabl	: Hydric Soils³: F2)
Histosol (A1)	: Hydric Soils³: F2)
ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Zem Muck (A10) Histol Epipedon (A2) Stripped Matrix (S6) Red Parent Material (Tile Spipedon (A2)) Black Histic (A3) Loarny Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (A11) Hydrogen Sulfide (A4) Loarny Gleyed Matrix (F2) Other (Explain in Remain Proceedings of Problematics (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must unless disturbed or problematics.	: Hydric Soils³: F2)
ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Zem Muck (A10) Histo Epipedon (A2) Stripped Matrix (S6) Red Parent Material (Tilder Matrix (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (A11) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Indicators of hydrophytic very Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or prob	: Hydric Soils³: F2)
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (Time Problematics) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (A12) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remains) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must unless disturbed or prob Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or prob	: Hydric Soils³: F2)
Histosol (A1)	: Hydric Soils³: F2)
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (Time Problematics) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (A12) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remains) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must unless disturbed or prob Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or prob	: Hydric Soils³: F2)
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Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (Tilder Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (A11) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Alndicators of hydrophytic very Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Wetland hydrology must Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or prob	: Hydric Soils³: F2)
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (Tilder Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (A11) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Alndicators of hydrophytic very Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Wetland hydrology must Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or prob	: Hydric Soils³: F2)
Histosol (A1) Sandy Redox (S5) Z cm Muck (A10) Histle Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TI Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surf Hydrogen Sulfide (A4) Loarny Gleyed Matrix (F2) Other (Explain in Rema Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Indicators of hydrophytic very sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or prob	F2)
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except MLRA 1) Loamy Gleyed Matrix (F2) Depleted Matrix (F2) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sendy Gleyed Matrix (S4) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except MLRA 1) Loamy Mucky Mineral (F2) Stripped Matrix (F2) Depleted Matrix (F3) Sandy Gleyed Matrix (S1) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except MLRA 1) Loamy Mucky Mineral (F2) Stripped Matrix (F2) Depleted Matrix (F3) Stripped Matrix (F3) Depleted Matrix (F3) Stripped Matrix (F3) Depleted Matrix (F3) Stripped Matrix (F3) Stripped Matrix (F3) Depleted Matrix (F3) Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Red Parent Material (Tive Companies (Tiv	•
Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surful Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remainder Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Indicators of hydrophytic very Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or prob	•
Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Loarny Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Other (Explain in Remains) Indicators of hydrophytic volume of the problem of the proble	'ace (TF12)
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) Pepleted Matrix (S4) Redox Depressions (F8) Wetland hydrology must unless disturbed or prob	
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Dark Surface (F6) Pepleted Dark Surface (F7) Redox Depressions (F8) "Indicators of hydrophytic versions of hydrophytic versions (F7) Wetland hydrology must unless disturbed or prob	ırks)
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or prob	
Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or prob	egetation and
	be present,
Restrictive Layer (if present):	lematic.
Type:	V
Depth (inches): Hydric Soil Present? Yes _	No
Remarks:	
YDROLOGY 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	
High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B)	,, (20) (
	210)
Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on	
Drift Deposits (B3) — Oxidized Rhizospheres along Living Roots (C3) X Geomorphic Position	• •
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 (D)5)
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 Hummo	ocks (D7)
Sparsely Vegetated Concave Surface (B8)	
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
	X
Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes	NO
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
manager of transport and free and damper transporting transport broader broader problems with transport to a second	
Pamarke: 0))	
Pamarke: 0))	
Pamarke: 0)	

WEILAND DETERMINATION DAT	IA FORM -	Western Mou	ntains, Valleys, and Coast Region
Project/Site: RMT I	City/	County: Hun	sampling Date: 428-2
Applicant/Owner: Humbold Bay Harbor			State: CA Sampling Point: TP 4
Investigator(s): Joseph Jaler, 5am Polly	Sect	tion, Township, Rar	nge: Secs. 15, 16, +21, T5N, RIW HBM
Landform (hillslope, terrace, etc.): BaySide	Loc	al relief (concave, o	convex, none): Con Cave Slope (%):
Subregion (LRR): A MLKA-4B	Lat: 40.8	14731°	Long: ~124.184 807° Datum: WG5 8
Soil Map Unit Name: 1014 - Urban land - Antho	ralfie Xe	rorthents a	155h, 0-2 NWI classification: None
Are climatic / hydrologic conditions on the site typical for this	time of year?	YesNo_	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology signal	gnificantly disto	ırbed? Are "	Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology na	aturally problen		eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map s	howing sa	mpling point k	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		1	*Mees (
Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No		Is the Sampled within a Wetlan	X WOLLOW
Remarks: 10' NW of DI @ outfall to bay	Sof B	ASIC cement	I wall a low of 5 of old dock
DI is elevated, ponding			
VEGETATION – Use scientific names of plant	s.		normal
Tree Stratum (Plot size:		minant Indicator ecies? Status	Dominance Test worksheet:
1	70 COVEL OF	ecies: oldius	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant
3.			Species Across All Strata: (B)
4	<u> </u>		Percent of Dominant Species 1007
Sapling/Shrub Stratum (Plot size:	=T	otal Cover	That Are OBL, FACW, or FAC:
1			Prevalence Index worksheet:
2			
3.			FACW species x 2 =
4			FAC species x 3 =
5		intel Cover	FACU species x 4 =
Herb Stratum (Plot size:)	7	otal Cover	UPL species x 5 =
1. Lotus corniculatus	23	FAC	Column Totals: (A) (B)
2. Festuca rubra	33-1	- TAC	Prevalence Index = B/A =
3. Daucus Carrota 4. Grindelia stricta	19	- TACU	Hydrophytic Vegetation Indicators:
5. Souchus Olerace W	1	UPL	1 - Rapid Test for Hydrophytic Vegetation
6. Meli lotus albus	3	NL	2 - Dominance Test is >50%
7. Rumex Gious	2	TAC	3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting)
8. Agrostis stolenifor	21	FAC	data in Remarks or on a separate sheet)
9. Holcus lanatus	3	FAC	5 - Wetland Non-Vascular Plants ¹
10. Vicra sativa	1	UPL	Problematic Hydrophytic Vegetation ¹ (Explain)
11. Lev canthemum vulgar P	115 -	otal Cover 515	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		23	
1			Hydrophytic
2.			Vegetation Present? Yes No
% Bare Ground in Herb Stratum	= To	otal Cover	
Remarks: Festuca rubra, sparting			
, == , , , , , , , , , , , , , , , , ,			

Depth (ches) Secondary Indicators: (2r) must be present: (3) Depth (ches) Secondary Indicators (2r) must be present: (3) Depth (ches) Searous (4) Depth (ches): (3) Depth (ches): (4) Depth (ches): (5) Depth (ches): (6) Depth (ches): (6) Depth (ches): (6) Depth (ches): (6) Depth (ches): (7) Searous (8) Depth (ches): (9) Depth (ches): (9) Depth (ches): (9) Depth (ches): (9) Depth (ches): (10) Depth	Color (most) % Color (most) % Type Loc Testure Regulate Regulate Concentration (D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Matrix, CS=Covered Matri	Profile Description: (Describe to the d	lepth needed to document the indicator or confi	irm the absence of indicators.)
Type: C=Concentration, D=Depletion, RM=Reduced Mistrix, CS=Covered or Ceated Sand Grains. Hydric Soil indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Histosol (A3) Sandy Redox, (S5) Black Histic (A3) Learny Micky Mineral (F1) (except MLRA 1) Hydrogen Surface (A12) Depleted Below Dark Surface (A11) Sandy Mineral (F2) Sandy Mineral (F3) Sandy Mineral (F3) Sandy Mineral (F3) Reatrictive Layer (if present): Type: Hydric Soil Indicators: Remarks: Hydric Soil Indicators (A12) Black Histic (A3) Depleted Dark Surface (A12) Redox Dark Surface (F5) Sandy Cleyey Matrix (S4) Restrictive Layer (if present): Type: Hydric Soil Present? Weltand Hydrology Indicators: Primary Indicators (minimum of none required; check all Inat abolt) Saturation (A3) Sati Crust (B11) Saturation (A3) Sati Crust (B11) Apal Mat or Crust (B4) Hydrogen Surface (B6) Reatrictive Layer (If present): Hydric Soil Present? Yes No Carbon Surface (B6) Sediment Deposits (B2) Hydrogen Surface (B6) Reatrictive (B6) Recent Inon Reduction in Titled Soils (C5) Saturation Visible on Aerial Imagery (B7) Sourface Water Present? Ves No Depth (Inches): Surface Water Present? Yes No Depth (Inches): Wetland Hydrology Present? Yes No Depth (Inches): Water Minks (B7) Presence of Reduced Inn (C4) Field Observations: Surface Water Present? Yes No Depth (Inches): Water Table Present? Yes No Depth (Inches): No Mineral Remarks) Wetland Hydrology Present? Yes No Depth (Inches): No Mineral Remarks) Wetland Hydrology Present? Yes No Depth (Inches): No Mineral Remarks (B7) In available: Wetland Hydrology Present? Yes No Depth (Inches): No Mineral Remarks (B7) In available: We	Type: C-Concentration. D-Depletion. RM=Reduced Matrix. CS=Covered or Coated Sand Grains. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Black Hatic (A3) Loany Mucky (Mineral (F)) Lydrogen Surface (A12) Depleted Benv Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy (Mineral (S1)	and the second s	Redox Features	Tautus Damada
"Type: C-Concentration, D-Depletion, RM-Reduced Matrix, CS-Covered or Coated Sand Grains. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histos (A1) Sandy Redox (S5) 2 cm Muck (A1) Histos (A2) Sinpped Matrix (S6) Redox (S5) 2 cm Muck (A1) Hydric Soil (A2) Learny Mucky Mineral (F1) (except MLRA 1) Depleted Below Dark Surface (A1) Depleted Matrix (F2) Thick Dark Surface (A1) Depleted Matrix (F2) Thick Dark Surface (A1) Depleted Matrix (F2) Sandy Mucky Mineral (S1) Depleted Matrix (F2) Sandy Mucky Mineral (S1) Depleted Dark Surface (F5) Sandy Mucky Mineral (S1) Depleted Dark Surface (F5) Sandy Olsyed Matrix (S4) Redox Depreasions (F8) Restrictive Layer (if present): Type: Depth (inches): Hydric Soil Present? Yes No Water Marks (B1) Sediment Deposts (B2) Oxide (B3) Aquatic Invertebrates (B13) Apal Mat or Crust (B4) Hydric Soil Cracks (B3) Freserved or Coated Sand Grains. *Location: PL-Pere Lining, M-Matrix Indicators and Matrix (B4) Red Parent Matrix (B1) Red Parent Matrix (B2) 1 cm Muck (A1) Presence (F7) Water Marks (B1) Aquatic Invertebrates (B13) Apal Mat or Crust (B4) Hydric Soil Present? Yes No Depth (inches): Matrix (B4) Frost-Heave Hummocks (D7) Sourface Water Present? Yes No Depth (inches): Matrix (B1) Depth (inches): Matrix (B1) No Depth (inches): Matrix (B1) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: D=Depletic Below Dark Surface (A1) Type: D=Depletic Below Dark Surface (A1) Sandy Gleyed Matrix, (F2) D=Depletic Below Dark Surface (A1) Type: D=Depletic Matrix, CS=Covered Matrix, (F2) Sandy Gleyed Matrix, (F3) Type: D=Depletic Matrix, CS=Covered Matrix, (F2) D=Depletic Below Dark Surface (A1) Type: D=Depletic Matrix, CS=Covered Matrix, CS=Covered Matrix, CS=Covered Matrix, (F2) Wetland Hydrology Indicators (Tipe) Type: D=Depletic Matrix, CS=Covered Matrix, CS=Cov		Color (moist) % Type Loc	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histo Epipedon (A2) Stripped Matrix (S6) 2 Com Muck (A10) Histo Epipedon (A2) Stripped Matrix (S6) 2 Com Muck (A10) Black Histo (A3) Loanry Mucky Mineral (F1) (except MLRA 1) Lydrogen Surdice (A4) Loanry Gleyed Matrix (F2) 2 Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Matrix (F3) 2 Other (Explain in Remarks) Thick Dark Surface (A12) Redox Dark Surface (F8) 3 Indicators of hydrophylic vegetation and wetland hydrophylic vegetation (P1) Secondary Indicators (2 or more required) Water Table (C2) Saluration Present (P3) Water Marks (B1) Dry Season Water Table (C2) Saluration Present (P3) No Depth (inches):	"Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. "Location: PL=Pore Lining, M=Matrix, Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histocol (A1) Sandy Redox (S5) Indicators for Problematic Hydric Soils*: Histocol (A2) Stipped Metrix, (G2) Redox (Pilor Matrix, (G2) Redox Dark Surface (A1) Redox (Pilor Matrix, (G2) Redox Dark Surface (A1) Redox Dark Surface (F2) Redox Dark Surface (F3) Re	VIII III		GILD FILL (ASPART BOW)
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Sandy Redy Matrix (F3) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (F1) Sandy Mucky Mineral (F1) Sandy Mucky Mineral (F1) Sandy Mucky Mineral (F1) Sandy Surface (A12) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Sandy Mucky Mineral (S1) Sandy Surface (A12) Redox Dark Surface (F6) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Surface (A12) Redox Depressions (F8) Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all Inat apoly) Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all Inat apoly) Water At A10 Saturation (A3) Saturation (A3) Saturation (A3) Saturation MLRA 1, 2, 4A, and 4B) Mater Marks (B1) Sediment Deposits (B2) Hydrogen Sulfide Cdor (C1) Softment Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Dirth Ceposits (B3) Surface Soil Cracks (B6) Surface Mater Posent? Yes No Depth (inches): Depth (inches): No Depth (inches): No Depth (inches): No Metland Hydrology Present? Yes No Depth (inches): No Metland Hydrology Present? Yes No Depth (inches): No Metland Hydrology Present? Yes No Depth (inches): No Describe Recordeo Data (stream gauge, monitoring well, serial photos, previous inspections), if available:	Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histocol (A1)	11-24 104 2.5/1 100		Gr LD fill (AsoLat, Brick)
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Sandy Redy Matrix (F3) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (F1) Sandy Mucky Mineral (F1) Sandy Mucky Mineral (F1) Sandy Mucky Mineral (F1) Sandy Surface (A12) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Sandy Mucky Mineral (S1) Sandy Surface (A12) Redox Dark Surface (F6) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Surface (A12) Redox Depressions (F8) Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all Inat apoly) Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all Inat apoly) Water At A10 Saturation (A3) Saturation (A3) Saturation (A3) Saturation MLRA 1, 2, 4A, and 4B) Mater Marks (B1) Sediment Deposits (B2) Hydrogen Sulfide Cdor (C1) Softment Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Dirth Ceposits (B3) Surface Soil Cracks (B6) Surface Mater Posent? Yes No Depth (inches): Depth (inches): No Depth (inches): No Depth (inches): No Metland Hydrology Present? Yes No Depth (inches): No Metland Hydrology Present? Yes No Depth (inches): No Metland Hydrology Present? Yes No Depth (inches): No Describe Recordeo Data (stream gauge, monitoring well, serial photos, previous inspections), if available:	Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Black Histo (A2) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (F3) Thick Dark Surface (A12) Sandy Mucky Mineral (F3) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Type: Depth (inches): Depth (inches): Depth (inches): Depth (inches): Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water Stained Leaves (B9) (except Hydrogen Sulfide Odor (C1) Saturation (A3) Saturation (A3) Saturation (A3) Saturation Peposits (B3) Oxidized Rivizopheres along Living Roots (C3) Surface (B3) Water Marks (B1) Duric Deposits (B3) Oxidized Rivizopheres along Living Roots (C3) Surface Soil Cracks (B6) Iron Deposits (B6) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Surface Roots (B6) Surface Soil Cracks (B6) Surface Roots (B6) Surface			
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Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (TF12) Hydrogen Surifice (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Bellew Dark Surface (A11) Depleted Matrix (F2) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Welland hydrology must be present, unriess disturbed or problematic. Restrictive Layer (if present): Type: Depth (inches): Hydric Soil Present? Yes No Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that appely) Surface Water (A1) Water-Stained Leaves (B9) (except Hydrogen Surface (B10)) Water Marks (B1) Aquatic Invertebrates (B13) Drainage Patterns (B10) Drainage Patterns (B10) Dry Seadiment Deposits (B2) Hydrogen Surface Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Coidized Rhizospheres along Living Roots (C3) Saturation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): No Dep	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 Beflow Dark Surface (A11) — Depleted Matrix (F3) — Thick Dark Surface (A12) — Redox Dark Surface (F6) — Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type:	Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Hydrogen Suifide (A4) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A12) Redox Dark Surface (F5) Sandy Musky Mineral (S1) Sandy Cleyed Matrix (S4) Redox Dark Surface (F7) Redox Dark Surface (F7) Sandy Cleyed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Depth (inches): Wetland Hydrology Indicators: Primary Indicators (minimum of one required: check all that apoly) Surface Water (A1) High Waler Table (A2) MLRA 1, 2, 4A, and 4B) Matrix (B1) Saturation (A3) Saturation (A3) Saturation (A3) Saturation Deposits (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B6) Surface Water (B4) Iron Deposits (B6) Surface Soil Cracks (B6) Iron Deposits (B6) Surface Soil Cracks (B6) Iron Deposits (B7) Sparseby Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Sandy Cleyed Matrix (S4) Redox Dark Surface (F7) Redox Dark Surface (F7) Sandy Cleyed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Type: Depth (inches): Wetland Hydrology Indicators: Primary Indicators (minimum of one required: check all that apply) Surface Water (A1) High Water Table (A2) MILRA 1, 2, 4A, and 4B) Saturation (A3) Suturation (A3) Suturation (A3) Suturation (A3) Sediment Deposits (B2) Dirth Deposits (B3) Aquatic Invertebrase long Living Roots (C3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Proposits (B3) Suturation (A3) Suturation (A3) Aquatic Invertebrase of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Surface Soil Cracks (B6) Iron Deposits (B3) Suturation (A3) Suturation (A3) Applicators (B4) Presence of Reduced Iron (C4) Spanses (B4) Presence of Reduced Iron (C4) Spanses (B4) Recent Iron Reduction in Tilled Soils (C6) Sutrated On Visible on Aerial Imagery (B7) Spanses (Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): No Depth (inches): No Depth (inches): No Depth (inches): No Depth (inches): No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Histic Epipedon (A2)	Stripped Matrix (\$6)	Red Parent Material (TF2)
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 Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic. Restrictive Layer (if present): Type: Depth (inches): Depth (inches): Remarks: Hydric Soil Present? Yes No	Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F5) Sandy Mukey Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Restrictive Layer (if present): Type: Depth (inches): Depth (inches): Remarks: Hydric Soil Present? Yes No No MIRA 1, 2, 4A, and 4B) Saturation (A3) Saturation (A4) Sa	Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA	.1) Very Shallow Dark Surface (TF12)
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Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic. Restrictive Layer (if present): Type:	Sandy Cleyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic. Restrictive Layer (if present):			
Restrictive Layer (if present): Type: Depth (inches): Depth (inches): Hydric Soil Present? Yes	Restrictive Layer (if present): Type: Depth (inches): Hydric Soil Present? Yes			
Type:	Hydric Soil Present? Yes		Redox Depressions (F8)	unless disturbed or problematic.
Remarks: Hydric Soil Present? Yes No No No No No	Remarks: Hydric Soil Present? Yes No	Restrictive Layer (if present):		
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) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation (Nas) Fresence of Reduced Iron (C4) Shallow Aquitard (D3) Fact-Neutral Test (D5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Spansely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): Depth (inches): Water Table Present? Yes No Depth (inches): Metland Hydrology Present? Yes No Metland Hydrology Present? Yes No Depth (inches): Inchesion Wetland Hydrology Present? Yes No Metland Hydrology Present? Yes No Metland Hydrology Present? Yes No Depth (inches): Inchesion Wetland Hydrology Present? Yes No Depth (inches): Inchesion Wetland Hydrology Present? Yes No Metland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Metland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Metland Hydrology Present? Yes No Wetland	HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) MLRA 1, 2, 4A, and 4B) Saturation (A3) Water Marks (B1) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) Surface Soil Cracks (B6) Inundation Visible on Aerial imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Ves No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Type:		
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Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1)			
Surface Water (A1)	Surface Water (A1)			
High Water Table (A2) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): Depth (inches): Saturation Present? Yes No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	High Water Table (A2) Saturation (A3) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B3) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) 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) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): Depth (inches): Saturation Present? Yes No Depth (inches): Mater Table Present? Yes No Depth (inches): Saturation Present? Yes No No Saturation Present? Yes No No No No Saturation Present? Yes No Saturation Visible on Aerial Imagery (C2) Saturation Present? Yes No No Saturation Visible on Aerial Imagery (C2) Saturation Present? Yes No No Saturation Present? Yes No No Saturation Present? Yes No No Sa			
Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Itron Deposits (B6) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Table Present? Yes No Depth (inches): Saturation (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Saturation Present? Yes No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inuidation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C2) Saturation Visible on Aerial Imagery (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Saturation Pres	Surface Water (A1)	Water-Stained Leaves (B9) (except	
Water Marks (B1)	Water Marks (B1)		MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Sediment Deposits (B2)	Sediment Deposits (B2)	X Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
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) Depth (inches): Depth (inches):	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) Depth (inches): Depth (inches): Depth (inches): No Depth (inches):	Water Marks (B1)	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Algal Mat or Crust (B4)	Algal Mat or Crust (B4)	Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
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?	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?	Drift Deposits (B3)	Oxidized Rhizospheres along Living F	Roots (C3) 👱 Geomorphic Position (D2)
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 Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): No No	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?	Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
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): Ves No	Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): No No	Iron Deposits (B5)	Recent Iron Reduction in Tilled Soils	(C6) FAC-Neutral Test (D5)
Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRF	RA) Raised Ant Mounds (D6) (LRRA)
Field Observations: Surface Water Present? Yes No Depth (inches):	Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Inundation Visible on Aerial Imagery	(B7) Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
Surface Water Present? Yes No Depth (inches):	Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): No Depth (inc	Sparsely Vegetated Concave Surface	ce (B8)	
Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Wetland Hydrology Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): No Depth (inches)	Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Wetland Hydrology Present? Yes No Depth (inches): No Depth (inch	Field Observations:		
Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Wetland Hydrology Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): No Depth (inches)	Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Wetland Hydrology Present? Yes No Depth (inches): No Depth (inch	Surface Water Present? Yes	No X Depth (inches): NA	
Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	1		Jetland Hydrology Present? Yes No
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:		Deput (inches)	iciana nyarorogy cresont: 160 no
Remarks:	Remarks:		, monitoring well, aerial photos, previous inspection	ns), if available:
		Remarks:		

WEILAND DETERMINATION D	A I A FURN	ı – Western Moui	ntains, valleys, and Coast Region
Project/Site: RMT 1	^	city/County: Samoa	CA TALE
Applicant/Owner. Hombol of Bay Horbor			State: CA Sampling Point:
Investigator(s): Sam Poly Joseph Ale			nge: Secs. 15, 16, +21, T5N, R1W, HBN
Landform (hillslope, terrace, etc.): Dayside +11			convex, none): CONCAVE Slope (%):
Subregion (LRR):	Lat: 40		Long: -124. 185571 Datum: W68 84
Soil Map Unit Name: 1017-0000 Land-ANTW		//	NWI classification: Nove
Are climatic / hydrologic conditions on the site typical for the	nis time of yea		(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology Are Vegetation, Soil, or Hydrology			Normal Circumstances" present? Yes No eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map		•	
	No	1	, , , , , , , , , , , , , , , , , , , ,
Hydric Soil Present? Yes	No	is the Sampled within a Wetlan	X X
	No	/C ()	2) 0 11 1
Wetland occurs in is isolated dep	nersian	(termer temport	m). Botoksvibed as PF01Es0a
VEGETATION – Use scientific names of pla	nts.		J
Tree Stratum (Plot size; 30 ft)	Absolute % Cover	Dominant Indicator	Dominance Test worksheet:
1. Salix losi andra vor losiandra	35	Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2. Satix hooheriana	65	FACW	
3.			Total Number of Dominant Species Across All Strata: (B)
4	- 100		Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 544)	100	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
1. Morella californica	20	V FACW	Prevalence Index worksheet:
2 Rubus armenacus	2	FAC	Total % Cover of:Multiply by:
3			OBL species x 1 = FACW species x 2 =
4			FAC species x 3 =
5	70	- 0-	FACU species x4 =
Herb Stratum (Plot size; 544	LL	= Total Cover	UPL species x 5 =
1. Carex obnulta	40	V OBL	Column Totals: (A) (B)
2. Equisetum arrigatum	_1_	FACW	Prevalence Index = B/A =
3. Sumphy of pichum John 1858	_3	FAC,	Hydrophytic Vegetation Indicators:
4 Juneur breweri	_1_	FACW	X 1 - Rapid Test for Hydrophytic Vegetation
5			X 2 - Dominance Test is >50%
6			3 - Prevalence Index is ≤3.0¹
7 8			4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants ¹
10			Problematic Hydrophytic Vegetation¹ (Explain)
11	45	= Total Cover 22.5	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:		- Total Cover	
1			Hydrophytic
2			Vegetation Present? Yes No
% Bare Ground in Herb Stratum 55%	_	= Total Cover	100
Remarks:			
1 Leas later			

Profile Description: (Describe to the de	oth needed to docum	tons and n	Idicator	or confirm	the absence of inc	icators.)
Depth <u>Matrix</u>	Redox	Features	<u> </u>		_	
(inches) Color (moist) %	Calor (moist)	%	Type ¹	Loc ²	Texture	Remarks
04 10/12/1 100					my_	
4-5 107/2/1 WO					MUD	
5-20 104251 35	5 YR 3/4	15	C	PL	5	
2024+ N 2.5/ 100			_	_	5	
1 100			-			
	-	-		Te.		
	-					
			_			
¹ Type: C=Concentration, D=Depletion, RM	I=Reduced Matrix, CS	=Covered	or Coate	ed Sand Gr		PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to al	LRRs, unless other	wise note	d.)		()	Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S	35)			2 cm Muc	
Histic Epipedon (A2)	Stripped Matrix					nt Material (TF2)
Black Histic (A3)	Loamy Mucky N			t MLRA 1)		ow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed I				Other (Ex	olain in Remarks)
Depleted Below Dark Surface (A11) Thick Dark Surface (A12)	Depleted Matrix				3 mdinators of 1	ydrophytic vegetation and
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Redox Dark Sur Depleted Dark S		7)			iyoropnytic vegetation and irology must be present,
Sandy Middle Matrix (S4)	Redox Depress	•	''			urbed or problematic.
Restrictive Layer (if present):	Nodex Bepress	(. 0)			111100001	
Туре:						V
Depth (inches):					Hydric Soil Press	ent? Yes No
HYDROLOGY Wetland Hydrology Indicators:						
Primary Indicators (minimum of one require	ed; check all that appl	<i>(</i>)			Secondary	Indicators (2 or more required)
Surface Water (A1)	Water-Sta	ned Leave	es (B9) (c	except	X Water-	Stained Leaves (B9) (MLRA 1, 2,
X High Water Table (A2)		1, 2, 4A, a				and 4B)
X Saturation (A3)	Salt Crust	(B11)			Drainag	ge Patterns (B10)
Water Marks (B1)	Aquatic In	vertebrates	s (B13)		U X Dry-Se	ason Water Table (C2)
Sediment Deposits (B2)	Hydrogen					
D-10 D 11 (D0)	Outstand C	41.4				ion Visible on Aerial Imagery (C9)
Drift Deposits (B3)						ion Visible on Aerial Imagery (C9) rphic Position (D2)
Algal Mat or Crust (B4)	Presence				ots (C3)\X Geomo	rphic Position (D2) v Aquitard (D3)
	Presence	of Reduce	d Iron (C		ots (C3) X Geomo	rphic Position (D2)
Algal Mat or Crust (B4)	Presence Recent Iro	of Reduce n Reduction	d Iron (C on in Tille	4)	ots (C3)\	rphic Position (D2) Aquitard (D3) autral Test (D5) Ant Mounds (D6) (LRR A)
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (I	Presence Recent Iro Stunted or Other (Exp	of Reduce n Reduction Stressed	d Iron (C on in Tille Plants (I	4) ed Soils (C6	ots (C3)\	rphic Position (D2) Aquitard (D3) autral Test (D5)
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface	Presence Recent Iro Stunted or Other (Exp	of Reduce n Reduction Stressed	d Iron (C on in Tille Plants (I	4) ed Soils (C6	ots (C3)\	rphic Position (D2) Aquitard (D3) autral Test (D5) Ant Mounds (D6) (LRR A)
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface Field Observations:	Presence Recent Iro Stunted or Other (Exp	of Reduce n Reduction Stressed plain in Re	d Iron (C on in Tille Plants (I	4) ed Soils (C6	ots (C3)\	rphic Position (D2) Aquitard (D3) autral Test (D5) Ant Mounds (D6) (LRR A)
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface	Presence Recent Iro Stunted or Other (Exp (B8) Depth (in	of Reduce in Reduction Stressed plain in Reduction ches):	d Iron (C on in Tille Plants (I	4) ed Soils (C6	ots (C3)\	rphic Position (D2) Aquitard (D3) autral Test (D5) Ant Mounds (D6) (LRR A)
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface Field Observations:	Presence Recent Iro Stunted or Other (Exp (B8) No Depth (in	of Reduce in Reduction Stressed plain in Reduction ches):	d Iron (C on in Tille Plants (I	4) d Soils (C6 01) (LRR A	ots (C3)\ \ \ Shallov Shallov FAC-N Raised Frost-H	rphic Position (D2) Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A) eave Hummocks (D7)
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface Field Observations: Surface Water Present?	Presence Recent Iro Stunted or Other (Exp (B8) No Depth (in No Depth (in	of Reduce n Reduction Stressed plain in Resches): ches): ches):	d Iron (Coon in Tille Plants (I marks)	4) ed Soils (C6 01) (LRR A	ots (C3)\ \ \ Shallov Shallov FAC-No) Raised Frost-H	rphic Position (D2) Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A) eave Hummocks (D7)
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? (includes capillary fringe)	Presence Recent Iro Stunted or Other (Exp (B8) No Depth (in No Depth (in	of Reduce n Reduction Stressed plain in Resches): ches): ches):	d Iron (Coon in Tille Plants (I marks)	4) ed Soils (C6 01) (LRR A	ots (C3)\ \ \ Shallov Shallov FAC-No) Raised Frost-H	rphic Position (D2) Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A) eave Hummocks (D7)
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface Fleid Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, next)	Presence Recent Iro Stunted or Other (Exp (B8) No Depth (in No Depth (in	of Reduce n Reduction Stressed plain in Resches): ches): ches):	d Iron (Coon in Tille Plants (I marks)	4) ed Soils (C6 01) (LRR A	ots (C3)\ \ \ Shallov Shallov FAC-No) Raised Frost-H	rphic Position (D2) Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A) eave Hummocks (D7)
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface Fleid Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, next)	Presence Recent Iro Stunted or Other (Exp (B8) No Depth (in No Depth (in	of Reduce n Reduction Stressed plain in Resches): ches): ches):	d Iron (Coon in Tille Plants (I marks)	4) ed Soils (C6 01) (LRR A	ots (C3)\ \ \ Shallov Shallov FAC-No) Raised Frost-H	rphic Position (D2) Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A) eave Hummocks (D7)
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface Fleid Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, next)	Presence Recent Iro Stunted or Other (Exp (B8) No Depth (in No Depth (in	of Reduce n Reduction Stressed plain in Resches): ches): ches):	d Iron (Coon in Tille Plants (I marks)	4) ed Soils (C6 01) (LRR A	ots (C3)\ \ \ Shallov Shallov FAC-No) Raised Frost-H	rphic Position (D2) Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A) eave Hummocks (D7)

WEILAND DETERMINATION DA	IA FOR	v – weste	rn Moui	ntains, Valleys, and Coast Region
Project/Site: RMT1		City/County:	Samoo	Hmbslet Sampling Date: 6/4/20
Applicant/Owner: Humbold Bay Harbor	Distric			State: A Sampling Point: TP 6
Investigator(s): Josep ale Som Poly		Section, Tow	nship, Rar	nge: Secs. 15, 16,+21, 75N, RIW, HBM
Landform (hillslope, terrace, etc.): Bayside fill			concave, c	convex, none): (a)(a)(b) Slope (%):
Subregion (LRR): A MLRA - 4B	Lat: 4	0.8151	680	Long: -124. 186805° Datum: W&58
Soil Map Unit Name: 1014 - Urban Land - Anthra	tic Xero	rhus !	Assn. (7-2% NWI classification: None
Are climatic / hydrologic conditions on the site typical for this	s time of yea	ar? Yes	No_	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologys	ignificantly (disturbed?	Are "I	Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology n	aturally pro	blematic?	(if ne	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 N	0			
	o	The state of the s	Sampled a Wetlan	
1000	o_ <u></u>	A. ((iii)	i a wellan	nor 1es no
Remarks:				
VECETATION LIES STITLES	4_	-		
VEGETATION – Use scientific names of plan		Dania ant 1		Barrian Tark waste bark
Tree Stratum (Plot size:	Absolute % Cover	Dominant I Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC:(A)
2				Total Number of Dominant
3.				Species Across All Strata: (B)
4	_			Percent of Dominant Species
5fl		= Total Cove	er	That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size: 5++) 1. Sa ix hockeriona	15	V-	FOW	Prevalence Index worksheet:
2			Troo	Total % Cover of: Multiply by:
3				OBL species x 1 =
4.		s s-		FACW species x 2 =
5				FAC species x 3 =
CCI	15	= Total Cove	er er	FACU species x 4 =
Herb Stratum (Plot size:)	15		001	UPL species x 5 =
1. Potestilla gistina	- 12		OBL	Column Totals: (A) (B)
2. Holeus anatus	70	V	CAC	Prevalence Index = B/A =
3. testuca arundina/RA 4. Eleocharis Macrostastya	5	- 1	NLOB	Hydrophytic Vegetation Indicators:
5. Long Corniculation	35	1	FAC	1 - Rapid Test for Hydrophytic Vegetation
6. Tritetium repour	1		FAC	2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹
7. Metha oxeldium	5		OBL	4 - Morphological Adaptations¹ (Provide supporting
8. Cynamus extinatus	2		NL	data in Remarks or on a separate sheet)
9. Briza maxima	1		NL	5 - Wetland Non-Vascular Plants ¹
10. Parestucellia Viscosa	4_		PAC	Problematic Hydrophytic Vegetation¹ (Explain)
11. Cylens cragiosis.			FACW	¹Indicators of hydric soil and wetland hydrology must
12. Anthoxathun odoratum	_&_		FACU	be present, unless disturbed or problematic.
13 Festura Muchas	1	1	FACU	
H Rumex (ristour	1		FAC	Hydrophytic Vegetation
CX	114	= Total Cove	The second second	Present? Yes No
% Bare Ground in Herb Stratum			22.8	
Remarks: of Eleochens macrostachya 19	not 115	team of	DACE W	ranval: however, obs of this species
Remarks: of Eleochens macrostachya is in the worth coast region suggest of	BLOV	FACWA	Qa gna	tton & is theated as such,

Profile Description: (Describe to the dep		
Depth Matrix	Redox Features	as minus
(inches) Color (moist) %	Color (moist) % Type¹ Loc²	Texture Remarks
D-1 10YR 2/2 100		
1-6 5Y 3/1 100	~	VisrasL
1-19 5/3/1 00	75V02/10 (0)	Les gravel
5 11 E 1 16 1	2.19K)/6 L C PL	13 283 GMAN
9-24+ 56 / 2.5/1 100		3
		· · · · · · · · · · · · · · · · · · ·
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		Indicators for Problematic Hydric Solis ³ :
		X 2 cm Muck (A10)
Histosol (A1)	Sandy Redox (S5) Stripped Matrix (S6)	Red Parent Material (TF2)
Histic Epipedon (A2)	Loarny Mucky Mineral (F1) (except MLRA 1)	
Black Histle (A3)		•
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	31
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:	 _	V
Depth (inches):		Hydric Soil Present? Yes No
Wetland Hydrology Indicators:	ed: 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)
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 require 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)
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) 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)	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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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 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) 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)	Water-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 Description (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)	Water-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 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) Ots (C3) 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls (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)
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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 (E Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Staturation 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 Solls (C6 Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) 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)
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WETLAND DETERMINATION DATA FORM – Western Mou	
Project/Site: RMT_1 City/County: 500000	Hwholdt Sampling Date: 6/4/20
Applicant/Owner: Humbold+ Bay, Harb & District	State: CA Sampling Point: TP 17
Investigator(s): Sam Polly Joseph Jale Section, Township, Ra	nga Secs. 15, 16, +21, T5N, R1W, HBM
Landform (hillslope, terrace, etc.): Bayside + Local relief (concave,	convex, none): O-1
Subregion (LRR): A, MLRA - 4B Lat: 40.814160°	Long: ~124.187/20° Datum: WG5 84
Soil Map Unit Name: 1014 - Urban Land-Anthroltic Xerorthents Assi	1. 0-21/2 NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _	(If no, explain in Remarks.)
	Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problematic? (If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point le	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes No Is the Sampled within a Wetland Wetland Hydrology Present?	nd? Yes No
Wotland Occurs in Isolated depression our lighty manipulated 5	hils. Botderontedas: 1951 CsOn
VEGETATION – Use scientific names of plants.	
Tree Stratum (Plot size: 30ff) Absolute Dominant Indicator % Cover Species? Status	Dominance Test worksheet:
1. SAIX STELLERS S 70 V FACW	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
25alix hookeriana 20 V FACW	Total Number of Dominant 2
3	Species Across All Strata: (B)
4	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)	That Are OBL, FACW, or FAC: (A/B)
1	Prevalence Index worksheet: Total % Cover of: Multiply by:
2	OBL species x1 =
3	FACW species x 2 =
4	FAC species x 3 =
5	FACU species x 4 =
Herb Stratum (Plot size: 511)	UPL species x 5 =
1. testuca perennis 7 tac	Column Totals: (A) (B)
2 Lotus cirhiculatus 50 / FAC	Prevalence Index = B/A =
3 mentry pulegium ? OBL	Hydrophytic Vegetation Indicators:
5. Agostis Stolantera 1 FAC	1 - Rapid Test for Hydrophytic Vegetation
6	2 - Dominance Test Is >50% 3 - Prevalence Index is ≤3.0¹
7	4 - Morphological Adaptations¹ (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	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	
1	Hydrophytic
2	Present? Yes No
% Bare Ground in Herb Stratum 43 // * = Total Cover	
Remarks: Leaf litter	

	pth needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type¹ Loc²	Texture Remarks
0-4 107R L/1 100		MS
4-5 10 YR 2/1 100		GVG-MCoS
5-13 10 VR 2/1 100		Co.SL
13-18 5V25/1 06	15 V3/1 2 6 M	GrLS Brick + Debris Proof
13-10 3/2:3/1 46	2000	DI DO DI DECTI DI CONTE
10 10 5/ 100	LISY JE L C M	
18- N 2.5/ 100		7
¹Tune: C=Concentration D=Depletion RM	M=Reduced Matrix, CS=Covered or Coated Sand Gr	rains. 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)	3Indicators 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):		1.7
Type:		Mudein Seil Descard? Van No
Depth (inches):		Hydric Soil Present? Yes No
HYDROLOGY		
Wetland Hydrology Indicators:		
	red; check all that apply)	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators:	red; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (89) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one require		
Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (89) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (810)
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 (89) (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) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 	Water-Stained Leaves (89) (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) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roce 	Water-Stained Leaves (89) (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)
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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)	Water-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)
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 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)
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 Roce 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) 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 Roce 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) 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 (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 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)	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 in the second in the 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 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) (B8)	Water-Stained Leaves (89) (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 (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? 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 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) (B8) Depth (inches):	Water-Stained Leaves (89) (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 (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table 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 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) (B8) Depth (inches): 1	Water-Stained Leaves (89) (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 (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? (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) (B7) Other (Explain in Remarks) (B8) Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (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 (includes capillary fringe) Describe Recorded Data (stream gauge, research	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roce 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) Depth (inches): 13 in. No Depth (inches): 5 in. Wetl.	Water-Stained Leaves (89) (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 and surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? 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 Roce 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) Depth (inches): 13 in. No Depth (inches): 5 in. Wetl.	Water-Stained Leaves (89) (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 (includes capillary fringe) Describe Recorded Data (stream gauge, research	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roce 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) Depth (inches): 13 in. No Depth (inches): 5 in. Wetl.	Water-Stained Leaves (89) (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 (includes capillary fringe) Describe Recorded Data (stream gauge, research	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roce 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) Depth (inches): 13 in. No Depth (inches): 5 in. Wetl.	Water-Stained Leaves (89) (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

WEILAND DEIERMINATION DATA FORM - Western Moui	ntains, Valleys, and Coast Region
Project/Site: RMT 1 Applicant/Owner: Husbold Bay Harbor District City/County: Sampa	70.0
	State: A Sampling Point: 17 8
Investigator(s): SOM Folly , Doseph Sales Section, Township, Rar	nge: Secs. 15, 16,+21, T5N, R1W, HBM
Landform (hillslope, terrace, etc.): Bayside fill Thousia Local relief (concave, c	
('alt 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Long: 124.187 933° Datum: WGS 84
Soil Map Unit Name: 1014 - Urban Land - Antwattic Xerorthents Assa	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 "l	Normal Circumstances" present? Yes X No
	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point to	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes No Is the Sampled within a Wetlan	d? Yes No
Wetland occurs inskallow degression at bore as lope. best de	stribed as: PSSICs On.
VEGETATION – Use scientific names of plants.	
Tree Stratum (Plot şize: 30 Ft) Absolute Dominant Indicator Species? Status	Dominance Test worksheet:
1. Sa[iX \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2	-1
3	Total Number of Dominant Species Across All Strata: (B)
4	Percent of Dominant Species 75 /
Sapling/Shrub Stratum (Plot size: 54) = Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)
1. Rubus winus 40 FACU	Prevalence Index worksheet:
2. Rubus armeniacus 3 FAC	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: 21)	UPL species x 5 =
1. Holay langus	Column Totals: (A) (B)
2 Agrostis Stalaitera 18 FAC 3 Lotus corniculatus 10 FAC	Prevalence Index = B/A =
4 Sonchus deraceus 2 UPL	Hydrophytic Vegetation Indicators:
5. Modha Pulesiim, 2 OBL	1 - Rapid Test for Hydrophytic Vegetation
6. Geranium dissectum I NL	2 - Dominance Test is >50%
7. Epilobium ciliatum I FACW	3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting
8.	data in Remarks or on a separate sheet)
9	5 - Wetland Non-Vascular Plants ¹
10	Problematic Hydrophytic Vegetation¹ (Explain)
11	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	
1	Hydrophytic
2	Vegetation Present? Yes No
% Bare Ground in Herb Stratum = Total Cover	riesentr Tes / No
Remarks:	

-	_		
	ГЪ	ш	

Ype¹ Loc² Texture Remarks
Yee Coc Texture Kernans
2
Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
_
2 cm Muck (A10)
Red Parent Material (TF2)
except MLRA 1) Very Shallow Dark Surface (TF12)
Other (Explain in Remarks)
3Indicators of hydrophytic vegetation and
wetland hydrology must be present,
unless disturbed or problematic.
aniood distance of problems and
V
Hydric Soli Present? Yes No
Hydric Son Present? Tes NO
Secondary Indicators (2 or more required)
B9) (except Water-Stained Leaves (B9) (MLRA 1, 2,
4B) 4A, and 4B)
Drainage Patterns (B10)
_ , , ,
Dry-Season Water Table (C2)
Dry-Season Water Table (C2) (C1) Saturation Visible on Aerial Imagery (C9)
Dry-Season Water Table (C2) (C1) Saturation Visible on Aerial Imagery (C9) along Living Roots (C3) Geomorphic Position (D2)
Dry-Season Water Table (C2) (C1) Saturation Visible on Aerial Imagery (C9) along Living Roots (C3) Geomorphic Position (D2) on (C4) Shallow Aquitard (D3)
Dry-Season Water Table (C2) (C1) Saturation Visible on Aerial Imagery (C9) along Living Roots (C3) Geomorphic Position (D2) on (C4) Shallow Aquitard (D3) n Tilled Soils (C6) FAC-Neutral Test (D5)
Dry-Season Water Table (C2) (C1) Saturation Visible on Aerial Imagery (C9) along Living Roots (C3) Geomorphic Position (D2) on (C4) Shallow Aquitard (D3) n Tilled Soils (C6) FAC-Neutral Test (D5) ints (D1) (LRR A) Raised Ant Mounds (D6) (LRR A)
Dry-Season Water Table (C2) (C1) Saturation Visible on Aerial Imagery (C9) along Living Roots (C3) Geomorphic Position (D2) on (C4) Shallow Aquitard (D3) n Tilled Soils (C6) FAC-Neutral Test (D5)
Dry-Season Water Table (C2) (C1) Saturation Visible on Aerial Imagery (C9) along Living Roots (C3) Geomorphic Position (D2) on (C4) Shallow Aquitard (D3) n Tilled Soils (C6) FAC-Neutral Test (D5) ints (D1) (LRR A) Raised Ant Mounds (D6) (LRR A)
Dry-Season Water Table (C2) (C1) Saturation Visible on Aerial Imagery (C9) along Living Roots (C3) Geomorphic Position (D2) on (C4) Shallow Aquitard (D3) n Tilled Soils (C6) FAC-Neutral Test (D5) ints (D1) (LRR A) Raised Ant Mounds (D6) (LRR A)
Dry-Season Water Table (C2) (C1) Saturation Visible on Aerial Imagery (C9) along Living Roots (C3) Geomorphic Position (D2) on (C4) Shallow Aquitard (D3) n Tilled Soils (C6) FAC-Neutral Test (D5) ints (D1) (LRR A) Raised Ant Mounds (D6) (LRR A)
Dry-Season Water Table (C2) (C1) Saturation Visible on Aerial Imagery (C9) along Living Roots (C3) Geomorphic Position (D2) on (C4) Shallow Aquitard (D3) n Tilled Soils (C6) FAC-Neutral Test (D5) ints (D1) (LRR A) Raised Ant Mounds (D6) (LRR A)
Dry-Season Water Table (C2) (C1) Saturation Visible on Aerial Imagery (C9) along Living Roots (C3) Geomorphic Position (D2) on (C4) Shallow Aquitard (D3) n Tilled Soils (C6) FAC-Neutral Test (D5) ints (D1) (LRR A) Raised Ant Mounds (D6) (LRR A)
Dry-Season Water Table (C2) (C1) Saturation Visible on Aerial Imagery (C9) Along Living Roots (C3) Geomorphic Position (D2) On (C4) Shallow Aquitard (D3) In Tilled Soils (C6) FAC-Neutral Test (D5) Ints (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
Dry-Season Water Table (C2) (C1) along Living Roots (C3) On (C4) n Tilled Soils (C6) Ints (D1) (LRR A) Frost-Heave Hummocks (D7) 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)
Dry-Season Water Table (C2) (C1) Saturation Visible on Aerial Imagery (C9) Along Living Roots (C3) Geomorphic Position (D2) On (C4) Shallow Aquitard (D3) In Tilled Soils (C6) FAC-Neutral Test (D5) Ints (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
Dry-Season Water Table (C2) (C1) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) on (C4) Shallow Aquitard (D3) In Tilled Soils (C6) FAC-Neutral Test (D5) Ints (D1) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
Dry-Season Water Table (C2) (C1) Saturation Visible on Aerial Imagery (C9) Along Living Roots (C3) Geomorphic Position (D2) On (C4) Shallow Aquitard (D3) In Tilled Soils (C6) FAC-Neutral Test (D5) Ints (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
Dry-Season Water Table (C2) (C1) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) on (C4) Shallow Aquitard (D3) In Tilled Soils (C6) FAC-Neutral Test (D5) Ints (D1) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No

WETLAND DETERMINATION D	ATA FORM -	Western Mou	ntains, Valleys, and Coast Region
Project/Site: RMT 1	City/C	County: Humb	2013+ Sampling Date: C/4/20
	por District	rounty. 17 vas ve	State: A Sampling Point: TP 19
Investigator(s): Joseph Saler, Sam Pol)	V Section	on, Township, Rar	nge: Secs. 15, 16, +21, T5N, RIW, HBM
Landform (hillslope, terrace, etc.): Bayside fill			convex, none): Cancave Slope (%): 0-
Subregion (LRR): A MLRA - 4B	Lat: 40.8	(11134"	Long: -124.187263 Datum: WGS 84
Soil Map Unit Name: 1014 - Urban Land - Ant	11 . 1	A .	1.0-2% NWI classification: None
Are climatic / hydrologic conditions on the site typical for t	his time of year? Y		(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	_ significantly distur	bed? Are "l	Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology	_ naturally problema	atic? (If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site maj	p showing san	npling point lo	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No	is the Sampled	Area
Hydric Soil Present? Yes Wetland Hydrology Present? Yes	No X	within a Wetlan	
Remarks: & 2022 regulated Gas equipment		-124 187259	50
13")= 4""			_
VECETATION . He seizelfe serve of ale	-4-		
VEGETATION – Use scientific names of pla		ninant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size 30+1)	% Cover Spe	and the second s	Number of Dominant Species
1. Marcella Californica	_ 90 v	FACW	That Are OBL, FACW, or FAC: (A)
2 Jalix hookerion a	5		Total Number of Dominant
3			Species Across All Strata: (B)
£0;	95 = To	tal Cover 47.5	Percent of Dominant Species That Are OBL, FACW, or FAC: 67 // (A/B)
Sapling/Shrub Stratum (Plot size: 5 (+)	15	(00	Prevalence Index worksheet:
1. Kupus armeniacus	- 18 -	CACIL	Total % Cover of: Multiply by:
5 KAPAL MEININ	_ 121	PACU	OBL species x 1 =
4.			FACW species x 2 =
5.			FAC species x 3 =
	30 = To	tal Cover	FACU species x 4 = UPL species x 5 =
Herb Stratum (Plot size:			Column Totals: (A) (B)
2			
3.			Prevalence Index = B/A =
4			1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is >50%
6.			3 - Prevalence Index is ≤3.01
7. 8.			 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9.			5 - Wetland Non-Vascular Plants¹
10			Problematic Hydrophytic Vegetation ¹ (Explain)
11			Indicators of hydric soil and wetland hydrology must
Mondy Vine Stratum (Plat size:	= Tot	tal Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:			Uradanahida
2.	\		Hydrophytic Vegetation
1001/*	= Tol	al Cover	Present? Yes No
% Bare Ground in Herb Stratum			
* Deve Shade, leat little			
]	•		

rofile Description: (Describe to the de Depth Matrix	Redox Features	04.35		
nches) Color (moist) %	Color (moist) % Type ¹	Loc ²	Texture	Remarks
1-5 10 YR 2/1 100			SL.	
-24+ 10 VR 3/1 100		- 1	55 LS	Dredge Spoils -> Sels
21. 10 11/2/1 100			31 /	
				and marine debris
Type: C=Concentration, D=Depletion, RM	M=Reduced Matrix, CS=Covered or Coate	d Sand Grain		cation: PL=Pore Lining, M=Matrix.
ydric Soil Indicators: (Applicable to a	II LRRs, unless otherwise noted.)		Indicate	ors for Problematic Hydric Soils ³ :
_ Histosol (A1)	Sandy Redox (S5)		2 cr	n Muck (A10)
_ Histic Epipedon (A2)	Stripped Matrix (S6)		Red	l Parent Material (TF2)
_ Black Histic (A3)	Loamy Mucky Mineral (F1) (except	MLRA 1)	Ver	y Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loarny Gleyed Matrix (F2)		Oth	er (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)		4	
Thick Dark Surface (A12)	Redox Dark Surface (F6)		³ Indicate	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)		unles	ss disturbed or problematic.
lestrictive Layer (if present):				
Type:				
Depth (inches):			Hydric Soll	Present? Yes No 🔼
emarks:				
YDROLOGY				
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one require	red; check all that apply)			ndary Indicators (2 or more required)
YDROLOGY Vetland Hydrology Indicators:	ed; check all that apply) Water-Stained Leaves (B9) (ex		Seco	
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requir			Seco	ndary Indicators (2 or more required)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1)	Water-Stained Leaves (B9) (et		<u>Seco</u> v	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2,
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (et MLRA 1, 2, 4A, and 4B)		Seco V [ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leaves (B9) (ex MLRA 1, 2, 4A, and 4B) Salt Crust (B11)		<u>Seco</u> V [ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2)
YDROLOGY Vetland 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) (et MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	ccept	Seco V C C	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leaves (B9) (ex MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	ccept Living Roots	Seco V C S S	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C8
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)	Water-Stained Leaves (B9) (et MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along	ccept Living Roots	Seco V [[S (C3) (C3)	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS) Geomorphic Position (D2)
YDROLOGY Vetland 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)	Water-Stained Leaves (B9) (et MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4	ccept Living Roots) I Soils (C6)	Seco V C C S S S	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C8 Geomorphic Position (D2) Shallow Aquitard (D3)
YDROLOGY Vetland 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) (et 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 Tilled Stunted or Stressed Plants (D	ccept Living Roots) I Soils (C6)	Seco V C S S F F	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C8 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
YDROLOGY Vetland 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 (Water-Stained Leaves (B9) (et 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 Tilled Stunted or Stressed Plants (D	ccept Living Roots) I Soils (C6)	Seco V C S S F F	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-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)
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 (Sparsely Vegetated Concave Surface	Water-Stained Leaves (B9) (et 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 Tilled Stunted or Stressed Plants (D	ccept Living Roots) I Soils (C6)	Seco V C S S F F	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-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)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requires 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 (Sield Observations:	Water-Stained Leaves (B9) (et 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 Tilled Stunted or Stressed Plants (D B7) Other (Explain in Remarks)	ccept Living Roots) I Soils (C6)	Seco V C S S F F	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-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)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requires 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 Surface Water Present? Yes	Water-Stained Leaves (B9) (et 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 B7) Other (Explain in Remarks) (B8)	ccept Living Roots) I Soils (C6)	Seco V C S S F F	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-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 requires Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes	Water-Stained Leaves (B9) (et 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 Tilled Stunted or Stressed Plants (D B7) Other (Explain in Remarks)	ccept Living Roots) I Soils (C6) I) (LRR A)	Seco V C S (C3) S F F	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-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 requires 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 (B4) Field Observations: Surface Water Present? Ves Saturation Present? Ves	Water-Stained Leaves (B9) (et 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 Tilled Stunted or Stressed Plants (D Depth (inches): No Depth (inches):	ccept Living Roots) I Soils (C6) (LRR A) Wetlan	Seco V E S F F	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-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)
VPROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requires 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 (B1) Ves	Water-Stained Leaves (B9) (et 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 B7) Other (Explain in Remarks) (B8) Depth (inches): No Depth (inches):	ccept Living Roots) I Soils (C6) (LRR A) Wetlan	Seco V E S F F	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-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)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requires 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 (B1) Surface Water Present? Ves	Water-Stained Leaves (B9) (et 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 B7) Other (Explain in Remarks) (B8) Depth (inches): No Depth (inches):	ccept Living Roots) I Soils (C6) (LRR A) Wetlan	Seco V E S F F	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-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)

STAN
Consulting Engineers
& Geologists, Inc.

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

oject/Site: Humboldt Bay Harbor District-RMMT		City/County: Humboldt		_ Sampling Date: 5 19 27
pplicant/Owner: Humboldt Bay Harbor District			State: CA	Sampling Point: TP 19 UP
vestigator(s): Joseph Saler, Cindy Wilcox		Section, Township, Ra	inge:	
ndform (hillslope, terrace, etc.) Ren insula 50	it	Local relief (concave,	солуех, попе):	Cave Slope (%): 0-
bregion (LRR): A, MLRA-4B	Lat:	40.811100	Long: -124.19	7 2-55 Datum: WGS 84
Map Unit Name: 1014-UV panland	Antiwelti	c X-evorthents	asor. 1-26NWI class	fication: NOVIL
climatic / hydrologic conditions on the site typica				
Vegetation, Soil, or Hydrology _				" present? Yes No
· Vegetation, Soil, or Hydrology _ JMMARY OF FINDINGS - Attach site			eeded, explain any ansv ocations, transec	
	No_X	,,		e e e e e e e e e e e e e e e e e e e
	No X	is the Sample	l Area	
/etland Hydrology Present? Yes		within a Wetlan	nd? Yes	No
emarks: WETS normal rainfall updated to reflect cha		eifions at TP	19 on account	or of Minor tree removal.
GETATION – Use scientific names o				
ee Stratum (Plot size: 36)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test wo	1
		<u> </u>	Number of Dominant That Are OBL, FACW	-1
				_
			Total Number of Dom Species Across All St	
			Percent of Dominant	
pling/Shrub Stratum (Plot size: 5'	1	_ = Total Cover	That Are OBL, FACW	
Eulous unsinus	15	FACU	Prevalence Index w	orksheet:
syphic across a cor	-4	FAC.	Total % Cover of	
vorella californi ca	3	FACIN		x 1 =
				x 2 =
			C C	x 3 =
	22	= Total Cover 4.9		x 4 =
rb Stratum (Plot size: 5'	10	Ocu		x 5 =
Metilotus, indicus	<u> </u>	- FACU	Column Totals:	(A) (B)
dresticellia Viscosa	<u>9</u> 15	FAC PAC	Prevalence Inde	ex = B/A =
notw corniculative	13	- FAC	Hydrophytic Vegeta	tion Indicators:
Foraium dissection	30	TOC		r Hydrophytic Vegetation
insim whatere	30	TACIL	2 - Dominance To	
June bysoning		FACW	3 - Prevalence In	
Helmottotlera echoides	3	FAC	4 - Morphologica data in Remai	l Adaptations ¹ (Provide supporting rks or on a separate sheet)
Sorchw oleracew	5	UPL	5 - Wetland Non-	
Brizamaxima	1	NL		rophytic Vegetation ¹ (Explain)
		4=1000		oil and wetland hydrology must
	13	= Total Cover 56.5	be present, unless dis	sturbed or problematic.
ody Vine Stratum (Plot size: 5'		22.6		
	\		Hydrophytic	X X
			Vegetation Present?	esNo_X
Bare Ground in Herb Stratum		_= Total Cover	. 1000/161	10 /
marks:	V ₂ ·	1 1 4. 1	1 1	
archerbacen veg. Tree Car	LAN I CEMPLE	d of this lo	cotion Which	has Changed.
BEKERNALDAN VETT	, NA (A)		1	1 1

US Army Corps of Engineers

Western Mountains, Valleys, and Coast - Version 2.0

	E AA
Sampling Point:	Compline Ingine
sampling Point. 11	I de la constante

Depth Matrix_ (inches) Color (moist)		Redox Features	
mones) Color (moist)	<u>%</u> C	Color (maist) <u>%</u> Type¹ L	<u>oc² Texture Remarks</u>
			/
Type: C=Concentration D=De	pletion RM=Rec	luced Matrix, CS=Covered or Coated S	Sand Grains. ² Location: PL=Pore Lining, M=Matrix.
lydric Soil Indicators: (Appli	cable to all LRR	s. unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
		Sandy Redox (S5)	2 cm Muck (A10)
Histosol (A1)		Stripped Matrix (S6)	Red Parent Material (TF2)
Histic Epipedon (A2)		Loamy Mucky Mineral (F1) (except MI	
Black Histic (A3)	/ / _		
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surfa		Depleted Matrix (F3)	³ Indicators of hydrophytic vegetation and
Thick Dark Surface (A12)		Redox Dark Surface (F6)	wetland hydrology must be present,
Sandy Mucky Mineral (S1)		Depleted Dark Surface (F7)	unless disturbed or problematic.
Sandy Gleyed Matrix (S4)		Redax Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):			
Туре:			
Depth (inches):		_	Hydric Soil Present? Yes No
Remarks:			
N T T T T T T T T T T T T T T T T T T T			
VDPOLOGV			
Wetland Hydrology Indicators			Consendent Indicators (2 or more required)
Wetland Hydrology Indicators			Secondary Indicators (2 or more required)
Wetland Hydrology Indicators		neck all that apply) Water-Stained Leaves (B9) (exce	
Vetland Hydrology Indicators Primary Indicators (minimum of			
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2)		Water-Stained Leaves (B9) (exce	ept Water-Stained Leaves (B9) (MLRA 1, 2,
Vetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3)		Water-Stained Leaves (B9) (exce 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 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		Water-Stained Leaves (B9) (excellent 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)
Vetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		Water-Stained Leaves (B9) (excellent 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)
Vetland Hydrology Indicators 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) (excellent to MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv	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)
Vetland 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)		Water-Stained Leaves (B9) (excellent the MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liver (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 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Water-Stained Leaves (B9) (excellent MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Live Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S	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 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) (excellent 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 Iron Reduction in Tilled S Stunted or Stressed Plants (D1)	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) (LRR A) Raised Ant Mounds (D6) (LRR A)
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)	f one required; ch	Water-Stained Leaves (B9) (excellent MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Live Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S	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 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)	f one <u>required; ch</u> al Imagery (B7)	Water-Stained Leaves (B9) (excellent 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 Iron Reduction in Tilled S Stunted or Stressed Plants (D1)	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) (LRR A) Raised Ant Mounds (D6) (LRR A)
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	f one <u>required; ch</u> al Imagery (B7)	Water-Stained Leaves (B9) (excellent 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 Iron Reduction in Tilled S Stunted or Stressed Plants (D1)	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) (LRR A) Raised Ant Mounds (D6) (LRR A)
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	al Imagery (B7) ave Surface (B8)	Water-Stained Leaves (B9) (excellent MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Live Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stanted or Stressed Plants (D1) 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) wing Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Soils (C6) FAC-Neutral Test (D5) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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	al Imagery (B7) ave Surface (B8) Yes No _	Water-Stained Leaves (B9) (excess 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 Iron Reduction in Tilled S Stunted or Stressed Plants (D1) 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) wing Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Soils (C6) FAC-Neutral Test (D5) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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	al Imagery (B7) ave Surface (B8) Yes No Yes No	Water-Stained Leaves (B9) (excellent formula of the company of the	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) Soils (C6) FAC-Neutral Test (D5) (LRR A) Frost-Heave Hummocks (D7)
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?	al Imagery (B7) ave Surface (B8) Yes No Yes No	Water-Stained Leaves (B9) (excess 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 Iron Reduction in Tilled S Stunted or Stressed Plants (D1) 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) (LRR A) Frost-Heave Hummocks (D7)
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)	al Imagery (B7) ave Surface (B8) Yes No Yes No Yes No	Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Live Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Second Iron (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) wing Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Soils (C6) FAC-Neutral Test (D5) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
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)	al Imagery (B7) ave Surface (B8) Yes No Yes No Yes No	Water-Stained Leaves (B9) (excellent formula of the company of the	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) wing Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Soils (C6) FAC-Neutral Test (D5) (LRR A) Frost-Heave Hummocks (D7) Wetland 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 Aeria Sparsely Vegetated Conca Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	al Imagery (B7) ave Surface (B8) Yes No Yes No Yes No	Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Live Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Second Iron (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) wing Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Soils (C6) FAC-Neutral Test (D5) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
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)	al Imagery (B7) ave Surface (B8) Yes No Yes No Yes No	Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Live Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Second Iron (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) wing Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Soils (C6) FAC-Neutral Test (D5) (LRR A) Frost-Heave Hummocks (D7) Wetland 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 Aeria Sparsely Vegetated Conca Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (streat	al Imagery (B7) ave Surface (B8) Yes No _ Yes No _ Yes No _ arm gauge, monitor	Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liver Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Second Iron (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ring Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Soils (C6) FAC-Neutral Test (D5) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No rictions), if available:
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) Describe Recorded Data (streat	al Imagery (B7) ave Surface (B8) Yes No _ Yes No _ Yes No _ arm gauge, monitor	Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liver Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Second Iron (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ring Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Soils (C6) FAC-Neutral Test (D5) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
Petland 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) Describe Recorded Data (streat	al Imagery (B7) ave Surface (B8) Yes No _ Yes No _ Yes No _ arm gauge, monitor	Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Live Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Second Iron (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ring Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Soils (C6) FAC-Neutral Test (D5) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No

WETLAND DETERMINATION DA	TA FORM - 1	Western Moun	ntains, Valleys, and Coast Region
Project/Site: RMT 1	City/C	county: Humbo	1 County Sampling Date: 8/13/20
	trict		State: CK Sampling Point: TP 20
Investigator(s): Sam Polly, Joseph Saler		on, Township, Ran	ge Secs. 15, 16, +21, T5N, R1W, HBM
Landform (hillslope, terrace, etc.): Davide Hill	Loca	I relief (concave, c	onvex, none): Cox QUE Slope (%): 0-1
Subregion (LRR): A, MLRA - 4B	_ Lat: 40. 8	07064°	Long: 124. 1895 7° Datum: WGS 84
	altic Xeror-		0-2% NWI classification: None
Are climatic / hydrologic conditions on the site typical for this			(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologys	ignificantly distur	bed? Are "N	Normal Circumstances" present? Yes No X
Are Vegetation, Soil, or Hydrology n	aturally problema	atic? (If nee	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing san	npling point lo	cations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes N	0	la tha Bassalad	
	0	is the Sampled a within a Wetland	Y
Wetland Hydrology Present? Yes N Remarks: Wells dark they than ngvn			
* Stormwater intrastructure prost, it	icluding w	tirs, chechi	dans, pipes, oi booms, and streets.
VEGETATION – Use scientific names of plan			
	Absolute Don	ninant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:	% Cover Spe	cies? Status	Number of Dominant Species
1,			That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant
3.			Species Across All Strata: (B)
	= To	tal Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size: 5f+	10	1 ~	Prevalence Index worksheet:
1. Salix hookeriana	. 38	1 FACW	Total % Cover of: Multiply by:
2	1		OBL species x 1 =
3	/		FACW species x 2 =
4	·		FAC species x 3 =
o	38	otal Cover	FACU species x 4 =
Herb Stratum (Plot size:	<u> </u>	cal Cover	UPL species x 5 =
1. Alima lanceo latum	12 1	OBL	Column Totals: (A) (B)
2. Tupha lattolia	20 L	OBL	Prevalence Index = B/A =
3. Persicatia Maculasa	15 V	FACW,	Hydrophytic Vegetation Indicators:
4. Pseudugraptalium lutevalbum	1	FACW	1 - Rapid Test for Hydrophytic Vegetation
5. Sonchus o'kraceus	<u> </u>	UPL	2 - Dominance Test is >50%
6. Epilbium Cillatum	<u> </u>	- FACW	3 - Prevalence Index is ≤3.01
8. The chaeris tradicate	7-	FACU	4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
9. Har deum Marinum	<u> </u>	FAC	5 - Wetland Non-Vascular Plants
10.		170	Problematic Hydrophytic Vegetation¹ (Explain)
11.			¹ Indicators of hydric soil and wetland hydrology must
	56 = To	tal Cover 23	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:		III	
1,			Hydrophytic Vegetation
2-	_	tal Caucr	Present? Yes No
% Bare Ground in Herb Stratum 44%	= 10	tal Cover	,
Remarks:			

~	_	
	гъ	

(inches) Color (moist) %		
	Color (moist) % Type¹ Loc²	Texture Remarks
0-3 10 yr 2/1, 100		Q Organic
3-12 7.54R 2.5/2 100		
12-20 2.54 2.5/1 70	104R2/2 30 C M	O Reduced Matrix, large volum
20-24+ N3/		LS undecompared wordstips.
20 -1 110		
¹Tuna: C=Cancentration D=Depletion E	RM=Reduced Matrix, CS=Covered or Coated Sand Gra	ains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soll Indicators: (Applicable to		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)	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):		r
Type:		
Depth (inches):	r decomposed wood chips for rood chips at 12 inches.	Hydric Soil Present? Yes No
HYDROLOGY Wetland Hydrology Indicators:		
Primary Indicators (minimum of one requ	ired: check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)		
	MI RA 1. 2. 4A. 300 4B)	4A, and 4B)
	MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	4A, and 4B) Drainage Patterns (B10)
X Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
Saturation (A3) Water Marks (B1)	Salt Crust (B11)Aquatic Invertebrates (B13)Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Saturation (A3) Water Marks (B1) 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)
Saturation (A3) Water Marks (B1)	Salt Crust (B11)Aquatic Invertebrates (B13)	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)	 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) To Shallow Aquitard (D3)
Saturation (A3) Water Marks (B1) 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) Second 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)	 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) 	Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Ts (C3) Second 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)	 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) Security (C3) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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	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) Other (Explain in Remarks)	Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Security (C3) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Saturation Present? (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) Depth (inches): No Depth (inches): Wetta	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) and Hydrology Present? Yes No

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

WETLAND DETERMINATION DATA FORM	- Western Mountains, Valleys, and Coast Region
	by/County: Humbold County Sampling Date: 8/13/20
Applicant/Owner: 1 worker Bay Horbor District	State: A Sampling Point: TP 21
investigator(s): Sam Polly Joseph Paler Se	ection, Township, Range: Secs. 15, 16, +21, T5N, R1W, HBM
	806915 Long: 124.191134 Datum: W65.85
	II A COLL
Soil Map Unit Name: 019 - Wrban Land - Anthraltic Xeror- 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 dis	
Are Vegetation, Soil, or Hydrology naturally proble	
SUMMARY OF FINDINGS - Attach site map showing s	ampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	ha tha Canadad Assa
Hydric Soil Present? Yes No Yes No	Is the Sampled Area within a Wetland? Yes No
Remarks: Wets data oner than normal	Cylverts empt 7 Into this swale a soil
Better described in Oltwin Sheet #1	is mostly wood waste.
VEGETATION – Use scientific names of plants.	
	Dominant Indicator Dominance Test worksheet:
1. Morela Californica 2	Species? Status Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2 Salix hookerigag 80	V JACW
3.	Total Number of Dominant Species Across All Strata: (B)
4	02.7
Santing/Shrub Stratum (Plot size: 54	Total Cover That Are OBL, FACW, or FAC: (A/B)
1. Rubus unsinus 3	Prevalence Index worksheet:
2,	
3	FACW species x 2 =
4,	FAC species x3 =
5	FACU species x 4 =
Herb Stratum (Plot/size: 544)	Total Cover UPL species x 5 =
1. Timew ethors	PACW Column Totals: (A) (B)
2. Holcus anatus I	Prevalence Index = B/A =
3	
4,	
5	
6	3 - Prevalence Index is ≤3.01
7	
9	
10	
11	¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:	Total Cover
1	Hydrophytic
2.	Vegetation Vegetation
08.1	Total Cover Present? Yes No
% Bare Ground in Herb Stratum 98%	
Remarks:	

Depth Matrix	Redox Features	- Total Bounds
(inches) Color (mojst) %	Color (moist) % Type' Loc ²	Texture Remarks
0-10 1041 314 100		LS Some % or apric matter troo
10-24+10482/2 106		Wood Chips Ut Sawdust

		-30
	·	
V	V	
IT	=Reduced Matrix, CS=Covered or Coated Sand	Grains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all		Indicators for Problematic Hydric Soils ² :
•	Sandy Redox (S5)	2 cm Muck (A10)
Histosol (A1)	Stripped Matrix (S6)	Red Parent Material (TF2)
Histic Epipedon (A2) Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
<u> </u>	Depleted Matrix (F3)	Offici (Explain in Remarks)
Depleted Below Dark Surface (A11) 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)	Redux Depressions (Fo)	dilless distribed of problematic.
Restrictive Layer (if present):		V
Type:		No. 11 To 11 To 12
Depth (inches):		Hydric Soil Present? Yes No
Wetland Hydrology Indicators:	ed: 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) (MI R& 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 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 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) Ory-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 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 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) Geomorphic Position (D2)
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 Refresence 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 Resence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) 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 Represence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (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) 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 Researce of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (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) 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 Represence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (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) 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) Driff 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 R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRR 37) 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 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 Represence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (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) 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 (Backs) 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 R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRR 37) 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)
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O A LES	IA FORIN -	Westelli Woul	italis, valleys, and Coast Region
Project/Site: RMT 1	City/C	County: Hum	bold Sampling Date: 8/13/20
Applicant/Owner: W. Mal of Ball Harbar Dis	trict		State: A Sampling Point: TP 22
Investigator(s): SIM PULY Joseph Saler	Secti	on, Township, Ran	go: Secs. 15, 16+21, TSN, RIW, HBM
Landform (hillslope, terrace, etc.): Bayside	Loca	I relief (concave, c	onvex, none): Slope (%): 0-1
Subregion (LRR): A-MLKA, 48		07821°	Long: -124.191760 Datum: WGS 84
10/11) 1 1 1 1 1	altic Xeror	theats Asso	. 0-2 % NWI classification: None
Are climatic / hydrologic conditions on the site typical for this	time of year?	res , No)	(If no, explain in Remarks.)
Are Vegetation, Soil _X, or Hydrology _X s	_		Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology n	THE STATE OF THE PARTY OF THE STATE OF THE S		eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing san	mpling point lo	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No			3-8
	o_ _	Is the Sampled within a Wetlan	
Wetland Hydrology Present? Yes No			
Remarks: Western m ost 4 Culve		1	I from old Green's office
- 3 large culverts emphy int	ssvak.	+ Unde co	mposed will wasterwood in soil
VEGETATION - Use scientific names of plant	14/	ets data dr	ner-than normal
Tree Stratum (Plot size: 30 FT)	Absolute Dor % Cover Spe	minant Indicator	Dominance Test worksheet:
1. Salix hochesiana	80	PACW	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2. Salix Instanded	5	FACW	
3			Total Number of Dominant Species Across All Strata: (B)
4			Percent of Dominant Species ()
SA.	45_= TO	otal Cover 47.5	That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size: 27+1) 1. RUOUS ACMPNIACW	15	CAC.	Prevalence Index worksheet:
2		1110	Total % Cover of: Multiply by:
3	. — —		OBL species x 1 =
4.	1.		FACW species x 2 =
5.			FAC species x 3 =
	= To	otal 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 Hydrophylic Vegetation
5. 6.			2 - Dominance Test is >50%
7	()		3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting
8.			data in Remarks or on a separate sheet)
9.			5 - Wetland Non-Vascular Plants ¹
10			Problematic Hydrophytic Vegetation¹ (Explain)
11			Indicators of hydric soil and wetland hydrology must
Wandy Vino Strature (Clataine)	= To	tal Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:) 1			
2.			Hydrophytic Vegetation
	= To	tal Cover	Vegetation Present? Yes No
% Bare Ground in Herb Stratum 100 %			
Remarks:			

Depth Matrix Inches) Color (moist) %	Color (moist) % Type Loc ²	Texture Remarks	
$\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$		Testairs Remains	
- 9 10 1 100		14	
-17 557251100		10	1
1-24 104R2/2 100		LS 70% saw dust/wa	dyo
10 10		1	1
1.			
Func: C-Concentration D-Depletion	RM=Reduced Matrix, CS=Covered or Coated Sand Gr	ains. ² Location: PL=Pore Lining, M=Matrix	
ydric Soil Indicators: (Applicable to		Indicators for Problematic Hydric Soils	
		2 cm Muck (A10)	•
Histosol (A1) Histic Epipedon (A2)	Sandy Redox (S5) 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)	Language Claused Banking (EQ)	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.	
testrictive Layer (if present):			
Туре:			V
Depth (inches):		Hydric Soil Present? Yes No _	
	Y ²		
/DROLOGY	y**		
YDROLOGY Vetland Hydrology Indicators:	uired; check all that apoly)	Secondary Indicators (2 or more require	ed)
YDROLOGY Vetland Hydrology Indicators:	uired; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more requirements Water-Stained Leaves (B9) (MLRA	V 151 211
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1)			V 151 211
YDROLOGY Vetland 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	V 151 211
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requestry Surface Water (A1)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 4A, and 4B)	V 151 211
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one reg 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 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Image	1, 2,
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) X 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 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imager	1, 2,
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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 Imager Sparsely Vegetated Concave Surface Water Present? Ves Vater Table 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) y (B7) Other (Explain in Remarks) No Depth (inches): No Depth (inches): Wetla	Water-Stained Leaves (B9) (MLRA 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imager (C3) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No	1, 2,
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 Imager Sparsely Vegetated Concave Surface Water Present? Ves Vater Table 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) y (B7) Other (Explain in Remarks) No Depth (inches):	Water-Stained Leaves (B9) (MLRA 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imager (C3) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No	1, 2,
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one reg 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 Present? Ves Water Table Present? Ves Saturation Present? Yes Saturation Present? Yes Concave Surface Water Present? Ves Saturation Present? Sparsely Vegetated Concave Surface Water Present? Sparsely Vegetated Concave Surface Water Present? Ves Saturation Present? Sparsely Vegetated Concave Surface 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 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) No Depth (inches): No Depth (inches): Wetla	Water-Stained Leaves (B9) (MLRA 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imager (C3) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No	1, 2,
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 Surfated Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes Sincludes 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) y (B7) Other (Explain in Remarks) No Depth (inches): No Depth (inches): Wetla	Water-Stained Leaves (B9) (MLRA 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imager (C3) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No	1, 2,

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

Geologists, Inc.	(1) 1
Project/Site: Humboldt Bay Harbor District-RMMT City/County: Humboldt	Sampling Date:
Applicant/Owner: Humboldt Bay Harbor District	State: CA Sampling Point: TP23
Investigator(s): Joseph Saler, Cindy Wilcox Section, Township, Ra	
Landform (hillslope, terrace, etc.): Bayride Al WWW Local relief (concave,	
Subregion (LRR): A. MLRA-4B Lat: 40. 823699	
Soil Map Unit Name: 1009 - tydraguents - Wassents mycky SiL 5 tong sal	Long: Visa of Manual Massage M
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 ne	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point I	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No Is the Samplec	. X
Wetland Hydrology Present? Yes No within a Wetlan	
Remarks: WETS normal rainfall severe regional drought. Wetland TP excavated attedded Estuarine wetland (E2US+EM IN WETLAND SUpports diverse sattment. Lawer elevation myd f	in Higher elevation partials of the
VEGETATION – Use scientific names of plants.	A) X
Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30') % Cover Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2	Total Number of Dominant
3	Species Across All Strata: (B)
4 = Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Piot size: 5"	Prevalence Index worksheet:
1	Total % Cover of: Multiply by:
2	OBL species x 1 =
3	FACW species x 2 =
4	FAC species x 3 =
5.	FACU species x 4 =
Herb Stratum (Rlot size: 5' = Total Cover	UPL species x 5 =
1. Sporting desirtard 5 OBL	Column Totals: (A) (B)
2. Samea cornosa 40 V OBL	Drawina and Inday - Dia -
3. Salkon a paytica 3 OBL	Prevalence Index = B/A =
4 impaign californicum 1 OBL	1 - Rapid Test for Hydrophytic Vegetation
5. Districted Solvator 5 FACW	2 - Dominance Test is >50%
6	3 - Prevalence Index is ≤3.0¹
7	4 - Morphological Adaptations (Provide supporting
8	data in Remarks or on a separate sheet)
9	5 - Wetland Non-Vascular Plants ¹
10	Problematic Hydrophytic Vegetation ¹ (Explain)
11	Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot eige)	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:) 1	
2	Hydrophytic Vegetation
= Total Cover	Vegetation Present? Yes No
% Bare Ground in Herb Stratum 46*	
Remarks:	1 1/42
* Muck and bare soil from peranial saturation + i	ryddin.

Profile Description: (Describe to the depth needed to document the indicator	or confirm the	e absence of ind	icators.)
Depth Matrix Redox Features		_ v	40.40
	Loc ²	Texture	Remarks
)-1 N2.5 L 100		5	
1-14+ 2.5 \ 3/2 \ 100	/	Mus_	
	·		
	• :		
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coat	ed Sand Grains	s ² l ocation	PL=Pore Lining, M=Matrix.
ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	led Sand Grains	Indicators for	Problematic Hydric Soils ³ :
		2 cm Muc	
Histosol (A1) Sandy Redox (S5) Stripped Matrix (S6)			nt Material (TF2)
Black Histic (A3) Loamy Mucky Mineral (F1) (excep	ot MLRA 1)		low Dark Surface (TF12)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)	,		plain in Remarks)
Depleted Below Dark Surface (A11) Depleted Matrix (F3)			
Thick Dark Surface (A12) Redox Dark Surface (F6)		3Indicators of I	ydrophytic vegetation and
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)		wetland hyd	drology must be present,
Sandy Gleyed Matrix (S4) Redox Depressions (F8)		unless dist	urbed or problematic.
Restrictive Layer (if present):			
Туре:			1
Depth (inches):	1 +	Hydric Soil Prese	ent? Yes X No
Remarks:			
Remarks:	1		
YDROLOGY	1		
YDROLOGY Vetland Hydrology Indicators:	1		
YDROLOGY Vetland Hydrology Indicators:	1		Indicators (2 or more required)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) X Surface Water (A1) Water-Stained Leaves (B9)		X Water-	Stained Leaves (B9) (MLRA 1, 2,
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) X Surface Water (A1) Yeter-Stained Leaves (B9) High Water Table (A2) MLRA 1, 2, 4A, and 4B)		Water-	Stained Leaves (B9) (MLRA 1, 2, and 4B)
VDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) X Surface Water (A1) High Water Table (A2) MLRA 1, 2, 4A, and 4B)		Water-	Stained Leaves (B9) (MLRA 1, 2,
VDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) X Surface Water (A1) High Water Table (A2) MLRA 1, 2, 4A, and 4B)		Water-	Stained Leaves (B9) (MLRA 1, 2, and 4B)
VDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) X Surface Water (A1) High Water Table (A2) MLRA 1, 2, 4A, and 4B) Saturation (A3) — Salt Crust (B11)		Water- 4A, Draina	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) X Surface Water (A1)		Water- 4A, Draina, Dry-Se Satura	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2)
VDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) X Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) WDRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	g Living Roots (Water- 4A, Drainag Dry-Se Satura' Geomo	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9)
VDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) X Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Wetland Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alon	g Living Roots (C4)	Water- 4A, Draina Dry-Se Satura Geomo Shallov	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9 orphic Position (D2)
VPROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) X Surface Water (A1)	g Living Roots (C4) led Soils (C6)	Water- 4A, Drainag Dry-Se Satura (C3) Geomo Shallov FAC-N	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3)
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 (C1) Iron Deposits (B5) Recent Iron Reduction in Til	g Living Roots (C4) led Soils (C6)	Water- 4A, Drainag Dry-Se Satura' Geomo Shallov FAC-N Raised	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) prophic Position (D2) w Aquitard (D3) eutral Test (D5)
VDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) X Surface Water (A1)	g Living Roots (C4) led Soils (C6)	Water- 4A, Drainag Dry-Se Satura' Geomo Shallov FAC-N Raised	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9 orphic Position (D2) w Aquitard (D3) eutral Test (D5) I Ant Mounds (D6) (LRR A)
VDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) X Surface Water (A1) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) X 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 (C1) Iron Deposits (B5) Recent Iron Reduction in Till Surface Soil Cracks (B6) Stunted or Stressed Plants (C1) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8)	g Living Roots (C4) led Soils (C6)	Water- 4A, Drainag Dry-Se Satura' Geomo Shallov FAC-N Raised	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) prphic Position (D2) w Aquitard (D3) eutral Test (D5) I Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	g Living Roots (C4) led Soils (C6)	Water- 4A, Drainag Dry-Se Satura' Geomo Shallov FAC-N Raised	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) I Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	g Living Roots (C4) led Soils (C6) (D1) (LRR A)	Water- 4A, Drainag Dry-Se Satura' Geomo Shallov FAC-N Raised	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) I Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	g Living Roots (C4) led Soils (C6) (D1) (LRR A)	Water- 4A, Drainag Dry-Se Satura Geomo Shallov FAC-N Raised Frost-H	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A) Heave Hummocks (D7)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	g Living Roots (C4) led Soils (C6) (D1) (LRR A)	Water- 4A, Drainag Dry-Se Satura' Geomo Shallov FAC-N Raised	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A) Heave Hummocks (D7)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Surface Capillary fringe)	g Living Roots (C4) led Soils (C6) (D1) (LRR A)	Water- 4A, Drainag Dry-Se Satura' Geomo Shallov FAC-N Raised Frost-H	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A) Heave Hummocks (D7)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	g Living Roots (C4) led Soils (C6) (D1) (LRR A)	Water- 4A, Drainag Dry-Se Satura' Geomo Shallov FAC-N Raised Frost-H	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A) Heave Hummocks (D7)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Water Table Present? Yes No Depth (inches): Surface Saturation Present? Water Table Present? Yes No Depth (inches): Surface Capillary fringe)	g Living Roots (C4) led Soils (C6) (D1) (LRR A)	Water- 4A, Drainag Dry-Se Satura' Geomo Shallov FAC-N Raised Frost-H	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A) Heave Hummocks (D7)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	g Living Roots (C4) led Soils (C6) (D1) (LRR A)	Water- 4A, Drainag Dry-Se Satura' Geomo Shallov FAC-N Raised Frost-H	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A) Heave Hummocks (D7)

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

eologists, Inc roject/Site: Humboldt Bay Harbor District-RMMT	City/County: Humbs	oldt Sampling Date: 4/29/
pplicant/Owner: Humboldt Bay Harbor District		State: CA Sampling Point: 1724
	Section, Township,	
andform (hillslope, terrace, etc.):	Section, Township,	
androrm (nilisiope, terrace, etc.): 1113 (010	Local relief (concav	re, convex, none): None Slope (%): 40 Long: -124.1743 48 Datum: WGS 84
ubregion (LRR): A, MLRA-4B	Lat: 10.000104	Long: VGS 84
		0-3/b NWI classification: 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 disturbed? A	re "Normal Circumstances" present? Yes X No
re Vegetation, Soil, or Hydrology	naturally problematic? (If	needed, explain any answers in Remarks.)
UMMARY OF FINDINGS - Attach site	map showing sampling poin	t locations, transects, important features, et
	No	
	No Is the Samp	
Wetland Hydrology Present? Yes Remarks: WETS normal rainfall	No Within a We	tiand? Yes No
EGETATION – Use scientific names of	plants.	
	Absolute Dominant Indicate	
Tree Stratum (Plot size: 30'	<u>% Cover Species? Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC; (A)
		Total Number of Dominant
		Species Across All Strata: (B)
	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B
Sapling/Shrub Stratum (Plot size: 5')	Prevalence Index worksheet:
		Total % Cover of: Multiply by:
		OBL species x 1 =
	$\overline{}$	FACW species x 2 =
		FAC species x 3 =
	- T-t-10	FACU species x 4 =
Herb Stratum (Plot size: 5'	= Total Cover	UPL species x 5 =
Briza Maxima	30 W NL	Column Totals: (A) (B)
Bromus diandres	NL NL	Prevalence Index = B/A =
Parapholis incurva		Hydrophytic Vegetation Indicators:
Distichlis Spicata	10 FACI	i - i apid rost for riyal optifitio regetation
Athoxathm odorothm		2 - Dominance Test is >50%
		3 - Prevalence Index is ≤3.01
112		4 - Morphological Adaptations¹ (Provide supportir
•		data in Remarks or on a separate sheet)
-		5 - Wetland Non-Vascular Plants ¹
0		Problematic Hydrophytic Vegetation ¹ (Explain)
1	- H/ -18	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Voody Vine Stratum (Plot size:	= Total Cover 25	oo process, unless distance of processing in
voody vine Stratum (Flot Size.		Under about
		Hydrophytic Vegetation
		— I _ 9
	= Total Cover	Present? Yes No
% Bare Ground in Herb Stratum	= Total Cover	Present? Yes No

mpling Point: TP 2 pasulting Engine

Depth Matrix		
	Redox Features Color (moist) % Type Loc²	Texture Remarks,
1-27 (OVP 4/2 100	Color (moist) % Type' Loc	5 <1% 5 YR 4/6@ 26 inch
)-27 109K72 100		-17. 3/N 1/6 20 IAUN
Type: C=Concentration D=Depletion RM:	=Reduced Matrix, CS=Covered or Coated Sand G	Grains. ² Location: PL=Pore Lining, M=Matrix.
lydric Soil Indicators: (Applicable to all		Indicators for Problematic Hydric Soils ³ :
	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):		
Type:		
Depth (inches):		Hydric Soil Present? Yes No X
Manager and a second of the se		
Netland Hydrology Indicators:		
Netland Hydrology Indicators:		Secondary Indicators (2 or more required)
Vetland Hydrology Indicators:	d; 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: Primary Indicators (minimum of one require		
Vetland Hydrology Indicators: rimary Indicators (minimum of one require Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Vetland Hydrology Indicators: Inimary Indicators (minimum of one require Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 48)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
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, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Vetland 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)
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 (C9)
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 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) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
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)	Water-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 Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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)	Water-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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) 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) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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)	Water-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 (Case) Stunted or Stressed Plants (D1) (LRR 2) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A)
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 (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 (Case) Stunted or Stressed Plants (D1) (LRR 2) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) 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) 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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Case) Stunted or Stressed Plants (D1) (LRR 2) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) 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) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (Bufface 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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) No Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A)
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 (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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) No Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 (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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) No Depth (inches): No Depth (inches): WA We	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 (Field Observations: Surface Water Present? Water Table Present? Ves Saturation Present? Ves Saturation Present? Ves Saturation Present? Ves Sincludes 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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) No Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 (Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, m	Water-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 A Other (Explain in Remarks) No Depth (inches): No Depth (inches): WA We	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 (Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, m	Water-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 A Other (Explain in Remarks) No Depth (inches): No Depth (inches): WA We	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 (Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, m	Water-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 A Other (Explain in Remarks) No Depth (inches): No Depth (inches): WA We	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks) No Depth (inches): No Depth (inches): WA We	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Coots (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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& Geologists, Inc. Project/Site: Humboldt Bay Harbor District-RMMT	Cia			_ Sampling Date:
Applicant/Owner: Humboldt Bay Harbor District	Uity	//County: Humboldt	C4-4 CA	Sampling Date: TP 25
	^			
investigator(s):	Se	ction, Township, Rai	nge:	0 0-1
Landform (hillslope, terrace, etc.): Bayside til	Lo	cal relief (concave, o	convex, none):	Slope (%): 0 - 1
Subregion (LRR): A, MLRA-4B	Lat: 10,	90000	Long: -124.17	5 161 Datum: WGS 84
Soil Map Unit Name: 1014 - Uy banland - 4nthra				
Are climatic / hydrologic conditions on the site typical for t	his time of year?	Yes X No _	(If no, explain in	Remarks.)
Are Vegetation, Soil, or Hydrology	significantly dis	turbed? Are "	Normal Circumstances"	present? Yes V No
Are Vegetation, Soil, or Hydrology	_naturally proble	matic? (If ne	eded, explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS - Attach site ma	showing sa	mpling point k	ocations, transect	s, important features, etc.
Hydrophytic Vegetation Present? Yes		1-4-0-		N .
Hydric Soil Present? Yes		Is the Sampled within a Wetlan		No. X
Wetland Hydrology Present? Yes	No	Within a victian		
Remarks: WETS normal rainfall	a allano	1 1 1000-	F. 4	
TP excavated west of Va	ice avoice	in orbig	1100	
VEGETATION – Use scientific names of pla	ints.			
Tree Stratum (Plot size: 30'		ominant Indicator	Dominance Test wor	ksheet:
1. Salix hookering	55	pecies? Status FACW	Number of Dominant : That Are OBL, FACW	
2. Malus punila	30	NL		
3.			Total Number of Domi Species Across All Str	
4			, ·	
de las Agos In ad No.	_85_=	Total Cover 423	Percent of Dominant S That Are OBL, FACW	
Sapling/Shrub Stratum (Plot size: 5')	12	1 FACY	Prevalence Index wo	
111 17 17 17 17 17 17 17 17 17 17 17 17		1/104	Total % Cover of:	Multiply by:
2			OBL species	x 1 =
4			FACW species	x 2 =
5			FAC species	x 3 =
	17	Total Cover		x 4 =
Herb Stratum (Plot size: 5'		1 1.01		x 5 =
1. Vicia Sativa	_ 40 _	UPL	Column Totals:	(A) (B)
2 tragona verca		FACY N'L	Prevalence Inde	x = B/A =
3. Gerburun dissectum		- NL	Hydrophytic Vegetat	ion Indicators:
5. Anholashun odoratum	15	FACU		Hydrophytic Vegetation
6. Bromus diandrus	1	NL	2 - Dominance Te	
7 Briza Maxima.		NL	3 - Prevalence Inc	
8. Symphystrichum chi Pase		FAC		Adaptations ¹ (Provide supporting ks or on a separate sheet)
9.			5 - Wetland Non-	Vascular Plants ¹
10			Problematic Hydr	ophytic Vegetation ¹ (Explain)
11				oil and wetland hydrology must
	76_=	otal Cover 38/15.2	pe present, unless dis	turbed or problematic.
Woody Vine Stratum (Plot size:)				
1,			Hydrophytic Vegetation	11
2		Total Carres	Vegetation Present? Y	es No
% Bare Ground in Herb Stratum		otal Cover		
Remarks: Her + words debuts				
MIN + WORLY COM				

Depth	Matrix		oth needed to document	x Feature				
nches)	-Color (moist)	%	Color (moist)	%	Type¹_	_Loc ²	Texture	Remarks
)-6	10482/2	100	254				LS	
-21	104R 4/2	89	2.54 4/3	1	(M	S	. 1
- 101 M	10/R3/2	10	- washing the	-		-		Mixermatrix
	1071(-)2	- 10	•					T-AV (Chronity)
			=Reduced Matrix, C			d Sand Gr		cation: PL=Pore Lining, M=Matrix. ors for Problematic Hydric Soils ³ :
_		cable to all	LRRs, unless othe		tea.)			•
_ Histoso	, ,		Sandy Redox (m Muck (A10)
_	pipedon (A2)		Stripped Matrix		=1) (avecat	MI DA 1\		d Parent Material (TF2) ry Shallow Dark Surface (TF12)
	Histic (A3)		Loamy Mucky I Loamy Gleyed			MILKA 1)		ner (Explain in Remarks)
	en Sulfide (A4) ed Below Dark Surfa	ce (A11)	Depleted Matri		د)		0.	ici (Explain iii Nemalika)
_	oark Surface (A12)	(11 <i>11)</i>	Redox Dark Su		5)		3Indicat	ors of hydrophytic vegetation and
-	Mucky Mineral (S1)		Depleted Dark		•			and hydrology must be present,
_	Gleyed Matrix (S4)		Redox Depress				unle	ss disturbed or problematic.
	Layer (if present):					-		
Туре:	11							
•	nches):						Hydric Soi	Present? Yes No
emarks:					_			
/DROLO	OGY ydrology Indicators	i						
			ed; check all that app	ly)			Seco	ondary Indicators (2 or more required)
	e Water (A1)				ves (B9) (e	xcept		Water-Stained Leaves (B9) (MLRA 1, 2
_	later Table (A2)				and 4B)			4A, and 4B)
	tion (A3)		Salt Crus		-			Drainage Patterns (B10)
	Marks (B1)		Aquatic Ir					Dry-Season Water Table (C2)
	ent Deposits (B2)				Odor (C1)			Saturation Visible on Aerial Imagery (CS
	eposits (B3)				eres along	Living Roo		Geomorphic Position (D2)
	flat or Crust (B4)		Presence	of Reduc	ced Iron (C	4)		Shallow Aquitard (D3)
	eposits (B5)				tion in Tille		6)	FAC-Neutral Test (D5)
	e Soil Cracks (B6)				d Plants (D		-	Raised Ant Mounds (D6) (LRR A)
	tion Visible on Aerial	l Imagery (E						Frost-Heave Hummocks (D7)
Sparse	ly Vegetated Concar	ve Surface	(B8)					
ield Obse	rvations:				h . Ih			
urface Wa	ater Present?	Yes	No Depth (in	rches): _	MA	_		
Vater Table	e Present?	Yes	No 🔽 Depth (in	nches):	AIN			
aturation I			No <u>V</u> Depth (in		NA	Wetl	and Hydrolo	gy Present? Yes No 💢
ncludes ca	apillary fringe) ecorded Data (strear	m gaude. m	nonitoring well, aerial	photos.	previous ins	spections).	if available:	
escribe R		G3-1	· g · · · · · · · · · ·			,//		
escribe R								
Describe R Remarks:								

(27V)
CIM
Consulting Engineers

e Geologists, Inc.			
Project/Site: Humboldt Bay Harbor District-RMMT	City/County: Humboldt	s	Sampling Date: 4/29/22
Applicant/Owner: Humboldt Bay Harbor District		State: CA S	ampling Point: TP26
Investigator(s): Joseph Saler, Cindy Wilcox	Section, Township, Rai		
Landform (hillslope, terrace, etc.): Artuna ae	Local relief (concave.	convex. none): Con Can	e Slope (%): 0-2
	Lat: 40,824108°		
Soil Map Unit Name: 1014 - UV ban land Anthrathe	Xevorthents a soc. U-20	5/40€ NIMI classificat	None PEM1 (near
Are climatic / hydrologic conditions on the site typical for the			
Are Vegetation, Soil, or Hydrology		Normal Circumstances" pre	
	·		President and a second a second and a second a second and
Are Vegetation, Soil, or Hydrology SUMMARY OF FINDINGS - Attach site map	,	eded, explain any answers	·
		oodiiono, trancooto, i	important routures, etc.
	No is the Sampled	Area	
	No within a Wetlar	nd? Yes 🔼	_ No
Remarks: WETS normal rainfall Wetland # 1 The excavated a leage of la wrine	, snubshyb wetland	(PSS3F+Dx 0+	39) Charelized
conditions connecting natural metlan	is (west) to tidal well a	ds (east). Tidega	te at vance Avenue
VEGETATION - Use scientific names of pla	nts.	J. J.	
20	Absolute Dominant Indicator	Dominance Test worksh	eet:
1. Morella Californica	Cover Species? Status 100 FACW	Number of Dominant Spe That Are OBL, FACW, or	
2		Total Number of Dominan	1 1
3		Species Across All Strata	
4	Total Cover	Percent of Dominant Spec That Are OBL, FACW, or	
Sapling/Shrub Stratum (Plot size: 5"		Prevalence Index works	
1.		Total % Cover of:	Multiply by:
2		OBL species	x 1 =
3.		FACW species	x 2 =
5.		FAC species	x 3 =
	= Total Cover	FACU species	x 4 =
Herb Stratum (Plot size: 5'		UPL species	
1		Column Totals:	(A) (B)
2,		Prevalence Index =	B/A =
3		Hydrophytic Vegetation	Indicators:
4		1 - Rapid Test for Hyd	drophytic Vegetation
5.		Z 2 - Dominance Test is	s >50%
6.		3 - Prevalence Index	
7		4 - Morphological Ada	aptations ¹ (Provide supporting r on a separate sheet)
9.		5 - Wetland Non-Vasi	
10		Problematic Hydrophy	ytic Vegetation ¹ (Explain)
11,			nd wetland hydrology must
	= Total Cover	be present, unless disturb	ed or problematic.
Woody Vine Stratum (Plot size:)			
1,		Hydrophytic	
2		Vegetation Present? Yes	No
% Bare Ground in Herb Stratum 100%	= Total Cover	2 200 240	
Remarks: No harbaceow or Shub lay	vers with perenially	flooded wetland.	
sporsely vertetated concar			

inches) Color (maist) %	Color (moist)	%Type ¹	_Loc ²	<u>Texture</u>	Remarks
- 8+ 2.54 2.5/1 100				M	Black. Noexacteolor
					match in book
	-				
	- (* - (* - (*)				
Type: C=Concentration, D=Depletion, R	RM=Reduced Matrix, CS	=Covered or Coate	ed Sand Gr	rains. ² Loc	cation: PL=Pore Lining, M=Matrix.
ydric Soil Indicators: (Applicable to	all LRRs, unless other	wise noted.)		Indicato	ors for Problematic Hydric Soils ³ :
_ Histosol (A1)	Sandy Redox (S				m Muck (A10)
Histic Epipedon (A2)	Stripped Matrix				l Parent Material (TF2)
Black Histic (A3)		lineral (F1) (excep	t MLRA 1)		y Shallow Dark Surface (TF12)
	Loamy Gleyed I			Oth	er (Explain in Remarks)
Depleted Below Dark Surface (A11)				31 - 41 4	or of budges bytic regetation and
Thick Dark Surface (A12)	Redox Dark Sur Depleted Dark S				ors of hydrophytic vegetation and and hydrology must be present,
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	Redox Depress				ss disturbed or problematic.
testrictive Layer (if present):	Nedox Bepiess	10113 (1 0)		1	o alocal bod of problems de
Type:					
Depth (inches):				Hydric Soil	Present? Yes X No
- High organic contest					
- High organic contest					
YDROLOGY Vetland Hydrology Indicators:				0.000	
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requ					ndary Indicators (2 or more required)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required) Surface Water (A1)	Water-Sta	ined Leaves (B9) (except		Vater-Stained Leaves (B9) (MLRA 1, 2,
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2)	Water-Sta MLRA	ined Leaves (B9) (1, 2, 4A , and 4B)	except	×	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Sta MLRA Salt Crust	ined Leaves (B9) (1, 2, 4A, and 4B) (B11)	except	× .	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Sta	ined Leaves (B9) (1, 2, 4A, and 4B) (B11) vertebrates (B13)	except	X (Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required in the primary Indicato	Water-Sta MLRA Salt Crust Aquatic In X Hydrogen	ined Leaves (B9) (1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1)		× v	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required with the control of the co	Water-Sta MLRA Salt Crust Aquatic Int X Hydrogen Oxidized F	ined Leaves (B9) (1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along	g Living Ro	X C C C C C C C C C	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required with the control of the co	Water-Sta MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence	ined Leaves (B9) (1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C	g Living Ro	X	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic 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-Sta MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence Recent Iro	ined Leaves (B9) (1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C n Reduction in Till	g Living Roi C4) ed Soils (Cd	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 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required with the content of the co	Water-Sta MLRA Salt Crust Aquatic Int Hydrogen Oxidized F Presence Recent Iro Stunted or	ined Leaves (B9) (1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C in Reduction in Tilli Stressed Plants (I	g Living Roi C4) ed Soils (Cd	ots (C3) S 6) F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-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)
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	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or	ined Leaves (B9) (1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C n Reduction in Till	g Living Roi C4) ed Soils (Cd	ots (C3) S 6) F	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)
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 Sparsely Vegetated Concave Surface	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or	ined Leaves (B9) (1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C in Reduction in Tilli Stressed Plants (I	g Living Roi C4) ed Soils (Cd	ots (C3) S 6) F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-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)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requivations) 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-Sta MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence Recent Iro Stunted or (B7) Other (Exp ce (B8)	ined Leaves (B9) (1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C in Reduction in Tille Stressed Plants (I	g Living Roi C4) ed Soils (Cd	ots (C3) S 6) F	Nater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-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)
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 Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes	Water-Sta MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence Recent Iro Stunted or (B7) Other (Exp Dee (B8)	ined Leaves (B9) (1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C in Reduction in Tille Stressed Plants (I clain in Remarks)	g Living Roo (4) ed Soils (Co D1) (LRR A	ots (C3) S 6) F	Nater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-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)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required of the re	Water-Sta MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence Recent Iro Stunted or (B7) Other (Exp ce (B8) No Depth (in No Depth (in	ined Leaves (B9) (1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C in Reduction in Tille Stressed Plants (I	g Living Roo C4) ed Soils (Co D1) (LRR A	ots (C3) S 6) F	Nater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-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)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required of the re	Water-Sta MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence Recent Iro Stunted or (B7) Other (Exp ce (B8) No Depth (in No Depth (in Depth (in	ined Leaves (B9) (ined Leaves (B9) (including the leaves (B13) (B11) (Including the leaves (B13) (Including the le	g Living Roo 24) ed Soils (Co D1) (LRR A	ots (C3) 6 6) F	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-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)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required of the re	Water-Sta MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence Recent Iro Stunted or (B7) Other (Exp ce (B8) No Depth (in	ined Leaves (B9) (ined Leaves (B9) (ined Leaves (B9) (ined Leaves (B13) (B11) (ined Leaves (B13) (B12)	g Living Roo 24) ed Soils (Co D1) (LRR A	ots (C3) 6 6) F	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-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)

STAT
Consulting Engineers & Geologists, Inc.

k Geologists, Inc.			manie, vanoyo, an	de la la
Project/Site: Humboldt Bay Harbor District-RMMT	c	ity/County: Humboldt		Sampling Date: 4/29/22
Applicant/Owner: Humboldt Bay Harbor District			State: CA	Sampling Point: TP 27
Investigator(s): Joseph Saler, Cindy Wilcox	s	ection, Township, Rar	nge:	
Landform (hillslope, terrace, etc.): Fill Stope	1	ocal relief (concave, o	convex, none): None	Slope (%): 15%
Subregion (LRR): A, MLRA-4B	Lat: 40	824121	Long: - 124,1741	62 Datum: WGS 84
Soil Map Unit Name: 1014-UVbanland Anthr				
Are climatic / hydrologic conditions on the site typical for				1. 10 1/14 - 1
Are Vegetation, Soil, or Hydrology				present? Yes X No
Are Vegetation, Soil, or Hydrology	-		eded, explain any answe	
SUMMARY OF FINDINGS - Attach site ma		•	•	•
Hydrophytic Vegetation Present? Yes	No_X			
Hydric Soil Present? Yes		Is the Sampled	Area	No_X
Wetland Hydrology Present? Yes	No X	within a Wetlan	d? Yes	No
Remarks: WETS normal rainfall The excavated on fillshope about	ve wotlan	g opprox 12	e ft from tp	26.
VEGETATION – Use scientific names of p				
T 20-1 - 20'		Dominant Indicator	Dominance Test work	sheet:
1. Fucal Hw Now W	80	Species? Status	Number of Dominant S	
2. Mary la Californich	- 3h	FACW	That Are OBL, FACW,	or FAC:(A)
3		1/101	Total Number of Domin Species Across All Stra	- 1
4				
Sapling/Shrub Stratum (Plot size: 5')	/10	Total Cover 55/22	That Are OBL, FACW,	or FAC: (A/B)
1. RILLIUS MUSINUS	R	FACU	Prevalence Index wor	The reserve to the second seco
2				Multiply by:
3				x1=
4			The state of the s	x 2 =
5				x3= x4=
Herb Stratum (Plot size: 5'	_8=	Total Cover	UPL species	
1. Scrophylaia Californica	8	FAC		(A)(B)
2 Briza maxima	55	V NL		
3. OXais Des-captae	4	NL	Hydrophytic Vegetation	= B/A =
4. Viciasarva	TO	UPL	1 - Rapid Test for I	
5. Grocosmia xcrocosmittera	5	FAC	2 - Dominance Tes	
6. Avenaborbata		NL	3 - Prevalence Inde	
7			4 - Morphological A	Adaptations ¹ (Provide supporting
8			data in Remark	s or on a separate sheet)
9			5 - Wetland Non-V	
10				phytic Vegetation ¹ (Explain)
11,	- 02	W21	Indicators of hydric soil be present, unless distri-	and wetland hydrology must
Woody Vine Stratum (Plot size: 5ft)	<u> </u>	Total Cover 41.5/16.4	Do predont, amoss dist	arbea of prodictilatic.
1. Lonicera japonica	5	V FAC	ñ	
2.		100	Hydrophytic Vegetation	
20.1*	_5	Total Cover	Present? Ye	s No
% Bare Ground in Herb Stratum				
Remarks: Leat litter from Encaly	W			
The first brown	100			

ampling Point: TP 2005 Ulting Engin

Depith Matrix Redox Features Color (moist) % Type Loc	irains. ² Loc Indicator 2 cm Red	Remarks Many 10015 - 1% 7.5 yr 5/8 @ 23 inc Conc. M. ation: PL=Pore Lining, M=Matrix. rs for Problematic Hydric Soils ³ : Muck (A10)
O-2	Frains. 2Local Indicator 2 cm Red	Many 1005 21% 7.5 yR 5/8 @23 inc Conc. M. ation: PL=Pore Lining, M=Matrix. rs for Problematic Hydric Soils ³ :
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand CHydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Historogic Matrix (A3)	irains. ² Loc Indicator 2 cm Red	conc. M. Conc. M. ation: PL=Pore Lining, M=Matrix. rs for Problematic Hydric Soils ³ :
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand CHydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	irains. ² Loc Indicator 2 cm Red	ation: PL=Pore Lining, M=Matrix. rs for Problematic Hydric Soils³:
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand C Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1 Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A112) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Cleyed Matrix (S4) Redox Depressions (F8) 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 Table (A2) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Salt Crust (B11) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Living Ro Algal Mat or Crust (B4) Presence of Reduced fron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches):	irains. ² Loc Indicator 2 cm Red	ation: PL=Pore Lining, M=Matrix. rs for Problematic Hydric Soils³:
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1 Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Restrictive Layer (if present): Type: Depth (inches): Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B1) Water Marks (B1) Aquatic Invertebrates (B13) Water Marks (B1) Aquatic Invertebrates (B13) Water Marks (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Living Roman (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR C5) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches):	Indicator 2 cm Red	ation: PL=Pore Lining, M=Matrix. rs for Problematic Hydric Soils ³ :
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histosol (A2) Stripped Matrix (S6) Black Histo (A3) Loamy Mucky Mineral (F1) (except MLRA 1 Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) 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 MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Salt Crust (B11) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Living Royal Agal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches):	Indicator 2 cm Red	rs for Problematic Hydric Soils ³ :
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histosol (A2) Stripped Matrix (S6) Black Histo (A3) Loamy Mucky Mineral (F1) (except MLRA 1 Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) 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 MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Living Royal Agal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C Surface Soil Cracks (B6) Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches):	Indicator 2 cm Red	rs for Problematic Hydric Soils ³ :
Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1 Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Restrictive Layer (if present): Type: Depth (inches): Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Living Royal Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Surface Oxidized Cracks (B6) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches):	Red	Muck (A10)
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (F1) (except MLRA 1 Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Dark Surface (F6) Sandy Gleyed Matrix (S4) Redox Depressions (F8) 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) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B2) Hydrogen Sulfide Odor (C1) Sediment 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 Depth (inches): Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except MLRA 1 Loamy Mucky Mineral (F1) Redox Dark Surface (F6) Pepleted Matrix (F2) Depleted Matrix (F3) Redox Deple	Red	
Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1 Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) 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 MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Living Represented (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR C5) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): NA	-	Parent Material (TF2)
Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (F3) Pepleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) 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) 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 Depth (inches): NA Depth (inches): NA Depth (inches): N) Very	Shallow Dark Surface (TF12)
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Remarks: Primary Indicators (minimum of one required; check all that apply)		er (Explain in Remarks)
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Restrictive Layer (if present): Type: Depth (inches): Performance (F8) Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C1) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Surface Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches):		
Restrictive Layer (if present): Type:		rs of hydrophytic vegetation and
Restrictive Layer (if present): Type:		nd hydrology must be present,
Type:	unless	s disturbed or problematic.
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 MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Drift Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Living Row Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (Call of Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR of Call of		
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Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Hydric Soil	Present? Yes No X
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 Table Present? 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 Ro Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR Other (Explain in Remarks) Depth (inches): NA Depth (inches): NA Depth (inches): NA NA NA NA NA NA NA NA NA N	Sacar	ndary Indicators (2 or more required)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Table Present? 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 (Canada and Canada		CALLED TO THE PARTY OF THE PART
Saturation (A3) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? 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 Other (Explain in Remarks) Depth (inches): NA Depth (inches): NA NA No Depth (inches): NA NA No Depth (inches): NA	~	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Living Root Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (Control of Stressed Plants (D1) (LRR) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches):	D	rainage Patterns (B10)
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 Depth (inches): Mater Table Present? 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 Other (Explain in Remarks) Depth (inches): NA Depth (inches):		ry-Season Water Table (C2)
Drift Deposits (B3) Oxidized Rhizospheres along Living Rot Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (Case Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR		aturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): NA Depth (inches):	.0.0	Seomorphic Position (D2)
Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C		hallow Aquitard (D3)
Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): NA Depth (inches):		AC-Neutral Test (D5)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches):		taised Ant Mounds (D6) (LRR A)
Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): NA	(6) F	rost-Heave Hummocks (D7)
Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): NA	C6) FA	
Water Table Present? Yes No Depth (inches):	C6) FA	,
Water Table Present? Yes No Depth (inches):	C6) FA	
Saturation Present? Yes No X Depth (inches): N/A We	C6) FA	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections	C6) FA	
Well drained, sandy fillslope.	c6) F, A) R F; tland Hydrology	y Present? Yes No

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Consu	lting Engineers
	and the same of th

& Geologists, Inc.		rlulas
Project/Site: Humboldt Bay Harbor District-RMMT	City/County: Humboldt	Sampling Date: 5/4/22 TO 28
Applicant/Owner: Trambolid Bay Harbor Bistrict		State: CA Sampling Point: TP 28
Investigator(s): Joseph Saler, Cindy Wilcox	Section, Township, Rar	
Landform (hillslope, terrace, etc.): Baycide +ill.	Local relief (concave, o	convex, none): Slope (%): 2-3
Subregion (LRR): A, MLRA-4B	Lat: 40.822388	Long: 124, 175811 Datum: WGS 84
Soil Map Unit Name 1940 rbanland Anthalti		
Are climatic / hydrologic conditions on the site typical for		The state of the s
Are Vegetation, Soil, or Hydrology		Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology		eded, explain any answers in Remarks.)
		ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No X	\ ,
Hydric Soil Present? Yes	No Is the Sampled	
Wetland Hydrology Present? Yes	No within a Wetlan	· · · · · · · · · · · · · · · · · · ·
Remarks: WETS normal rainfall - willow o	lepression between vo	ance Rdd Humbold + Bars
VEGETATION – Use scientific names of pl	ants.	
Tree Stratum (Plot size: 30')	Absolute Dominant Indicator % Cover Species? Status	Dominance Test worksheet:
1. Salix hookering	90 Species status	Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2 3		Total Number of Dominant
4		Species Across All Strata: (B) Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 51)	Total Cover	That Are OBL, FACW, or FAC: 27/- (A/B)
1. Rubus weinus	8 FACY	Prevalence Index worksheet:
2. Lypinus arbonew,	6 V UPL	Total % Cover of: Multiply by:
3. Lonicera involucrata	I FAC	OBL species x1 =
4.		FACW species x 2 = FAC species x 3 =
5		FACU species x 4 =
Herb Stratum (Plot size: 5'	15 = Total Cover 15/3	UPL species x 5 =
1. Antho xan in choration	27 / FACU	Column Totals:(A)(B)
2. Moleur lonatus	2 FAC	Prevalence Index = B/A =
3. Vicia terraperma		Hydrophytic Vegetation Indicators:
4. Vicia sativa	3 upu	1 - Rapid Test for Hydrophytic Vegetation
5		2 - Dominance Test is >50%
6		3 - Prevalence Index is ≤3.0 ¹
7		4 - Morphological Adaptations (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	2/1	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	34 = Total Cover	
1		Hydrophytic
2.		Vegetation
% Bare Ground in Herb Stratum 66* Remarks;	= Total Cover	Present? Yes No
Remarks:	i)	
* litter and duff under deve u	11 on Gropy.	
	1/	

Profile Description: (Describe to the dep		
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type Loc2	Texture Remarks
0-9 104K 5/2 100		L
9-13 10484/3 100	_ // - 6	or LS fill
13-20 TOVR 5/2+ 00		Gr S fill
10/10/1/2 00		
1018 413 10	1400 1101 101 10	Mixed matrices
20-25 2.5 y 5/2 90	10 YR 4/3+ 10 C M	S Notive horizon
	· · · · · · · · · · · · · · · · · · ·	100
	· · · · · · · · · · · · · · · · · · ·	
	Reduced Matrix, CS=Covered or Coated Sand Grain	
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)	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
HYDROLOGY Wetland Hydrology Indicators:		
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required	d; check all that apply)	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators:	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 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 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 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, 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) 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) 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) 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 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 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) 	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 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) 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 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 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 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	Water-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 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-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 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 (Incided Concave Surface) 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 Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) No Depth (inches): No De	Water-Stained Leaves (B9) (MLRA 1, 2,
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 (Incided Concave Surface) 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 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): No Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2,
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 (Incided Concave Surface) 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 Roots Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) No Depth (inches): No De	Water-Stained Leaves (B9) (MLRA 1, 2,
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) Describe Recorded Data (stream gauge, motor)	Water-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) No Depth (inches): Depth (inches): Depth (inches): Depth (inches): No Depth (inches): No Depth (inches): No Depth (inches): Depth (inches): Depth (inches): Depth (inches): Depth (inches): Depth (inche	Water-Stained Leaves (B9) (MLRA 1, 2,
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) Describe Recorded Data (stream gauge, mothers)	Water-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) No Depth (inches): No De	Water-Stained Leaves (B9) (MLRA 1, 2,

Project/Site: Humboldt Bay Harbor District-RMMT	City	//County:_Humboldt	Sampling Date: 5/4/2
pplicant/Owner: Humboldt Bay Harbor District			State: CA Sampling Point: TP 29
nvestigator(s): Joseph Saler, Cindy Wilcox	Se	ction, Township, Ra	
andform (hillslope, terrace, etc.): Bayside Fill	Lo	cal relief (concave,	convex, nane): None Slope (%): 0-
subregion (LRR): A, MLRA-4B	Lat: <u>40</u> ก	022197	Long: -124. 176220 Datum: WGS 84
ioil Map Unit Name: Urbanland An thralt	a xeromother	nts assoc. C	0-26 NWI classification: None
re climatic / hydrologic conditions on the site typical fo		\ /	
re Vegetation, Soil, or Hydrology			"Normal Circumstances" present? Yes X No
re Vegetation, Soil, or Hydrology			eeded, explain any answers in Remarks.)
			ocations, transects, important features, e
	2011	inping point	
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes		Is the Sampled	l Area
Wetland Hydrology Present? Yes		within a Wetlar	nd? YesNo
Percente: METC normal rainfall			11
resemple with willow potch	. See 182	8 for soil of	hydrology representative conditions
			1, 34.4
/EGETATION – Use scientific names of p			1 -
Tree Stratum (Plqt size: 30'		ominant Indicator pecies? Status	Dominance Test worksheet:
1. Salix hockeriana	85	1 FACW	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2. Morella Californica	10	FACW	
3,			Total Number of Dominant Species Across All Strata: (B)
4		416	Percent of Dominant Species 22 /
O-2010 - 101-1 - 51	95	Total Cover 79	That Are OBL, FACW, or FAC:
Sapling/Shrub Stratum (Plot size: 5')	75	1 FACU	Prevalence Index worksheet:
2.		- MINI	Total % Cover of:Multiply by:
3			OBL species x 1 =
4.			FACW species x 2 =
5			FAC species x 3 =
F1	75_=	Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 5'	15	V FACU	UPL species x 5 = (A) (E
1. Polystichum muitum		VIAM	
2			Prevalence Index = B/A =
3			Hydrophytic Vegetation Indicators:
4 ,			1 - Rapid Test for Hydrophytic Vegetation
6			2 - Dominance Test is >50%
7			3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporti
B			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
West Vin Status (D)	=7	Total Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:			
1			Hydrophytic Vegetation
			* eAcronou
% Bare Ground in Herb Stratum 85%		Total Cover	Present? Yes No

	BILL
201	Consulting Enginee
Sampling Point: 29	V Geologists, Inc

Depth Matrix	h needed to document the indicator or confi Redox Features	ac are green
(inches) Color (moist) %	Color (moist) % Type¹ Lac²	Texture Remarks
	X 25	2.5%
	M	
	ALC	200
	1 10	MANINO
	1 () ()	FUN ONLO 1.
	-PO TT COTA	
	Carp Ma	A CONTRACTOR OF THE CONTRACTOR
	14/10	
Type: C=Concentration, D=Depletion, RM=	Reduced Matrix, CS=Covered or Coated Sand	
lydric Soil Indicators: (Applicable to all I	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	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	Indicators of hudrophytic venetation and
Thick Dark Surface (A12)	Redox Dark Surface (F6) Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
lestrictive Layer (if present):		amos distarboa or problemente.
Type:		-1
Depth (inches):		Hydric Soil Present? Yes No
		Try drie Con Treatment Tea Tea
	28 for reprodutive	soil conditions
see TP	28 for reproductive	soil conditions
See TP	28 for reprodutive	soil conditions
Sce TP YDROLOGY Vetland Hydrology Indicators:		Secondary Indicators (2 or more required)
YDROLOGY Vetland Hydrology Indicators:		Secondary Indicators (2 or more required)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required	Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1)	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,
YDROLOGY Vetland 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) Salt Crust (B11) Aquatic Invertebrates (B(3))	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 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-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)
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 (B130) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living B	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) Roots (C3) Geomorphic Position (D2)
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)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Fresence 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) Roots (C3) Geomorphic 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 (B(3)) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Print Deposits (B4) In Deposits (B5) Ste TP YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required of the req	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B130) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living B Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRB	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) Roots (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 (B7)	Water-Stained Leaves (B9) (except MIRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B(3)) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living F Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRF	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
YDROLOGY 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 (I	Water-Stained Leaves (B9) (except MIRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B(3)) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living F Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRF	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (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 (B7) Sparsely Vegetated Concave Surface (B7)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B(3)) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living B Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Soils Stunted or Stressed Plants (D1) (LRR 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) Roots (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 (B7) Sparsely Vegetated Concave Surface (B7)	Water-Stained Leaves (B9) (except MIRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B(3)) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living F Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRF	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (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 (B7) Sparsely Vegetated Concave Surface (B7) Field Observations: Surface Water Present? Yes	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B(3)) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living B Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Soils Stunted or Stressed Plants (D1) (LRR 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) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Proposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B7) Surface Water Present? Surface Water Present? Water Table Present? Saturation Present? Seaturation Present? Seaturation Present? Seaturation Present? Seaturation Present? Seaturation Present? Seaturation Present? Seaturation Prese	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B(3)) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living F Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRF Other (Explain in Remarks) No Depth (inches):	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Proposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (IFField Observations: Surface Water Present? Saturation Present? Saturation Present? Saturation Present? Staturation Prese	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B(3)) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRR Other (Explain in Remarks) 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) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Proposits (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (IField Observations: Surface Water Present? Saturation Present? Saturation Present? Saturation Visible on Present? Saturation Present?	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B(3)) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living F Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRF Other (Explain in Remarks) No Depth (inches):	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Print Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B7) Sparsely Vegetated Concave Surface (B7) Surface Water Present? Surface Water Present? Water Table Present? Semarks: Print 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) Surface Water Present? Water Table Present? Yes Includes capillary fringe) Describe Recorded Data (stream gauge, moderness)	Water-Stained Leaves (B9) (except WILRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B(3)) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living F Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRF Other (Explain in Remarks) No Depth (inches): No Depth (inches): No Depth (inches): Water Archive Company (C4) Depth (inches): No Depth (inches): Water Archive Company (C4) Water Archive Company (C4) Depth (inches): 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) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Vetland Hydrology Present? Yes No
Proposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B7) Sparsely Vegetated Concave Surface (B7) Sparsely Vegetated Concave Surface (B7) Surface Water Present? Surface Water Present? Saturation Present? Security Present. Security Present. Security Present. Security Present. Security Present. Security Prese	Water-Stained Leaves (B9) (except WILRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B(3)) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living F Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRF Other (Explain in Remarks) No Depth (inches): No Depth (inches): No Depth (inches): Water Archive Company (C4) Depth (inches): No Depth (inches): Water Archive Company (C4) Water Archive Company (C4) Depth (inches): 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) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Vetland Hydrology Present? Yes No
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 (B7) Sparsely Vegetated Concave Surface (B7) Vater Table Present? Vater Table Present? Vater Table Present? Ves Saturation Present? Yes Saturation Present? Yes Secondary Seco	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B(3)) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRR Other (Explain in Remarks) 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) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Vetland Hydrology Present? Yes No



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

Geologists, Inc.					•	-1.1
Project/Site: Humboldt Bay Harbor District-RMMT	Cir	ty/County: <u>H</u>	lumboldt	- CA	_ Sampling Date:	514/22
Applicant/Owner: Humboldt Bay Harbor District				State: CA	_ Sampling Point:	1 1 20 VE
Investigator(s): Joseph Saler, Cindy Wilcox Landform (hillslope, terrace, etc.):	Se	ection, Towns	ship, Rang	je:		1.
Landform (hillslope, terrace, etc.): kay side fill	L	ocal relief (co	oncave, co	onvex, none): Nave	Sic	ope (%): 1X
Subregion (LRR): A, MLRA-4B	Lat: 40,	821591		Long: -124, 17	7492_ Datu	um: WGS 84
Soil Map Unit Name: 1014-UVban land Anthold	42 Kerorx	hents as	5000	-2010 NWI classifi	ication: N6N	e
Are climatic / hydrologic conditions on the site typical for th						
Are Vegetation, Soil, or Hydrology				ormal Circumstances"		∠ No
Are Vegetation, Soil, or Hydrology	-			ded, explain any answe		
SUMMARY OF FINDINGS – Attach site map	-			-		eatures, etc.
Hydrophytic Vegetation Present? Yes N	No X				V	
Hydric Soil Present? Yes N			ampled A		X	
· • • —	No X	within a	a Wetland	!? Yes	No <u>/ \</u>	-
Remarks: WETS normal rainfall Veg sampled M/Y. See TP	3 for r	epresal	due.	soil and hyo	hologic and	itians
VEGETATION – Use scientific names of plan	nts.			.f.		
Tree Stratum (Plot size: 30'		Dominant Inc		Dominance Test wor	ksheet:	
1. Jaix 60 ericha	% Cover 3		ACW	Number of Dominant S		(4)
2		40	710.00	That Are OBL, FACW,	, 01 FAC	(A)
3.				Total Number of Domi Species Across All Str		(B)
4			*			- (D)
	95	Total Cover		Percent of Dominant S That Are OBL, FACW,	or FAC: 50	% (A/B)
Sapling/Shrub Stratum (Plot size: 5'	70	1 1	4	Prevalence Index wo		(/ 0 5)
1. Rubus wsinus	- 13 -	V 1	MCU	Total % Cover of:		ly by:
2. Rybur armeniacus		97	AC_	OBL species		
3				FACW species	x 2 =	
4				FAC species	x3=	
5	85	Total Cover	42.5	FACU species	x 4 =	
Herb Stratum (Plot size: 5")		- Total Cover	17	UPL species	x 5 =	
1				Column Totals:	(A)	(B)
2				Prevalence Inde	x = B/A =	
3.				Hydrophytic Vegetat		
4.				1 - Rapid Test for	Hydrophytic Vege	tation
5				2 - Dominance Te	est is >50%	
6				3 - Prevalence Inc	dex is ≤3.0¹	
7				4 - Morphological		
8,				5 - Wetland Non-	ks or on a separate	e sneet)
9				Problematic Hydro		1 (Evolain)
10		_		¹ Indicators of hydric so		
		Total Cover		be present, unless dis		
Woody Vine Stratum (Plot size:)	-	TOTAL COVEL				
1				Hydrophytic		
2				Vegetation Present? You	es No_	X
% Bare Ground in Herb Stratum	=	Total Cover		rieschit 10	es NO_	
Remarks:						
+ Litter and dutt from Willow.	nd rubi	w.				

Sampling Point: 1730 Aparts, In

OIL		Sampling Point: 11 20 4
Profile Description: (Describe to the depth needed to document the indicator	r or confirm the abser	nce or indicators.)
Depth Matrix Redox Features (inches) Color (moist) % Color (moist) % Type¹	Loc ² Texture	Remarks
TIGHES) OSIGI (TIGHS) 70 TIGHS		
		- 359
- Pl	0.74	
——————————————————————————————————————		
17 7109 0011		
78 10		
	had Cond Coning	21
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coallydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		² Location: PL=Pore Lining, M=Matrix. cators 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) (excel		Very Shallow Dark Surface (TF12)
Black Histic (A3) Loamy Mucky Mineral (F1) (excel Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)		Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Depleted Matrix (F3)	_	Other (Explain in Nemarks)
Thick Dark Surface (A12) Redox Dark Surface (F6)	3Indi	cators of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)		retland hydrology must be present,
Sandy Gleyed Matrix (S4) Redox Depressions (F8)		nless disturbed or problematic.
Restrictive Layer (if present):		
Type:		
	Hydric	Soil Present? Yes No
Depth (inches):	- 1	
veg only. See the 3 for representati	NG 2811 CO	nultions.
YDROLOGY	NG 2811 CO	nultions.
YDROLOGY Wetland Hydrology Indicators:		Two.
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	<u>s</u>	econdary Indicators (2 or more required)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9)	<u>s</u>	econdary Indicators (2 or more required) _ Water-Stained Leaves (B9) (MLRA 1, 2
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	(except	econdary Indicators (2 or more required)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9)	(except	econdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) High Water Table (A2)	(except	econdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2
YDROLOGY 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)	<u>S</u> (except	econdary Indicators (2 or more required) _ Water-Stained Leaves (89) (MLRA 1, 2 4A, and 4B) _ Drainage Patterns (B10) _ Dry-Season Water Table (C2)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Water Marks (B1) Sediment Deposits (B2) Wetland Hydrogen Sulfide Odor (C1)	(except	econdary Indicators (2 or more required) _ Water-Stained Leaves (89) (MLRA 1, 2 4A, and 4B) _ Drainage Patterns (B10) _ Dry-Season Water Table (C2)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Water Marks (B1) Sediment Deposits (B2) Wetland Hydrogen Sulfide Odor (C1)	(except	econdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C
VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Wetland Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alon	(except	econdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2)
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 (C1)	(except	econdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	(except	econdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) 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 Marks (B1) Presence of Reduced Iron (B2) Stunted or Stressed Plants (B3) Other (Explain in Remarks)	(except	econdary Indicators (2 or more required) Water-Stained Leaves (89) (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)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	(except	econdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	(except	econdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	(except g Living Roots (C3) C4) led Soils (C6) (D1) (LRR A)	econdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
VDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Surface Water Present? Water Table Present? Yes No Water All that apply) Water-Stained Leaves (B9) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alon Presence of Reduced Iron (Present Iron Reduction in Tilleton Other (Explain in Remarks) Surface Water Present? Yes No Depth (inches): Depth (inches):	(except	econdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C 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 all that apply) Surface Water (A1)	(except	econdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Depth (inches):	(except	econdary Indicators (2 or more required) Water-Stained Leaves (89) (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) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Saturation Present? Yes No Depth (inches): Saturation Present? Yes No Saturation Present? Yes No Saturation Present? Yes No Saturation Present? Yes No Saturation Prese	(except	econdary Indicators (2 or more required) Water-Stained Leaves (89) (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) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	(except g Living Roots (C3) G4) led Soils (C6) (D1) (LRR A) Wetland Hydronspections), if available	econdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C 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 all that apply) Surface Water (A1)	(except g Living Roots (C3) G4) led Soils (C6) (D1) (LRR A) Wetland Hydronspections), if available	econdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C 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 all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): Saturation Prescorded Data (stream gauge, monitoring well, aerial photos, previous in the concave previous in th	(except g Living Roots (C3) G4) led Soils (C6) (D1) (LRR A) Wetland Hydronspections), if available	econdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C 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 all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Marks (B1) Aquatic Invertebrates (B13) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alon Presence of Reduced Iron (Inches) Recent Iron Reduction in Till Stunted or Stressed Plants (Inches) Other (Explain in Remarks) Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): Depth (inches): Includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous in	(except g Living Roots (C3) G4) led Soils (C6) (D1) (LRR A) Wetland Hydronspections), if available	econdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

COLL
78-11
Consulting Engineers

Landform (hillslope, terrace, etc.): Bay side fill Local re Subregion (LRR): A. MLRA-48 Lat: 40.82 Soil Map Unit Name: 1014-UVban land Anthractic Kerveth Are climatic / hydrologic conditions on the site typical for this time of year? Yes Are Vegetation, Soil, or Hydrology significantly disturbe Are Vegetation, Soil, or Hydrology naturally problematic SUMMARY OF FINDINGS - Attach site map showing samp Hydrophytic Vegetation Present? Yes No	State: CA Sampling Point: 193 Township, Range: Slope (%): 35 Polyty Long: 177503 Datum: WGS 84 Ent's assoc. 0-16 NWI classification: Fresh water Fore
Investigator(s): Joseph Saler, Cindy Wilcox Landform (hillslope, terrace, etc.): Bay side fill Local re Subregion (LRR): A, MLRA-48 Lat: 40.82 Soil Map Unit Name: 1014- UVban land Anthrulta Kervith Are climatic / hydrologic conditions on the site typical for this time of year? Yes Are Vegetation, Soil, or Hydrology significantly disturbe Are Vegetation, Soil, or Hydrology naturally problematic SUMMARY OF FINDINGS - Attach site map showing samp Hydrophytic Vegetation Present? Yes No	Township, Range:
Landform (hillslope, terrace, etc.): Bay side fill Local re Subregion (LRR): A, MLRA-48 Lat: 40.82 Soil Map Unit Name: 1014-UVban land Anthraltic Kerveth Are climatic / hydrologic conditions on the site typical for this time of year? Yes Are Vegetation, Soil, or Hydrology significantly disturbe Are Vegetation, Soil, or Hydrology naturally problematic SUMMARY OF FINDINGS - Attach site map showing samp Hydrophytic Vegetation Present? Yes No	elief (concave, convex, none): <u>concave</u> Slope (%): <u>35</u> 0944 Long: <u>-124.177503</u> Datum: <u>WGS 84</u> ents asoc. 0-2% NWI classification: Freshwater For
Subregion (LRR): A. MLRA-4B Soil Map Unit Name: 1014-UVban land Anthralia Xervith Are climatic / hydrologic conditions on the site typical for this time of year? Yes Are Vegetation, Soil, or Hydrology significantly disturbe Are Vegetation, Soil, or Hydrology naturally problematic SUMMARY OF FINDINGS - Attach site map showing samp Hydrophytic Vegetation Present? Yes No	ents assoc. 0-26 NWI classification: Freshwater For
Soil Map Unit Name: 1014-UVban land Anthralta Xervith Are climatic / hydrologic conditions on the site typical for this time of year? Yes Are Vegetation, Soil, or Hydrology significantly disturbe Are Vegetation, Soil, or Hydrology naturally problematic SUMMARY OF FINDINGS - Attach site map showing samp Hydrophytic Vegetation Present? Yes No	ents asoc. 0-26 NWI classification: Freshwater For
Are climatic / hydrologic conditions on the site typical for this time of year? Yes Are Vegetation, Soil, or Hydrology significantly disturbe Are Vegetation, Soil, or Hydrology naturally problematic SUMMARY OF FINDINGS - Attach site map showing samp Hydrophytic Vegetation Present? Yes No	X No. (If no explain in Remarks) Shurb wetter
Are Vegetation, Soil, or Hydrology significantly disturbe Are Vegetation, Soil, or Hydrology naturally problematic SUMMARY OF FINDINGS - Attach site map showing samp Hydrophytic Vegetation Present? Yes No	No (If no explain in Remarks) 3/1/4/2 We ((4))
Are Vegetation, Soil, or Hydrology naturally problematic SUMMARY OF FINDINGS - Attach site map showing samp Hydrophytic Vegetation Present? Yes No	
SUMMARY OF FINDINGS – Attach site map showing samp Hydrophytic Vegetation Present? Yes No	d? Are "Normal Circumstances" present? Yes V No
Hydrophytic Vegetation Present? Yes No	c? (If needed, explain any answers in Remarks.)
	ling point locations, transects, important features, etc.
Trydic Soil Tesent:	s the Sampled Area vithin a Wetland? Yes No
veitand hydrology Present? Tes 💥 No	, , , , , , , , , , , , , , , , , , ,
Remarks: WETS normal rainfall well and accurs in descript of Palwhine frested westland (PFDIEs On introdon inch new Connection to Humboldt Ba) Some partian JCMb-Strub. Brochish water
VEGETATION – Use scientific names of plants.	
Absolute Domin	ant Indicator Dominance Test worksheet:
Tree Stratum (Plot size: 30') % Cover Specie	Number of Dominant Species 2
1. Marella californica 50 v	That Are OBL, FACW, or FAC:(A)
	Total Number of Dominant
3	Species Across All Strata: (B)
Scaling (Shouth Startum (Clatering 5') = Total	Cover Percent of Dominant Species That Are OBL, FACW, or FAC: 66 % (A/B)
Sapling/Shrub Stratum (Plot size: 5'	FACU Prevalence Index worksheet:
2	Total % Cover of: Multiply by:
3	OBL species x 1 =
4	FACW species x 2 =
5	FAC species x 3 =
7 = Total	Cover x 4 =
Herb Stratum (Plot size: 5'	UPL species x 5 =
1	(A) (B)
2	Prevalence Index = B/A =
3	Hydrophytic Vegetation Indicators:
5	1 - Rapid Test for Hydrophytic Vegetation
6.	2 - Dominance Test is >50%
7.	3 - Prevalence Index is ≤3.0¹
8	4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
9.	5 - Wetland Non-Vascular Plants
10	Problematic Hydrophytic Vegetation ¹ (Explain)
11	¹Indicators 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 00* = Total	Cover
Remarks: * http://www.news.com/	
~ Utter	

SOIL						Sampling Form.
Profile Description: (Describe to the	depth needed to docu	ment the i	indicator o	r confirm	n the absence	e of indicators.)
Depth Matrix		ox Feature:				-
(inches) Color (moist), %		%	Type'	Loc2	Texture	Remarks
0-13 2.592.5/1 100	O T 12	/			SIL	till: buried bricks +
13-20+112.543/1 >4	9 10YR 5/8	27		M	SL	Woody debris, pochets of much
19-21+ 2,54 3/1 99	107R5/8	5	C	m	SL	
	A	-				
	d	-			-	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
						- CU
						- 12
			1.	95		<u> </u>
¹ Type: C=Concentration, D=Depletion,	RM=Reduced Matrix, C	S=Covered	d or Coate	d Sand G	rains. ² Lo	ocation: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to	o all LRRs, unless othe	rwise not	ed.)		Indicat	ors for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox	(S5)			20	m Muck (A10)
Histic Epipedon (A2)	Stripped Matrix					d Parent Material (TF2)
Black Histic (A3)	Loamy Mucky	-		MLRA 1		ry Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed	•	2)		Oth	her (Explain in Remarks)
Depleted Below Dark Surface (A11					3	
Thick Dark Surface (A12)	Redox Dark S					tors of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark		-7)			and hydrology must be present, ess disturbed or problematic.
Sandy Gleyed Matrix (S4) Restrictive Layer (if present):	Redox Depres	SIONS (FO)			une	as disturbed of problematic.
Type:						
Depth (inches):	-				Hydric So:	il Present? Yes No
			Table 1			
	canot excavate of to dig deepe	ap onou	gh ho	eternin lout.	e. Coul.	d be potentially an inal judgement = hydric
HYDROLOGY			177			
Wetland Hydrology Indicators:						
Primary Indicators (minimum of one rec	uired: check all that app	oly}(ylc			Seco	ondary Indicators (2 or more required)
Surface Water (A1)	Water-St	ained Leav	res (B9) (e	xcept	X	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA	1, 2, 4A,	and 4B)			4A, and 4B)
Saturation (A3)	Salt Crus	t (B11)			_	Drainage Patterns (B10)
Water Marks (B1)	Aquatic li	nvertebrate	es (B13)			Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydroger	n Sulfide O	dor (C1)		-	Saturation Visible on Aerial Imagery (C9)
Orift Deposits (B3)		Rhizosphe	_	_	ots (C3) X	Geomorphic Position (D2)
Algal Mat or Crust (B4)	1.7	of Reduce				Shallow Aquitard (D3)
Iron Deposits (B5)		on Reduct			1	FAC-Neutral Test (D5)
Surface Soil Cracks (B6)	_	or Stressed		1) (LRR A	-	Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Image	· · · · — ·	oplain in Re	emarks)		_	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surf	ace (B8)					
Field Observations:		N	111			
Surface Water Present? Yes	1	nches):	VIT	-		×
Water Table Present? Yes	No Depth (i		2010	-		V
Saturation Present? Yes 2	No Depth (i		012		land Hydrolo	gy Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gaug	e. monitoring well, aeria		revious ins		, if available:	-
, , , , , , , , , , , , , , , , , , , ,	-, · · · · · · · · · · · · · · · · · · ·				,	
Remarks:						
1						

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NIV	1
Consulting Engine	

Project/Site: Humboldt Bay Harbor District-RMMT		City/County: Humboldt		_ Sampling Date:
Applicant/Owner: Humboldt Bay Harbor District			State: CA	_ Sampling Point: TP 32_
Investigator(s): Joseph Saler, Cindy Wilcox		Section, Township, Ran		_ Gamping Form.
Landform (hillslope, terrace, etc.): Bayside, fill		Local relief (concave, o		ave Slope (%): 5
Subregion (LRR): A, MLRA-4B		40.82 0407		
Soil Map Unit Name: 1014-Urban land Anthral	Lac	Nonte occor	Long:	
				014.000 1000 0110
Are climatic / hydrologic conditions on the site typical for				Remarks.)
Are Vegetation, Soil, or Hydrology			Normal Circumstances	present? Yes No
Are Vegetation, Soil, or Hydrology	-		eded, explain any answ	
SUMMARY OF FINDINGS – Attach site ma			ocations, transect	ts, important features, etc
Hydrophytic Vegetation Present? Yes	No	Is the Sampled	Area	1
Hydric Soil Present? Yes Wetland Hydrology Present? Yes	No	within a Wetlan		No
Pomarke: MICTO normal rainfall	C .			01/-06
TP excavated in smale below of	ill man	d. Connects to	. Humbold Bay	. Palwithe troted
VEGETATION – Use scientific names of pl	ants.			
	Absolute	Dominant Indicator	Dominance Test wo	rksheet:
Tree Stratum (Plot size: 30'		Species? Status	Number of Dominant	/
1. Alpur rubra	20	FAC	That Are OBL, FACW	/, or FAC:(A)
2. Salix hookenana		FACW	Total Number of Dom	
3			Species Across All St	rata: (B)
Canting (Charle Charles (Distance 5)	110	= Total Cover 55/12	Percent of Dominant That Are OBL, FACW	Species 100 (A/B)
Sapling/Shrub Stratum (Plot size: 5') 1. Rubw (MW) (W)	85	J FAC	Prevalence Index we	orksheet:
2. Ribu usinus	-8	FACIL	Total % Cover of	Multiply by:
3		INOUL	OBL species	x 1 =
4.	_		FACW species	x 2 =
5.			FAC species	x 3 =
6	90	= Total Cover	THE PROPERTY OF THE PARTY OF TH	x 4 =
Herb Stratum (Plot size: 5'	- 1121		The second secon	x 5 =
1		- 1	Column Totals:	(A) (B)
2			Prevalence Inde	ex = B/A =
3			Hydrophytic Vegeta	tion Indicators:
4				r Hydrophytic Vegetation
5			X 2 - Dominance To	est is >50%
6		4.5	3 - Prevalence In	idex is ≤3,0¹
7	\		4 - Morphologica	I Adaptations ¹ (Provide supporting rks or on a separate sheet)
9.			5 - Wetland Non-	•
	-			rophytic Vegetation ¹ (Explain)
10			l .	soil and wetland hydrology must
11	-	Tatal Co		sturbed or problematic.
Woody Vine Stratum (Plot size:	-	_=\Total Cover		
1,			Hydrophytic	No. 1
2			Vegetation	×
(00%*		= Total Cover	Present?	/es_/ No
% Bare Ground in Herb Stratum				
Remarks: X litter and duff. Extre	nely	are Ridge Co	ever .	
L. Alta and ant Extra	nuly a	BUC KUBVI D	- 41	
	,			9

SOIL

Profile Description: (Describe to the				JI GUIIIIIII	tne absence	of mulcators.
Depth Matrix (inches) Color (moist) %		x Features	Type ¹	_Loc ²	Texture	Remarks
11 0141		%	Type	LOG	Ci	Remarks
2.57 3/1	161/11/1	10	-	AA	311	
- 24+ 2.5y 4/1 15	104K 4/6	1>			SCL	
	-					
	_					
	_					-
					-	
Type: C=Concentration, D=Depletion,				d Sand Gr		cation: PL=Pore Lining, M=Matrix.
ydric Soil Indicators: (Applicable t			ed.)			rs for Problematic Hydric Soils ³ :
_ Histosol (A1)	Sandy Redox (n Muck (A10)
_ Histic Epipedon (A2)	Stripped Matrix Loamy Mucky N		\	MI DA 4V		Parent Material (TF2)
Black Histic (A3) Hydrogen Sulfide (A4)	Loamy Gleyed	-		WILKA 1)		y Shallow Dark Surface (TF12) er (Explain in Remarks)
Depleted Below Dark Surface (A11			,		000	ы (схивш и пешапа)
Thick Dark Surface (A12)	Redox Dark Su				³ Indicato	ors of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark					nd hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depress	sions (F8)			unles	s disturbed or problematic.
estrictive Layer (if present):						- Lath
Туре:				1		V
Depth (inches):					Hydric Soil	Present? Yes No
						111.7 - 1 T
Vetland Hydrology Indicators:	nuired: check all that ann	lu)			Seco	ndan Indicators /2 or more required)
Vetland Hydrology Indicators: rimary Indicators (minimum of one rec			og /B0) /e	voort		ndary Indicators (2 or more required)
Vetland Hydrology Indicators: rimary Indicators (minimum of one red Surface Water (A1)	Water-Sta	ined Leave		xcept		Vater-Stained Leaves (B9) (MLRA 1, 2,
Vetland Hydrology Indicators: rimary Indicators (minimum of one red Surface Water (A1) High Water Table (A2)	Water-Sta	ined Leave 1, 2, 4A, a		xcept	Xv	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
fetland Hydrology Indicators: rimary Indicators (minimum of one red Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Sta MLRA Salt Crust	ined Leave 1, 2, 4A , a (B11)	ind 4B)	xcept	c	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Irainage Patterns (B10)
Vetland Hydrology Indicators: rimary Indicators (minimum of one rec _ Surface Water (A1) _ High Water Table (A2) ✓ Saturation (A3) _ Water Marks (B1)	Water-Sta MLRA Salt Crust Aquatic In	ined Leave 1, 2, 4A, a (B11) vertebrate	and 4B) s (B13)	xcept	_ c	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2)
/etland Hydrology Indicators: rimary Indicators (minimum of one red _ Surface Water (A1) _ High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) 	Water-Sta MLRA Salt Crust Aquatic In Hydrogen	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc	s (B13)		_ C	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2) Paturation Visible on Aerial Imagery (C9
Vetland Hydrology Indicators: Irimary Indicators (minimum of one reconstruction (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Od Rhizosphe	ind 4B) s (B13) dor (C1) res along	Living Roc	> v	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Trainage Patterns (B10) Dry-Season Water Table (C2) Staturation Visible on Aerial Imagery (C9 Seomorphic Position (D2)
Vetland Hydrology Indicators: rimary Indicators (minimum of one rec 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 Crust Aquatic In Hydrogen Oxidized I Presence	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce	s (B13) dor (C1) res along d Iron (C4	Living Roo	ots (C3) X	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2) Praturation Visible on Aerial Imagery (C9 Proposition (D2) Prainage (C9)
Vetland Hydrology Indicators: rimary Indicators (minimum of one reconstruction of the process o	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Od Rhizosphe	s (B13) for (C1) res along d Iron (C4 on in Tille	Living Roo 1) d Soils (C6	X V	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Trainage Patterns (B10) Dry-Season Water Table (C2) Staturation Visible on Aerial Imagery (C9 Seomorphic Position (D2)
Vetland Hydrology Indicators: rimary Indicators (minimum of one recommend) 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 Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reduction	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D	Living Roo 1) d Soils (C6	Ots (C3) 2 C - C - C - S - S - S - S - F - F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2) Patteration Visible on Aerial Imagery (C9) Peomorphic Position (D2) Phallow Aquitard (D3) Pac-Neutral Test (D5)
/etland Hydrology Indicators: rimary Indicators (minimum of one recomposite (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or C ust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	Water-Sta	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reduction r Stressed	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D	Living Roo 1) d Soils (C6	Ots (C3) 2 C - C - C - S - S - S - S - F - F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Seomorphic Position (D2) Shallow Aquitard (D3) (AC-Neutral Test (D5) Staised Ant Mounds (D6) (LRR A)
Vetland Hydrology Indicators: Irimary Indicators (minimum of one recommendation (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Grust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Images	Water-Sta	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reduction r Stressed	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D	Living Roo 1) d Soils (C6	Ots (C3) 2 C - C - C - S - S - S - S - F - F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Seomorphic Position (D2) Shallow Aquitard (D3) (AC-Neutral Test (D5) Staised Ant Mounds (D6) (LRR A)
Vetland Hydrology Indicators: Primary Indicators (minimum of one recommendation (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Coust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surfaciled Observations:	Water-Sta	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizospher of Reduce on Reduction Stressed plain in Re	s (B13) for (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Roo 1) d Soils (C6	Ots (C3) 2 G - S - S - S - S - S - F - F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Seomorphic Position (D2) Shallow Aquitard (D3) (AC-Neutral Test (D5) Staised Ant Mounds (D6) (LRR A)
Vetland Hydrology Indicators: Irimary Indicators (minimum of one recommend of the recommen	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted or ry (B7) Other (Expanse)	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Re	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D	Living Roo 1) d Soils (C6	Ots (C3) 2 G - S - S - S - S - S - F - F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Seomorphic Position (D2) Shallow Aquitard (D3) (AC-Neutral Test (D5) Staised Ant Mounds (D6) (LRR A)
Vetland Hydrology Indicators: Primary Indicators (minimum of one recomposite (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Grust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surface Water Present? Ves Vater Table Present? Yes Saturation Present? Yes Saturation Present? Yes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted or ry (B7) Depth (in	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Re	s (B13) for (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Roots I) d Soils (C6 1) (LRR A	Ots (C3) 2 G - S - S - S - S - S - F - F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2) Prainage Patterns (B10) Pry-Season Water Table (C2) Production Visible on Aerial Imagery (C9) Production (D2) Production (D3) Production (D3) Production (D5) Production (D5) Production (D5) Production (D6) (LRR A) Production (D7)
Vetland Hydrology Indicators: Primary Indicators (minimum of one recomposite (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Grust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surface Water Present? Ves Vater Table Present? Yes Saturation Present? Yes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted or Other (Ext ace (B8) Depth (in Depth (in	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Re aches):	s (B13) slor (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Roots d Soils (C6 1) (LRR A	ots (C3) Z G S Ots (C	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2) Prainage Patterns (B10) Pry-Season Water Table (C2) Production Visible on Aerial Imagery (C9) Production (D2) Production (D3) Production (D3) Production (D5) Production (D5) Production (D5) Production (D6) (LRR A) Production (D7)
Vetland Hydrology Indicators: Primary Indicators (minimum of one reconstruction of the construction of th	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted or Other (Ext ace (B8) Depth (in Depth (in	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Re aches):	s (B13) slor (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Roots d Soils (C6 1) (LRR A	ots (C3) Z G S Ots (C	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2) Prainage Patterns (B10) Pry-Season Water Table (C2) Production Visible on Aerial Imagery (C9) Production (D2) Production (D3) Production (D3) Production (D5) Production (D5) Production (D5) Production (D6) (LRR A) Production (D6) Production (D7)
Vetland Hydrology Indicators: Irimary Indicators (minimum of one reconstruction (A3) Saturation (A3) Veter Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Grust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surfacield Observations: Surface Water Present? Ves Saturation Present? Yes Saturation Present? Sescribe Recorded Oata (stream gauge)	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted or Other (Ext ace (B8) Depth (in Depth (in	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Re aches):	s (B13) slor (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Roots d Soils (C6 1) (LRR A	ots (C3) Z G S Ots (C	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2) Prainage Patterns (B10) Pry-Season Water Table (C2) Production Visible on Aerial Imagery (C9) Production (D2) Production (D3) Production (D3) Production (D5) Production (D5) Production (D5) Production (D6) (LRR A) Production (D7)
Vetland Hydrology Indicators: Irimary Indicators (minimum of one reconstruction (A3) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Grust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surface Water Present? Ves Vater Table Present? Ves Saturation Present? Ves Saturation Present? Ves Includes capillary fringe) Vescribe Recorded Data (stream gauge	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted or Other (Ext ace (B8) Depth (in Depth (in	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Re aches):	s (B13) slor (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Roots d Soils (C6 1) (LRR A	ots (C3) Z G S Ots (C	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2) Prainage Patterns (B10) Pry-Season Water Table (C2) Production Visible on Aerial Imagery (C9) Production (D2) Production (D3) Production (D3) Production (D5) Production (D5) Production (D6) (LRR A) Production (D7)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Grust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surfaceld Observations: Surface Water Present? Ves Water Table Present?	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted or Other (Ext ace (B8) Depth (in Depth (in	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Re aches):	s (B13) slor (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Roots d Soils (C6 1) (LRR A	ots (C3) Z G S Ots (C	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2) Prainage Patterns (B10) Pry-Season Water Table (C2) Production Visible on Aerial Imagery (C9) Production (D2) Production (D3) Production (D3) Production (D5) Production (D5) Production (D5) Production (D6) (LRR A) Production (D7)

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Consulting Engineers
Consulting Engineers

Geologists, Inc. Project/Site: Humboldt Bay Harbor District-RMMT	City/County: Humboldt Sampli	5/4/22
Applicant/Owner: Humboldt Bay Harbor District	State: CA Sampli	ing Date: TP32
		A CONTRACTOR OF THE PARTY OF TH
	Section, Township, Range:	
	ewace Local relief (concave, convex, none):	
	Lat: <u>40.820743</u> Long: <u>-124.177990</u>	
Soil Map Unit Name: 1019-Urban land Anth	ultic XI northents assoc. 0296 NWI classification:	
Are climatic / hydrologic conditions on the site typical fo	this time of year? Yes X No (If no, explain in Remarks.	, shrubwetla
Are Vegetation, Soil, or Hydrology	_ significantly disturbed?	Yes X No
Are Vegetation, Soil, or Hydrology	·	
1/	p showing sampling point locations, transects, impo	·
Hydrophytic Vegetation Present? Yes	No X	· V
Hydric Soil Present? Yes	No Is the Sampled Area	
Wetland Hydrology Present? Yes	No Within a Wetland? Yes No	0
Remarks: WETS normal rainfall	200 all towards	1.14.
They avoted in wlandore	approx. 8 ft from welland thexploratory).	Concillor
100.0.	representative of upland Conditions ar	and wetland
VEGETATION – Use scientific names of p	ints.	
201	Absolute Dominant Indicator Dominance Test worksheet:	
Tree Stratum (Plot size: 30'	% Cover Species? Status Number of Dominant Species	1
1. Alnus pubra	That Are OBL, FACW, or FAC:	(A)
2	Total Number of Dominant	3
3	Species Across All Strata:	(B)
4	Percent of Dominant Species	121
Sapling/Shrub Stratum (Plot size: 5')	That Are OBL, FACW, or FAC:	33 /. (A/B)
1. Rubus Winw	Prevalence Index worksheet:	
2. Rubu ormeniacur	Total % Cover of:	
3	OBL species	
4	FACW species	
5	FAC species	
5	= Total Cover FACU species	
1. Poystichum (Plot size: 5')	UPL species	
1. PONSUCHUM INWTUM	Column Totals:(A)(B)
		=
3,		ators:
4		
5		
6		
7		
8		·
9		
11.	¹Indicators of hydric soil and we	
	be present, unless disturbed or	
Woody Vine Stratum (Plot size:)	Total Govern	
1	— — Hydrophytic	
2.	Vegetation	
85*	= Total Cover Present? Yes	_ No 🔼
% Bare Ground in Herb Stratum		
* byter + duff from Jose R	burcoler	
THAT I GIA! HA! GOOD IN		

Profile Desc	cription: (Describe	to the dep	th needed to docur	nent the	indicator	or confirm	the absen	ce of indicators.)	
Depth	Matrix			x Feature			150.00		
(inches)	Calar (maist)	_%_	Color (moist)	%	Type ¹	_Loc2	Texture	<u>Remarks</u>	
0-5	104R 2/1	100					SIL		
.5-10	104R3/1	100					SiL	grade time loo for	Channe
10-24	104R3/2	Obi		/	/		CIL	wwoody deprice	0
21-211-	1000 4/1	07	12 40 C/6	3	1	1	-	- Toolog party	
71-71.	1078 7/1		10/1/0/0			101	0	- 10	
								_(2	
	4						10		
	-	-						1	
ITymes C-C	oncentration, D=Der	olotion DM		S-Covers	d or Coate	d Sand G	raine 2	Location: PL=Pore Lining, N	
	Indicators: (Applic					u Sanu G		ators for Problematic Hydr	-
I -		able to all			.cu.,			cm Muck (A10)	10 00110
Histosol	pipedon (A2)		Sandy Redox (Stripped Matrix					Red Parent Material (TF2)	
_	istic (A3)		Loamy Mucky I		1) (except	: MLRA 1)		ery Shallow Dark Surface (1	(F12)
	en Sulfide (A4)		Loamy Gleyed			,		Other (Explain in Remarks)	,
	d Below Dark Surfac	ce (A11)	Depleted Matrix				_		
	ark Surface (A12)		Redox Dark Su)		³ indic	ators of hydrophytic vegetat	ion and
	Mucky Mineral (S1)		Depleted Dark	Surface (l	F7)		we	etland hydrology must be pre	esent,
Sandy (Gleyed Matrix (S4)		Redox Depress	ions (F8)			un	less disturbed or problemati	c.
Restrictive	Layer (if present):								
Type:					,				1
Depth (in	iches):						Hydric S	oil Present? Yes	No X
Remarks:									
									1
								<u> </u>	
HYDROLO)GY		Market .						
Wetland Hy	drology Indicators	:							
Primary Ind.	cators (minimum of	one require	d; check all that app	y)	_		<u>Se</u>	condary Indicators (2 or mo	re required)
Surface	Water (A1)		Water-Sta	ined Leav	/es (B9) (e	except		Water-Stained Leaves (B9) (MLRA 1, 2,
	ater Table (A2)			1, 2, 4A,				4A, and 4B)	3
	ion (A3)		Salt Crust		,			Drainage Patterns (B10)	
	Marks (B1)		Aquatic In		es (B13)			Dry-Season Water Table (C2)
1—	ent Deposits (B2)		Hydrogen				_	Saturation Visible on Aeria	
1	posits (B3)					Living Ro	ots (C3)	Geomorphic Position (D2)	
1 —	at or Crust (B4)		Presence		-	-		Shallow Aquitard (D3)	
2000	posits (B5)					d Soils (C		FAC-Neutral Test (D5)	
1 —								Raised Ant Mounds (D6) (I RR A)
	Soil Cracks (B6)	Imagani /B	Stunted o			/		Frost-Heave Hummocks (I	
ı —	ion Visible on Aerial ly Vegetated Concav			piain in ix	emaiks)	-4	_	_ 1 tost-fleave fluitilliocks (i	31)
		re Surface (
Field Obse			N. V B. 4.		1/4	1			
			No X Depth (in			-	- 00		N.
Water Table	e Present?		No X Depth (in						
Saturation F		Yes	No X Depth (in	ches): N	4	Wet	land Hydrol	logy Present? Yes	No <u>~</u>
Describe Re	ipillary fringe) ecorded Data (strean	n nauge m	onitoring well aerial	nhotos n	revious in	spections)	if available:		
DC3C/IDC TX	scorded batta (stream	n gaage, m	onitoring view, dona	priotod, p	TO FIGURE III	SPOOLIGITO),	, ii aranabio.	'	
Domeska	n A .	1	1 1/1	11	1	- 1	1 1	11	
Remarks:	well draine	Nois	SIGITY COV	ated	a pove	well	nd doc	imented @ TP 3	32.
	MACH GOLOG			0	-10-0			411	
	4		U						

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	7 4 4/
6	
	lting Engineers

Geologists, Inc.	Humboldt	Slula
Project/Site: Humboldt Bay Harbor District-RMMT		Sampling Date: 5/4/22
Applicant/Owner: Humboldt Bay Harbor District		State: CA Sampling Point: TP34
	Section, Township, Rai	• 19
		convex, none): hord Slope (%): 5
		Long: -124.177511 Datum: WGS 84
Soil Map Unit Name: 1014-Orbanland An	nthractic Xevorthents ass	60C. 0-78NWI classification: The shwater Forest
Are climatic / hydrologic conditions on the site typical	for this time of year? Yes No _	(If no, explain in Remarks.) Show wetlan
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "	"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology	naturally problematic? (If ne	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site r	nap showing sampling point l	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes		
Hydric Soil Present? Yes		^
Wetland Hydrology Present? Yes	No No	Id: 165 NO
Remarks: WETS normal rainfall TP excavated within willow 5	rand. Flatgrand, no h	Agelda
VEGETATION – Use scientific names of	plants.	
30	Absolute Dominant Indicator	Dominance Test worksheet:
1. Salix hours in a.	85 Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2. 3.		Total Number of Dominant Species Across All Strata: (B)
4	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size: 5'	UN CENTRA	Prevalence Index worksheet:
2. Malw fusca	1. INC.	Total % Cover of:Multiply by:
		OBL species x 1 =
3		FACW species x 2 =
5		FAC species x 3 =
	= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 5	Total Gover	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 ≤3.01
7	\	4 - Morphological Adaptations (Provide supporting
В		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,		be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	= Total Cover	
1		Hydrophytic
2		Venetation
	= Total Cover	Present? Yes No
% Bare Ground in Herb Stratum		
* Literard delais from willow a	nalabor	
IN MILE OUG OFFICE STATE AND IN	1/4 JOIDDA	

Profile Description: (Describe to the de	pth needed to docur	nent the i	ndicator o	or confirm	n the abse	nce of indicators.)
Depth <u>Matrix</u>		x Features				
(inches) Color (moist) %	Color (moist)	<u> </u>	Type ¹	_Loc ²	Texture	e Remarks
0-5 2.54 2.5/1 100					SiL	<u> </u>
5-13 104R311 100					Sh	
13-23.55 4/1 97	25 4 5/6	3	-	M	5	
23.5-2+ 2.54 2.5/ 100					1	Botomash + burned debris
23. 3 21 2.3/1 100					20	
\(\text{\text{\$\frac{1}{2}}}\)	-				-	Very compacted.
					-	- 196 <u>-</u>
					1	
¹ Type: C=Concentration, D=Depletion, RM				d Sand Gr		² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to al			∌d .)			cators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)				2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix					Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky F			MLRA 1)		Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed)			Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix				+	
Thick Dark Surface (A12)	Redox Dark Su	, ,				icators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark		7)			vetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depress	sions (F8)			u	nless disturbed or problematic.
Restrictive Layer (if present):						
Type:						X
Depth (inches):					Hydric	Soil Present? Yes No
HYDROLOGY Wetland Hydrology Indicators:		1				
Primary Indicators (minimum of one require	ed: check all that anni	lv)			S	econdary Indicators (2 or more required)
Surface Water (A1)	Water-Sta		pe (R0) /e	vcent		Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)		1, 2, 4A, a		voehr	_	4A, and 4B)
Saturation (A3)	Salt Crust		iliu 4D)			Drainage Patterns (B10)
l 	Aquatic In		o (B12)		-	
Water Marks (B1) Sediment Deposits (B2)					_	Dry-Season Water Table (C2)
	Hydrogen			Listina Don	-t- (O2)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)			_	Living Roo	ots (C3) _	Geomorphic Position (D2)
Algal Mat or Crust (B4)	Presence		•	•	_	_ Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iro			•	· –	FAC-Neutral Test (D5)
Surface Soil Cracks (B6)	1 2 2			1) (LRR A)	·) _	Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery (i		раш п Ке	anarks)		-	_ Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface	(60)					
Field Observations:	N Y 5 4 6	N	4/1			
Surface Water Present? Yes		ches):				V 1
Water Table Present? Yes		ches):	IA	-		\vee
Saturation Present? Yes	No X Depth (in	ches):	V (A)	_ Wetla	and Hydro	ology Present? Yes No
(includes capillary fringe)	onitoring well, aerial	photos, pr	evious ins	pections),	if available):
Describe Recorded Data (stream gauge, rr				, ,.		
Describe Recorded Data (stream gauge, n	- C					
Describe Recorded Data (stream gauge, n Remarks:						

sulting Engineers Geologists, Inc.	RMINATION DA	ATA FORM -	- Western Mou	ntains, Valleys, an	d Coast Region
Project/Site: Humboldt Bay Harbor Distr	rict-RMMT	City	/County: Humboldt		_ Sampling Date: <u>5/4/22</u>
Applicant/Owner: Humboldt Bay Harbor		On,		State: CA	Sampling Point: TP35
Investigator(s): Joseph Saler, Cindy Wil		Soc	ction, Township, Ra		_ Sampling Form
andform (hillslope, terrace, etc.):			cal relief (concave	convex, none):N	Slope (%): 0
Subregion (LRR): A, MLRA-4B	, p. co	Lat. HO.	821749	1000 - 124.177	533 Datum: WGS 84
oil Map Unit Name: 1014-Alrba					
re climatic / hydrologic conditions on t	-				
re Vegetation, Soil, or				Normal Circumstances"	
re Vegetation, Soil, or	Hydrology	naturally proble	matic? (If ne	eded, explain any answ	ers in Remarks
SUMMARY OF FINDINGS - A	ttach site map	showing sa	mpling point l	ocations, transects	s, important features, et
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: WETS normal rainfall	Yes Yes	No X	is the Sampled within a Wetlan		No_X
/EGETATION - Use scientific	-	Absolute D	ominant Indicator	Dominance Test wor	Species 3
2				That Are OBL, FACW, Total Number of Domi Species Across All Str	nant 5
4	· ·	<u> 10 =</u>	Total Cover	Percent of Dominant S That Are OBL, FACW.	
1. Daccharis pilvionis com		10	- UPL	Prevalence Index wo	rksheet:
2. Rubu orminacus	J	70-	FAC	Total % Cover of:	
3. Rubur INTSINUS		8	L FACU	The state of the s	x1=
4					x 2 =
5					x 3 =
c		38=	Total Cover		x 4 = x 5 =
Herb Stratum (Plot size: 15')	07	001		(A) (B
1. Carex partordii 2. Antexanhum odoratum		- 20 -	CACIL		
3. Vicia sativa	1	3 -	THUM-		x = B/A =
4. Twow Lescuri			FACW	Hydrophytic Vegetat	
					Hydrophytic Vegetation
5				2 - Dominance Te	
6 7 8				3 - Prevalence Inc 4 - Morphological data in Remar	dex is ≤3.0° Adaptations¹ (Provide supportii ks or on a separate sheet)
8				5 - Wetland Non-	·
9,					ophytic Vegetation ¹ (Explain)
11			Fotal Cover 24.5	¹ Indicators of hydric se	oil and wetland hydrology must turbed or problematic.
Woody Vine Stratum (Plot size:			51.5		

% Bare Ground in Herb Stratum

Hydrophytic Vegetation Present?

_= Total Cover

Depth Matrix inches) Color (moist) %	Redox Features Color (moist) % Type¹ Lo	c ² Texture	Remarks
0-7 2.573/2 100		15	
7-16 10484/1 10	7 A	n 5	
C-24+5Y 4/4 100			
5-21. 77 9/4 100			-
-		-	
ydric Soil Indicators: (Applicable to	M=Reduced Matrix, CS=Covered or Coated Sa		ation: PL=Pore Lining, M=Matrix. 's for Problematic Hydric Soils ³ :
· · · · · · · · · · · · · · · · · · ·	·		
_ Histosol (A1) _ Histic Epipedon (A2)	Sandy Redox (S5) Stripped Matrix (S6)		Muck (A10) Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLI		Shatlow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		r (Explain in Remarks)
_ Depleted Below Dark Surface (A11)	Depleted Matrix (F3)		(23)
_ Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicato	s of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		nd hydrology must be present,
_ Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unles	disturbed or problematic.
estrictive Layer (if present):			
Туре:			V
Depth (inches):		Hydric Soil	Present? Yes No <u> </u>
/DROLOGY			The second
/DROLOGY /etland Hydrology Indicators:	ired: check all that apply)	Secon	dary Indicators (2 or more required)
∕DROLOGY √etland Hydrology Indicators: rimary Indicators (minimum of one requ			dary Indicators (2 or more required)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requ _ Surface Water (A1)	Water-Stained Leaves (B9) (excep		ater-Stained Leaves (B9) (MLRA 1, 2
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requ	Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B)	w	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requested Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) (exception MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	ot W D	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10)
POROLOGY Setland Hydrology Indicators: rimary Indicators (minimum of one requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	 Water-Stained Leaves (B9) (exceptions) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) 	ot W D: D:	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requ _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) _ Sediment Deposits (B2)	 Water-Stained Leaves (B9) (exceptions) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 	ot W D D	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9
POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requestrates Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	 Water-Stained Leaves (B9) (exceptions) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin 	ot W D D Sa g Roots (C3) G	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (CS eomorphic Position (D2)
/DROLOGY /etland Hydrology Indicators: rimary 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) (exceptions) 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) 	ot W D D Sa g Roots (C3) G Si	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 ecomorphic Position (D2) nallow Aquitard (D3)
/DROLOGY /etland Hydrology Indicators: rimary 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 Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So	ot W Di Di Si g Roots (C3) Gi Si ils (C6) F/	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requestrict 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 Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (L	of W Di Di Si g Roots (C3) Gi Si Si ils (C6) F/ RR A) Ri	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 ecomorphic Position (D2) nallow Aquitard (D3)
/DROLOGY /etland Hydrology Indicators: rimary 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)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (L67) Other (Explain in Remarks)	of W Di Di Si g Roots (C3) Gi Si Si ils (C6) F/ RR A) Ri	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requestrict 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 Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (L67) Other (Explain in Remarks)	of W Di Di Si g Roots (C3) Gi Si Si ils (C6) F/ RR A) Ri	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (CS) ecomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
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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 Surfaceield 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 Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (L (B7) Other (Explain in Remarks) e (B8)	of W Di Di Si g Roots (C3) Gi Si Si ils (C6) F/ RR A) Ri	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requestrict 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? //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 Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (L) (B7) Other (Explain in Remarks) e (B8) No Depth (inches):	ot W Di Si g Roots (C3) G Si ils (C6) F/ RR A) Ri Fr	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) atturation Visible on Aerial Imagery (C9) eomorphic Position (D2) nallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) oost-Heave Hummocks (D7)
Vetland Hydrology Indicators: rimary Indicators (minimum of one requirement) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surfactield Observations: urface Water Present? Ves vater Table Present? Yes aturation 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 Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (L87) Other (Explain in Remarks) e (B8) No Depth (inches): No Depth (inches):	bt W Di Di Si g Roots (C3) G Si ils (C6) F/ RR A) Ri Fr	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) atturation Visible on Aerial Imagery (C9 eomorphic Position (D2) nallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) oost-Heave Hummocks (D7)
Vetland Hydrology Indicators: rimary Indicators (minimum of one requirement) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surfactield Observations: urface Water Present? Ves vater Table Present? Yes aturation 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 Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (L) (B7) Other (Explain in Remarks) e (B8) No Depth (inches):	bt W Di Di Si g Roots (C3) G Si ils (C6) F/ RR A) Ri Fr	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) atturation Visible on Aerial Imagery (C9 eomorphic Position (D2) nallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) oost-Heave Hummocks (D7)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requestrict one of the requestrict of the region of the requestrict of the region o	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (L67) Other (Explain in Remarks) (B8) Depth (inches): No Depth (inches): No Depth (inches): No Depth (inches): No Depth (inches):	bt W Di Di Si g Roots (C3) G Si ils (C6) F/ RR A) Ri Fr	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) atturation Visible on Aerial Imagery (CS eomorphic Position (D2) nallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requirement Indicators (minimum of one requirement Indicators (minimum of one requirement Indicators (Mater Marks (Mater Mater Mater Mater (Mater Mater	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (L67) Other (Explain in Remarks) (B8) Depth (inches): No Depth (inches): No Depth (inches): No Depth (inches): No Depth (inches):	bt W Di Di Si g Roots (C3) G Si ils (C6) F/ RR A) Ri Fr	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) atturation Visible on Aerial Imagery (Cs eomorphic Position (D2) nallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)

(21V)
CIM
Consulting Engineers

Project/Site: Humboldt Bay Harbor District-RMMT		City/County:	Humboldt		_ Sampling Date: 5/4/27
Applicant/Owner: Humboldt Bay Harbor District				State: CA	_ Sampling Point: TP36
nvestigator(s): Joseph Saler, Cindy Wilcox				nge:	
andform (hillslope, terrace, etc.): BaySide Fill		Local relief	(concave, c	convex, none):	Slope (%): <u>0-1</u>
Subregion (LRR): A, MLRA-4B	Lat: 40	1.8217	11	Long: 124. 17	7863 Datum: WGS 84
Soil Map Unit Name: 1014 Uvbanland Ant	prettic Xe	erorth	ents o.	29/0 NWI class	ification: None
Are climatic / hydrologic conditions on the site typical for			,		
Are Vegetation, Soil, or Hydrology					" present? Yes No
Are Vegetation, Soil, or Hydrology				eded, explain any ansi	
SUMMARY OF FINDINGS – Attach site ma			g point le	ocations, transec	ts, important features, etc
Hydrophytic Vegetation Present? Yes	No X				X-
Hydric Soil Present? Yes			e Sampled		X
Wetland Hydrology Present? Yes	No X	With	in a Wetlan	nd? Yes	No
TP excevated in isolated, by	1	veg	prevet,	but not domin	art.
VEGETATION – Use scientific names of pl		Daminant	Indiantas	Danisana Testure	-lahaat.
Tree Stratum (Plot size: 30'	Absolute % Cover	Dominant Species?		Number of Dominant	
1. Salix hocheriana	35	V	FACW	That Are OBL, FACV	
2				Total Number of Don	ninant II
3				Species Across All S	P1
4				Percent of Dominant	Species 540/
er o mai tres e	35	= Total Co	ver	That Are OBL, FACV	
Sapling/Shrub Stratum (Plot size: 5'	20	1/	MPL	Prevalence Index w	orksheet:
1. Baccharis pllulons sop. consanguinea	- 1 2	-		Total % Cover o	f: Multiply by:
2. Rubus ursinus	10		FACU	OBL species	x 1 =
3				1	x 2 =
4				FAC species	x 3 =
b	38	T-4-10-		FACU species	x 4 =
Herb Stratum (Plot size: 5'	_00_	= Total Co	ver	UPL species	x 5 =
1. Jungus effusus	8		FACW		(A) (B)
2 Phalanis annainacea	8		FACW	Drovolones Ind	ex = B/A =
3. Jungus haltiquesta Her	40	L	FACW	Hydrophytic Vegeta	
4. Cardanine oligosperma	5		FAC		or Hydrophytic Vegetation
5. Galium aparine	1		FACU	2 - Dominance 1	•
				3 - Prevalence li	
7					al Adaptations ¹ (Provide supporting
8				data in Rema	arks or on a separate sheet)
9				5 - Wetland Non	
10				Problematic Hyd	Irophytic Vegetation ¹ (Explain)
11					soil and wetland hydrology must
Mark the transfer of the second	62	= Total Cov	er (3.8	pe present, unless d	isturbed or problematic.
Woody Vine Stratum (Plot size:)					
1			-	Hydrophytic	
2	1	·——		Vegetation Present?	Yes No
% Bare Ground in Herb Stratum 38		= Total Cov	er		
Remarks:					
A CONTRACTOR OF THE PARTY OF TH					

Redox Features Color (moist) % Type Reduced Matrix, CS=Covered or Coa RRs, unless otherwise noted.) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (exce Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)	M ated Sand Gra	Gradation between horizon Gradation between hor
Reduced Matrix, CS=Covered or Coarens, unless otherwise noted.) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (excelled Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)	M ated Sand Gra	Gradation between horizon M=Material Indicators for Problematic Hydric Soils³: 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Reduced Matrix, CS=Covered or Coares, unless otherwise noted.) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (excell Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)		Gradation between horizon Gradation between horizon Gradation between horizon ains. 2-Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: 2-cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3-Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Reduced Matrix, CS=Covered or Coares, unless otherwise noted.) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (excell Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)		Gradation between horizon Gradation between horizon Gradation between horizon ains. 2-Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: 2-cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3-Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Reduced Matrix, CS=Covered or Coares, unless otherwise noted.) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (excell Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)		ains. 2Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Reduced Matrix, CS=Covered or Coares, unless otherwise noted.) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (excell Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)		ains. 2Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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RRs, unless otherwise noted.) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (excelloamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)		Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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Stripped Matrix (S6) Loamy Mucky Mineral (F1) (excellance) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)	ept MLRA 1)	Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Loamy Mucky Mineral (F1) (excelled Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)	ept MLRA 1)	Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)	ept MILRA 1)	Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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.
Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)		wetland hydrology must be present, unless disturbed or problematic.
Depleted Dark Surface (F7) Redox Depressions (F8)		wetland hydrology must be present, unless disturbed or problematic.
Redox Depressions (F8)		unless disturbed or problematic.
		×
check all that apply)		Hydric Soil Present? Yes No
check all that apply)		Hydric Soil Present? Yes No
check all that apply)		Hydric Soil Present? Yes No
check all that apply)	7-	
check all that apply)		
check all that apply)		
		Secondary Indicators (2 or more required)
Water-Stained Leaves (B9)	(except	Water-Stained Leaves (B9) (MLRA 1, 2,
MLRA 1, 2, 4A, and 4B)	1	4A, and 4B)
Salt Crust (B11)		Drainage Patterns (B10)
Aquatic Invertebrates (B13)	25%	Dry-Season Water Table (C2)
Hydrogen Sulfide Odor (C1))	Saturation Visible on Aerial Imagery (C9)
Oxidized Rhizospheres alor	ng Living Root	ts (C3) Geomorphic Position (D2)
		Shallow Aquitard (D3)
		· · · · · · · · · · · · · · · · · · ·
		Frost-Heave Hummocks (D7)
		Trost-fiedes frammooks (D7)
•,		
X Breat Grabany N/N		
	 -	
K/U/K		Y
		Ind Hydrology Present? Yes No
normy went acrial priotos, previous i	пароспопа), п	avandue.
ydology wandy	501.	3
	Hydrogen Sulfide Odor (C1 Oxidized Rhizospheres alor Presence of Reduced Iron (Recent Iron Reduction in Ti Stunted or Stressed Plants Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches):	Depth (inches): NA Depth (inches): NA

onsulting Engineers & WETLAND DETERMINATION C	DATA FORM – Western Mou	ntains, Valleys, and Coast Region
_	City/County: Humboldt	Sampling Date: 515/2;
Applicant/Owner: Humboldt Bay Harbor District		State: CA Sampling Point: TP37
Investigator(s): Joseph Saler, Cindy Wilcox	Section, Township, Rai	nge:
Landform (hillslope, terrace, etc.): Baylow	Local relief (concave.	convex none): Concave Slope (%): 5
Subregion (LRR): A, MLRA-4B	Lat: 40.821384°	Long: -124.1796840 Datum: WGS 84
Soil Map Unit Name: Urban land-Anthrolt	x xevorthents assoc. 0-	20/0 NWI classification: Freshwater Forest
Are climatic / hydrologic conditions on the site typical for t		
Are Vegetation, Soil, or Hydrology		Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology	•	eded, explain any answers in Remarks.)
	p snowing sampling point is	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydrophytic Soil Present? Yes	No Is the Sampled	Area
	No Is the Sampled within a Wetlan	X
Remarks: WETS normal rainfall	140	
TP excavated W/i steep sloped)	nollow. transitions abo	yoth stomose to your.
VEGETATION - Use scientific names of pla		(· · 525)
Tree Stratum (Plot size: 30' 1. More a California 2. Salix house and 3 4 Sapling/Shrub Stratum (Plot size: 5' 1 2 3 Herb Stratum (Plot size: 5')	Absolute % Cover Species? Status FACW 20 FACW = Total Cover 45/18	Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species FACW species FACW species FAC species FACU species V 5 = UPL species Number of Dominant Species (A/B) Multiply by: Multiply by: X 1 = FACW species X 2 = FACU species X 4 = UPL species X 5 =
1 Corex Obrusta		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
8.		4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9		5 - Wetland Non-Vascular Plants ¹

= Total Cover

= Total Cover

from dose Morella cover.

Woody Vine Stratum (Plot size: _

% Bare Ground in Herb Stratum

US Army Corps of Engineers

Remarks:

Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

	lepth needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix	Redox Features	Power to
nches) Color (moist) %	Color (moist) % Type¹ Loc²	Texture Remarks
$)-3$ $2.5 \lor 2.5 / 1 100$		
-7 2.5 V 2.5/1 100		feat
-16 2,5 × 2,5/1 100		Mu
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		<
6-24+ 104 2.5/1 100		
		190
Type: C=Concentration, D=Depletion, I	RM=Reduced Matrix, CS=Covered or Coated Sand Gra	ains. ² Location: PL=Pore Lining, M=Matrix.
ydric 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) Other (Explain in Remarks)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2) Depleted Matrix (F3)	Curer (Explain in Remarks)
Depleted Below Dark Surface (A11)Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
I nick Dark Surface (A12) Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Mucky Milleral (61) Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Type:		
Depth (inches):		Hydric Soil Present? Yes No
Remarks: Positive AAD reation @		
<u> </u>		
Wetland Hydrology Indicators:	uired: check all that apply)	Secondary Indicators (2 or more required)
Netland Hydrology Indicators: Primary Indicators (minimum of one req		Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
Netland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Netland Hydrology Indicators: Primary Indicators (minimum of one req 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)
Netland Hydrology Indicators: Primary Indicators (minimum of one req 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 reg 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)
Netland Hydrology Indicators: Primary Indicators (minimum of one req 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 req 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 Roce 	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 req 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 Rock 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) Shallow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one req 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 ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one req 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 Rock 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 obs (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one reg 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR Act) 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 obs (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 reg 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 Act) Ty (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 obs (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 reg 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 Surfated 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 Act) by (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 obs (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Primary Indicators (minimum of one reg 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 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 Act) Ty (B7) Other (Explain in Remarks) No Depth (inches): 1/12/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 obs (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 req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imager Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes 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 Act) By (B7) Other (Explain in Remarks) No Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 ots (C3)
Primary Indicators (minimum of one req 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 Present? Water Table Present? Saturation Present? Yes Saturation Present? (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 Act) Ty (B7) Other (Explain in Remarks) No Depth (inches): No Depth (inches): Vett	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 reg 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 Surfated Observations: Surface Water Present? 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 Act) By (B7) Other (Explain in Remarks) No Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 ots (C3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one reg 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 Surfated Observations: Surface Water Present? Water Table Present? Yes Saturation Present? (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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR Act) Yes (B7) Other (Explain in Remarks) No Depth (inches): 1 (12) No Depth (inches): 5 (12) Wetter, 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)
Primary Indicators (minimum of one reg 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 Present? Water Table Present? Yes Saturation 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR Act) Yes (B7) Other (Explain in Remarks) No Depth (inches): 1 (12) No Depth (inches): 5 (12) Wetter, 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)
Wetland Hydrology Indicators: Primary Indicators (minimum of one reg 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 Surfated Observations: Surface Water Present? Water Table Present? Yes Saturation Present? (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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR Act) Ty (B7) Other (Explain in Remarks) No Depth (inches): No Depth (inches): Vett	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)
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? Water Table Present? Yes Saturation 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR Act) Yes (B7) Other (Explain in Remarks) No Depth (inches): 1 (12) No Depth (inches): 5 (12) Wetter, 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)

nsulting Engineers WETLAND DETERMINATION I	DATA FORM – Western Mou	ntains, Valleys, and Coast Region
k Geologists, Inc.		* Kh2
Project/Site: Humboldt Bay Harbor District-RMMT Applicant/Owner: Humboldt Bay Harbor District		Sampling Date: 5/3/02
Investigator(s): Joseph Saler, Cindy Wilcox		State: CA Sampling Point: 77 38
	Section, Township, Ra	
Landform (hillslope, terrace, etc.): Bayside alwit	Local relief (concave,	convex, none): Sope, None Slope (%): 48 Long: -124, 179723 Datum: WGS 84
Subregion (LRR): A, MLRA-4B	Lat: 00 90	Long: -124, 179723 Datum: WGS 84
		- 290 NWI classification: Freshwater Foreste
		(If no, explain in Remarks.) Shrub wetlands
Are Vegetation, Soil, or Hydrology	7,1,54,27	'Normal Circumstances" present? Yes V No No
Are Vegetation, Soil, or Hydrology		eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site ma	p showing sampling point le	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes		Area
Hydric Soil Present? Yes Wetland Hydrology Present? Yes	10	X
Remarks: WFTS normal rainfall	1 1	
to excavated on hollow slope	above wetland Repr	rectative of upland conditions.
VEGETATION – Use scientific names of pl	ants.	
30'	Absolute Dominant Indicator	Dominance Test worksheet:
1. Morel A Californi Ca	% Cover Species? Status	Number of Dominant Species 1
2. Salix hookeriana	TO FACE	That Are OBL, FACW, or FAC: (A)
3	7,000	Total Number of Dominant Species Across All Strata: (B)
4		-ol
Spelling (Charles Charles (District 5)		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size: 5') 1. Rubus ursinus	7 / FACU	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: 5'	= Total Cover	UPL species x 5 =
1. Polystichum muitum	15 / FACY	Column Totals: (A) (B)
2. Hypochaesis, cadicata	1 FACY	
3. Rund ace ose a	3 V FACY	Prevalence Index = B/A = Hydrophytic Vegetation Indicators:
4 Epilobium citiatum	1 TACW	1 - Rapid Test for Hydrophytic Vegetation
		2 - Dominance Test is >50%
6		3 - Prevalence Index is ≤3.0 ¹
7.		4 - Morphological Adaptations (Provide supporting
8		data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants ¹
9		Problematic Hydrophytic Vegetation¹ (Explain)
11		¹ Indicators of hydric soil and wetland hydrology must
	= Total Cover 1.3	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		
1		Hydrophytic Vegetation
% Bare Ground in Herb Stratum	= Total Cover	Present? Yes No
	Total Cover	
Litter + Duff from Morella and pol	intelled Brownte a	15%
Little + UNT+ + rom 1 Morella cha pol	BUCYMAN- DOLOGOON Y	1277

Depth Matrix Redox Features Color (moist) % Color (moist) % Type¹ Loc² Texture Remaind Structure Rema	arks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2.5 Y 2.5 / 100 LS 1-2-4+5 Y 4/3 100 1-3-4-5 Y 4/3 100 1-3-5 Y 4/3	arks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2 Location: PL=Pore Lin	
	ing, M=Matrix.
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic	
Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10)	
Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF	⁻ 2)
Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surfa	ace (TF12)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remai	rks)
Depleted Below Dark Surface (A11) Depleted Matrix (F3)	
Thick Dark Surface (A12) Redox Dark Surface (F6) 3Indicators of hydrophytic ve	
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must be Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)	
Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or probl	emauc.
Restrictive Layer (if present):	1
Type:	II. X
Depth (inches): Hydric Soil Present? Yes _	NO V
IYDROLOGY	
Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 of the control of t	
Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves	es (B9) (MLRA 1, 2,
High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B)	
Saturation (A3) Salt Crust (B11) Drainage Patterns (B	
Water Marks (B1) — Aquatic Invertebrates (B13) — Dry-Season Water T	able (C2)
Codiment Deposite (D3) Hudespee Cultide Oder (C4) Seturation Visible on	
Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position	n (D2)
Drift Deposits (B3) Algal Mat or Crust (B4) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Shallow Aquitard (C3)	n (D2) 3)
Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D	n (D2) 3) 95)≰
Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) 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) Reised Ant Mounds	n (D2) 3) 95) _⊁ (D6) (LRR A)
Drift Deposits (B3)	n (D2) 3) 95) _⊁ (D6) (LRR A)
Drift Deposits (B3)	n (D2) 3) 95)≽ (D6) (LRR A)
Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position 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 (D Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummo Sparsely Vegetated Concave Surface (B8) Field Observations:	n (D2) 3) 95) _⊁ (D6) (LRR A)
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) Depth (inches): Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Shallow Aquitard (D3) FAC-Neutral Test (D Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds Frost-Reave Hummon Depth (inches): Depth (inches):	n (D2) 3) 95) _⊁ (D6) (LRR A)
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? Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Shallow Aquitard (D3) FAC-Neutral Test (D Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds Frost-Heave Hummon Depth (inches): Depth (inches): NA Depth (inches): NA	n (D2) 3) 95); (D6) (LRR A) pcks (D7)
Drift Deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3 Fac-Neutral Test (D3 Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Ves No Depth (inches): Depth (inches): No Depth (inches): Wetland Hydrology Present? Yes Saturation Present? Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position FAC-Neutral Test (D3 FAC	n (D2) 3) 95); (D6) (LRR A) pocks (D7)
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? Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Shallow Aquitard (D3) FAC-Neutral Test (D Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds Frost-Heave Hummon Depth (inches): Depth (inches): NA Depth (inches): NA	n (D2) 3) 95); (D6) (LRR A) pocks (D7)
Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): Depth (inches): NA Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Geomorphic Position Shallow Aquitard (D3) FAC-Neutral Test (D Shallow Aquitard (D3) FAC-Neutral Test (D CA) Shallow Aquitard (D3) FAC-Neutral Test (D CA) FAC-Neutral	3) 95); (D6) (LRR A) ocks (D7)
Drift Deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position Shallow Aquitard (D3 FAC-Neutral Test (D FAC-Neutral Test (D C4) Shallow Aquitard (D3 FAC-Neutral Test (D Raised Ant Mounds Cher (Explain in Remarks) Frost-Heave Hummon Depth (inches): NA Wetland Hydrology Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	n (D2) 3) 95); (D6) (LRR A) pcks (D7)
Drift Deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): Depth (inches): No Dep	n (D2) 3) 95); (D6) (LRR A) pcks (D7)
Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): Depth (inches): NA Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	n (D2) 3) 95); (D6) (LRR A) pocks (D7)

Geologists, Inc. Project/Site: Humboldt Bay Harbor District-RMMT	City/County: Humbo	oldt Sampling Date: 5/5/22
Applicant/Owner: Humboldt Bay Harbor District		State: CA Sampling Point: 17 39
Investigator(s): Joseph Saler, Cindy Wilcox	Section, Township,	
Landform (hillslope, terrace, etc.): Bysice Fil		e, convex, none): CONCAVE Slope (%): 3
	Lat. 40.420668	Long:124.176999° Datum: WGS 84
Soil Map Unit Name: UV ban (and Anthraft)		
Are climatic / hydrologic conditions on the site typical		
Are Vegetation, Soil, or Hydrology		re "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology		needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site		t locations, transects, important features, etc
Hydrophytic Vegetation Present? Yes	No	90
Hydric Soil Present? Yes	No is the Sample	
Wetland Hydrology Present? Yes		
Remarks: WETS normal rainfall In drainage swale widire	tabove armed connection	to OI
set described or PSSIC	x0a	,,
VEGETATION – Use scientific names of	nlants	
January State Control of Control	Absolute Dominant Indicato	or Dominance Test worksheet:
Tree Stratum (Plot size: 30'	% Cover Species? Status	Number of Dominant Species 3
1. Salix hookerana	TALV	That Are OBL, FACW, or FAC: (A)
2. Morella Californica		Total Number of Dominant 2
4		Species Across All Strata: (B)
	= Total Cover	Percent of Dominant Species 100 /
Sapling/Shrub Stratum (Plot size: 5'		That Are OBL, FACW, or FAC:
1. Rybus amoracus		Total 9/ Cover of Marking to the
2. Kubu wsinw		OBL species x 1 =
4		FACW species x 2 =
5.		FAC species x 3 =
and the case of	24 = Total Cover 12/4	FACU species x 4 =
Herb Stratum (Plot size: 5'		UPL species x 5 =
1. Holais anoths 2. Equistum averse		Column Totals: (A) (B)
3. Sarow Micr. corpur	2 FAC 20BL	Prevalence Index = B/A =
		- Injurophytic regetation malcators.
5		1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
6		2 - Bornmance Fest is >50% 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	10 - al	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	= Total Cover 9/3	6
1		- Hydrophytic
2		Vegetation <
% Bare Ground in Herb Stratum 32	= Total Cover	Present? Yes No
% Bare Ground in Herb Stratum 0		

Profile Description: (Describe to the	depth needed to document the	indicator or	confirm :	the absence	of indicators.)
Depth Matrix	Redox Feature	es	-		
inches) Color (moist) %	Calar (maist) %	Type'	Loc ²	Texture	Remarks
$\frac{0-2}{2.5 \times 25/1} \frac{100}{100}$				Peat	100
2-26+ 2.54 4/2 60	7.5 /R4/6 5		M	3	2,54 4/2 increases Wast
	2.5 V 4/4 35	0	M		
				-	
					
Type: C=Concentration, D=Depletion,	RM=Reduced Matrix, CS=Covere	ed or Coated	Sand Gra	ins. ² Lo	cation: PL=Pore Lining, M=Matrix.
lydric Soil Indicators: (Applicable to	all LRRs, unless otherwise no	ted.)		Indicate	ors for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)			2 c	m Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)				d Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F	-1) (except N	ILRA 1)	Ver	y Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F	2)		Oth	ner (Explain in Remarks)
Depleted Below Dark Surface (A11				3	
_ Thick Dark Surface (A12)	Redox Dark Surface (F6	-			ors of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (and hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)		unie	ss disturbed or problematic.
Restrictive Layer (if present):					
Type:					Present? Yes X No
Depth (inches):				Hydric Soi	Present? Yes No
YDROLOGY					
Wetland Hydrology Indicators: Primary Indicators (minimum of one re-	suired chack all that anniv)			Sec	ondary Indicators (2 or more required)
		was (BD) (ave	nant.		Water-Stained Leaves (B9) (MLRA 1, 2,
Surface Water (A1)	Water-Stained Lea		cehr	-	4A, and 4B)
High Water Table (A2)	MLRA 1, 2, 4A	, and 4D)			Orainage Patterns (B10)
Saturation (A3)	Salt Crust (B11) Aquatic Invertebra	toe (B13)			Dry-Season Water Table (C2)
Water Marks (B1)	Addatic invertebra				Saturation Visible on Aerial Imagery (C9)
Sediment Deposits (B2)	Oxidized Rhizosph		iving Roo		Geomorphic Position (D2)
Drift Deposits (B3) Algal Mat or Crust (B4)	Presence of Redu				Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduc				FAC-Neutral Test (D5)
Surface Soil Cracks (B6)	Stunted or Stresse				Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Image			,,		Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surf				_	
ield Observations:	N 1	TK1			
Surface Water Present? Yes	No Depth (inches): _	NIA			
Water Table Present? Yes	No Depth (inches):	1311			\
Saturation Present? Yes	No Depth (inches): _	10 in	Wetla	and Hydrolo	gy Present? Yes No
(includes capillary fringe)		Tollar Tollar			
Describe Recorded Data (stream gaug	e, monitoring well, aerial photos,	previous insp	ections),	ir available:	
Remarks:		11	×	1 ^	04
Depression holds we which connect to he	ter. Appears to be I	A goldi,	e in	put from	n DI and gralling
will consist to he	mbolth bay via offe	s wella	rg.		

STY
Consulting Engineers
& Geologists, Inc.

z Geologists, Inc.			ilalis, valleys, all	
Project/Site: Humboldt Bay Harbor District-RMMT		City/County: Humboldt		Sampling Date: \$15/22
Applicant/Owner: Humboldt Bay Harbor District			State: CA	Sampling Point: TP 40
Investigator(s): Joseph Saler, Cindy Wilcox		Section, Township, Rai	nge:	
Landform (hillslope, terrace, etc.): Bayside fill		Local relief (concave, o	convex, none): <u>None</u>	Slope (%): 2
Subregion (LRR): A, MLRA-4B	Lat:	0.020650	Long:124, 17909	Datum: WGS 84
Soil Map Unit Name: Urbanland Anthaltic	Kerorth	ents a 550c. 0-2	% NWI classific	cation: non-e
Are climatic / hydrologic conditions on the site typical for t	his time of yea	ar? Yes X No _	(If no, explain in F	temarks.)
Are Vegetation, Soil, or Hydrology	significantly	disturbed? Are "	Normal Circumstances"	present? Yes X No
Are Vegetation, Soil, or Hydrology	naturally pro	blematic? (if ne	eded, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS - Attach site maj	showing	sampling point lo	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes				
Hydric Soil Present? Yes	No X	Is the Sampled	Area nd? Yes	No.
Wetland Hydrology Present? Yes		14		
Remarks: WETS normal rainfall TP excavated within flot or ca	Justaba	re studie condition	ining wetland of	s documented by TP39.
VEGETATION – Use scientific names of pla	ints.			
Tree Stratum (Plot size: 30'	Absolute		Dominance Test work	sheet:
1	78 COVEL	Species? Status	Number of Dominant S That Are OBL, FACW,	
2				1
3			Total Number of Domir Species Across All Stra	
4		= Total Cover	Percent of Dominant S That Are OBL, FACW,	pecies Ø //
Sapling/Shrub Stratum (Plot size: 5'	3	SHILL	Prevalence Index wor	
1. Rular wstry		FACU	Total % Cover of:	
2			V	x1=
3				x 2 =
4			FAC species	x 3 =
	3	= Total Cover	FACU species	x 4 =
Herb Stratum (Plot size: 5')			UPL species	x 5 =
1. Anthoxathun odoratum	80	- FACU	Column Totals:	(A) (B)
2. Aira caryophylea	1	- FACY	Prevalence Index	: = B/A =
3. Browns digitalis	- 3	NL NL	Hydrophytic Vegetati	
4. Vicia Sativa		WPL TOOL	1 - Rapid Test for I	Hydrophytic Vegetation
5. Klumer accoscila 6. Bromus hordeaceus		FACY	2 - Dominance Tes	
6. Bronni hordeacew 7. Fotuca bronnides		- FACY NL	3 - Prevalence Ind	
8. Egysetym dryese	1	FAC	4 - Morphological /	Adaptations ¹ (Provide supporting s or on a separate sheet)
9.		- 110	5 - Wetland Non-V	i i
10				phytic Vegetation ¹ (Explain)
11				il and wetland hydrology must
	93	= Total Cover 44.5/	be present, unless dist	
Woody Vine Stratum (Plot size:)		18.6		
1			Hydrophytic	X .
2			Vegetation Present? Ye	sNo
% Bare Ground in Herb Stratum	1	= Total Cover		7
I Hemarks.				
* Sand.				

inches) Color (moist) % 2.5 \(\frac{2.5}{1.00} \)	Color (moist) % Type Loc2	Texture Remarks
W 0 0 10 10 1	Color (molas) 78 Type Loc	1 Northean
2-24 2.54 4/2+ 99	7.548 416 1 C M	5 other reday staining aroun
		metal pièces.
	-0-	
Torre Co-Consentration DeDonation D	M=Reduced Matrix, CS=Covered or Coated Sand G	rains. ² Location: PL=Pore Lining, M=Matrix.
ydric 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)	
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.
lestrictive Layer (if present):		
Type:		
Depth (inches):		Hydric Soil Present? Yes No
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requ	ized check all that apply	Secondary Indicators (2 or more required)
Surface Water (A1)		Secondary indicators (2 or more required)
	Mater Staised Leaves (PO) (except	Mater Stained Leaves (R0) (MI PA 1 2
	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)
High Water Table (A2) Saturation (A3)	MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	4A, and 4B) Drainage Patterns (B10)
High Water Table (A2) Saturatio⊓ (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)
High Water Table (A2) 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)
High Water Table (A2) Saturatio⊓ (A3) Water Marks (B1)	MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 oots (C3) Geomorphic Position (D2)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	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)	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)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	MILRA 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	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
High Water Table (A2) 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 Ro Presence of Reduced Iron (C4)	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	MILRA 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 A)	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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)	MILRA 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 (Case) Stunted or Stressed Plants (D1) (LRR 4) (B7) Other (Explain in Remarks)	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soit Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface	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 A) (B7) Other (Explain in Remarks)	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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	MILRA 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 6) (B7) Other (Explain in Remarks)	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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 SurfaceField Observations:	MILRA 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 6) (B7) Other (Explain in Remarks) Depth (inches):	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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	MILRA 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 A (B7) Other (Explain in Remarks) (B8) Depth (inches): No Depth (inches):	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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 Surfactive Concave Concave Surfactive Concave Surfactive Concave Concave Surfactive Concave Concave Surfactive Concave Concave Surfactive Concave Co	MILRA 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 A (B7) Other (Explain in Remarks) Depth (inches): No Depth (inches): No Depth (inches): Wei	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) tland Hydrology Present? Yes No
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Project/Size: Humboid Bay Harbor District-HAMMT Applicanto/Owner: Humboid Bay Harbor District Applicantor Applicantor Applicantor Applicantor Applicantor Applic	eologists, Iuc.	11,	. Elela
Section, Township, Range: Local relate (concave, convex, none): Local relate (concave, non		City/County: Humboldt	Sampling Date: 7/ 7/ 2
andform (nilislope, terrace, etc.) Backing in 11 Mark Local relief (concave, convex, none): Cancal Relief (concave, convex, con			
Lat: \(\frac{V0.8725}{0} \) Long. \(-124,176946 \) Datum WGS Oil Map In Name: \(\frac{V156}{0} \) In Map In Name In Map In Name In Map In Name		Section, Township, Ra	inge:
oil Map Unit Name Urban land Antiquettic Year Ments 2500. 0.206 NWI classification: Expensivery re climate/ hydrologic conditions on the ate typical for this time of year? Yes X No. (If no, explain in Remarks.) 5h vib well reversely conditions on the ate typical for this time of year? Yes X No. (If no, explain in Remarks.) No. (If no explai			
re climatic / hydrologic conditions on the site typical for this time of year? Yes	Ulder land A. M	Lat: TV DW 951	Long: 177,179979 Datum: WGS
re Vegetation Soil or Hydrology significantly disturbed?			
UMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, hydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Wetland Hydrology Present? Wetland Hydrology Hyd			(in the, explain in rechiarks.)
UMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, trydrophytic Vegetation Present? Yes No Is the Sampled Area Is the Sa			
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Is the Sampled Area Wetland Hydrology Present? Yes No Within a Wetland? Yes No			ocations, transects, important features,
Wetland Hydrology Present? Yes No within a Wetland? Wes No worksheet: Number of Dominant Species That Are OBL, Facury of Facury That Are OBL, Facury of F		la dia o	Area
Remarks: WETS normal rainfall TP excovored Mi Swale, Likely (meete of by SHEX) A control of Mineral Mi			X
Absolute Dominant Indicator W. Cover Species Status Summer of Dominant Species Status Number of Dominant Species Status Number of Dominant Species Status Number of Dominant Species Status Species Status Species Status Species Status Species Status Species Across All Strata Across All Strata Species Across All Strata Acro			1 10 +0-0 1 1 1 1 -1 = 1
Absolute % Cover Species? Status (Plot size; 30") Absolute % Cover Status (Plot size; 30") Absolute % Cover Species (Prevalence Index worksheet: (Prevalence Index orksheet: (Preval	TP excavated Wi swale,	thely connected to Wi	
Sapling/Shrub Stratum (Plot size 30° 30	EGETATION – Use scientific names of p	olants.	
Morella Californica Morella Californica Sapling/Shrub Stratum (Plot size: 5) Sapling/Shrub Stratum Sapling/Shrub Stratum Sapling/Shrub Stratum Sapling/Shrub Stratum Sapling/Shrub Stratum Sapling/Shrub Stratum Sapling/Shrub Shrub Sh	Free Stratum (Plot eize: 30'		1 1 1 1
Total Number of Dominant Species Across All Strata. Percent of Dominant Species That Are OBL, FACW, or FAC: 106 // (Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species x 1 = FACW species x 3 = FACW species x 4 = UPL species x 4 = UPL species x 5 = Column Totals: (A) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation x 2 - Dominance Test is >50% 3 - Prevalence Index is <3.0' 4 - Morphological Adaptations' (Provide support of a facility in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants' Problematic Hydrophytic Vegetation' (Explain) Indicators of hydric soil and wetland hydrology multiple present, unless disturbed or problematic.			
Species Across All Strata. Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index worksheet: Total % Cover of. Multiply by: Obligation Pack Prevalence Index worksheet: Total % Cover of. Multiply by: Obligation Pack			
That Are OBL, FACW, or FAC: Prevalence Index worksheet: Total % Cover of: Multiply by:	+		1.
Prevalence Index worksheet: Total % Cover of: Multiply by:		= Total Cover	
Total % Cover of: Multiply by: Continue		50 / DN	
OBL species x1 = FACW species x2 = FAC species x3 = FACU species x4 = UPL species x5 = Column Totals: (A) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation X2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supportate in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Hydrophytic Vegetation		TD TACU	Total % Cover of: Multiply by:
FAC species x3 = FACU species x4 = UPL species x5 = Column Totals: (A) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supportional in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation ¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Hydrophytic Vegetation Problematic Hydrophytic Vegetation Uput Stratum Problematic Hydrophytic Uput Stratum Uput Stratum Problematic Hydrophytic Uput Stratum Uput	A CONTRACTOR OF THE PARTY OF TH	15 V FAL	
FACU species x 4 =			
## Stratum (Plot size: 5) ## Prevalence Index = B/A = ## Hydrophytic Vegetation Indicators: ## 1 - Rapid Test for Hydrophytic Vegetation ## 2 - Dominance Test is >50% ## 3 - Prevalence Index is ≤3.0¹ ## Morphological Adaptations¹ (Provide suppordata in Remarks or on a separate sheet) ## Dominance Test is >50% ## Morphological Adaptations¹ (Provide suppordata in Remarks or on a separate sheet) ## Problematic Hydrophytic Vegetation¹ (Explain) ## Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. ### Hydrophytic Vegetation ### Hydrophytic Vegetation ### Hydrophytic Vegetation ### Hydrophytic Vegetation			·
Column Totals:	erh Stratum (Plot size: 5'	Total Cover	
Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supportate in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Hydrophytic Vegetation			
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data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation			
Problematic Hydrophytic Vegetation¹ (Explain) 1 Problematic Hydrophytic Vegetation¹ (Explain) 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation		<u> </u>	
1			
Voody Vine Stratum (Plot size: Hydrophytic Vegetation			
Hydrophytic Vegetation	Woody Vine Stratum (Diet sine)	= Total Cover	be present, unless disturbed or problematic.
Vegetation Vegetation			
			Non-sisting (
= Total Cover	6 Bare Ground in Herb Stratum	= Total Cover	Present? Yes No

Depth Matrix	Redox Features	T
nches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
-5 10 yr 3/1 100		A
5-9 0 YR 3/2 00		15
-22+2.5 / 4/1 97	10484/6 3 C M	.5
Type: C=Concentration D=Depletion RM	// // // // // // // // // // // // //	ains. ² Location: PL=Pore Lining, M=Matrix.
ydric 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)	X 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:		X N
Depth (inches):		Hydric Soil Present? Yes No
Remarks: Positive AAD @	w/i 12in. Many roots.	
YDROLOGY	w/i 12in. Many roots.	
YDROLOGY Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	red; check all that apply)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MI RA 1 2
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1)	red; check all that apply) Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requirements of the second seco	red; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3)	red; check all that apply) 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)
YDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	red; check all that apply) 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)
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)	red; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
YDROLOGY Netland 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)	red; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living 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)
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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)	red; check all that apply) Water-Stained Leaves (B9) (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 ots (C3)
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YDROLOGY Netland 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	red; check all that apply) Water-Stained Leaves (B9) (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 Ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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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 (Sparsely Vegetated Concave Surface) Field Observations: Surface Water Present? Yes	red; check all that apply) Water-Stained Leaves (B9) (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 Ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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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 (Company of the Company of the Comp	red; check all that apply) Water-Stained Leaves (B9) (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 ots (C3)
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Geologists, Inc. Project/Site: Humboldt Bay Harbor District-RMMT City/Cou			unty: Humboldt Sampling Date: 5/5/22		
				State: CA Sampling Point: TP42	
Investigator(s): Joseph Saler, Cindy Wilcox	ht >			nge:	
Landform (hillslope, terrace, etc.): Buyside fill		Local relief (concave, o	convex, none): <u>None</u> Slope (%): <u>25-</u>	
Subregion (LRR): A, MLRA-4B	Lat: <u>년</u> 0	.02031	07°	Long: -124.1788920 Datum: WGS 84	
Soil Map Unit Name: Ur ban land Anthraftle	Kerovthen	5 0550C.	0-296	NWI classification: hone	
Are climatic / hydrologic conditions on the site typical fo	or this time of yea	ır? Yes	<_ No _	(If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology	significantly o	disturbed?	Are "	Normal Circumstances" present? Yes No	
Are Vegetation, Soil, or Hydrology	naturally prol	olematic?	(If ne	eded, explain any answers in Remarks.)	
SUMMARY OF FINDINGS - Attach site m	nap showing	sampling	point lo	ocations, transects, important features, etc.	
Hydrophytic Vegetation Present? Yes	No X				
Hydric Soil Present? Yes	_ No		Sampled	Area	
Wetland Hydrology Present? Yes Remarks: WETS normal rainfall Lada ad a	- No X it for TP4				
VEGETATION – Use scientific names of p	olants. Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30'	% Cover	Species?	Status	Number of Dominant Species 7	
1. Marella Californica	50		FACW	That Are OBL, FACW, or FAC: (A)	
3			-	Total Number of Dominant Species Across All Strata: (B)	
4					
Sapling/Shrub Stratum (Plot size: 5')		= Total Cov	er	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)	
1. Rubus ampiacu	70	/	FAC	Prevalence Index worksheet:	
2				Total % Cover of:Multiply by:	
3				OBL species x 1 = FACW species x 2 =	
4				FAC species x3 =	
5	A			FACU species x 4 =	
Herb Stratum (Plot size: 5'		= Total Cov		UPL species x 5 =	
1. Cortadoria Juliata	40		FACU	Column Totals: (A) (B)	
2. Scirly Nigrocorpus			OBL	Prevalence Index = B/A =	
3. Epilopiya ciliatur	-4		FACW	Hydrophytic Vegetation Indicators:	
4. Atholathun odoratur	<u> </u>		FACY	1 - Rapid Test for Hydrophytic Vegetation	
5. Polystichum mutum 6. Achillea mile foium			FACU	2 - Dominance Test is >50%	
7			PACU	3 - Prevalence Index is ≤3.0¹	
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)	
				¹ Indicators of hydric soil and wetland hydrology must	
11.	84	= Total Cove	er 42/16	be present, unless disturbed or problematic.	
11,	-01				
11	-8-1				
11,				Hydrophytic Vegetation	
11		Total Cove		Hydrophytic Vegetation Present? Yes No	

	pth needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist), %	Color (moist) % Type¹ Loc²	Texture Remarks
0-37 OYR 3/2 100	7.57R 4/6 1 CM	SL occ. gravel
		U
		4 4/2
·	3 8	gi) (a)
*	25.	(2))
 4	·—————	
		97
		5 *
¹Type: C=Concentration D=Depletion RM	M=Reduced Matrix, CS=Covered or Coated Sand Gr	rains. 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)
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 (\$1)	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):	<u> </u>	Hydric Soil Present? Yes No X
Brich, abble HYDROLOGY		- 18. 3
Wetland Hydrology Indicators:		
residing hydrology indicators.		
Primary Indicators (minimum of one requir	ed; check all that apply)	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one requir		
Primary Indicators (minimum of one requir Surface Water (A1)	Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
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)
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,
Primary Indicators (minimum of one requir 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 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)
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 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) ots (C3) Geomorphic Position (D2)
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)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roce 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 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)	Water-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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled 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) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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 Role Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Called 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) A) Raised Ant Mounds (D6) (LRR A)
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 (Water-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 fron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A5) 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)
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 Ro Presence of Reduced fron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR A5) 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) A) 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	Water-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 (C) 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) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A)
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?	Water-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 fron (C4) Recent Iron Reduction in Tilled Soils (C- 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) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A)
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 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 Ro- Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A B7) Other (Explain in Remarks) (B8) No Depth (inches): NA 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)
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 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 Role Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Cilling Stunted or Stressed Plants (D1) (LRR AB) Other (Explain in Remarks) (B8) No Depth (inches): NA Depth (inches): VA Depth (inches): VA 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)
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 Water Table Present? Yes Saturation Present? Yes (includes capitlary 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 Ro- Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A B7) Other (Explain in Remarks) (B8) No Depth (inches): NA 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) 6) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, research in the content of the conte	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Role Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Cilling Stunted or Stressed Plants (D1) (LRR A) B7) Other (Explain in Remarks) (B8) No Depth (inches): 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) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, research)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Road Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Castunted or Stressed Plants (D1) (LRR Astronomy) B7) Other (Explain in Remarks) (B8) No Depth (inches): NA Depth (inches): VA 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)
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 (includes capillary fringe) Describe Recorded Data (stream gauge, research)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Road Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Castunted or Stressed Plants (D1) (LRR Astronomy) B7) Other (Explain in Remarks) (B8) No Depth (inches): NA Depth (inches): VA 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)
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 Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, research)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Role Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Cilling Stunted or Stressed Plants (D1) (LRR A) B7) Other (Explain in Remarks) (B8) No Depth (inches): 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) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) 6) 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: Humboldt Bay Harbor District-RMMT	City/Cou	inty: Humboldt		Sampling Date: 5/12/2
Applicant/Owner: Humboldt Bay Harbor District			State: CA	Sampling Point: TP 43
nvestigator(s): Joseph Saler, Cindy Wilcox	Section,	Township, Rang		
andform (hillslope, terrace, etc.): Baysi de Fill	Local re	elief (concave, co	onvex, none): Conc	1 Ve Slope (%): 0 -
Subregion (LRR): A, MLRA-4B	Lat: 40.019	992	Long: -124. 178	002 Datum: WGS 84
Soil Map Unit Name: 1014-Uvban land Anthra				
Are climatic / hydrologic conditions on the site typical for				Chie L. sald
Are Vegetation, Soil, or Hydrology	_ significantly disturbe	d? Are "N	lormal Circumstances"	present? Yes X No _
tre Vegetation, Soil, or Hydrology			ded, explain any answe	
SUMMARY OF FINDINGS – Attach site ma	p showing samp	ling point lo	cations, transects	s, important features, e
Hydrophytic Vegetation Present? Yes	No			î
Hydric Soil Present? Yes	No	s the Sampled A		No
Wetland Hydrology Present? Yes X	No	vithin a Wetland	7	
Remarks: WETS normal rainfall		See TP4	+TP44 for up	and conditions whom
TP excavated in 30 Slovely drain	nage way. B	of obside	Nar PFO1HX+	The second of th
/EGETATION – Use scientific names of pla	u / u	01 00100	3.00	10).
EGETATION - OSE SCIERCITIC Harries of pro-		ant Indicator	Dominance Test work	kohaat-
Tree Stratum (Plot size: 30'	% Cover Specie	1020 1000 10	Number of Dominant S	
1. Morella Calitornica	_ 85	FACW	That Are OBL, FACW,	
2 frankula purshiana sop pulshiana	_ 20	FAC	Total Number of Domi	nant C
3. Salix hoohering	10	- FACW	Species Across All Str	
4	110	77.5	Percent of Dominant S	inecies (1.2)
Sapling/Shrub Stratum (Plot size: 5'	= Total	Cover 57.5	That Are OBL, FACW,	
1. Rubu arminacu	75 /	- CAC	Prevalence Index wo	rksheet:
2. Barchan's Glutines a	22	OBL.	Total % Cover of:	Multiply by:
3.		_ 002	OBL species	x 1 =
4.				x 2 =
5				x 3 =
-	47 = Total	Cover 2315		x 4 =
Herb Stratum (Plot size: 5')	-	1 1101	UPL species	
1. Sonchus oberaceus	5 V	WIL	Column Totals:	(A) (E
2. Cardanine Oligosperma	-4	_ TAC	Prevalence Index	c = B/A =
3			Hydrophytic Vegetati	on Indicators:
4			1 - Rapid Test for	Hydrophytic Vegetation
5			X2 - Dominance Te	
5			3 - Prevalence Ind	
7				Adaptations ¹ (Provide support is or on a separate sheet)
8			5 - Wetland Non-\	
9				phytic Vegetation ¹ (Explain)
11				il and wetland hydrology must
		Cover 4.5	be present, unless dist	
Woody Vine Stratum (Plot size:)		1.1		
1			Hydrophytic	
2			Vegetation	X
9/ Bass Converd in 11st City 91	= Total	Cover	Present? Yo	es No
% Bare Ground in Herb Stratum	/ T N	•		
* Much and peat. Sparrely vege		esurtaxe.		

Depth	Redox Features	
(inches) Color (moist) %	Color (moist)%Type' _Loc²	Texture Remarks
0-10 Black 40	<u> </u>	Peat W/ pochets of Much
10/2: 10/0 5/1 100		Mu Much color
10-13+ 10 4 2. 3/1 100 -		<u> </u>
1		2) acetica. Di possi Lista Manatina
Hydric Soil Indicators: (Applicable to all LF	educed Matrix, CS=Covered or Coated Sand Grain	ns. 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)	Very Shallow Dark Surface (TF12)
X Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Country (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):		
Type:	_	/
Depth (inches):	_	Hydric Soil Present? Yes V No No
Remarks: BSTAVE AAD reaction with		
HYDROLOGY		
Wetland Hydrology Indicators:		
	check all that apply)	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators:	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)		
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-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-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) 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) 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) 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)
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 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)	Water-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) 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 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 (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) 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 (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) 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)
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 (B8) Field Observations: Surface Water Present? Water Table 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)	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 (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Table Present? Yes No Saturation Present? Yes No (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 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): Depth (inches): 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: Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Table Present? Yes No Saturation Present? Yes No (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 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) Frost-Heave Hummocks (D7)
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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 (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Table Present? Yes No Saturation Present? Yes No (includes capillary fringe) Describe Recorded Data (stream gauge, mon	Water-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): Depth (inches): 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)

	DATA FORM – Western Mou	ıntains, Valleys, and Coast Region
Project/Site: Humboldt Bay Harbor District-RMMT	aisean Humbold	sampling Date: 5/12/22
Applicant/Owner: Humboldt Bay Harbor District	City/County: Humbold	Sampling Date: TP 44 State: CA Sampling Point: TP 44
Investigator(s): Joseph Saler, Cindy Wilcox		
Landform (hillslope, terrace, etc.): Bayot &	Section, Township, Ra	convex, none): None Slope (%): 20
Subregion (LRR): A, MLRA-4B		Long: 124. 178639 Datum: WGS 84
		C. 0-296 NWI classification: Fresh water Forest
		Shin che allan
Are climatic / hydrologic conditions on the site typical for Are Vegetation, Soil, or Hydrology		(it tio, explain in Remarks.)
Are Vegetation, Soil, or Hydrology		
		eeded, explain any answers in Remarks.) locations, transects, important features, etc.
		ocations, transects, important leatures, etc.
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes		d Area
Wetland Hydrology Present? Yes		nd? Yes No
Remarks: WETS normal rainfall		76.1
To excavated ~ 30 inches above	standing natur and	36 inclo south of well and edge.
VEGETATION – Use scientific names of pl	lants.	- J
30	Absolute Dominant Indicator	Dominance Test worksheet:
1. Frankly (Plot size: 30' 1. Frankly (Dushion a soft purchion a	% Cover Species? Status	Number of Dominant Species 2
2. Saix hodhwana	50 FACW	That Are OBL, FACW, or FAC: (A)
3. Morella californica	T5 FACIN	Total Number of Dominant Species Across All Strata: (B)
4		
5	95 = Total Cover 475	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size: 5')	50 V FACU	Prevalence Index worksheet:
2.		Total % Cover of: Multiply by:
3.		OBL species x 1 =
4		FACW species x 2 =
5		FACIl species x 3 =
Herb Stratum (Plot size: 5'	Total Cover	FACU species x 4 = UPL species x 5 =
1 Polystichum munitum	30 FACU	Column Totals: (A) (B)
2. Galium agaring	4 FACU	Prevalence Index = B/A =
3. Sorchus oberaceus	4 UPL	Hydrophytic Vegetation Indicators:
4		1 - Rapid Test for Hydrophytic Vegetation
5		2 - Dominance Test is >50%
6		3 - Prevalence Index is ≤3.0¹
7		4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
8 9		5 - Wetland Non-Vascular Plants ¹
10		Problematic Hydrophytic Vegetation¹ (Explain)
11.		¹ Indicators of hydric soil and wetland hydrology must
	38 = Total Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:	7.6	
2		Hydrophytic Vegetation
	= Total Cover	Present? Yes No
% Bare Ground in Herb Stratum 62*	, otal oordi	
Remarks:		
in little and chat.		

Depth	Matrix			lox Features		. 3	_		-	
(inches)	Color (moist)	%_	Color (moist)	%	Type'	Loc2	Texture		Remarks	
0-14	2.542.211	100	7				SL			
4-21	2.57 3/2	99	7.54R 518				5L			
21-28	2.545/2	80	7.5425/8	20	C	m	LS			
-										
						e .				
	- Supremotive		Bu-will t							
	ncentration, D=Dep					Sand Gra			Pore Lining,	
-	ndicators: (Applic	abie to ali			ea.)				olematic Hy	Bric Solls :
Histosol (• •		Sandy Redox					n Muck (A1	•	
	ipedon (A2)		Stripped Matri		\	AL DA AL		Parent Ma		(TE42)
Black His			Loamy Mucky			NILKA 1)	_	•	ark Surface in Remarks)	•
	n Sulfide (A4) I Below Dark Surfac	0 (811)	Loamy Gleyed Depleted Mate)		O(n	er (Explain	in Remarks)	
	irk Surface (A12)	e (A11)	Redox Dark S				3!ndicate	ers of hydro	phytic veget:	ation and
_	lucky Mineral (S1)		Depleted Dark		7)			•	gy must be p	
-	leyed Matrix (S4)		Redox Depres	•	',				or problema	
	ayer (if present):									
Type:	,									
							Hydric Soil	Drocont?	Yes	No.
						1.5	Tryunc don	ricaciik:	169	
Depth (inco		ř			17-					
Depth (incongress) Remarks:		*			7					
Depth (incomers) Remarks: YDROLOG Wetland Hyd	GY		d; check all that ap	ply)	147		Seco	ndary Indica	ators (2 or m	nore required)
Depth (inconstruction	GY drology Indicators: ators (minimum of c		-11	100	es (B9) (ex	cept				
Depth (inconstruction	GY drology Indicators: sators (minimum of c Water (A1)		Water-S	ply) tained Leave		cept		Vater-Stain	ed Leaves (E	nore required) 39) (MLRA 1, 2
Depth (inclements: YDROLOG Vetland Hydio Surface N High Wa	GY drology Indicators: eators (minimum of c Water (A1) der Table (A2)		Water-S	tained Leave A 1, 2, 4A, a		ccept	_ \	Vater-Staine 4A, and	ed Leaves (E 4B)	39) (MLRA 1, 2
Depth (inconstruction) Primary Indiconstruction Surface Notes High Wall Saturation	GY drology Indicators: eators (minimum of c Water (A1) lter Table (A2) on (A3)		Water-S MLR/ Salt Crus	tained Leave A 1, 2, 4A , a st (B11)	ind 4B)	cept	_ ·	Vater-Staine 4A, and Prainage Pa	ed Leaves (E 4B) utterns (B10)	39) (MLRA 1 , 2
Pepth (inclements: YDROLOG Yetland Hyd Yetland Hyd Surface N High Wa Saturation Water Mi	GY drology Indicators: eators (minimum of c Water (A1) lter Table (A2) on (A3) arks (B1)		Water-S MLR Salt Cru Aquatic	tained Leave A 1, 2, 4A, a st (B11) Invertebrate	and 4B) s (B13)	ccept	_ \ 1 1	Vater-Staind 4A, and d Orainage Pa Ory-Season	ed Leaves (B 4B) itterns (B10) Water Table	39) (MLRA 1, 2
Pepth (inclemarks: YDROLOG Vetland Hyd Primary Indic Surface N High Wa Saturatio Water Ma Sedimen	GY drology Indicators: ators (minimum of c Water (A1) ater Table (A2) on (A3) arks (B1) at Deposits (B2)		Water-S MLR/ Salt Crus Aquatic Hydroge	tained Leave A 1, 2, 4A, a st (B11) Invertebrate en Sulfide Oc	and 4B) s (B13) dor (C1)		\ : :	Vater-Staind 4A, and description Drainage Pactor Dry-Season Saturation V	ed Leaves (B 4 B) atterns (B10) Water Table fisible on Ae	39) (MLRA 1, 2 e (C2) rial Imagery (C
Pepth (inclination of the perturbation of the	GY drology Indicators: cators (minimum of cators (Mater (A1)) alter Table (A2) on (A3) arks (B1) at Deposits (B2) cosits (B3)		Water-Si MLR/ Salt Crue Aquatic Hydroge Oxidized	tained Leave A 1, 2, 4A, a st (B11) Invertebrate in Sulfide Od I Rhizosphe	s (B13) dor (C1) res along L	_iving Roc	[[[5 ots (C3) (Vater-Staind 4A, and description Drainage Pactor Ory-Season Saturation V Geomorphic	ed Leaves (E 4 B) Itterns (B10) Water Table fisible on Ae Position (Di	39) (MLRA 1, 2 e (C2) rial Imagery (C
Depth (inconstruction) Primary Indiconstruction Surface Voluments High Wassaturation Water Manual Sediments Drift Dep	GY drology Indicators: cators (minimum of c Water (A1) of (A3) of (A3) or (B1) of Deposits (B2) of (B3) of or Crust (B4)		Water-S MLR Salt Cru Aquatic Hydroge Oxidized Presence	tained Leave A 1, 2, 4A, a st (B11) Invertebrates on Sulfide Oct d Rhizosphele of Reduce	s (B13) dor (C1) res along L	_iving Roc	[[5 ots (C3) (Vater-Stain 4A, and Orainage Pa Ory-Season Saturation V Geomorphic Shallow Aqu	ed Leaves (B 4B) titerns (B10) Water Table fisible on Ae Position (D3)	39) (MLRA 1, 2 e (C2) rial Imagery (C
Primary Indic Surface N High Wa Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep	GY drology Indicators: eators (minimum of control of co		Water-Si MLR/ Salt Crus Aquatic Hydroge Oxidized Presence Recent I	tained Leave A 1, 2, 4A, a st (B11) Invertebrate in Sulfide Od il Rhizosphe e of Reduce Iron Reducti	s (B13) dor (C1) res along L d Iron (C4) on in Tilled	iving Roo) I Soils (C6	[[5] ots (C3) (3 5]	Vater-Staind 4A, and Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutra	ed Leaves (B 4B) utterns (B10) Water Table fisible on Ae Position (Di itard (D3) Test (D5)	39) (MLRA 1, 2 e (C2) rial Imagery (C 2)
Depth (inconservation) Primary Indiconservation High Wal Saturation Water Mal Sediment Drift Dept Algal Mal Iron Dept Surface	GY drology Indicators: cators (minimum of content of the cators) Water (A1) Ider Table (A2) Ider Table (A2) Ider Table (A2) Ider Table (B1) Ider Table (B2) Ider Table (B3) Ider Table (B4) Ider Table (B4) Ider Table (B5) Ider Table (B6) Ider Table (B6)	ne require	Water-Si MLR/ Salt Crus Aquatic Hydroge Oxidized Presenc Recent I	tained Leave A 1, 2, 4A, a st (B11) Invertebrates in Sulfide Oc il Rhizosphe e of Reduce Iron Reduction Stressed	s (B13) dor (C1) res along L do Iron (C4) on in Tilled Plants (D1	iving Roo) I Soils (C6	[[5 ots (C3) (5 5 6	Vater-Staind 4A, and Orainage Pa Ory-Season Saturation V Geomorphic Shallow Aqu FAC-Neutra Raised Ant I	ed Leaves (E 4B) tterns (B10) Water Table fisible on Ae Position (D3) itard (D3) Test (D5) Mounds (D6)	39) (MLRA 1, 2 e (C2) rial Imagery (C 2)
YDROLOG Vetland Hyd Vetland Hyd Surface V High Wal Saturatio Water Mal Sedimen Drift Dep Algal Mal Iron Dep Surface S Inundation	GY drology Indicators: cators (minimum of comparison of co	ine require	Water-Si MLR Salt Crue Aquatic Hydroge Oxidized Presenc Recent I Stunted Other (E	tained Leave A 1, 2, 4A, a st (B11) Invertebrate in Sulfide Od il Rhizosphe e of Reduce Iron Reducti	s (B13) dor (C1) res along L do Iron (C4) on in Tilled Plants (D1	iving Roo) I Soils (C6	[[5 ots (C3) (5 5 6	Vater-Staind 4A, and Orainage Pa Ory-Season Saturation V Geomorphic Shallow Aqu FAC-Neutra Raised Ant I	ed Leaves (B 4B) utterns (B10) Water Table fisible on Ae Position (Di itard (D3) Test (D5)	39) (MLRA 1, 2 e (C2) rial Imagery (C 2)
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Primary Indic Surface N High Wa Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio Sparsely Field Observ	GY drology Indicators: eators (minimum of control (Mater (A1)) after Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial at Vegetated Concavivations:	imagery (B e Surface (Water-Si MLR/ Salt Crue Aquatic Hydroge Oxidized Presence Recent I Stunted Other (E	tained Leave A 1, 2, 4A, a st (B11) Invertebrates in Sulfide Oct if Rhizospher e of Reduce fron Reduction or Stressed explain in Re	s (B13) dor (C1) res along L do Iron (C4) on in Tilled Plants (D1	iving Roo) I Soils (C6	[[5 ots (C3) (5 5 6	Vater-Staind 4A, and Orainage Pa Ory-Season Saturation V Geomorphic Shallow Aqu FAC-Neutra Raised Ant I	ed Leaves (E 4B) tterns (B10) Water Table fisible on Ae Position (D3) itard (D3) Test (D5) Mounds (D6)	39) (MLRA 1, 2 e (C2) rial Imagery (C 2)
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Depth (inconservation) Primary Indiconservation Surface Vertility High Wall Saturation Water Male Sediment Drift Dept Algal Male Iron Dept Surface Surface Surface Surface Surface Surface Surface Water Table	GY drology Indicators: ators (minimum of o Water (A1) ater Table (A2) on (A3) arks (B1) at Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial ovegetated Concavivations: er Present?	imagery (B e Surface (es	Water-SindLR MLR Salt Crue Aquatic i Hydroge Oxidized Presenc Recent I Stunted 37) Other (E	tained Leave A 1, 2, 4A, a st (B11) Invertebrate en Sulfide Oc d Rhizosphe e of Reduce fron Reduction or Stressed explain in Re (inches):	s (B13) dor (C1) res along L do Iron (C4) on in Tilled Plants (D1	Living Roo) I Soils (C6 I) (LRR A	[[5] ots (C3) (5]) F	Vater-Stains 4A, and Prainage Pe Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutra Raised Ant I Frost-Heave	ed Leaves (E4B) Itterns (B10) Water Table Sisible on Ae Position (D3) I Test (D5) Mounds (D6) Hummocks	39) (MLRA 1, 2 e (C2) rial Imagery (C 2)
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Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

(2VV)	
CIN	-
Consulting Engineers	
& Centooists Inc.	

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

Geologists, Inc. Project/Site: Humboldt Bay Harbor District-RMMT				=	_ Sampling Date: 511	2 27
Applicant/Owner: Humboldt Bay Harbor District		, , , , , , , , , , , , , , , , , , ,		State: CA	_ Sampling Point: TP	45
Investigator(s): Joseph Saler, Cindy Wilcox					_ Sampling Folia	
Landform (hillslope, terrace, etc.): by side Peninsu		section, Tov	vnsnip, Rar	nge:	CA 13 0 51 (0)	· Λ-1
Subregion (LRR): A, MLRA-4B						
Soil Map Unit Name: 1014 Urban land An-		Section 1			01 4 6	record
Are climatic / hydrologic conditions on the site typical for the	nis time of yea	r? Yes/	<u>X_</u> № _	(If no, explain in	Remarks.)	WE 110
Are Vegetation, Soil, or Hydrology	significantly d	disturbed?	Are "I	Normal Circumstances"	present? Yes	No
Are Vegetation, Soil, or Hydrology	naturally prot	olematic?	(If ne	eded, explain any answ	ers in Remarks.)	
SUMMARY OF FINDINGS - Attach site map	showing	sampling	g point lo	ocations, transect	s, important featur	es, etc
Hydrophytic Vegetation Present? Yes	No					
Hydric Soil Present? Yes	No		e Sampled in a Wetlan		No	
	No				NO	
Remarks: WETS normal rainfall Texcavored in small, isolated	depter	512. C	of des	inhed as P551	AtBs+X On	4
VEGETATION – Use scientific names of pla	-					
30'	Absolute	Dominant		Dominance Test wor	rksheet:	
1. Delix booken and	<u>% Cover</u> <u>42</u>	Species?	FACW	Number of Dominant That Are OBL, FACW		_ (A)
2				Total Number of Dom Species Across All St	1	_ (B)
4.		-		·	6.05	_
Sapling/Shrub Stratum (Plot size: 5'	113	= Total Co	ver	Percent of Dominant S That Are OBL, FACW		(A/B)
1. Rybw ombjacw	20	V	FAC.	Prevalence Index wo	orksheet:	
2.		-	-10	Total % Cover of		
3					x 1 =	
4.					x 2 =	
5.				The state of the s	x 3 =	
	20	= Total Co	ver		x 4 =	
Herb Stratum (Plot size: 5'	05		001		x 5 =	
1. Denante sormetura	85		OBL	Column Totals:	(A)	(B)
2 Rumex Crispus			PAC		ex = B/A =	_
3				Hydrophytic Vegeta		
4,					Hydrophytic Vegetation	
5				2 - Dominance To		
6,				3 - Prevalence In		
7				4 - Morphologica	l Adaptations ¹ (Provide si rks or on a separate shee	upporting
8				5 - Wetland Non-	•	,
9,				7	rophytic Vegetation ¹ (Exp	lain)
10	-:	-			oil and wetland hydrology	
11	77	= Total Cov			sturbed or problematic.	, masi
Woody Vine Stratum (Plot size: 5++)		,= TOTAL COV	rei			
1. Loncera Lispidula	_2_			Hydrophytic	S	
2				Vegetation	. X	
12*	2	= Total Cov	er	Present?	/es No	
% Bare Ground in Herb Stratum 13**						
Remarks: ** Litter + wiff						
שאט, פאנון צ						
J. 1						

OIL				3.1	Sampling Point:
Profile Description: (Describe to the dep			or or confi	rm the absence	of indicators.)
Depth Matrix (inches) Color (moist), %	CONTRACTOR OF THE PROPERTY OF THE PROPERTY OF	Features % Type	1 Loc²	- Touture	Damada
(inches) Color (moist), % ()-7 2.5 / 2.5 / 1 100	Color (moist)	% Type	LOC	Peat	Remarks
				- Fra	3
7-12 2.5 y 3/1 100	Talle Talle			SIL	
12-17+2.54 4/1 85	104R 5/8	15 C	_ / /	C	
			_	= ;=====	
		-	-,	-	
¹ Type: C=Concentration, D=Depletion, RM=			ated Sand (ation: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all	LRRs, unless otherw	ise noted.)		Indicato	rs for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5	•			Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S	•			Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mir		ept MLRA		Shallow Dark Surface (TF12)
── Hydrogen Sulfide (A4) ✓ Depleted Below Dark Surface (A11)	Loamy Gleyed Ma			△ Oth	er (Explain in Remarks)
Thick Dark Surface (A12)	Depleted Matrix (I Redox Dark Surfa			3Indicate	rs of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Sulla				nd hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressio				s disturbed or problematic.
Restrictive Layer (if present):		(/			
Type:					1
Depth (inches):				Hydric Soil	Present? Yes X No
			12	1	· -
Remarks: Positive AAD reaction	w/i 12 inch	er ofsi	rtace	(9-12i	^)
Positive AAD reaction	w/i 12 incl	er 42v	Hace	(9-12i	^)
Positive AAD reaction	w/i 12 incl	er etsv	Hace	(9-12i	
HYDROLOGY Wetland Hydrology Indicators:			rface	44	
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required	d; check all that apply)			Secon	ndary Indicators (2 or more required)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1)	d; check all that apply) Water-Staine	ed Leaves (B9)	(except	Secon	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2,
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2)	d; check all that apply) Water-Stains MLRA 1,	ed Leaves (B9) 2, 4A, and 4B	(except	Second V	ndary Indicators (2 or more required) later-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3)	d; check all that apply) Water-Staine MLRA 1, Salt Crust (B	ed Leaves (B9) 2, 4A, and 4B) 311)	(except	Secol V	idary Indicators (2 or more required) /ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	d; check all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inve	ed Leaves (B9) 2, 4A, and 4B 311) ertebrates (B13)	(except	Secon	dary Indicators (2 or more required) later-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	d; check all that apply) Water-Stains MLRA 1, Salt Crust (E Aquatic Inve	ed Leaves (B9) 2, 4A, and 4B; 311) artebrates (B13) ulfide Odor (C1	(except	Secondary V	Idary Indicators (2 or more required) Idater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Irainage Patterns (B10) Iry-Season Water Table (C2) Indicators (C9)
HYDROLOGY 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)	d; check all that apply) Water-Stains MLRA 1, Salt Crust (B Aquatic Inve Hydrogen Ss	ed Leaves (B9) 2, 4A, and 4B; 311) entebrates (B13) ulfide Odor (C1) izospheres alor	(except	Secondary V	Indary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) recomorphic Position (D2)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	d; check all that apply) Water-Stains MLRA 1, Salt Crust (E Aquatic Inve Hydrogen So Oxidized Rh Presence of	ed Leaves (B9) 2, 4A, and 4B; 311) ertebrates (B13) ulfide Odor (C1 izospheres alor Reduced Iron ((except))) ng Living Rec(C4)	oots (C3)	Indary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) reomorphic Position (D2) hallow Aquitard (D3)
HYDROLOGY 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)	d; check all that apply) Water-Staine MLRA 1, Salt Crust (E Aquatic Inve Hydrogen So Oxidized Rh Presence of Recent Iron	ed Leaves (B9) 2, 4A, and 4B; 311) entebrates (B13) ulfide Odor (C1 izospheres alor Reduced Iron ((except) ng Living Re(C4)	Secondary V	Indary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Irainage Patterns (B10) Iray-Season Water Table (C2) Iraitration Visible on Aerial Imagery (C9) Iraitration Position (D2) Iraitration Aquitard (D3) Iraitration According to the complete Position (D2) Iraitration Aquitard (D3) Iraitration (D5)
HYDROLOGY 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)	d; check all that apply) Water-Staine MLRA 1, Salt Crust (E Aquatic Inve Hydrogen Staine Oxidized Rh Presence of Recent Iron Stunted or S	ed Leaves (B9) 2, 4A, and 4B; 311) ertebrates (B13) ulfide Odor (C1 izospheres alor Reduced Iron ((except) ng Living Re(C4)	Secondary V	Idary Indicators (2 or more required) Idater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Irainage Patterns (B10) Iray-Season Water Table (C2) Idaturation Visible on Aerial Imagery (C9) Ideomorphic Position (D2) Ideomorphic Position (D3) Ideomorphic Test (D5) Ideomorphic Test (D5) Ideomorphic Active (D6) (LRR A)
HYDROLOGY 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)	d: check all that apply) Water-Staine MLRA 1, Salt Crust (E Aquatic Inve Hydrogen Staine Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leaves (B9) 2, 4A, and 4B; 311) artebrates (B13) ulfide Odor (C1 izospheres alor Reduced Iron (Reduction in Ti	(except) ng Living Re(C4)	Secondary V	Indary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Irainage Patterns (B10) Iray-Season Water Table (C2) Iraitration Visible on Aerial Imagery (C9) Iraitration Position (D2) Iraitration Aquitard (D3) Iraitration According to the complete Position (D2) Iraitration Aquitard (D3) Iraitration (D5)
HYDROLOGY 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*)	d: check all that apply) Water-Staine MLRA 1, Salt Crust (E Aquatic Inve Hydrogen Staine Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leaves (B9) 2, 4A, and 4B; 311) artebrates (B13) ulfide Odor (C1 izospheres alor Reduced Iron (Reduction in Ti	(except) ng Living Re(C4)	Secondary V	Idary Indicators (2 or more required) Idater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Irainage Patterns (B10) Iray-Season Water Table (C2) Idaturation Visible on Aerial Imagery (C9) Ideomorphic Position (D2) Ideomorphic Position (D3) Ideomorphic Test (D5) Ideomorphic Test (D5) Ideomorphic Active (D6) (LRR A)
HYDROLOGY 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 (B5) Sparsely Vegetated Concave Surface (I	d; check all that apply) Water-Staine MLRA 1, Salt Crust (E Aquatic Inve Hydrogen So Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leaves (B9) 2, 4A, and 4B; 311) entebrates (B13) ulfide Odor (C1 itzospheres alor Reduced Iron (Reduction in Ti Stressed Plants ain in Remarks)	(except) ng Living Re(C4)	Secondary V	Idary Indicators (2 or more required) Idater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Irainage Patterns (B10) Iray-Season Water Table (C2) Idaturation Visible on Aerial Imagery (C9) Ideomorphic Position (D2) Ideomorphic Position (D3) Ideomorphic Test (D5) Ideomorphic Test (D5) Ideomorphic Test (D5) Ideomorphic Test (D6) (LRR A)
HYDROLOGY 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 (Billing Sparsely Vegetated Concave Surface (IField Observations: Surface Water Present?	d; check all that apply) Water-Staine MLRA 1, Salt Crust (E Aquatic Inve Hydrogen Staine Oxidized Rh Presence of Recent Iron Stunted or S Other (Explaine) No Depth (inch	ed Leaves (B9) 2, 4A, and 4B; 311) artebrates (B13) ulfide Odor (C1 izospheres alor Reduced Iron (Reduction in Ti stressed Plants ain in Remarks)	(except) ng Living Re(C4)	Secondary V	Idary Indicators (2 or more required) Idater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Irainage Patterns (B10) Iray-Season Water Table (C2) Idaturation Visible on Aerial Imagery (C9) Ideomorphic Position (D2) Ideomorphic Position (D3) Ideomorphic Test (D5) Ideomorphic Test (D5) Ideomorphic Test (D5) Ideomorphic Test (D6) (LRR A)
HYDROLOGY 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 (IField Observations: Surface Water Present? Water Table Present?	d: check all that apply) Water-Staine MLRA 1, Salt Crust (E Aquatic Inve Hydrogen St Oxidized Rh Presence of Recent Iron Stunted or S Other (Explaine) No Depth (inch	ed Leaves (B9) 2, 4A, and 4B; 311) artebrates (B13) ulfide Odor (C1 izospheres alor Reduced Iron (Reduction in Ti Stressed Plants ain in Remarks) es): N/A hes):	(except) ng Living R (C4) Iled Soils (CD1) (LRR	Secondary V	Indary Indicators (2 or more required) Indicators (2 or more required) Indicators (B9) (MLRA 1, 2, 4A, and 4B) Irainage Patterns (B10) Iry-Season Water Table (C2) Indicator Visible on Aerial Imagery (C9) Indicator Position (D2) Indicator Position (D3) Indicator Position
HYDROLOGY 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 (Bind Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes (includes capillary fringe)	d: check all that apply) Water-Staine MLRA 1, Salt Crust (E Aquatic Inve Hydrogen St Oxidized Rh Presence of Recent Iron Stunted or S 7) Other (Explaine) No Depth (inch	ed Leaves (B9) 2, 4A, and 4B; 311) artebrates (B13) ulfide Odor (C1 izospheres alor Reduced Iron (Reduction in Ti Stressed Plants ain in Remarks) es): NA es): NA es):	(except) ng Living R (C4) Illed Soils (CD1) (LRR	Secondary V	Indary Indicators (2 or more required) Indicators (2 or more required) Indicators (B9) (MLRA 1, 2, 4A, and 4B) Irainage Patterns (B10) Iry-Season Water Table (C2) Indicator Visible on Aerial Imagery (C9) Indicator Position (D2) Indicator Position (D3) Indicator Position
HYDROLOGY 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 (Billian Sparsely Vegetated Concave Surface (IField Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes	d: check all that apply) Water-Staine MLRA 1, Salt Crust (E Aquatic Inve Hydrogen St Oxidized Rh Presence of Recent Iron Stunted or S 7) Other (Explaine) No Depth (inch	ed Leaves (B9) 2, 4A, and 4B; 311) artebrates (B13) ulfide Odor (C1 izospheres alor Reduced Iron (Reduction in Ti Stressed Plants ain in Remarks) es): NA es): NA es):	(except) ng Living R (C4) Illed Soils (CD1) (LRR	Secondary V	Indary Indicators (2 or more required) Indicators (2 or more required) Indicators (B9) (MLRA 1, 2, 4A, and 4B) Irainage Patterns (B10) Iry-Season Water Table (C2) Indicator Visible on Aerial Imagery (C9) Indicator Position (D2) Indicator Position (D3) Indicator Position
HYDROLOGY 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 (Bind Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes (includes capillary fringe)	d: check all that apply) Water-Staine MLRA 1, Salt Crust (E Aquatic Inve Hydrogen St Oxidized Rh Presence of Recent Iron Stunted or S 7) Other (Explaine) No Depth (inch	ed Leaves (B9) 2, 4A, and 4B; 311) artebrates (B13) ulfide Odor (C1 izospheres alor Reduced Iron (Reduction in Ti Stressed Plants ain in Remarks) es): NA es): NA es):	(except) ng Living R (C4) Illed Soils (CD1) (LRR	Secondary V	Indary Indicators (2 or more required) Indicators (2 or more required) Indicators (B9) (MLRA 1, 2, 4A, and 4B) Irainage Patterns (B10) Iry-Season Water Table (C2) Indicator Visible on Aerial Imagery (C9) Indicator Position (D2) Indicator Position (D3) Indicator Position
HYDROLOGY 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 (Billian Sparsely Vegetated Concave Surface (IField Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, model)	d: check all that apply) Water-Staine MLRA 1, Salt Crust (E Aquatic Inve Hydrogen St Oxidized Rh Presence of Recent Iron Stunted or S 7) Other (Explaine) No Depth (inch	ed Leaves (B9) 2, 4A, and 4B; 311) artebrates (B13) ulfide Odor (C1 izospheres alor Reduced Iron (Reduction in Ti Stressed Plants ain in Remarks) es): NA es): NA es):	(except) ng Living R (C4) Illed Soils (CD1) (LRR	Secondary V	Indary Indicators (2 or more required) Indicators (2 or more required) Indicators (B9) (MLRA 1, 2, 4A, and 4B) Irainage Patterns (B10) Iry-Season Water Table (C2) Indicator Visible on Aerial Imagery (C9) Indicator Position (D2) Indicator Position (D3) Indicator Position
HYDROLOGY 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 (Billian Sparsely Vegetated Concave Surface (IField Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, model)	d: check all that apply) Water-Staine MLRA 1, Salt Crust (E Aquatic Inve Hydrogen St Oxidized Rh Presence of Recent Iron Stunted or S 7) Other (Explaine) No Depth (inch	ed Leaves (B9) 2, 4A, and 4B; 311) artebrates (B13) ulfide Odor (C1 izospheres alor Reduced Iron (Reduction in Ti Stressed Plants ain in Remarks) es): NA es): NA es):	(except) ng Living R (C4) Illed Soils (CD1) (LRR	Secondary V	Indary Indicators (2 or more required) Indicators (2 or more required) Indicators (B9) (MLRA 1, 2, 4A, and 4B) Irainage Patterns (B10) Iry-Season Water Table (C2) Indicator Visible on Aerial Imagery (C9) Indicator Position (D2) Indicator Position (D3) Indicator Position

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BIN	
Consulting Engineer	s
& Coologiste Inc.	

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

Ceologists, Inc. Project/Site: Humboldt Bay Harbor District-RMMT		Citu/County: Humboldt		_ Sampling Date: 5/12/22
Applicant/Owner: Humboldt Bay Harbor District		City/County.	State: CA	Sampling Point: TP 46
nvestigator(s): Joseph Saler, Cindy Wilcox				_ Sampling Point: 11 10
_andform (hillslope, terrace, etc.): Pais waspit,	0.00	Section, Township, Rai	nge:	n
				7131 Datum: WGS 84
Soil Map Unit Name: 1014 Urban land An	thralfic x	Gerorthents a	600.0-7/6NWI classi	fication: Theohwater will
Are climatic / hydrologic conditions on the site typical fo	or this time of year	ar? YesX_ No _	(If no, explain in	Remarks.)
Are Vegetation, Soil, or Hydrology	significantly	disturbed? Are "	Normal Circumstances	" present? Yes 🗶 No
Are Vegetation, Soil, or Hydrology				
SUMMARY OF FINDINGS - Attach site m	nap showing	sampling point le	ocations, transect	ts, important features, etc
Hydrophytic Vegetation Present? Yes	No X			× .
Hydric Soil Present? Yes	_ No	Is the Sampled		No.
Wetland Hydrology Present? Yes	_ No _X	within a Wetlan	id? Tes	NO
Remarks: WETS normal rainfall				15 6
VEGETATION – Use scientific names of p	olants.			
204	Absolute		Dominance Test wo	rksheet:
Tree Stratum (Plot size: 30	% Cover	Species? Status	Number of Dominant	
1		·	That Are OBL, FACW	/, or FAC:(A)
2			Total Number of Dorr	
3.		·	Species Across All St	trata: (8)
4		= Total Cover	Percent of Dominant	
Sapling/Shrub Stratum (Plot size: 5')	-	Total Cover	That Are OBL, FACW	
1. Baccharis pilulais rep. contanguine	¢ 20	- UPL	Prevalence Index w	
2 Salix hookeriona	30	FACW		: Multiply by:
3. Rubu ormeriacu	30	FAC		x 1 =
4.				x 2 =
5				x 3 =
	80	= Total Cover		x 4 =
Herb Stratum (Plot size: 5'	0	uol	7//	x 5 =
1. Brita malma	<u> </u>	UPL	Column Totals.	(A) (B)
2 Attakantum Edoratum	10	FACU	Prevalence Inde	ex = B/A =
3. Jucia sativa	3	MPL	Hydrophytic Vegeta	
4. Myasotis discolor		- FAC		r Hydrophytic Vegetation
5. Platago ma jor		FAC FAC	2 - Dominance T	
6. Runge Krispy			3 - Prevalence In	
7. Sorchur oberacew 8. Geraium disectum				il Adaptations ¹ (Provide supporting rks or on a separate sheet)
	- 3	FACU	5 - Wetland Non-	
9. Plantage longolata 10. Holcus langus	_ - -	FAC		rophytic Vegetation ¹ (Explain)
11. Csalium opanine		FACU		soil and wetland hydrology must
	या	- T-tal Carra 20.5		sturbed or problematic.
Woody Vine Stratum (Plot size: 5ft)		= Total Cover 20.5		
1. Conicera Vispidula	20_	FACU	Hydrophytic	
2			Vegetation	. 🗙
	20	= Total Cover	Present?	Yes No
% Bare Ground in Herb Stratum 59*				
* Liter, duff from Rubus + Shub	0.0	have some	K	
			transfer to the second	

Profile Desc	cription: (Describe	, to the depi	th needed to document the i			i tilo abacilo	e or maioatoro.,
Depth	Matrix		Redox Features				
(inches)	Color (moist)	_ <u>%</u>	Color (moist) %	Type ¹	Loc²	<u>Texture</u>	Remarks
0-15	104R312	100				SIL	wloce graves
15-24	54 411	90	- sed matrix			arts	compacted gravel
	WYR 3/2	10	Mr. Konding.	7111		7	workets de
						-	- Company
	4				-	-	
	-						: Ti
						-	-
¹Type: C=C	concentration, D=De	pletion, RM=	Reduced Matrix, CS=Covered	d or Coate	d Sand Gr	ains. ² Lo	ocation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applie	cable to all I	LRRs, unless otherwise not	ed.)		Indicat	tors for Problematic Hydric Soils ³ :
Histosol	l (A1)		Sandy Redox (S5)			2 0	em Muck (A10)
Histic E	pípedon (A2)		Stripped Matrix (S6)		7.	Re	ed Parent Material (TF2)
Black H	istic (A3)		Loamy Mucky Mineral (F1	l) (except	MLRA 1)	Ve	ry Shallow Dark Surface (TF12)
	en Sulfide (A4)		Loamy Gleyed Matrix (F2)		Ot	her (Explain in Remarks)
	d Below Dark Surfac	ce (A11)	Depleted Matrix (F3)			1	
	ark Surface (A12)		Redox Dark Surface (F6)				tors of hydrophytic vegetation and
	Mucky Mineral (S1)		Depleted Dark Surface (F	7)			land hydrology must be present,
	Gleyed Matrix (S4)		Redox Depressions (F8)			unle	ess disturbed or problematic
Restrictive	Layer (if present):						
Type:							1
Depth (in	ches):					Hydric So	il Present? Yes No 🔀
						- 1	
						+ h	1
Wetland Hy	drology Indicators		la character all these accepts		P	- h	1
Wetland Hy Primary Indi	drology Indicators		; check all that apply)				ondary Indicators (2 or more required)
Wetland Hy Primary Indi	rdrology Indicators cators (minimum of Water (A1)		Water-Stained Leav		cept		Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hy Primary Indi Surface High Wa	rdrology Indicators cators (minimum of Water (A1) ater Table (A2)		Water-Stained Leav MLRA 1, 2, 4A, a		ccept	_	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hy Primary Indi Surface High Wa	rdrology Indicators cators (minimum of Water (A1) ater Table (A2) ion (A3)		Water-Stained Leaver MLRA 1, 2, 4A, a	and 4B)	cept	<u> </u>	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Wetland Hy Primary Indi Surface High Wa Saturati Water M	rdrology Indicators cators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1)		Water-Stained Leav. MLRA 1, 2, 4A, a Salt Crust (B11) Aquatic Invertebrate	s (B13)	cept	_ 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hy Primary Indi Surface High Wa Saturati Water M	rdrology Indicators cators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2)		Water-Stained Leave MLRA 1, 2, 4A, a Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Od	and 4B) s (B13) dor (C1)		_ _ 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Täble (C2) Saturation Visible on Aerial Imagery (C9)
Wetland Hy Primary India Surface High Wa Saturati Water M Sedime Drift De	rdrology Indicators cators (minimum of a Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3)		Water-Stained Leave MLRA 1, 2, 4A, a Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Oc Oxidized Rhizosphe	and 4B) s (B13) dor (C1) res along t	_iving 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)
Wetland Hy Primary India Surface High Wa Saturati Water M Sedime Drift De	rdrology Indicators cators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4)		Water-Stained Leav MLRA 1, 2, 4A, a Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Oc Oxidized Rhizosphe Presence of Reduce	and 4B) s (B13) dor (C1) res along to	_iving Roo	ots (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 Hy Primary Indi Surface High Wa Saturati Water M Sedime Drift De Algal Ma	rdrology Indicators cators (minimum of a Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5)		Water-Stained Leav MLRA 1, 2, 4A, a Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Oc Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti	s (B13) dor (C1) res along to d Iron (C4 on in Tilled	_iving Roo)* I Soils (C6	ots (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 Hy Primary Indi Surface High Wa Saturati Water M Sedime Drift De Algal Ma	rdrology Indicators cators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4)		Water-Stained Leav MLRA 1, 2, 4A, a Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Oc Oxidized Rhizosphe Presence of Reduce	s (B13) dor (C1) res along to d Iron (C4 on in Tilled	_iving Roo)* I Soils (C6		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedime Drift De Algal Ma Iron Dep Surface	rdrology Indicators cators (minimum of a Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	one required	Water-Stained Leave MLRA 1, 2, 4A, a Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Oc Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti Stunted or Stressed	s (B13) dor (C1) res along t d Iron (C4 on in Tilled Plants (D1	_iving Roo)* I Soils (C6	ots (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 Hy Primary Indi Surface High Wa Saturati Water M Sedime Drift De Algal Ma Iron De Surface	rdrology Indicators cators (minimum of atter Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)	one required	Water-Stained Leave MLRA 1, 2, 4A, a Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Oc Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti Stunted or Stressed Other (Explain in Re	s (B13) dor (C1) res along t d Iron (C4 on in Tilled Plants (D1	_iving Roo)* I Soils (C6	ots (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 Hy Primary Indi Surface High Wa Saturati Water M Sedime Drift De Algal Ma Iron Dep Surface Inundati Sparset	rdrology Indicators cators (minimum of or the Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concav	one required	Water-Stained Leave MLRA 1, 2, 4A, a Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Oc Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti Stunted or Stressed Other (Explain in Re	s (B13) dor (C1) res along t d Iron (C4 on in Tilled Plants (D1	_iving Roo)* I Soils (C6	ots (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 Hy Primary Indi Surface High Wa Saturati Water M Sedime Drift De Algal Ma Iron De Surface Inundati Sparset	rdrology Indicators cators (minimum of a Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) e Soil Cracks (B6) ion Visible on Aerial y Vegetated Concavervations:	one required Imagery (B7	Water-Stained Leave MLRA 1, 2, 4A, a Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Oc Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti Stunted or Stressed Other (Explain in Re	s (B13) dor (C1) res along t d Iron (C4 on in Tilled Plants (D1	_iving Roo)* I Soils (C6	ots (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 Hy Primary Indi Surface High Wa Saturati Water M Sedime Drift De Algal Ma Iron De Surface Inundati Sparset	rdrology Indicators cators (minimum of a Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) a Soil Cracks (B6) ion Visible on Aerial y Vegetated Concavervations: ter Present?	Imagery (B7 ve Surface (B	Water-Stained Leav MLRA 1, 2, 4A, a Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Oc Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti Stunted or Stressed Other (Explain in Re	s (B13) dor (C1) res along t d Iron (C4 on in Tilled Plants (D1	_iving Roo)* I Soils (C6	ots (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 Hy Primary Indi Surface High Wa Saturati Water M Sedime Driff De Algal Ma Iron De Surface Inundati Sparset Field Obser Surface Wat Water Table Saturation P (includes ca	rdrology Indicators cators (minimum of- Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) soil Cracks (B6) ion Visible on Aerial y Vegetated Concav rvations: ter Present?	Imagery (B7 /e Surface (B Yes N Yes N	Water-Stained Leav MLRA 1, 2, 4A, a Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Oc Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti Stunted or Stressed Other (Explain in Re 38) Depth (inches): Depth (inches):	s (B13) dor (C1) res along t d Iron (C4 on in Tilled Plants (D' marks)	Living Roo)* I Soils (C6 I) (LRR A)	its (C3) i) and Hydrolo	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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Consulting Engineers WETLAND DETERMINATION DATA: FORM – Western Mountains, Valleys, and Coast Region

Geologists, Inc.	Humboli	5/12/2
	City/County: Humbok	
Applicant/Owner: Humboldt Bay Harbor District		State: CA Sampling Point: TP47
Investigator(s): Joseph Saler, Cindy Wilcox	Section, Township, R	
Landform (hillslope, terrace, etc.): Poninsula spi		c, convex, none): Concave Slope (%): 2-5
Subregion (LRR): A, MLRA-4B	Lat: 40.819178	Long:
Soil Map Unit Name: 1014 - Urbanland An	Miltic yenorthests	0-20/0 NWI classification: The Shouser Foresta
Are climatic / hydrologic conditions on the site typical for		6 1410 10 11 11 11 11 11
Are Vegetation, Soil, or Hydrology		e "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology		needed, explain any answers in Remarks.)
		locations, transects, important features, etc.
		, , , , , , , , , , , , , , , , , , , ,
Hydrophytic Vegetation Present? Yes X Hydric Soil Present? Yes X	No Is the Sample	
Wetland Hydrology Present?	No within a Wetl	and? Yes No
		diller port to los
Children & There	gound connectivity to Hum	about Bay. Bot durabed as
Current outflow depression	or. Cobbles, Swep	r seature: PEMIA+BXOn
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		That Are OBL, FACW, or FAC: (A)
2		Total Number of Dominant
3		Species Across Ali Strata: (B)
4		Percent of Dominant Species ()
Sapling/Shrub Stratum (Plot size: 5')	= Total Cover	That Are OBL, FACW, or FAC:(A/B)
1. Rubus armeniacus	5 FAC	Prevalence Index worksheet:
2,		Total % Cover of: Multiply by:
3		OBL species x 1 =
4.		FACW species x 2 =
5.		FAC species x 3 =
	= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 5'	93 × FAC	UPL species x 5 =
1. Agrostis stolonitera		Column Totals: (A) (B)
2. Lotus cornicularlus.	5 FAC	Prevalence Index = B/A =
3. Cyperus eragroshs	PACU FAC	- Injuropinjuo regoundi munontono.
5. Leonagon saxatilis	TACU FACU	1 - Rapid Test for Hydrophytic Vegetation
6. Trifolium repens	3 FAC	2 - Dominance Test is >50%
110		3 - Prevalence Index is ≤3.0¹
7;		 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9.		5 - Wetland Non-Vascular Plants ¹
10		Problematic Hydrophytic Vegetation¹ (Explain)
11		¹ Indicators of hydric soil and wetland hydrology must
	105 = Total Cover 525	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	
Remarks:		
One herbaceur cover within d	ones la	
MAC MINOR MAN G	ין אופטיוןאל.	

inches) Color (moist) %	Redox Features Color (moist) % Type ¹ Loc ²	<u>Texture</u> Remarks
-3 0 $\sqrt{2}$ 0		L
3-12+ 2.544/2 100		CALS
100		SO 23
		
	RM=Reduced Matrix, CS=Covered or Coated Sand Gra	
ydric Soil Indicators: (Applicable to		Indicators for Problematic Hydric Soils ³ :
_ Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2) Black Histic (A3)	Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except MLRA 1)	Red Parent Material (TF2)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
Depleted Below Dark Surface (A11)		Citier (Explain in Remarks)
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
estrictive Layer (if present):		
Type:		V
Depth (inches):		Hydric Soil Present? Yes V No
emarks: - Positive AAD read - Extended compacted	ion in upper 12 inches.	
- Positive AAD read - Extrevely compacted	ion in upper 12 inches. cubble and bouldon @ 12	în.
YDROLOGY	ion in upper 12 inches. Cabble and bouldon @ 12	in.
- Positive AAD read - Extrevely compacted YDROLOGY Votland Hydrology Indicators:		
- Positive AAD read - Extrevely compacted YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requ	ired; check all that apply)	Secondary Indicators (2 or more required)
- Resitive AAD read- - Extremely compacted PDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1)	ired; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
- Positive AAD read - Extremely compacted (DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2)	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)
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Positive AAD read Extremely compacted (DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requirements 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)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Positive AAD read Extremely compacted (DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one required 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)
Positive AAD read- Extremely compacted (DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requirement Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	ired; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 s (C3) Geomorphic Position (D2)
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Positive And read Positive And read Positive Compacted Positive	water-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) 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) Secondary Indicators (B2) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Positive And read Positive And read Positive Compacted Positive	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 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) ie (B8) — No — Depth (inches): — Wetla monitoring well, aerial photos, previous inspections), if	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) Secondary Indicators (D2) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No Indicators (2 or more required) (A) Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9)
Positive AAD read CDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requised 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 ided Observations: urface Water Present? Ves Vater Table Present? Atter Table Present? Acter Table Present? A	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 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) No Depth (inches): WA No Depth (inches): Wetla	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 (CS) 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

WET AND DETERMINATION	N DATA FORM			
sulting Engineers Geologists, Inc. WETLAND DETERMINATIO			A	
Project/Site: Humboldt Bay Harbor District-RMMT	City/C	ounty: Humboldt		_ Sampling Date: 5/12/27
Applicant/Owner: Humboldt Bay Harbor District			State: CA	_ Sampling Point: TP48
nvestigator(s): Joseph Saler, Cindy Wilcox	Section			
Investigator(s): Joseph Saler, Cindy Wilcox Landform (hillslope, terrace, etc.): Maria A Spir	t balside Local	relief (concave,	convex, none): Nan	Slope (%): 0-1
Subregion (LRR): A, MLRA-4B	Lat: 40, 819	1159	Long: 724.1796	Datum: WGS 84
Soil Map Unit Name: 1014 - Whan land An	Myaltic Xevort	hents asso	C. O - 24 NWI classi	fication: Freshwater Fore
Are climatic / hydrologic conditions on the site typical	for this time of year? You	es X No	(If no explain in	Remarks) Shrub wetton
Are Vegetation, Soil, or Hydrology Are Vegetation, Soil, or Hydrology SUMMARY OF FINDINGS - Attach site	significantly disturb	ped? Are that it is a second of the second o	'Normal Circumstances eeded, explain any ansv	" present? Yes No vers in Remarks.)
Hydrophytic Vegetation Present? Yes	No No No	Is the Sampled within a Wetlan		No <u></u>
/EGETATION – Use scientific names of Tree Stratum (Plot size: 30' 1	Absolute Dom <u>% Cover</u> Spec		Number of Dominant That Are OBL, FACW	Species 1 (A)
4			Species Across All S	trata: (B)
	= Tot	tal Cover	Percent of Dominant That Are OBL, FACV	Species 33% (A/B)
Sapling/Shrub Stratum (Plot size: 5'	20 L	1 1	Prevalence Index w	(71B)
1. Rulous arminach		HAC	Total % Cover of	
2				x 1 =
4.			FACW species	x 2 =
5.			FAC species	
*	20 = Tot	tal Cover		x 4 =
Herb Stratum (Plotysize: 5'	3⊂	ASSET AND A	· -	x 5 =
1 Anthoxanthum adoratum		FACU	Column l'otals:	(A) (B)
2 Contaderia jubata 3 Leontiden Pakatilis	- 2 V	FACU		ex = B/A =
3. Hoku anow	15	FACU	Hydrophytic Vegeta	
5. Plantago ancesipta		FACU		r Hydrophytic Vegetation
6. Lotu Corniculatu	10	FAC	2 - Dominance T	
7. Crown Vulgare		FACU	3 - Prevalence Ir	idex is ≤3.0° ∮ Adaptations¹ (Provide supporting
8. Viça Vilasa	12	UPL	data in Rema	rks or on a separate sheet)
· Festuca annihoacea	3	FAC	5 - Wetland Non-	-Vascular Plants ¹
10. Symphyotrichum chiese	5	FAC	Problematic Hyd	rophytic Vegetation ¹ (ЕхрІаіл)

= Total Cover 51.5

= Total Cover

Remarks:

Woody Vine Stratum (Plot size:

% Bare Ground in Herb Stratum

Dove herbaceans veg.

¹Indicators of hydric soil and wetland hydrology must

be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

rofile Description: (Describe to Depth Matrix		Redo	x resture:	S			
inches) Color (moist)	% (Color (moist)	%	Type ¹	_Loc ²	<u>Texture</u>	Remarks
1-3 104R3/2	100			11		<u> </u>	
3-23 104R 8/2	100				No.	gr SL	compacted
23-24 254 4/1	95 11	04R3/2	5	_	_		very compact-cl
V2 P1 V1 11						4. 000	
						•	- \\"
			• ——				-
		_1				4	
							-
Type: C=Concentration, D=Deple	etion, RM=Red	duced Matrix. C	S=Covere	d or Coate	ed Sand Gr	rains ² Loc	eation: PL=Pore Lining, M=Matrix.
ydric Soil Indicators: (Applica							rs for Problematic Hydric Soils ³ :
Histosol (A1)		Sandy Redox ((S5)			2 cn	n Muck (A10)
Histic Epipedon (A2)		Stripped Matrix				Red	Parent Material (TF2)
Black Histic (A3)	_	Loamy Mucky	Mineral (F	1) (except	t MLRA 1)		/ Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	_	Loamy Gleyed		2)		Othe	er (Explain in Remarks)
_ Depleted Below Dark Surface	(A11)	Depleted Matri				34	
Thick Dark Surface (A12)	_	Redox Dark St	٠.,				rs of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)		Depleted Dark Redox Depres					nd hydrology must be present, s disturbed or problematic.
estrictive Layer (if present):		Idedox Depies	sions (i o)			T	a distorbed or problematic.
Type:							
		-				Hydric Soil	Present? Yes No
Depth (inches):		_				11,7 411.0 00	
Depth (inches):							
YDROLOGY							
	ne required; ch	neck ail that app	oly)			Seco	ndary Indicators (2 or more required)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of or	ne required; ch			ves (B9) (e	except		the state of the s
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1)	ne required; ch	Water-Sta		ves (B9) (e and 4 8)	except		Vater-Stained Leaves (B9) (MLRA 1, 2,
POROLOGY Vetland Hydrology Indicators: Inimary Indicators (minimum of or Surface Water (A1) High Water Table (A2)	ne required; ch	Water-Sta	ained Leav		except	v	the state of the s
YDROLOGY Vetland Hydrology Indicators: Inimary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3)	ne required; ch	Water-Sta MLRA Salt Crus	ained Leav 1, 2, 4A, t (B11)	and 4B)	except	v	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2)	ne required; ch	Water-Sta MLRA Salt Crus Aquatic In	ained Leav	and 4B) es (B13)	except	v	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2)
YDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	ne required; c	Water-Sta MLRA Sait Crus Aquatic in Hydroger	ained Leav 1, 2, 4A, t (B11) nvertebrate n Sulfide C	and 4B) es (B13) Odor (C1)	except	v c s	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	ne required; ch	Water-Sta MLRA Salt Crus Aquatic Ir Hydroger Oxidized	ained Leav 1, 2, 4A, t (B11) nvertebrate n Sulfide C Rhizosphe	and 4B) es (B13) Odor (C1)	Living Ro	V C S ots (C3) C	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	ne required; ch	Water-Sta MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence	ained Leav 1, 2, 4A, t (B11) nvertebrate n Sulfide C Rhizosphe e of Reduc	es (B13) Odor (C1) eres along ed Iron (C	Living Ro	V C S ots (C3) C	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Secomorphic Position (D2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	ne required; ch	Water-Sta MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent Ir	ained Leav 1, 2, 4A, t (B11) nvertebrate n Sulfide C Rhizosphe of Reduct	es (B13) Odor (C1) eres along ed Iron (C	Living Ro	V C S ots (C3) C S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Secomorphic Position (D2) Shallow Aquitard (D3)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of or 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 In Hydroger Oxidized Presence Recent In	ained Leav 1, 2, 4A, t (B11) nvertebrate n Sulfide C Rhizosphe of Reduct	es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (D	Living Ro 4) ed Soils (C	V C S ots (C3) S S 6) F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Seomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of or 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)	nagery (B7)	Water-Sta MLRA Salt Crus Aquatic In Hydroger Oxidized Presence Recent In	ained Leav 1, 2, 4A, t (B11) nvertebrate n Sulfide C Rhizosphe of Reduct on Reduct or Stressec	es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (D	Living Ro 4) ed Soils (C	V C S ots (C3) S S 6) F	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Seomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of or 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 In	nagery (B7)	Water-Sta MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent Ir Stunted of	ained Leav 1, 2, 4A, t (B11) nvertebrate n Sulfide C Rhizosphe e of Reduct on Reduct or Stressec kplain in R	es (B13) Door (C1) eres along ed Iron (C tion in Tille d Plants (D emarks)	Living Ro 4) ed Soils (C	V C S ots (C3) S S 6) F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Seomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
VDROLOGY Vetland Hydrology Indicators: Verimary Indicators (minimum of or 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 Ir Sparsely Vegetated Concave	nagery (B7)	Water-Sta MLRA Salt Crus Aquatic In Hydroger Oxidized Presence Recent In Stunted of Other (Ex	ained Leav 1, 2, 4A, t (B11) nvertebrate n Sulfide C Rhizospho e of Reduct on Reduct or Stressed cplain in Re-	es (B13) Door (C1) eres along ed Iron (C tion in Tille d Plants (E emarks)	Living Ro 4) ed Soils (C	V C S ots (C3) S S 6) F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Seomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
VDROLOGY Vetland Hydrology Indicators: Inimary Indicators (minimum of or 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 In Sparsely Vegetated Concave	nagery (B7) Surface (B8)	Water-Sta MLRA Salt Crus Aquatic In Hydroger Oxidized Presence Recent In Stunted of Other (Ex	ained Leav 1, 2, 4A, t (B11) nvertebrate n Sulfide C Rhizosphe e of Reduct on Reduct or Stressed kplain in R	es (B13) Door (C1) eres along ed Iron (C tion in Tille d Plants (D emarks)	Living Ro 4) ed Soils (C	V C S ots (C3) S S 6) F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Seomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
POROLOGY Vetland Hydrology Indicators: Inimary Indicators (minimum of or 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 In Sparsely Vegetated Concave Field Observations: Surface Water Present? Vater Table Present? Vater Table Present?	nagery (B7) Surface (B8) es No es No	Water-Sta MLRA Salt Crus Aquatic in Hydroger Oxidized Presence Recent in Stunted of Other (Ex	ained Leavanne Leavan	es (B13) Deres along ed Iron (C tion in Tille d Plants (E emarks)	Living Roi 4) ed Soils (Ci 01) (LRR A	V 0 5 ots (C3) 6 5 6) 6 6	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Seomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of or 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 Ir Sparsely Vegetated Concave Field Observations: Surface Water Present? Veter Table Present? Veter Table Present?	nagery (B7) Surface (B8) es No es No	Water-Sta MLRA Salt Crus Aquatic in Hydroger Oxidized Presence Recent in Stunted of Other (Ex	ained Leavanne Leavan	es (B13) Deres along ed Iron (C tion in Tille d Plants (E emarks)	Living Roi 4) ed Soils (Ci 01) (LRR A	V 0 5 ots (C3) 6 5 6) 6 6	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Secomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Primary Indicators (minimum of or 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 In Sparsely Vegetated Concave Field Observations: Surface Water Present?	nagery (B7) Surface (B8) es No es No	Water-Sta MLRA Salt Crus Aquatic in Hydroger Oxidized Presence Recent in Stunted of Other (Ex	ained Leavanne Leavan	es (B13) Deres along ed Iron (C tion in Tille d Plants (E emarks)	Living Roi 4) ed Soils (Ci 01) (LRR A	V 0 5 ots (C3) 6 5 6) 6 6	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Secomorphic 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 or 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 Ir Sparsely Vegetated Concave Field Observations: Surface Water Present? Veter Table Present? Vater Table Present? Vater Table Recorded Data (stream	nagery (B7) Surface (B8) es No es No	Water-Sta MLRA Salt Crus Aquatic in Hydroger Oxidized Presence Recent in Stunted of Other (Ex	ained Leavanne Leavan	es (B13) Deres along ed Iron (C tion in Tille d Plants (E emarks)	Living Roi 4) ed Soils (Ci 01) (LRR A	V 0 5 ots (C3) 6 5 6) 6 6	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Secomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

sulting Engineers WETLAND DETERMINA	• TION DATA FORM – Western	Mountains, Valleys, and Coast Region
Geologists, Inc.		
Project/Site: Humboldt Bay Harbor District-RMM1	City/County: Hui	mboldt Sampling Date: 5/12/2
Applicant/Owner: Humboldt Bay Harbor District		State: CA Sampling Point: TP49
Investigator(s): Joseph Saler, Cindy Wilcox	Section, Townsh	
andform (hillslope, terrace, etc.): Revinsu		
		Long: -124, 180274 Datum: WGS 84
		15 agov. 0 Monw classification: none
Are climatic / hydrologic conditions on the site ty		
Are Vegetation, Soil, or Hydrolog		Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrolog	y naturally problematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach s	ite map showing sampling po	oint locations, transects, important features, et
Hydrophytic Vegetation Present? Yes		* Meats CO
	140	impled Area
	No within a	Wetland? Yes No Wetland d
Remarks: WETS normal rainfall		d- the t
TP excavated in mowed	industrial field. I	n Slight depression
Torta Tien III		
/EGETATION Use scientific names		
Tree Stratum (Plot size: 30')	Absolute Dominant India <u>% Cover</u> Species? Sta	atue
1		Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2		Total Number of Dominant
3		Species Across All Strata: (B)
4		Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 5'	= Total Cover	That Are OBL, FACW, or FAC: (A/B
1.		Prevalence index worksheet:
2.		Total % Cover of: Multiply by:
3		OBL species x 1 =
4		FACW species x 2 = FAC species x 3 =
5		FACU species x 4 =
Herb Stratum (Plot size: 5'	= Total Cover	UPL species x 5 =
1. Mentha Dulesium	55 / 08	32 Column Totals: (A) (B)
2. Rrunex (ris by)	20 V 54	Prevalence Index = B/A =
3. Festuca perennis	2 ====	Hydrophytic Vegetation Indicators:
4 Cypers etagrostis,		1 - Rapid Test for Hydrophytic Vegetation
5 Eleachards Wacrostockya	<u>\$</u> N	
6. Leantodon Saxatilis	1 + A	3 - Prevalence Index is ≤3.01
7. Lotu comiculatus	<u>Z</u>	4 - Morphological Adaptations ¹ (Provide supportin data in Remarks or on a separate sheet)
9		5 - Wetland Non-Vascular Plants ¹
10		Problematic Hydrophytic Vegetation¹ (Explain)
11		¹Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum / Plat size	86 = Total Cover	be present, unless disturbed or problematic.

* Bore soils, likely reflecting compacted grovel.

Woody Vine Stratum (Plot size:

% Bare Ground in Herb Stratum 30*
Remarks:

Hydrophytic Vegetation

Present?

= Total Cover

Depth	SE PROPERTY AND SECURIOR SE		th needed to document				
PERSONAL PROPERTY OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TO THE PER	Matrix		Redox Fe	atures	oc² Texture		Description
(inches)	Color (moist)	100	Color (moist)	% Type ¹ L	oc² Texture	-	Remarks
0-6	25/5/1	100	was when			10 11000	and the state of
6-16	2.313/1	99	werthe	<u> </u>			compected
					- Towy	ouckets '	*
			*	10	-		
						-	
			=Reduced Matrix, CS=Co				Pore Lining, M=Matrix.
		able to all	LRRs, unless otherwise	e noted.)			lematic Hydrlc Soils³:
Histoso	' '		Sandy Redox (S5)			cm Muck (A10	
	pipedon (A2)		Stripped Matrix (S6)			Red Parent Mat	, ,
_	listic (A3)		Loamy Mucky Mine			•	ark Surface (TF12)
	en Sulfide (A4) ed Below Dark Surfac	o /A11\	Loamy Gleyed MatrDepleted Matrix (F3		_ `	Other (Explain i	i indiliaina)
	ed Below Dark Surfac Park Surface (A12)	æ (A 1 1)	Redox Dark Surface		3Indic	ators of hydror	hytic vegetation and
	Mucky Mineral (S1)		Depleted Dark Surfa				y must be present,
	Gleyed Matrix (S4)		Redox Depressions			less disturbed	•
	Layer (if present):			· - /)	
Туре:							1
Depth (in	nchee).				Hydric S	ioil Present?	Yes No_X
YDROLO	ydrology Indicators	:					
			ed; check all that apply)		Se	condary Indica	tore (2 or more required)
	e Water (A1)			Legues (RQ) /eves			tors (2 or more required)
	/ater Table (A2)		Water-Stained	LEGACO (DO) (OVER		Water-Staine	A STATE OF THE PARTY OF THE PAR
			Water-Stained MLRA 1, 2			Water-Staine	d Leaves (B9) (MLRA 1, 2,
Saturat			MLRA 1, 2	, 4A, and 4B)	ept	7	d Leaves (B9) (MLRA 1, 2, B)
	tion (A3)			, 4A , and 4B)	ept	4A, and 4 Drainage Pa	d Leaves (B9) (MLRA 1, 2, B) terns (B10)
Water i	tion (A3) Marks (B1)		MLRA 1, 2 Salt Crust (B1 Aquatic Invert	, 4A , and 4B) 1) ebrates (B13)		4A, and 4 Drainage Pa Dry-Season Saturation V	d Leaves (B9) (MLRA 1, 2, B) terns (B10) Water Table (C2) sible on Aerial Imagery (C9
Water i Sedime	tion (A3) Marks (B1) ent Deposits (B2)		MLRA 1, 2 Salt Crust (B1 Aquatic Inverti Hydrogen Sulf	4A, and 4B) 1) ebrates (B13) fide Odor (C1)	ppt	4A, and 4 Drainage Pa Dry-Season Saturation V	d Leaves (B9) (MLRA 1, 2, B) terns (B10) Water Table (C2) sible on Aerial Imagery (C9
Water i Sedime Drift De	tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)		MLRA 1, 2 Salt Crust (B1 Aquatic Inverte Hydrogen Sulte Oxidized Rhiz	, 4A, and 4B) 1) ebrates (B13) fide Odor (C1) ospheres along Livi	ppt	4A, and 4 Drainage Pa Dry-Season	d Leaves (B9) (MLRA 1, 2, B) terns (B10) Water Table (C2) sible on Aerial Imagery (C9 Position (D2)
Water i Sedime Drift De Algal M	tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) fat or Crust (B4)		MLRA 1, 2 Salt Crust (B1 Aquatic Inverte Hydrogen Sult Oxidized Rhiz Presence of R	4A, and 4B) 1) ebrates (B13) fide Odor (C1)	ing Roots (C3)	4A, and 4 Drainage Pa Dry-Season Saturation Vi	d Leaves (B9) (MLRA 1, 2, B) terns (B10) Water Table (C2) sible on Aerial Imagery (C9 Position (D2) tard (D3)
Water if Sedime Drift De Algal M	tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)		MLRA 1, 2 Salt Crust (B1 Aquatic Inverte Hydrogen Sulfe Oxidized Rhiz Presence of R Recent Iron R	, 4A, and 4B) 1) ebrates (B13) fide Odor (C1) ospheres along Livi educed Iron (C4)	ing Roots (C3)	4A, and 4 Drainage Pa Dry-Season Saturation Vi Geomorphic Shallow Aqu	d Leaves (B9) (MLRA 1, 2, B) terns (B10) Water Table (C2) sible on Aerial Imagery (C9 Position (D2) tard (D3)
Water I Sedime Drift De Algal M Iron De Surface	tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5)	Imagery (E	MLRA 1, 2 Salt Crust (B1 Aquatic Inverte Hydrogen Sulf Oxidized Rhiz Presence of R Recent Iron R Stunted or Str	, 4A, and 4B) 1) ebrates (B13) fide Odor (C1) ospheres along Livi educed Iron (C4) eduction in Tilled S essed Plants (D1) (ing Roots (C3)	4A, and 4 Drainage Pa Dry-Season Saturation Vi Geomorphic Shallow Aqu FAC-Neutral Raised Ant M	d Leaves (B9) (MLRA 1, 2, B) Iterns (B10) Water Table (C2) sible on Aerial Imagery (C9 Position (D2) tard (D3) Test (D5)
Water I Sedime Drift De Algal M Iron De Surface Inunda	tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) e Soil Cracks (B6)		MLRA 1, 2 Salt Crust (B1 Aquatic Inverte Hydrogen Sulf Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explain	, 4A, and 4B) 1) ebrates (B13) fide Odor (C1) ospheres along Livi educed Iron (C4) eduction in Tilled S essed Plants (D1) (ing Roots (C3)	4A, and 4 Drainage Pa Dry-Season Saturation Vi Geomorphic Shallow Aqu FAC-Neutral Raised Ant M	d Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9 Position (D2) ttard (D3) Test (D5) Mounds (D6) (LRR A)
Water I Sedime Sedime Drift De Algal M Iron De Surface inunda Sparse	tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial ely Vegetated Concaveryations:	e Surface	MLRA 1, 2 Salt Crust (B1 Aquatic Inverte Hydrogen Sulf Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explain (B8)	, 4A, and 4B) 1) ebrates (B13) fide Odor (C1) ospheres along Livi educed Iron (C4) eduction in Tilled S essed Plants (D1) (in Remarks)	ing Roots (C3)	4A, and 4 Drainage Pa Dry-Season Saturation Vi Geomorphic Shallow Aqu FAC-Neutral Raised Ant M	d Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9 Position (D2) ttard (D3) Test (D5) Mounds (D6) (LRR A)
Water I Sedime Drift De Algal M Iron De Surface Inunda Sparse	tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial ely Vegetated Concavervations: ater Present?	re Surface	MLRA 1, 2 Salt Crust (B1 Aquatic Inverte Hydrogen Sulf Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explair (B8) No Depth (inches	dA, and 4B) abrates (B13) de Odor (C1) ospheres along Livi educed Iron (C4) eduction in Tilled S essed Plants (D1) (and in Remarks)	ing Roots (C3)	4A, and 4 Drainage Pa Dry-Season Saturation Vi Geomorphic Shallow Aqu FAC-Neutral Raised Ant M	d Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9 Position (D2) ttard (D3) Test (D5) Mounds (D6) (LRR A)
Water if Sedime Drift De Algal M Iron De Surface Inunda Sparse Field Obse Surface Wa	tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial ely Vegetated Concavervations: ater Present?	re Surface	MLRA 1, 2 Salt Crust (B1 Aquatic Inverte Hydrogen Sulf Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explair (B8) No Depth (inches	dA, and 4B) abrates (B13) de Odor (C1) ospheres along Livi educed Iron (C4) eduction in Tilled S essed Plants (D1) (and in Remarks)	ing Roots (C3)	4A, and 4 Drainage Pa Dry-Season Saturation Vi Geomorphic Shallow Aqu FAC-Neutral Raised Ant M	d Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9 Position (D2) ttard (D3) Test (D5) Mounds (D6) (LRR A)
Water I Sedime Sedime Drift De Algal M Iron De Surface Inunda Sparse Field Obse Surface Water Table	tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial ely Vegetated Concavervations: ater Present?	re Surface	MLRA 1, 2 Salt Crust (B1 Aquatic Inverte Hydrogen Sulf Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explair (B8) Depth (inches	AA, and 4B) 1) ebrates (B13) fide Odor (C1) ospheres along Livi educed Iron (C4) eduction in Tilled S essed Plants (D1) (in Remarks) S): N/A N/A	ing Roots (C3)	4A, and 4 Drainage Pa Dry-Season Saturation Vi Geomorphic Shallow Aqu FAC-Neutral Raised Ant M Frost-Heave	d Leaves (B9) (MLRA 1, 2, B) Iterns (B10) Water Table (C2) sible on Aerial Imagery (C9 Position (D2) Itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)
Water I Sedime Drift De Algal M Iron De Surface Inunda Sparse Field Obse Surface Water Table Saturation I	tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) fat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial ely Vegetated Concavervations: ater Present? e Present? present? apillary fringe)	ye Surface Yes Yes	MLRA 1, 2 Salt Crust (B1 Aquatic Inverte Hydrogen Sulf Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explair (B8) No Depth (inche: No Depth (inche: No Depth (inche:	AA, and 4B) 1) ebrates (B13) fide Odor (C1) ospheres along Livi educed Iron (C4) eduction in Tilled S essed Plants (D1) (in Remarks) S): N/A s): N/A s): N/A s):	ing Roots (C3)	4A, and 4 Drainage Pa Dry-Season Saturation Vi Geomorphic Shallow Aqu FAC-Neutral Raised Ant M Frost-Heave	d Leaves (B9) (MLRA 1, 2, B) Iterns (B10) Water Table (C2) sible on Aerial Imagery (C9 Position (D2) Itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)
Water I Sedime Drift De Algal M Iron De Surface Inunda Sparse Field Obse Surface Water Table Saturation I	tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) fat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial ely Vegetated Concavervations: ater Present? e Present? present? apillary fringe)	ye Surface Yes Yes	MLRA 1, 2 Salt Crust (B1 Aquatic Inverte Hydrogen Sulf Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explain (B8) No Depth (inche: No Depth (inche:	AA, and 4B) 1) ebrates (B13) fide Odor (C1) ospheres along Livi educed Iron (C4) eduction in Tilled S essed Plants (D1) (in Remarks) S): N/A s): N/A s): N/A s):	ing Roots (C3)	4A, and 4 Drainage Pa Dry-Season Saturation Vi Geomorphic Shallow Aqu FAC-Neutral Raised Ant M Frost-Heave	d Leaves (B9) (MLRA 1, 2, B) Iterns (B10) Water Table (C2) sible on Aerial Imagery (C9 Position (D2) Itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)
Water I Sedime Drift De Algal M Iron De Surface inunda Sparse Field Obse Surface Water Table Water Table (includes ca Describe R	tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial ely Vegetated Concavervations: ater Present? e Present? Present? apillary fringe) ecorded Data (strean	Yes Yes Yes Yes	MLRA 1, 2 Salt Crust (B1 Aquatic Inverte Hydrogen Sulf Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explain (B8) No Depth (inchesed to the contioning well, aerial pho-	AA, and 4B) 1) ebrates (B13) fide Odor (C1) ospheres along Livi educed Iron (C4) eduction in Tilled S essed Plants (D1) (in Remarks) S): N/A S): N/A S): V/A S): V	ing Roots (C3)	4A, and 4 Drainage Pa Dry-Season Saturation Vi Geomorphic Shallow Aqu FAC-Neutral Raised Ant M Frost-Heave	d Leaves (B9) (MLRA 1, 2, B) Iterns (B10) Water Table (C2) sible on Aerial Imagery (C9 Position (D2) Itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)
Water I Sedime Drift De Algal M Iron De Surface inunda Sparse Field Obse Surface Water Table Saturation I (includes ca	tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial ely Vegetated Concavervations: ater Present? e Present? Present? apillary fringe) ecorded Data (strean	Yes Yes Yes Yes	MLRA 1, 2 Salt Crust (B1 Aquatic Inverte Hydrogen Sulf Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explain (B8) No Depth (inchesed to the contioning well, aerial pho-	AA, and 4B) 1) ebrates (B13) fide Odor (C1) ospheres along Livi educed Iron (C4) eduction in Tilled S essed Plants (D1) (in Remarks) S): N/A S): N/A S): V/A S): V	ing Roots (C3)	4A, and 4 Drainage Pa Dry-Season Saturation Vi Geomorphic Shallow Aqu FAC-Neutral Raised Ant M Frost-Heave	d Leaves (B9) (MLRA 1, 2, B) Iterns (B10) Water Table (C2) sible on Aerial Imagery (C9 Position (D2) Itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)
Water I Sedime Drift De Algal M Iron De Surface Inunda Sparse Field Obse Surface Water Table Saturation I (includes ca Describe R Remarks:	tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial ely Vegetated Concavervations: atter Present? e Present? Present? apillary fringe) ecorded Data (stream Soils become Water table	Yes Yes Yes Yes m gauge, m	MLRA 1, 2 Salt Crust (B1 Aquatic Inverte Hydrogen Sulf Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explair (B8) No Depth (inche: No Depth (inche: No Depth (inche:	AA, and 4B) 1) ebrates (B13) fide Odor (C1) ospheres along Livi educed Iron (C4) eduction in Tilled S essed Plants (D1) (in Remarks) N/A s): N/A s): V/A s): V/A T tos, previous inspect	wetland Hydro	AA, and A Drainage Pa Dry-Season Saturation Vi Geomorphic Shallow Aqu FAC-Neutral Raised Ant M Frost-Heave	d Leaves (B9) (MLRA 1, 2, B) Iterns (B10) Water Table (C2) sible on Aerial Imagery (C9 Position (D2) Itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)



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

Geologists, Inc.		Humboldt		- Fliplan
Project/Site: Humboldt Bay Harbor District-RMMT	City/Co	ounty: Humbolat		Sampling Date: 5/12/22
Applicant/Owner: Humboldt Bay Harbor District				Sampling Point: TP50
Investigator(s): Joseph Saler, Cindy Wilcox	Sectio	n, Township, Rar	nge:	
Landform (hillslope, terrace, etc.): Reninsule	Spit Local	relief (concave, c	convex, none): Conv	€ <u>火</u> Slope (%): 10
Subregion (LRR): A, MLRA-4B	Lat: 40. 9	8988	Long: _124.18031	Datum: WGS 84
Soil Map Unit Name: 1014 Urbanland	Anthraltic Xero	thents ass	OC. O-24 NWI classifi	cation: Innhe
Are climatic / hydrologic conditions on the site typ				Taylor
Are Vegetation, Soil, or Hydrology				present? Yes No
Are Vegetation, Soil, or Hydrology	r naturally problema	tic? (If ne	eded, explain any answe	ers in Remarks,)
SUMMARY OF FINDINGS – Attach si	te map showing sam	pling point lo	ocations, transects	s, important features, etc
	No			\ .
	No	Is the Sampled		X
Wetland Hydrology Present? Yes _	No X	within a Wetlan	d? Yes	No
Remarks: WETS normal rainfall Upland pit for TP46 VEGETATION – Use scientific names		ation		
VEGETATION - Use scientific fightes	•	innat Indinator	Dominance Test wor	kahaati
Tree Stratum (Plot size: 30'	% Cover Spec	inant Indicator cies? Status		0.4
1,			Number of Dominant S That Are OBL, FACW,	1
2			Total Number of Desci	
3			Total Number of Domi Species Across All Str	
4		al Cover	Percent of Dominant S That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: 5'			Prevalence Index wo	
1.				Multiply by:
2				x 1 =
3			1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	x 2 =
4			100 A	x 3 =
5			FACU species	x 4 =
Herb Stratum (Plot size: 5')	= Tot	al Cover		x5=
1. Briza Maxima	25 ×	- UPL	Column Totals:	
2. Plantago Janceolata.	15	FACU		
3. Hyperhappis radicata	5	FACU	Hydrophytic Vegetat	x = B/A =
4. Jam bience;	10	WPL		Hydrophytic Vegetation
5. Anthoxantin odoratum	2	FACU	2 - Dominance Te	• • •
6. Lentodon saxatills	1	FACU	3 - Prevalence Inc	
7. Hypochaeris alabra	2	UPL		Adaptations ¹ (Provide supporting
8. Bromw hordancew	5	FACU		(s or on a separate sheet)
e testuce myuros	20 V	FACU	5 - Wetland Non-\	/ascular Plants ¹
10. Aira carronhylea	5	FACU	Problematic Hydro	ophytic Vegetation ¹ (Explain)
11. Sileve gallica	4 -	UPL		oil and wetland hydrology must
V ·	94 = Tota	al Cover	be present, unless dis	turbed or problematic.
Woody Vine Stratum (Plot size:		14.4		
1			Hydrophytic	
2			Vegetation Present? Yes	es No X
% Bare Ground in Herb Stratum	= Tota	al Cover	ricacilly 19	140
% Bare Ground in Herb Stratum				
4 Mass and grovel.				

Sampling Point



Depth Matrix	Bodov Footures		ce of indicators.)
(inches) Color (moist) %	Redox Features Color (moist) % Type Loc		Remarks
0-5 104R311 100		54	
1-16 2.54 5/1 100			yes very compacted
		9, 1000	y to (whipati)
		_	
		-1	*
		_	
			<u> </u>
		-	
	RM=Reduced Matrix, CS=Covered or Coated San		ocation: PL=Pore Lining, M=Matrix.
lydric Soil Indicators: (Applicable to			ators for Problematic Hydric Soils ³ :
Histosol (A1) Histic Epipedon (A2)	Sandy Redox (S5) Stripped Matrix (S6)		cm Muck (A10) led Parent Material (TF2)
Black Histic (A3)	Loarny Mucky Mineral (F1) (except MLR/		ery Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		Other (Explain in Remarks)
Depleted Below Dark Surface (A11)			
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indic	ators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		tland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	un	less disturbed or problematic.
lestrictive Layer (if present):			
Type:			
Depth (inches):	TP49, but no redox	Hydric S	oil Present? Yes No
YDROLOGY			
Vetland Hydrology Indicators:			
,	uired; check all that apply)	<u>Se</u>	condary Indicators (2 or more required)
Primary Indicators (minimum of one req Surface Water (A1)	Water-Stained Leaves (B9) (except		
Primary Indicators (minimum of one req 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 req 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 req 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 req 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 req 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 	=	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 Indicators (minimum of one req 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 Presence of Reduced Iron (C4) 	Roots (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)
Primary Indicators (minimum of one req 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils 	Roots (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)
Primary Indicators (minimum of one req 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR 	Roots (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 req 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR	Roots (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)
Primary Indicators (minimum of one req 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	Water-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	Roots (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 req 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 Imagen Sparsely Vegetated Concave Surfa	Water-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) y (B7) Other (Explain in Remarks) ce (B8)	Roots (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 req 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	Water-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) (L8) (B7) Other (Explain in Remarks) ce (B8)	Roots (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 req 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? Water Table 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR y (B7) Other (Explain in Remarks) ce (B8) Depth (inches): NA Depth (inches):	Roots (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)
Primary Indicators (minimum of one req 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? Water Table Present? Yes Saturation Present? Yes Signal Mater Crust (B6) Inundation Visible on Aerial Imager, Sparsely Vegetated Concave Surfa Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Signal Mater Crust (Material Imager, Signal 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR (B7) Other (Explain in Remarks) ce (B8) Depth (inches): No Depth (inches): No Depth (inches):	Roots (C3) s (C6) RR 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)
Primary Indicators (minimum of one req 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? Water Table Present? Yes Saturation Present? Yes Signal Mater Crust (B6) Inundation Visible on Aerial Imager, Sparsely Vegetated Concave Surfa Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Signal Mater Crust (Material Imager, Signal 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR y (B7) Other (Explain in Remarks) Ce (B8) Depth (inches):	Roots (C3) s (C6) RR 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)
Primary Indicators (minimum of one req 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 Surfa Field Observations: Surface Water Present? Water Table Present? Yes Saturation 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR (B7) Other (Explain in Remarks) ce (B8) Depth (inches): No Depth (inches): No Depth (inches):	Roots (C3) s (C6) RR 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)
Primary Indicators (minimum of one req 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? Water Table Present? Ves Saturation Present? Ves Simulation Present? Secribe 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR (B7) Other (Explain in Remarks) ce (B8) Depth (inches): No Depth (inches): No Depth (inches):	Roots (C3) s (C6) RR 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)
Primary Indicators (minimum of one req 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 Surfafield Observations: Surface Water Present? Ves Saturation Present? Ves Saturation Present? Secribe 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR (B7) Other (Explain in Remarks) ce (B8) Depth (inches): No Depth (inches): No Depth (inches):	Roots (C3) s (C6) RR 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)
Primary Indicators (minimum of one req 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 Surfateld Observations: Surface Water Present? Water Table Present? Water Table Present? Saturation Present? Ves 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR (B7) Other (Explain in Remarks) ce (B8) Depth (inches): No Depth (inches): No Depth (inches):	Roots (C3) s (C6) RR 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)
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 Surfa Field Observations: Surface Water Present? Water Table Present? Yes Saturation 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR (B7) Other (Explain in Remarks) ce (B8) Depth (inches): No Depth (inches): No Depth (inches):	Roots (C3) s (C6) RR A)	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (California) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

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Consulting Engineer	rs

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

r Ceologists, Inc.	4.5	• •	
Project/Site: Humboldt Bay Harbor District-RMMT	City/County: _	Humboldt	_ Sampling Date: 5/12/22
Applicant/Owner: Humboldt Bay Harbor District		State: CA	Sampling Point: 1P51
Investigator(s): Joseph Saler, Cindy Wilcox	Section, Town	nship, Range:	at I. O
Landform (hillslope, terrace, etc.): Ren in sula Sp	Local relief (c	oncave, convex, none): 5 high	1 concesse Slope (%):0-2
Subregion (LRR): A, MLRA-4B	Lat: 40, 819 119	8 Long: -124,1	80 144 Datum: WGS 84
Subregion (LRR): A, MLRA-4B Soil Map Unit Name: 1014-Urbanland An 10	raltic Xerorthent	3050C. 0-290 NWI class	fication: None
Are climatic / hydrologic conditions on the site typical for			
Are Vegetation, Soil, or Hydrology	_ significantly disturbed?	Are "Normal Circumstances	" present? Yes No
Are Vegetation, Soil, or Hydrology	_ naturally problematic?	(If needed, explain any ansv	vers in Remarks.)
SUMMARY OF FINDINGS - Attach site ma	p showing sampling	point locations, transec	ts, important features, etc.
Hydrophytic Vegetation Present? Yes			4
Hydric Soil Present? Yes	within	Sampled Area a Wetland? Yes	No XX
Wetland Hydrology Present? Yes	NO		
Remarks: WETS normal rainfall 5 light depression in Indi	istrial mowed f	ield Possibly the ro	nous of a both humpite.
VEGETATION – Use scientific names of pl		,	
Tree Stratum (Plot size: 30'	Absolute Dominant In		rksheet:
1	% Cover Species? S	Number of Dominant That Are OBL, FACW	
2		Total Number of Don	
3		Species Across All St	rata: (B)
51	= Total Cove	Percent of Dominant That Are OBL, FACW	
Sapling/Shrub Stratum (Plot size: 5'	8 / 1	Prevalence Index w	
2. Rubu anni acu		FAC Total % Cover of	Multiply by:
3			x 1 =
4.		FACW species	x 2 =
5.		FAC species	x 3 =
	= Total Cove		x 4 =
Herb Stratum (Plot size: 5'	105	UPL species	x 5 =
1. testica peranis			(A) (B)
2. Matha pulkajum 3. Letus Corridulatus			ex = B/A =
4. Toraxacum officinale		A C L I Try al opriy a vegeta	
5. Anthoxastrum adonation			r Hydrophytic Vegetation
6. Agroste Stolenton		2 - Dominance 1	
7. Radmoults repers		_ 5 1 1 1 1 1 1 1 1 1	
8. Intolium report		¬ morphologica	I Adaptations ¹ (Provide supporting rks or on a separate sheet)
9. humex cristus		5 - Wetland Non-	
10			rophytic Vegetation ¹ (Explain)
11			oil and wetland hydrology must
	Total Cover	all a land a lan	sturbed or problematic.
Woody Vine Stratum (Plot size:)		21.6	
1.		Hydrophytic	\$
2,	<u> </u>	Vegetation Present?	res No
% Bare Ground in Herb Stratum	= Total Cover	Toddill	110
Pemarks:	Stat A		
Developaceur veg within	slight depression	N .	
	r.M.		

epth Matrix nches) Color (moist) %	Redox Features Color (moist) % Type¹ Loc²	Texture	Remarks
5-10 104R25/1 100		trum	
-17+ 104R 3/2 106		Sich	5/ag ~ 99% of
			horizon
			-
vpe: C=Concentration. D=Depletion, R	M=Reduced Matrix, CS=Covered or Coated Sand Gra	ins. ² Loc	eation: PL=Pore Lining, M=Matrix.
rdric Soil Indicators: (Applicable to			ors for Problematic Hydric Soils ² :
Histosol (A1)	Sandy Redox (S5)	2 cr	m Muck (A10)
_, Histic Epipedon (A2)	Stripped Matrix (S6)	Rec	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)	Oth	er (Explain in Remarks)
_ Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	1.	
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)	Redox Depressions (F8)	unles	ss disturbed or problematic.
estrictive Layer (if present):			
Type:		Hydric Soil	Present? Yes No
Depth (inches):		H Myaric Soil	Presentr res NO
	, thick topsoil. over burns		
emarks: In grassy field rdrology	, thick topsoil. over burns		
POROLOGY Petland Hydrology Indicators:		lag pile	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requi	ired; check all that apply)	lag pile	andary Indicators (2 or more required)
POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one required) Surface Water (A1)	lired; check all that apply) Water-Stained Leaves (B9) (except	lag pile	indary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2
Emarks: In grussy field EDROLOGY etland Hydrology Indicators: imary Indicators (minimum of one required by the second	iired; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	lag pile	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
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) Salt Crust (B11)	lag pile	ndary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10)
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)	lag pile	ndary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2)
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)	Seco	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C
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 Roo	Secondary (C3)	ndary 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
emarks: In grussy field EDROLOGY Tetland Hydrology Indicators: Timary Indicators (minimum of one required in the control of	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)	Seco	ndary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3)
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)	ired; check all that apply) Water-Stained Leaves (B9) (except	Secondary (C3)	mdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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)	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 (C3) X (S3)	Andary 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 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	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)	Secondary (C3) X (S3)	mdary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
PROLOGY etland Hydrology Indicators: imary Indicators (minimum of one requirement) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface	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)	Secondary (C3) X (S3)	Andary 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: In grussy field DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one requestrated by the second secon	wired; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living 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 (C3) X (S3)	Andary 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)
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POROLOGY Petland Hydrology Indicators: rimary Indicators (minimum of one required in the property of the late of of the	wired; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living 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) Depth (inches):	Second S	andary 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)
POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requirement) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface ield Observations: urface Water Present? Ves Jater Table Present? Yes aturation Present? Yes Jessel Ves Jes	wired; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living 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) Depth (inches):	Secondary (C3) X (S3)	andary 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)
PROLOGY Petland Hydrology Indicators: Fimary Indicators (minimum of one required in the second in t	wired; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living 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) Depth (inches):	second Se	andary 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)
PROLOGY Petland Hydrology Indicators: Fimary Indicators (minimum of one required in the second in 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 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) Depth (inches): No Depth (inches): Wetla	second Se	andary 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)

oject/Site: Humboldt Bay Harbor District-RMMT	_		ntains, Valleys, and	Sampling Date: 5/12/2
pplicant/Owner: Humboldt Bay Harbor District		ity/Godiffy.	State: CA	Sampling Point: TP 52(
vestigator(s): Joseph Saler, Cindy Wilcox	9	ection, Township, Ra		Outripling Cont. 11
undform (hillslope, terrace, etc.): Rinsula Lit, Bay	lit shix	ection, rownship, ita	agree sage Vare	Slape (%): 0
ubregion (LRR): A, MLRA-4B				5lope (%): <u>V</u> Datum: WGS 84
oil Map Unit Name: 1014-Urbanland Antha				
e climatic / hydrologic conditions on the site typical for the				
re Vegetation, Soil, or Hydrology	_			
e Vegetation, Soil, or Hydrology	_naturally proo	iematic? (if ne	eeded, explain any answe	rs in Remarks.)
UMMARY OF FINDINGS – Attach site map	showing s	sampling point I	ocations, transects	, important features, e
Hydrophytic Vegetation Present? Yes	No X			
Hydric Soil Present? Yes		Is the Sampled within a Wetlan		No.
Vetland Hydrology Present? Yes	No X	within a wenai	ilur res	NO
Remarks: WETS normal rainfall	C	11 -	1 11.	1.1
Vetanly. See TP 51	tor 10	prestitative.	Solls and hi	dro 1694.
J /				
EGETATION – Use scientific names of pla	ints.			
ree Stratum (Plot size: 30)		Dominant Indicator Species? Status	Dominance Test work	4
· Of Sizes.	<u> 70 00401</u>	Openies: Otatus	Number of Dominant S That Are OBL, FACW,	
			Total Number of Domin Species Across All Stra	The state of the s
				-
		= Total Cover	Percent of Dominant S That Are OBL, FACW,	
apling/Shrub Stratum (Plot size: 5		KN	Prevalence Index wor	
Rubus ormenia cus	_ 4_	FAC	Total % Cover of:	
*				x 1 =
			FACW species	
·				x 3 =
			FACU species	x 4 =
		= Total Cover	UPL species	x 5 =
7			UFL species	x
erb Stratum (Plot size: 5')	40	1 FACU		
Herb Stratum (Plot size: 5'	- 1 0 -40 48		Column Totals:	(A) (I
Herb Stratum (Plot size: 5' And Oxion M Odorof M To thirm 1000	40 40 12		Column Totals:	(A)(I
Herb Stratum (Plot size: 5' Art DX (Arthur 1900) To Filium 1900 Day (W Carola	48		Column Totals: Prevalence Index Hydrophytic Vegetation	(A) (I = B/A =
Herb Stratum (Plot size: 5' And Oxion w odoratum Triflium repeas Day w Carota Achilea Wiletalium	48		Column Totals: Prevalence Index Hydrophytic Vegetati 1 - Rapid Test for I	(A) (E = B/A = on Indicators: Hydrophytic Vegetation
Herb Stratum (Plot size: 5' And Oxion w Odoratum Tritium reper Day w Carota Achilea Wiletalium	48	FACU FACU FACU FACU	Prevalence Index Hydrophytic Vegetatio 1 - Rapid Test for I 2 - Dominance Test	(A) (I = B/A =
Herb Stratum (Plot size: 5" 1. And Stratum (Plot size: 5" 2. This live repeated to the size of the s	48	FACU FACU FACU	Prevalence Index Hydrophytic Vegetatio 1 - Rapid Test for I 2 - Dominance Test 3 - Prevalence Index	(A) (I = B/A =
Platago lancedata	48	FACU FACU FACU FACU FACU FACU	Prevalence Index Hydrophytic Vegetatio 1 - Rapid Test for I 2 - Dominance Test 3 - Prevalence Index 4 - Morphological A	(A) (I = B/A =

= Total Cover

= Total Cover

Deve vegetation cover. Shrub stratum not conted in dominance calc or it is less than 5% cover.

Woody Vine Stratum (Plot size:

% Bare Ground in Herb Stratum

¹Indicators of hydric soil and wetland hydrology must

be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

ampling Point: TP 5 2 may line in other

	andrian Incaping to mi	e depth needed to document the indicator or c	ontimi the absen	ce of indicators.)
Depth	Matrix	Redox Features		
(inches)	Color (moist) 9	Color (moist) % Type ¹ L	oc ² Texture	Remarks
				-
	.i(_	
				-
	s			
¹Type: C=C	oncentration D=Depletion	, RM=Reduced Matrix, CS=Covered or Coated S	and Grains 2	Location: PL=Pore Lining, M=Matrix.
		to all LRRs, unless otherwise noted.)		ators for Problematic Hydric Soils ³ :
Histosol		Sandy Redox (S5)		cm Muck (A10)
W	· March Colored			
	pipedon (A2)	Stripped Matrix (S6)		Red Parent Material (TF2)
	istic (A3)	Loamy Mucky Mineral (F1) (except ML		/ery Shallow Dark Surface (TF12) Other (Explain in Remarks)
	en Sulfide (A4) d Ralow Dark Surface (A1	Loamy Gleyed Matrix (F2)	1	oner (Explain in Remarks)
	d Below Dark Surface (A1 ark Surface (A12)	1) Depléted Matrix (F3) Redox Dark Surface (F6)	31 00 00	ators of hydrophytic vegetation and
				etland hydrology must be present,
	Mucky Mineral (S1)	Depleted Dark Surface (F7)		elless disturbed or problematic.
	Gleyed Matrix (S4)	Redox Depressions (F8)	ui	ness disturbed of problematic.
	Layer (if present):		ĺ	\ .
Type:				
Depth (in	ches):		Hydric S	oil Present? Yes No
Remarks:	Veg sampled	I only. See to 51 for	representa	tive sols.
HYDROLC)GY			
Wetland Hy	drology Indicators:			
_				
THITIES TO THE	cators (minimum of one re	equired: check all that apply)	Se	condary Indicators (2 or more required)
		equired; check all that apply)		condary Indicators (2 or more required)
Surface	Water (A1)	Water-Stained Leaves (B9) (exce		Water-Stained Leaves (B9) (MLRA 1, 2,
Surface High Wa	Water (A1) ater Table (A2)	Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B)		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Surface High Wi Saturati	Water (A1) ater Table (A2) ion (A3)	Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11)		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Surface High Wi Saturati	Water (A1) ater Table (A2)	Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B)		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Surface High Wi Saturati Water N	Water (A1) ater Table (A2) ion (A3)	Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11)		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Surface High Water Mater	Water (A1) ater Table (A2) ion (A3) Marks (B1)	 Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) 	pt	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Surface High Wi Saturati Water N Sedime	Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2)	 Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 	pt	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 High W: Saturati Water N Sedime Drift De Algal M	Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	 Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4) 	ng Roots (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)
Surface High Wi Saturati Water N Sedime Drift De Algal M	Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc	ng Roots (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)
Surface High With Saturati Water Mither Mither Sedime Drift De Algal Mither Mither Sedime Surface	Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) soil Cracks (B6)	 Water-Stained Leaves (B9) (excendence MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Stunted or Stressed Plants (D1) (I 	ng Roots (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)
Surface High Wi Saturati Water N Sedime Drift De Algai M Iron De Surface	Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) soil Cracks (B6) ion Visible on Aerial Image	Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Stunted or Stressed Plants (D1) (I	ng Roots (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)
Surface High Wi Saturati Water N Sedime Drift De Algal M Iron Dej Surface Inundat	Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial Image y Vegetated Concave Sur	Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Stunted or Stressed Plants (D1) (I	ng Roots (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)
Surface High Wi Saturati Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel	Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial Image y Vegetated Concave Sur	Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livii Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Stunted or Stressed Plants (D1) (I	ng Roots (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)
Surface High Wi Saturati Water N Sedime Drift De Algal M Iron De Surface Inundat Sparsel Field Obser Surface Water	Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) is Soil Cracks (B6) ion Visible on Aerial Image y Vegetated Concave Sur- rvations: ter Present? Yes	Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (I ery (B7) Other (Explain in Remarks) face (B8)	ng Roots (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)
Surface High Wi Saturati Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel	Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) is Soil Cracks (B6) ion Visible on Aerial Image y Vegetated Concave Sur- rvations: ter Present? Yes	Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (I ery (B7) Other (Explain in Remarks) Pepth (inches): Depth (inches):	ng Roots (C3) pils (C6) LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Surface High Wi Saturati Water N Sedime Drift De Algal M Iron De Surface Inundat Sparsel Field Obser Surface Water Table Saturation F	Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial Image y Vegetated Concave Surrections: ter Present? Present? Yes Present? Yes Present? Yes Present? Yes Present? Yes	Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (I ery (B7) Other (Explain in Remarks) face (B8)	ng Roots (C3) pils (C6) LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Surface High Wi Saturati Water N Sedime Drift De Algai M Iron De Surface Inundat Sparsel Field Obser Surface Water Table Saturation F (includes ca	water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) soil Cracks (B6) ion Visible on Aerial Image y Vegetated Concave Surrevations: ter Present? Present? Yes Present?	Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (I ery (B7) Other (Explain in Remarks) Pepth (inches): Depth (inches):	ng Roots (C3) pils (C6) LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Surface High Wi Saturati Water N Sedime Drift De Algai M Iron De Surface Inundat Sparsel Field Obser Surface Water Table Saturation F (includes ca	water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) soil Cracks (B6) ion Visible on Aerial Image y Vegetated Concave Surrevations: ter Present? Present? Yes Present?	Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (I ery (B7) Other (Explain in Remarks) Pepth (inches): Depth (inches):	ng Roots (C3) pils (C6) LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Surface High Wi Saturati Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel Field Obser Surface Wat Water Table Saturation F (includes ca Describe Re	water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) soil Cracks (B6) ion Visible on Aerial Image y Vegetated Concave Surrevations: ter Present? Present? Yes Present?	Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (I ery (B7) Other (Explain in Remarks) Pepth (inches): Depth (inches):	ng Roots (C3) pils (C6) LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Surface High Wi Saturati Water N Sedime Drift De Algai M Iron De Surface Inundat Sparsel Field Obser Surface Water Table Saturation F (includes ca	water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) soil Cracks (B6) ion Visible on Aerial Image y Vegetated Concave Surrevations: ter Present? Present? Yes Present?	Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Stunted or Stressed Plants (D1) (I ery (B7) Other (Explain in Remarks) face (B8) Depth (inches): No Depth (inches): Depth (inches):	ng Roots (C3) pils (C6) LRR A) Wetland Hydrol tions), if available:	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 High Wi Saturati Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel Field Obser Surface Wat Water Table Saturation F (includes ca Describe Re	water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) soil Cracks (B6) ion Visible on Aerial Image y Vegetated Concave Surrevations: ter Present? Present? Yes Present?	Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Stunted or Stressed Plants (D1) (I ery (B7) Other (Explain in Remarks) face (B8) Depth (inches): No Depth (inches): Depth (inches):	ng Roots (C3) pils (C6) LRR A) Wetland Hydrol tions), if available:	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 High Wi Saturati Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel Field Obser Surface Wat Water Table Saturation F (includes ca Describe Re	water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) soil Cracks (B6) ion Visible on Aerial Image y Vegetated Concave Surrevations: ter Present? Present? Yes Present?	Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Stunted or Stressed Plants (D1) (I ery (B7) Other (Explain in Remarks) face (B8) Depth (inches): No Depth (inches): Depth (inches):	ng Roots (C3) pils (C6) LRR A) Wetland Hydrol tions), if available:	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 High Wi Saturati Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel Field Obser Surface Wat Water Table Saturation F (includes ca Describe Re	water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) soil Cracks (B6) ion Visible on Aerial Image y Vegetated Concave Surrevations: ter Present? Present? Yes Present?	Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (I ery (B7) Other (Explain in Remarks) Pepth (inches): Depth (inches):	ng Roots (C3) pils (C6) LRR A) Wetland Hydrol tions), if available:	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)

	(City/County	r: Humboldt		Sampling Date:	5/12/22
pplicant/Owner: Humboldt Bay Harbor District				State: CA		
vestigator(s): Joseph Saler, Cindy Wilcox		Section, To	wnship, Ra	nge:		
indform (hillslope, terrace, etc.): https://d/50it.	, hayside	Local relie	f (concave, c	convex, none):	ave Stop	pe (%): <u>0</u>
ubregion (LRR): A, MLRA-4B				Long: -124, 180		
oil Map Unit Name: 1014 - Urbanland A	nthralticy	worth	ents ass	OC. 0-20/0NWI classific	ation: no	
e climatic / hydrologic conditions on the site typical f	for this time of yes	ar? Yes_	X_ No_	(If no, explain in R	temarks.)	
e Vegetation, Soil, or Hydrology	significantly	disturbed?	Are "	Normal Circumstances"	present? Yes	No
e Vegetation, Soil, or Hydrology				eded, explain any answe		
					·	
UMMARY OF FINDINGS – Attach site n	nap snowing	sampiin	g point is	ocations, transects	s, important re	atures,
Hydrophytic Vegetation Present? Yes	No	le th	ne Sampled	Aron	,	
Hydric Soil Present? Yes Vetland Hydrology Present? Yes	No		ie Sallipieu iin a Wetlar	nd? Yes	No	
	No					•
to de de la contra del la contra de la contra de la contra del la contra del la contra de la contra del	raibed as	P551	B500.			
Loolated 3p wetland. Bot do	Clipes or		The second second			
FORTATION III						
EGETATION – Use scientific names of						
ree Stratum (Plot size: 30')	Absolute % Cover		Indicator	Dominance Test work		
	77 00101	ороскоз:		Number of Dominant S That Are OBL, FACW,		(A
				Total Number of Domin Species Across All Stra		(B
				,		
A		= Total Co	ver	Percent of Dominant Sp That Are OBL, FACW,		% (A
apling/Shrub Stratum (Plot size: 5'	25		-1.1	Prevalence Index wor		
Salix Losheriana			79cw	Total % Cover of:		/ by:
	5		THEW	OBL species	x 1 =	
Salix sitchesis	- 11		1. 4.1			
Salix stehenis Rubus ormeniacus	<u> 25 </u>		FAC	FACW species	x 2 =	
Salix sitchesis Rubus ormeniacus	<u>25</u>		FAC	FACW species		
Salix sitchesis Rubus ormeniacus			FAC	FAC species	x 3 =	
Salix sitchests Rubus ormeniacus		= Total Co	FAC	FAC species	x 3 = x 4 =	
Salix sitchesis Rubus or Meniacus lept Stratum (Plot size; 5')		= Total Co	FAC 13/32:	FAC species FACU species	x 3 = x 4 = x 5 =	
Herb Stratum (Plot size; 5')		= Total Co	##C	FAC species FACU species UPL species Column Totals:	x 3 = x 4 = x 5 = (A)	
Salix sitchesis Rubus ormeniacus lerb Stratum (Plot size; 5') testuca armadinacea Symphygrischum Chilese		= Total Co	FAC	FAC species FACU species UPL species Column Totals: Prevalence Index	x 3 = x 4 = x 5 = (A)	
Salix sitchesis Rubus ormeriacus lerb Stratum (Plot size; 5' testuca arundinacea Symphyotrichum Gillase Holcut langtus		= Total Co	FAC	FAC species FACU species UPL species Column Totals: Prevalence Index Hydrophytic Vegetation	x 3 = x 4 = x 5 = (A) = B/A = on Indicators:	
Salix sitchestis Rubus ormeriacus lerb Stratum (Plot size; 5' testuca armainacea Symphyotrichum Chilase Holcus lanatus Canex harfordii	3 20 7 12	= Total Co	FAC FAC OBL	FAC species FACU species UPL species Column Totals: Prevalence Index Hydrophytic Vegetation 1 - Rapid Test for the	x 3 = x 4 = x 5 = (A) = B/A = on Indicators:	(
Salix sitchests Rubus or meniacus lerb Stratum (Plot size; 5' restuca aryndinacea Symphyotrichum Gillese Holdut lanatus Carex harfordii Achillea Miletolium	3 20 7 12	= Total Co	FACU FACU	FAC species FACU species UPL species Column Totals: Prevalence Index Hydrophytic Vegetatio 1 - Rapid Test for 8 2 - Dominance Tes	x 3 = x 4 = x 5 = (A) = B/A = on Indicators: Hydrophytic Vegeta it is >50%	(
salix sitchesis Rubus ormeniacus Herb Stratum (Plot size; 5' testuca aryndinacea Symphyotrichum Chilese Holcut langtus Carex harfordii	3 20 7 12	= Total Co	FAC FAC OBL	FAC species FACU species UPL species Column Totals: Prevalence Index Hydrophytic Vegetation 1 - Rapid Test for the	x 3 =	etion

= Total Cover

= Total Cover

Remarks:

Woody Vine Stratum (Plot size:

% Bare Ground in Herb Stratum

_ 5 - Wetland Non-Vascular Plants¹

Hydrophytic Vegetation Present?

 Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Profile Description: (Describe to the depth needed to document the in		the absence	of indicators.)
Depth Matrix Redox Features (inches) Color (moist), % Color (moist) %	Type Loc	Texture	Remarks
0-7 2.5 \ 2.5 \ 100	1700 - 200	<	Isomano
	_ 11	25	Tal of all and
7-16 10 VR 4/1 90 7.5 VR 4/6 10	C M	SCL	bits at charcoal
(-24+ N 3/ 100		5	
			4
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered	or Coated Sand Gra	ains. ² Loc	sation: PL=Pore Lining, M=Matrix.
lydric Soil Indicators: (Applicable to all LRRs, unless otherwise note		Indicate	rs for Problematic Hydric Soils ³ :
Histosol (A1) Sandy Redox (S5)		2 cr	n Muck (A10)
Histic Epipedon (A2) Stripped Matrix (S6)		Red	Parent Material (TF2)
Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1)	Ver	y Shallow Dark Surface (TF12)
)	Oth	er (Explain in Remarks)
Depleted Below Dark Surface (A11) Depleted Matrix (F3)			
Thick Dark Surface (A12) Redox Dark Surface (F6)			ors of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Depleted Dark Surface (F	7)		nd hydrology must be present,
Sandy Gleyed Matrix (S4) Redox Depressions (F8)		unles	s disturbed or problematic.
Restrictive Layer (if present):			51
Type:			Daniel Mark No.
Depth (inches):		Hydric Soil	Present? Yes No No
YDROLOGY			
Wetland Hydrology Indicators:	×		
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	¥**		ndary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leave			Vater-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Water-Stained Leave		v	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leave		v	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Water-Stained Leave	and 4B)	v	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) MLRA 1, 2, 4A, a	and 4B) s (B13)	v c s	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Baturation Visible on Aerial Imagery (CS
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	and 4B) s (B13)	v c s	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	s (B13) dor (C1) res along Living Roo	ots (C3) X C	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Baturation Visible on Aerial Imagery (CS
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	s (B13) dor (C1) res along Living Roo	V C S ots (C3) X	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Baturation Visible on Aerial Imagery (C9 Geomorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	s (B13) dor (C1) res along Living Roo d Iron (C4)	- V - C - C - S - S - S - S - S - S - S - S - S - S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2) Baturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	s (B13) dor (C1) res along Living Roo d Iron (C4) on in Tilled Soils (C6 Plants (D1) (LRR A)	- V C C S S S S S S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS) Geomorphic Position (D2) Italiow Aquitard (D3) AC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	s (B13) dor (C1) res along Living Roo d Iron (C4) on in Tilled Soils (C6 Plants (D1) (LRR A)	- V C C S S S S S S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2) Baturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Fallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	s (B13) dor (C1) res along Living Roo d Iron (C4) on in Tilled Soils (C6 Plants (D1) (LRR A)	- V C C S S S S S S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2) Baturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Fallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	s (B13) dor (C1) res along Living Roo d Iron (C4) on in Tilled Soils (C6 Plants (D1) (LRR A)	- V C C S S S S S S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2) Baturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Fallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	s (B13) dor (C1) res along Living Roo d Iron (C4) on in Tilled Soils (C6 Plants (D1) (LRR A) emarks)	- V C C S S S S S S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2) Baturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Fallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	s (B13) dor (C1) res along Living Roo d Iron (C4) on in Tilled Soils (C6 Plants (D1) (LRR A) emarks)	V C S S S F F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Baturation Visible on Aerial Imagery (C9) Beomorphic Position (D2) Fac-Neutral Test (D3) 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)	s (B13) s (B13) dor (C1) res along Living Roo of Iron (C4) on in Tilled Soils (C6 Plants (D1) (LRR A) emarks) Wetla	ots (C3) X C S) X F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Baturation Visible on Aerial Imagery (C9) Beomorphic Position (D2) Fac-Neutral Test (D3) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	s (B13) s (B13) dor (C1) res along Living Roo of Iron (C4) on in Tilled Soils (C6 Plants (D1) (LRR A) emarks) Wetla	ots (C3) X C S) X F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Baturation Visible on Aerial Imagery (C9) Beomorphic Position (D2) Vallow 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) Surface Water (A1)	s (B13) s (B13) dor (C1) res along Living Roo of Iron (C4) on in Tilled Soils (C6 Plants (D1) (LRR A) emarks) Wetla	ots (C3) X C S) X F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Baturation Visible on Aerial Imagery (C9) Beomorphic Position (D2) Fac-Neutral Test (D3) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	s (B13) s (B13) dor (C1) res along Living Roo of Iron (C4) on in Tilled Soils (C6 Plants (D1) (LRR A) emarks) Wetla	ots (C3) X C S) X F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Baturation Visible on Aerial Imagery (C9) Beomorphic Position (D2) Fac-Neutral Test (D3) 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 (B8) Field Observations: Surface Water Present? MLRA 1, 2, 4A, a Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Oc Oxidized Rhizosphe Presence of Reduce Recent Iron Reduction Stunted or Stressed Other (Explain in Reservation) Depth (inches): No	s (B13) s (B13) dor (C1) res along Living Roo of Iron (C4) on in Tilled Soils (C6 Plants (D1) (LRR A) emarks) Wetla	ots (C3) X C S) X F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Baturation Visible on Aerial Imagery (C9) Beomorphic Position (D2) Fac-Neutral Test (D3) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

nsulting Engineers ~ WETLAND DETERMINATION & Geologists, Inc.	DATA FORM – Western Mou	ntains, Valleys, and Coast Region
	City/County: Humboldt	Sampling Date: 5/13/22
Applicant/Owner: Humboldt Bay Harbor District		State: CA Sampling Point: 7457
Investigator(s): Joseph Saler, Cindy Wilcox	Section, Township, Ra	nge:
Landform (hillslope, terrace, etc.): Reminsula 50	Local relief (concave,	convex, none): Slope (%):
Subregion (LRR): A, MLRA-4B	Lat: <u>40.819499</u>	Long: -124.180599 Datum: WGS 84
Soil Map Unit Name: 1014-Urban land An	Waltic XI northents ass	c. 0-2% NWI classification: NONE
Are climatic / hydrologic conditions on the site typical for	r this time of year? Yes X No _	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "	Normal Circumstances" present? Yes V No
Are Vegetation, Soil, or Hydrology	naturally problematic? (If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site ma	ap showing sampling point l	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: WETS normal rainfall Next to vall read line, just ad	No within a Wetlar	nd? Yes No
VEGETATION – Use scientific names of p	lants.	
Tree Stratum (Plot size: 30	Absolute Dominant Indicator	Dominance Test worksheet:
1. Plot size.	% Cover Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2		Total Number of Dominant
3		Species Across All Strata: (B)
4	= Total Cover	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 5')		That Are OBL, FACW, or FAC: (A/B) Prevalence Index worksheet:
1. Salix sitchesis	15 FACW	Total % Cover of: Multiply by:
2 Jalix hockertana 3. Rubus arminiacus	- 10 FACW	OBL species x 1 =
4.		FACW species x 2 =
5		FAC species x 3 =
5'	35 = Total Cover 17.5	FACU species x 4 = UPL species x 5 =
Herb Stratum (Plot size: 5'	70 / FACW	Column Totals: (A) (B)
2 Sumphyotrichm chilese	25 V FAC	
3. Phiesilla assing	4 OBL	Prevalence index = B/A = Hydrophytic Vegetation Indicators:
4. Holas lanatus	2 FAC	1 - Rapid Test for Hydrophytic Vegetation
5. Lotus corniculatus	FAC	2 - Dominance Test is >50%
6		3 - Prevalence Index is ≤3.01
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)
Marky Vice Charles Co.	= Total Cover 504	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:) 1	A	Herdranbustia
2.		Hydrophytic Vegetation Present? Yes No No
% Bare Ground in Herb Stratum	= Total Cover	Present? Yes No
Remarks:	1 1,7 4	1 1 0 tors!)
Junear rejeurii dominance rep	rooks extent at 1	p feature. See TP 55 (veg)

Sampling Point: TP5 Consulting Engine

Profile Description: (Describe to the	lepth needed to document the indicator or confirm	n the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type¹ Loc²	Texture Remarks
0-5 loye3/2 100		Le
5-7 10 yR 4/2 100		Color LS
7-13 10 VR 4/2 09	75 VR 5/8 1 C M	s goden at brick not read to
13 10 10 10 2/1 100	- 1311/10	
13-19 104K2/1 100	- 1.10 H/2	Si L Slag bride + debris ~ 80%
19-24+564 3/1 99	10XK 7/6 1 C m	c w black organic flechs
		no Hydrolen beneficial, den
		
	RM=Reduced Matrix, CS=Covered or Coated Sand G	
Hydric Soil Indicators: (Applicable to	all LRRs, unless otherwise πoted.)	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)		
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):		0
Туре:		
Depth (inches):		Hydric Soil Present? Yes No V
3	j. t	7 - 4- 3 July 2
HYDROLOGY	<u> </u>	2 -dec 2 los
HYDROLOGY Wetland Hydrology Indicators:	, j	7 -4- 3112 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Wetland Hydrology Indicators:	uired; check all that apply)	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requirement)	The state of the s	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1)	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)	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)	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)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requestry) 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) 	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)	 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)	Water-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	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) oots (C3) Geomorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required in 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	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) oots (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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C	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) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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Wetland Hydrology Indicators: Primary Indicators (minimum of one required 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 Imagery Sparsely Vegetated Concave Surfated	Water-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 of the company of the c	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) Oots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

Applicant/Owner: Humboldt Bay Harbor District RMMT Applicant/Owner: Humboldt Bay Harbor District Investigator(s): Joseph Saler, Cindy Willcox Landforminilistope, terrace, etc.): Manager Local relief (concave, convex, none): Manager Local relief (concav	,	d Coast Region	ntains, Valleys, and	VI – Western Mou	DATA FORM	Engineers wetland determination (
Applicant/Owner: Humbold Bay Harbor District Investigator(s): Joseph Saler, Cindy Willox Landform (nillslope, terrace, etc.): MIDDLE (pit Saysted Local relief (concave, convex, none): Most Slope (%): Subregion (LRR): A.M.RA-4B Lat: U.O. 61 9 16 A Long: -1)-1. 90 532 Datum: WGS Soil Map Unit Name: DI + Urban land Ammathic Xerotherits 9500. 0-2/b NWI classification: MOVE Are climatic / hydrologic conditions on the site typical for this time of year? Yes	/22	Sampling Date: 5/B/		City/County: Humboldt	(
Investigator(s): Joseph Saler, Cindy Wilcox Section, Township, Range:	5 (v	Sampling Point: 105	State: CA	.,		ant/Owner: Humboldt Bay Harbor District
Landform initislope, terrace, etc.): Initial (or hydrology in the property of						
Are climatic / hydrologic conditions on the site typical for this time of year? Yes		0532 Datum: WGS	convex, none): None Long: -124. 190	Local relief (concave, 0, 919469	Lat: U	gion (LRR): A, MLRA-4B
Are 'Normal Circumstances' present? Yes No Are 'Normal Circumstances' present? Yes No Are Vegetation	_	220,000			1013	OSEN PO COURT OF SECTION ASSESSMENT ASSESSMENT OF SECTION ASSESSMENT ASSESSMENT ASSESSME
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes No Within a Wetland? Vegetation Present? Wetland Hydrology Present? Yes No Wetland? Remarks: WETS normal rainfall Vegetation Plot size: 30 Absolute Dominant Indicator Species? Status I Tree Stratum (Plot size: 30 Absolute Species? Status Species? Status Species? Status Species Across All Strata: I Total Number of Dominant Species That Are OBL, FACW, or FAC: Sapling/Shrub Stratum (Plot size: 5' Total Cover Species Count of Dominant Species That Are OBL, FACW, or FAC: I Supplied Area within a Wetland? I Total Number of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index worksheet: Total Cover Species X 1 = FACW species X 1 = FACW species X 3 = FAC species X 3 = FAC species X 3 = FACU species X 4 = UPL species X 4 = UPL species X 5 = Column Totals: (A) Prevalence Index = B/A = Prevalence I	, s, etc	present? Yes No ers in Remarks.)	Normal Circumstances" eded, explain any answe	disturbed? Are blematic? (If no	significantly o	egetation, Soil, or Hydrology egetation, Soil, or Hydrology
VEGETATION Use scientific names of plants. Tree Stratum (Plot size: 30	,	V	Area	Is the Sampleo	No No	rophytic Vegetation Present? Yes ric Soil Present? Yes land Hydrology Present? Yes
Absolute % Cover Species? Status Dominant Indicator % Cover Species? Status Status Species Specie		*			ante	Veg sample only.
Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species x 1 =	(A)	Species O	Number of Dominant S		Absolute	
Sapling/Shrub Stratum (Plot size: 5' 2	(B)		1			
1. Run Grand Common Com	(A/B)			= Total Cover		ing/Shruh Stratum (Plot size: 5')
3. 4. 5.	_	Multiply by:	Total % Cover of:	FAC	_2	
5 = Total Cover	-		· -			·
Herb Stratum (Plot size: 5')	•					
Herb Stratum (Plot size: 5' 80						
1. An akanyan O dor atum 80				= Total Cover		OL 1 (D) 1 5'
2. Holaw and 22 FAC Prevalence Index = B/A =	_		TOTAL TOTAL CONTROL IN	V GAN	80	
1 10 Prevalence index - B/A -				FAC		
				LIPL	1	liva torospama
4. MGa Sativa 1 - Rapid Test for Hydrophytic Vegetation				WPL WPL	4	rica satula,
5. Daucus carata 1 PACU 2 - Dominance Test is >50%					1_	saucus carota
6. SXMP Votricalim Chilese 2 AC 3 - Prevalence Index is ≤3.0'			I —	- FAC	_ 2	symphyoticalim chilene
7. Brita Makina 4 - Morphological Adaptations' (Provide supplied to the control of the control o	porting			WL	40	3/m20 / Maxima

= Total Cover 15.4

= Total Cover

layers of behaviours veg. Donse.

635

Hydrophytic Vegetation Present?

US Army Corps of Engineers

Remarks:

Woody Vine Stratum (Plot size: 5'

% Bare Ground in Herb Stratum

5 - Wetland Non-Vascular Plants¹

Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Redox Features Color (moist) Calor (moist) Texture (inches) ²Location: PL=Pore Lining, M=Matrix. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Indicators for Problematic Hydric Soils³: Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Sandy Redox (S5) 2 cm Muck (A10) Histosol (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) ³Indicators of hydrophytic vegetation and Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must be present, Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic. Restrictive Layer (if present): Type:_ Depth (inches): Hydric Soil Present? confy. See TP 54 Remarks: representative 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) _ Drainage Patterns (B10) Saturation (A3) Salt Crust (B11) Dry-Season Water Table (C2) Water Marks (B1) Aquatic Invertebrates (B13) ___ Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Sediment Deposits (B2) Oxidized Rhizospheres along Living Roots (C3) Drift Deposits (B3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Iron Deposits (B5) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Surface Soil Cracks (B6) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Depth (inches): Water Table Present? Depth (inches) Saturation Present? Depth (inches): Wetland Hydrology Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:

Lat: <u>40</u>	Section, Township, Ra	State: <u>CA</u>	_ Sampling Date: _ _ Sampling Point: _	
Lat: <u>40</u>	Section, Township, Ra		-	
Lat: 40	· -	nye		,
_ Lat: <u>40</u>	Local relief (concave,	convex, none):nor	Slop	e (%): 0-1
et	. 819379	Lang: -/24. /80	675 Datum	n: WGS 84
TC Xer	orthents assoc	0-2% NWI classif	ication: <u>none</u>	-
time of yea	er? Yes X No _	(If no, explain in	Remarks.)	
gnificantly	disturbed? Are	Normal Circumstances"	present? Yes X	No
aturally prof	blematic? (If ne	eded, explain any answ	ers in Remarks.)	
howing	sampling point l	ocations, transect	s, important fea	atures, etc.
,			\ .	
			No. X	
			NO /	F _j
sl for	representative.	poil conditions.		1
Absolute	Dominant Indicator	Dominance Test wor	ksheet:	
% Cover	Species? Status			(8)
		I That Are OBL, FACVV	, or FAC:	(A)
-	-	l .	,	(B)
18 +			-	(D)
	= Total Cover			(A/B)
			27 17 17	
		Total % Cover of:	Multiply	by:
		OBL species	x 1 =	
-	*			
	= Total Cover			
25	I. IIc			
35	TAC	Column Totals	(A)	—— (D)
14				
25		' ' ' -		
1				tion
3		-		4
			- 1	
		data in Remark	ks or on a separate :	sheet)
		5 - Wetland Non-Y	Vascular Plants ¹	
		Problematic Hydro	ophytic Vegetation ¹	(Explain)
117	= Total Cover	be present, unless dis	sturbed or problemat	iC.
	23.1		•	
	·	Hydrophytic	1	
1	= Total Cover	Present? Y	es X No _	_
	- Total Cover			
8 5 C C C C C C C C C C C C C C C C C C	aturally prosper showing of the state of the	aturally problematic? (If ne showing sampling point le showing sampling point le la showing sampling point le showing sampling	showing sampling point locations, transect Sampling point locations, transect Sampling point locations, transect Sampled Area within a Wetland? Yes	aturally problematic? (If needed, explain any answers in Remarks.) showing sampling point locations, transects, important feators within a Wetland? Is the Sampled Area within a Wetland? Second Species? Status Absolute % Cover Species? Status Total Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Total % Cover of: Multiply OBL species x2 = FAC species x3 = FACU species x4 = UPL speci

C	n	П	ı	

See IP 51

	STAN
Sampling Point:	1P56 onsulting Engine

Depth Matrix		
	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
	Att	
		
		-
		
		\\\
¹ Type: C=Concentration, D=Depletion, R	tM=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)	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)		
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
HYDROLOGY		
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one requ	ired; check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)	_
		4A, and 4B)
Saturation (A3)		4A, and 4B) Drainage Patterns (B10)
Saturation (A3) Water Marks (B1)	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) 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)
Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	 Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro 	 Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Ots (C3) Geomorphic Position (D2)
Water Marks (B1) 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 Ro Presence of Reduced Iron (C4) 	 Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	 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 	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)
Water Marks (B1) 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 Ro Presence of Reduced Iron (C4) Recent Ign Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A	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)
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	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 A	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)
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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	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) Recent Ign Reduction in Tilled Soils (C 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) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Field Observations; Surface Water Present? Water Table Present? 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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A (B7) Other (Explain in Remarks) (B8) No Depth (inches): No Depth (inches): Wet	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)

usulting Bingineers Geologists, Inc. WETLAND DETERMINATION DA	TA FORM – Western Mou	ntains, Valleys, and	l Coast Region	
Project/Site: Humboldt Bay Harbor District-RMMT	City/County: Humboldt		Sampling Date:	5/13
Applicant/Owner: Humboldt Bay Harbor District	City/County.	State: CA		
Investigator(s): Joseph Saler, Cindy Wilcox	Postina Taurahia Da		Sampling Point: 1	31
Landform (hillslope, terrace, etc.): Paristyla Spit Bays	Section, Township, Ra	nge:	^ -	0-1
	Local relief (concave,	convex, none): CONCAV	Slope	
Subregion (LRR): A, MLRA-4B	Lat: 40.819.395			WGS 84
Soil Map Unit Name: 1014-Urban land Anthrol			0.5	
Are climatic / hydrologic conditions on the site typical for this		(If по, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology si	ignificantly disturbed? Are '	Normal Circumstances" p	present? Yes	_ No
Are Vegetation, Soil, or Hydrology n	aturally problematic? (If ne	eded, explain any answe	rs in Remarks.)	
SUMMARY OF FINDINGS – Attach site map s	showing sampling point l	ocations, transects	. important feat	ures etc
			,	uros, 010
	Is the Sampled	Area	,	
	within a Wetlar	ıd? Yes 🔼	No	
Remarks: WETS normal rainfall			10	
TP excavated within 3p ve	Hand laterally .	PEMID-RODA		
I BECAVAGE WINN SP V	orance, so recursees a	LITHITH DROG		
/EGETATION – Use scientific names of plant	ts.			
201	Absolute Dominant Indicator	Dominance Test work	sheet:	
	% Cover Species? Status	Number of Dominant S		
1		That Are OBL, FACW, o	or FAC:	(A)
2		Total Number of Domin		
1		Species Across All Stra	ta:	(B)
4	= Total Cover	Percent of Dominant Sp		b
Sapling/Shrub Stratum (Plot size: 5'		That Are OBL, FACW, o	DI FAC:	(A/B)
1		Prevalence Index work		
2		Total % Cover of: OBL species		
3.		FACW species		
4		FAC species		
5	$\overline{}$	FACU species		
Herb Stratum (Plot sizę: 5'	= Total Cover		x5=	
1. Distichis Spicera	80 V FACW	Column Totals:		
2. Alongular generalars	12 081			
3. Electaris macrostactiva	5 & NLINE	Prevalence Index	= B/A =	
4. RUMEX COS W	3 FAC	1 - Rapid Test for H		nn.
5. fertura perenis	1 PAC	2 - Dominance Tes		ш
6		3 - Prevalence Inde		
7		T-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	daptations¹ (Provide	supporting
8		data in Remarks	or on a separate sh	eet)
9		5 - Wetland Non-Va	ascular Plants ¹	
10		Problematic Hydrog	phytic Vegetation ¹ (E	xplain)

= Total Cover

2 DAIGHTANA MACA

Woody Vine Stratum (Plot size: 5

% Bare Ground in Herb Stratum 5%

US Army Corps of Engineers

Remarks:

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

Sampling Point:



inches)	<u>Matrix</u>			ox Feature:						
1	Color (moist)	- % 	Color (moist)	%	Type'	_Loc ² _	Texture	-	Remarks	
)-)	2.5 Y, 3/1	100					MuP	Many	Coats	
	N5/	100			_	/	Cols	Mony	cobbles.	
<u> </u>	K									
/dric Soi l l _ Histosol	pipedon (A2)	pletion, RM=R cable to all Li	Reduced Matrix, C RRs, unless othe Sandy Redox Stripped Matrix Loamy Mucky	erwise not (S5) x (S6)	ed.)		Indicate 2 co Red	ors for Pro m Muck (A d Parent M	=Pore Lining, Mandelle Medical Hydrical (TF2) Dark Surface (TI	c Soils³:
	n Sulfide (A4)	_	Loamy Gleyed			LINENA I/			n in Remarks)	,
Depleted Thick Da Sandy N	d Below Dark Surfa ark Surface (A12) lucky Mineral (S1)	ce (A11)	Depleted Matr Redox Dark S Depleted Dark Redox Depres	ix (F3) urface (F6) : Surface (f) =7)		³ Indicat wetla	ors of hydr and hydrol	ophytic vegetation ogy must be presid or problematic	ent,
	Gieyed Matrix (S4) Layer (if present):		Redux Deples	5510115 (1 0)			T	33 GISTATEC	a or problematic	
									11	
Depth (in		·	_				Hydric Soi	l Present?	Voe	No
	U1103)		=							
cernancs.										
OROLO	GY drology Indicators cators (minimum of		check all that app	ply)					cators (2 or more	
YDROLO Vetland Hy Primary Indi Surface	drology Indicator		Water-St	ply) ained Leav		except			ned Leaves (B9)	
YDROLO Vetland Hy Primary Indio X Surface X High Wa	drology Indicators cators (minimum of Water (A1) ater Table (A2)		Water-St	ained Leav	and 4B)	except	X	Water-Stai	ned Leaves (B9)	
YDROLO Vetland Hy Primary Indio X Surface X High Wa X Saturati	drology Indicators cators (minimum of Water (A1) ater Table (A2)		Water-St MLRA Salt Crus	ained Leav	and 4B)	except		Water-Stai 4A, and Drainage F Dry-Seaso	ned Leaves (B9) I 4B) Patterns (B10) n Water Table (C	(MLRA 1, 2 (2)
YDROLO Vetland Hy Primary Indio X Surface X High Wa X Saturati Water M	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3)		Water-St MLRA Salt Crus Aquatic I Hydrogei	ained Leav A 1, 2, 4A, st (B11) nvertebrate n Sulfide C	and 4B) es (B13) dor (C1)		X .	Water-Stai 4A, and Drainage F Dry-Seaso Saturation	ned Leaves (B9) I 4B} Patterns (B10) n Water ⊺able (0 Visible on Aerial	(MLRA 1, 2 (2)
Surface X High Wax Saturati Water M Sedime	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) tarks (B1)		Water-St MLRA Salt Crus Aquatic I Hydrogei Oxidized	ained Leav A 1, 2, 4A, st (B11) nvertebrate n Sulfide C Rhizosphe	and 4B) es (B13) odor (C1) eres along	ı Living Ro	ots (C3) X	Water-Stai 4A, and Drainage F Dry-Seaso Saturation Geomorph	ned Leaves (B9) I 4B) Patterns (B10) In Water Table (C Visible on Aerial ic Position (D2)	(MLRA 1, 2 (2)
YDROLO Wetland Hy Primary Indie X Surface X High Wa X Saturati Water M Sedime Drift Del Algal Ma	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) tarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		Water-St MLRA Salt Crus Aquatic I Hydrogei Oxidized Presence	ained Leav A 1, 2, 4A, st (B11) nvertebrate n Sulfide C Rhizosphe e of Reduc	and 4B) es (B13) dor (C1) eres along ed Iron (C	ı Living Ro	ots (C3) X	Water-Stai 4A, and Drainage F Dry-Seaso Saturation Geomorph Shallow Ad	ned Leaves (B9) I 4B) Patterns (B10) In Water Table (Cook) Visible on Aerial ic Position (D2) puitard (D3)	(MLRA 1, 2 (2)
YDROLO Wetland Hy Primary India Surface High Wa Saturati Water M Sedimer Drift De Algal Ma	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)		Water-St MLRA Salt Crus Aquatic I Hydrogel Oxidized Presence Recent Ii	ained Leav A 1, 2, 4A, st (B11) nvertebrate n Sulfide C Rhizosphe e of Reduc ron Reduct	and 4B) es (B13) dor (C1) eres along ed Iron (C	j Living Ro (4) ed Soils (C	ots (C3) X	Water-Stai 4A, and Drainage F Dry-Seaso Saturation Geomorph Shallow Ac FAC-Neutr	ned Leaves (B9) I 4B) Patterns (B10) In Water Table (Cook) Visible on Aerial ic Position (D2) puitard (D3) al Test (D5)	(MLRA 1, 2 2) Imagery (C
YDROLO Wetland Hy Primary Indie X Surface High Wa X Saturati Water Mater	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) tarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)	one required;	Water-St MLRA Salt Crus Aquatic I Hydrogei Oxidized Presence Recent II	ained Leav A 1, 2, 4A, st (B11) nvertebrate n Sulfide C Rhizosphe e of Reduct ron Reduct or Stressec	and 4B) es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (I	ı Living Ro	ots (C3) X	Water-Stai 4A, and Drainage F Dry-Seaso Saturation Geomorph Shallow Ad FAC-Neutr Raised Ant	ned Leaves (B9) I 4B) Patterns (B10) In Water Table (Cooking to the cooking the cooking the cooking (D2) In the cooking th	(MLRA 1, 2 2) Imagery (C
YDROLO Vetland Hy Primary Indie X Surface X High Wa X Saturati Water M Sedimer Drift De Algal March Iron De Surface Inundati	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) tarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria	one required:	Water-St MLRA Salt Crus Aquatic I Hydroger Oxidized Presence Recent Ir Stunted of	ained Leav A 1, 2, 4A, st (B11) nvertebrate n Sulfide C Rhizosphe e of Reduc ron Reduct	and 4B) es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (I	j Living Ro (4) ed Soils (C	ots (C3) X	Water-Stai 4A, and Drainage F Dry-Seaso Saturation Geomorph Shallow Ad FAC-Neutr Raised Ant	ned Leaves (B9) I 4B) Patterns (B10) In Water Table (Cook) Visible on Aerial ic Position (D2) puitard (D3) al Test (D5)	(MLRA 1, 2 2) Imagery (C
YDROLO Vetland Hy Primary India X Surface X High Wa X Saturati Water M Sedime Drift De Algal Malron De Surface Inundati Sparsel	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) tarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Conca	one required:	Water-St MLRA Salt Crus Aquatic I Hydroger Oxidized Presence Recent Ir Stunted of	ained Leav A 1, 2, 4A, st (B11) nvertebrate n Sulfide C Rhizosphe e of Reduct ron Reduct or Stressec	and 4B) es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (I	j Living Ro (4) ed Soils (C	ots (C3) X	Water-Stai 4A, and Drainage F Dry-Seaso Saturation Geomorph Shallow Ad FAC-Neutr Raised Ant	ned Leaves (B9) I 4B) Patterns (B10) In Water Table (Cooking to the cooking the cooking the cooking (D2) In the cooking th	(MLRA 1, 2 2) Imagery (C
YDROLO Wetland Hy Primary India Surface High Wa Saturati Water M Sedime Drift De Algal Ma Iron De Surface Inundati Sparsel	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Concar vations:	Imagery (B7)	Water-St MLRA Salt Crus Aquatic I Hydrogei Oxidized Presence Recent Ii Stunted (Other (E.	ained Leav A 1, 2, 4A, st (B11) nvertebrate in Sulfide O Rhizosphe e of Reduc- ron Reduct or Stressed xplain in R	and 4B) es (B13) dor (C1) eres along ed Iron (C tion in Tille d Plants (I emarks)	j Living Ro (4) ed Soils (C	ots (C3) X	Water-Stai 4A, and Drainage F Dry-Seaso Saturation Geomorph Shallow Ad FAC-Neutr Raised Ant	ned Leaves (B9) I 4B) Patterns (B10) In Water Table (Cooking to the cooking the cooking the cooking (D2) In the cooking th	(MLRA 1, 2 2) Imagery (C
YDROLO Wetland Hy Primary India Surface High Wa Saturati Water M Sedime Drift De Algal Ma Iron De Surface Inundati Sparsel Field Obser Surface Water	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) tarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Conca- rvations:	Imagery (B7) ve Surface (B	Water-St MLRA Salt Crus Aquatic I Hydrogel Oxidized Presence Recent II Stunted (Other (E:	ained Leav A 1, 2, 4A, st (B11) nvertebrate n Sulfide C Rhizosphe e of Reduct ron Reduct or Stressed xplain in Re	es (B13) dor (C1) eres along ed Iron (C tion in Tille d Plants (I emarks)	j Living Ro (4) ed Soils (C	ots (C3) X	Water-Stai 4A, and Drainage F Dry-Seaso Saturation Geomorph Shallow Ad FAC-Neutr Raised Ant	ned Leaves (B9) I 4B) Patterns (B10) In Water Table (Cooking to the cooking the cooking the cooking (D2) In the cooking th	(MLRA 1, 2 2) Imagery (Cs
YDROLO Vetland Hy Primary India X Surface High Water M Sedime Drift De Algal Malron De Surface Inundati Sparsel Field Obser Surface Water Table	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) tarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria ty Vegetated Concar vations: ter Present?	Imagery (B7) ve Surface (B) Yes N	Water-St	ained Leav A 1, 2, 4A, st (B11) nvertebrate n Sulfide C Rhizosphe e of Reduct ron Reduct or Stressed xplain in R	es (B13) es (B13) ed (C1) eres along ed Iron (C tion in Tille d Plants (I emarks)	J Living Ro (4) ed Soils (C O1) (LRR A	ots (C3) X	Water-Stai 4A, and Drainage F Dry-Seaso Saturation Geomorph Shallow Ad FAC-Neutr Raised And Frost-Heav	ned Leaves (B9) 14B) Patterns (B10) In Water Table (Color Visible on Aerial (Color Position (D2) Indianal (D3) In Test (D5) In Mounds (D6) (Lor Hummocks (D6)	(MLRA 1, 2 2) Imagery (Cs
YDROLO Wetland Hy Primary Indie X Surface High Water Management Field Observation Pales Surface Water Table Surface Water Table Saturation Pales Simple Observation P	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) tarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria ty Vegetated Concar vations: ter Present?	Imagery (B7) Ive Surface (B) Yes N Yes N	Water-St	ained Leav A 1, 2, 4A, st (B11) nvertebrate n Sulfide C Rhizosphe e of Reduct ron Reduct or Stressed xplain in R inches):	es (B13) es (B13) ed (C1) eres along ed Iron (C tion in Tille d Plants (I emarks)	Living Ro (4) ed Soils (C O1) (LRR A	ots (C3) X	Water-Stai 4A, and Drainage F Dry-Seaso Saturation Geomorph Shallow Ad FAC-Neutr Raised And Frost-Heav	ned Leaves (B9) 14B) Patterns (B10) In Water Table (Color Visible on Aerial (Color Position (D2) Indianal (D3) In Test (D5) In Mounds (D6) (Lor Hummocks (D6)	(MLRA 1, 2 2) Imagery (C
YDROLO Wetland Hy Primary Indie X Surface High Water Management Field Observation Pales Surface Water Table Surface Water Table Saturation Pales Simple Observation P	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) tarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Conca vations: ter Present? Present?	Imagery (B7) Ive Surface (B) Yes N Yes N	Water-St	ained Leav A 1, 2, 4A, st (B11) nvertebrate n Sulfide C Rhizosphe e of Reduct ron Reduct or Stressed xplain in R inches):	es (B13) es (B13) ed (C1) eres along ed Iron (C tion in Tille d Plants (I emarks)	Living Ro (4) ed Soils (C O1) (LRR A	ots (C3) X	Water-Stai 4A, and Drainage F Dry-Seaso Saturation Geomorph Shallow Ad FAC-Neutr Raised And Frost-Heav	ned Leaves (B9) 14B) Patterns (B10) In Water Table (Color Visible on Aerial (Color Position (D2) Indianal (D3) In Test (D5) In Mounds (D6) (Lor Hummocks (D6)	(MLRA 1, 2 2) Imagery (C

Consulting Engineers & WETLAND DETERMING & Geologists, Inc.	NATION DATA FORM	– Western Mou	ntains, Valleys, and	Coast Region
Project/Site: Humboldt Bay Harbor District-Ri	<u>MMT</u> C	ty/County: Humboldt		Sampling Date: 5/13/22
Applicant/Owner: Humboldt Bay Harbor Distr	ict		State: CA	Sampling Point: TP 50
Investigator(s): Joseph Saler, Cindy Wilcox		ection, Township, Ra		
Subregion (LRR): A. MLRA-4B Soil Map Unit Name: 1014-V Wan Land	/spit, Baysidefil Lat: 40.	ocal relief (concave, 91934b	convex, none): Nove Long: -124.1797	Datum: WGS 84
Are climatic / hydrologic conditions on the sit	e typical for this time of year	? Yes <u>X</u> No _	(If no, explain in Re	marks.)
Are Vegetation, Soil, or Hydro			Normal Circumstances" pr	
Are Vegetation, Soil, or Hydro			eded, explain any answer	
SUMMARY OF FINDINGS – Attac				·
Hydrophytic Vegetation Present? Y Hydric Soil Present? Y	es No No No No	Is the Sampled within a Wetlar	Area	*
TP excavated at slightly	higher elevation -	than 3p. we	tland. "	definition.
VEGETATION – Use scientific nar		Dominant Indicator	Dominance Test works	heet:
Tree Stratum (Plot size: 30') 1 2	% Cover	Species? Status	Number of Dominant Sp That Are OBL, FACW, o Total Number of Domina	r FAC: (A)
3			Species Across All Strat	,
4Sapling/Shrub Stratum (Plot size: 5'		: Total Cover	Percent of Dominant Sp. That Are OBL, FACW, o	r FAC: (A/B)
1			Prevalence Index work	
2			Total % Cover of:	
3			OBL species	
4			· -	x 3 =
5.				x4=
Herb Stratum (Plot size: 5' ,)		· Total Cover		x 5 =
1. Alotecurus geniculatus	25	W OBL	i -	(A) (B)
2. Metha pulerium	10	OBL	-	
3. Tuncus butagin	35	FACW	Hydrophytic Vegetation	= B/A =
4. Leonadon suxatilis	10	FACU	1 - Rapid Test for H	
5. Fetuca permis	77	FAC	2 - Dominance Test	
6. Isoleois ternua	1	OBL	3 - Prevalence Inde:	
7. Lotus Cornicul atus	8	FAC	4 - Morphological A	daptations ¹ (Provide supporting or on a separate sheet)
9.			5 - Wetland Non-Va	
10			Problematic Hydrop	hytic Vegetation ¹ (Explain)
11.	2			and wetland hydrology must
		Total Cover	be present, unless distui	bed or problematic.

Remarks:

Total Cover

= Total Cover

Woody Vine Stratum (Plot size: 5'

% Bare Ground in Herb Stratum

Hydrophytic Vegetation Present?

Depth <u>Matrix</u>		
	Redox Features	T-0000-000
inches) Color (moist) %	Calor (maist) % Type¹ Loc²	Texture Remarks
0-1 10YR3/2 100		year
-9 10483/2 100		GrLS
7-14+ 107 4/1 100	ーフフフリ	Color
1-17-101-7/1 100		(00123
Type: C=Concentration, D=Depletion, RM	=Reduced Matrix, CS=Covered or Coated Sand Gra	ins. 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):		
Туре:		\vee
Depth (inches):		Hydric Soil Present? Yes No
		excavate beyond 14 in depth.
YDROLOGY Wetland Hydrology Indicators:		
YDROLOGY		Secondary Indicators (2 or more required)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require	ed; check all that apply)	Secondary Indicators (2 or more required)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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,
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3)	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	ed; check all that apply) Water-Stained Leaves (B9) (except 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)
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)	ed; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
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)	ed: check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) s (C3) Geomorphic Position (D2)
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)	ed: check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) S (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
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)	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 Root — Presence of Reduced Iron (C4) — Recent Iron Reduction in Tilled Soils (C6)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 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)
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)	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 Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 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)
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)	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 Root — Presence of Reduced Iron (C4) — Recent Iron Reduction in Tilled Soils (C6) — Stunted or Stressed Plants (D1) (LRR A)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 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)
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)	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 Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 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)
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 (I	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 Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 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)
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 (I	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 Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 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)
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 (I 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 Root Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (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) s (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 (I Sparsely-Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Saturation Present? Saturation Present? Signification Present? Significati	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 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): N/A Depth (inches): U/A Wetla	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) (C3) Geomorphic Position (D2) 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 (I Sparsely-Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Saturation Present? Saturation Present? Signification Present? Significati	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 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) Depth (inches): N/A Depth (inches): 12.5	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)

G117
CIN.
Consulting Engineers

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

Geologists, Inc.	I have I	Shala
Project/Site: Humboldt Bay Harbor District-RMMT	City/County: Humbol	Idt Sampling Date: 5/13/2
Applicant/Owner: Humboldt Bay Harbor District		State: CA Sampling Point: TP 59
Investigator(s): Joseph Saler, Cindy Wilcox	Section, Township, F	Range:
Landform (hillslope, terrace, etc.): Renin Sul	a 5pit Local relief (concave	e, convex, none): <u>No ne</u> Slope (%): <u>3-5</u>
Subregion (LRR): A, MLRA-4B	Lat: 40.919364	Long:/ 24. / 179829 Datum: WGS 84
Soil Map Unit Name: 1014 - Urbunland An	nthraltic xcrowthents as	500 0-2% NWI classification: none
Are climatic / hydrologic conditions on the site typica	al for this time of year? Yes X	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology _		e "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology _		needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site	map showing sampling point	t locations, transects, important features, etc
Hydrophytic Vegetation Present? Yes	No X	
	No Is the Sample	•
	No X within a Wetl	and? Yes No _/-
TP excavated qurex- 3ft from	m Hydophylic veg da	winance Shown in T158.
VEGETATION – Use scientific names o	of plants.	
200	Absolute Dominant Indicato	
Tree Stratum (Plot size: 30)	% Cover Species? Status	Number of Dominant Species
1		That Are OBL, FACW, or FAC: (A)
3.		Total Number of Dominant
Δ		Species Across All Strata: (B)
7:	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size: 5'		Prevalence Index worksheet:
1.		Total % Cover of: Multiply by:
2	$\overline{}$	OBL species x 1 =
3	$\overline{}$	FACW species x 2 =
4	$\overline{}$	FAC species x 3 =
5	- Total Course	FACU species x 4 =
Herb Stratum (Plot size: 5')	= Total Cover	UPL species x 5 =
1. Briza Maxima	60 L UPL	Column Totals: (A) (B)
2. Plantago lanceolata	TO FACU	Prevalence Index = B/A =
3. Ceranium dissection	3 UPL	Hydrophytic Vegetation Indicators:
4. Anthexanthum odoratum	25 FACU	1 - Rapid Test for Hydrophytic Vegetation
5. Branco diandres		_ 2 - Dominance Test is >50%
6. Tritalium suberfaneum	2 UPL	3 - Prevalence Index is ≤3.0¹
7. Vicia sativa		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		Indicators of hydric soil and wetland hydrology must
	103 = Total Cover 51.5	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 5'	20.0	
1,		- Hydrophytic
2		Vegetation Present? Yes No
% Bare Ground in Herb Stratum	= Total Cover	
	will be a large	in al anser Com
Minio no ominare	. Attestive of major	they at dison & trum
la dustrial toold	J	

Profile Desc	cription: (Describe	to the dep	th needed to docu	ment the ir	ndicator	or confirm	n the absence	of indicators.)
Depth	Matrix			x Features				·
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	_Loc ²	Texture	Remarks
0-12	104R 2/1	100				-	SCL	
12-16+	104 4/1	>99	10 YR4/6	11/		MIPL	Excogr W	redax on copole surfaces
-		-				-		
-			-	-		-		
								14
1Tuna: C=0	angentration D-Day	alation DM		S=Caustad		ad Sond C	design 2) or	cation: PL=Pore Lining, M=Matrix.
			=Reduced Matrix, C: LRRs, unless othe			ed Sand G		ors for Problematic Hydric Soils ³ :
Histoso		Jabio Lo dii	Sandy Redox (,			n Muck (A10)
	pipedon (A2)		Stripped Matrix					Parent Material (TF2)
	istic (A3)		Loamy Mucky I) (excen	t MLRA 1		y Shallow Dark Surface (TF12)
	en Sulfide (A4)		Loamy Gleyed					er (Explain in Remarks)
	d Below Dark Surfac	ce (A11)	Depleted Matri:		•			ar yampisiir ir romaning
	ark Surface (A12)	SE (A11)	Redox Dark Su				3Indicate	ors of hydrophytic vegetation and
_	Mucky Mineral (S1)		Depleted Dark		7)			and hydrology must be present,
	Gleyed Matrix (S4)		Redox Depress	-	" "			ss disturbed or problematic.
i i	Layer (if present):		Nedox Depies.	310113 (1 0)			dilla	as distance of problematic.
Type:								
Depth (in	iches):						Hydric Soil	Present? Yes No _X
HYDROLO)GY	ż		_				
Wetland Hy	drology Indicators	:						
_			d: check all that app	lv)			Seco	ndary Indicators (2 or more required)
		one reganc		ined Leave	se (BB) (ovenet		Vater-Stained Leaves (B9) (MLRA 1, 2
1 To	Water (A1)					except	_ v	
	ater Table (A2)			1, 2, 4A, a	na 4B)		_	4A, and 4B)
	ion (A3)		Salt Crust					Prainage Patterns (B10)
Water N	/larks (B1)			vertebrate			<u> </u>	Ory-Season Water Tablé (C2)
Sedime	nt Deposits (B2)		Hydrogen	Sulfide Oc	or (C1)		8	Saturation Visible on Aerial Imagery (C
Drift De	posits (B3)		Oxidized	Rhizospher	res along	Living Ro	ots (C3) C	Seomorphic Position (D2)
Algal M	at or Crust (B4)		Presence	of Reduce	d Iron (C	(4)	_ \$	Shallow Aquitard (D3)
Iron De	posits (B5)		Recent Ire	on Reductio	on in Tille	ed Soils (C	:6) F	AC-Neutral Test (D5)
Surface	Soil Cracks (B6)		Stunted o	r Stressed	Plants (I	01) (LRR /	A) F	Raised Ant Mounds (D6) (LRR A)
_	ion Visible on Aerial	lmagery (E		plain in Re		,		rost-Heave Hummocks (D7)
—	ly Vegetated Concav		<i>-</i>	p	,		 ·	(21,
Field Obser	<u> </u>	TO QUITELE	(==)			-1		
		W	N . X		A			
		Yes		nches):				2
Water Table	Present?	Yes		iches):N		_		
Saturation F	Present? pillary fringe)	Yes	No Depth (in	nches):	enote	We	tiand Hydrolog	y Present? Yes No
		n gauge, m	onitoring well, aerial	photos, pro	evious in	spections)	, if available:	
Remarks:		Á	·	n. 1	,		0	D 1 1 1 1 1
Slidt	ly raised	aprie	TP 38.	No h	AGKO	(100)	proext.	Pockets at saturation
- 1			1	ikely a	rout o	4	fo	m 10-12 in above
				1.00	minter	1	COMPACTO	ed a givel layer.

ologists, Inc. oject/Site: Humboldt Bay Harbor District-RMMT		City/County: Humboldt		Sampling Date: 5131
plicant/Owner: Humboldt Bay Harbor District				Sampling Point: TP60
vestigator(s): Joseph Saler, Cindy Wilcox	9	Section, Township, Rar		
ndform (hillslope, terrace, etc.): Peninsula				cave Slope (%):
bregion (LRR): A, MLRA-4B				
il Map Unit Name: 1014-urbanland An	throllie VI	with enteres	or and and	Datum. 100
e climatic / hydrologic conditions on the site typica				
e Vegetation, Soil, or Hydrology _	significantly o	listurbed? Are "	Normal Circumstances" (oresent? Yes ૣ No _
e Vegetation, Soil, or Hydrology _	naturally prob	olematic? (If ne	eded, explain any answe	rs in Remarks.)
UMMARY OF FINDINGS - Attach site	man showing	sampling point le	ocations, transects	. important features.
	_	Jamping Politic	Juliono, managati	, important router out
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes	No	is the Sampled	Area	
Vetland Hydrology Present? Yes	No	within a Wetlan		No
Pernarks: M/ETC pormal rainfall			And In it and an	0×1.40 A
Slight swale through willow	16 bleck benny	res.	pest described as	
stight swift through		to make the diff.	No abovegramo	l cornectivity
EGETATION – Use scientific names o	f nlante		9	-
OLIATION - dat deletitine flames o	Absolute	Dominant Indicator	Dominance Test work	rchast:
ree Stratum (Plot size: 30'	20.0 -277	Species? Status		
Morella californica	85	V FACW	Number of Dominant S That Are OBL, FACW,	
Salix hochetiona	20	FACW		_
			Total Number of Domir Species Across All Stra	,
				10031
	105	= Total Cover 52.5	Percent of Dominant S That Are OBL, FACW,	
apling/Shrub Stratum (Plot size: 5'	40	21	Prevalence Index wor	
Rylan ameriacus	70	FAC	Total % Cover of:	
Rubur winu		- FACU	OBL species	
. Linicera involverata			FACW species	
			Call Color C	x3=
			THE STATE COMMITTEE STATE OF THE STATE OF TH	x4=
	47	= Total Cover		x5=
lerb Stratum (Plot size: 5)				^3
			Coldinii Totala.	(^)
			Prevalence Index	c = B/A =
			Hydrophytic Vegetati	
			1 - Rapid Test for	Hydrophytic Vegetation
		s	2 - Dominance Tes	
	\		3 - Prevalence Ind	ex is ≤3.0 ¹
·			4 - Morphological	Adaptations ¹ (Provide suppo
×				s or on a separate sheet)
			5 - Wetland Non-V	
0				phytic Vegetation ¹ (Explain)
				il and wetland hydrology mu
1			be present, unless dist	urbad or problematic

______Total Cover

% Bare Ground in Herb Stratum 100%

Profile Description: (Describe to the de	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
0-2 104R 41 100		MU Peut
2-16 2.54311 100		mus
		
·		
-		2
	=Reduced Matrix, CS=Covered or Coated Sand Gra	
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)	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)	31 at a second of the second o
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:		l X
Remarks: Other- a.a.d preaction		Hydric Soil Present? Yes No No
HYDROLOGY		
Wetland Hydrology Indicators:		2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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 ⊺able (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 Roof	
Algal Mat or Crust (B4)	 Oxidized Rhizospheres along Living Roof Presence of Reduced Iron (C4) 	
Algai Mat or Crust (B4) Iron Deposits (B5)		ts (C3) X Geomorphic Position (D2) Shallow Aquitard (D3)
	Presence of Reduced Iron (C4)	ts (C3) X Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Iron Deposits (B5)	Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A)	ts (C3) X Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (I	Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	ts (C3) X Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Iron Deposits (B5) Surface Soil Cracks (B6)	Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	ts (C3) X Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface Field Observations:	Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) (B8)	ts (C3) X Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes	Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) No Depth (inches):	ts (C3) X Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes	Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) No Depth (inches): V/A No Depth (inches): 40	ts (C3)
Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Saturation Present? Yes	Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) No Depth (inches): YA Depth (inches): YO	ts (C3) X Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? (includes capillary fringe)	Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) No Depth (inches): V/A No Depth (inches): 40	ts (C3)
Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? (includes capillary fringe)	Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) No Depth (inches): What No Depth (inches): Wetlate No Depth (inches): Wetlate No Depth (inches): Wetlate No Depth (inches): No Depth (inches): Wetlate No Depth (inches): Wetlate No Depth (inches): No Depth (inches)	ts (C3)
Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, n	Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) No Depth (inches): What No Depth (inches): Wetlate No Depth (inches): Wetlate No Depth (inches): Wetlate No Depth (inches): No Depth (inches): Wetlate No Depth (inches): Wetlate No Depth (inches): No Depth (inches)	ts (C3)
Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, n	Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) No Depth (inches): What No Depth (inches): Wetlate No Depth (inches): Wetlate No Depth (inches): Wetlate No Depth (inches): No Depth (inches): Wetlate No Depth (inches): Wetlate No Depth (inches): No Depth (inches)	ts (C3)
Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, n	Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) No Depth (inches): What No Depth (inches): Wetlate No Depth (inches): Wetlate No Depth (inches): Wetlate No Depth (inches): No Depth (inches): Wetlate No Depth (inches): Wetlate No Depth (inches): No Depth (inches)	ts (C3)

Project/Site: Humboldt Bay Harbo	r District-RMMT	0	ity/County: Humbold		Sampling Dat
Applicant/Owner: Humboldt Bay H	larbor District			State: CA	Sampling Poi
Investigator(s): Joseph Saler, Cinc	ty Wilcox		Section, Township, Ra	inge:	
Landform (hillslope, terrace, etc.):	Pennsula Soit	Baysidetil	_ocal relief (concave,	convex, none): No	e
Subregion (LRR): A, MLRA-4B	7-1	Lat: 40	. 819830	Long: -124.1	79396
Soil Map Unit Name: 1014- Un	panlandx	Anthral tic	Xenorthents	0-290 NWI clas	ssification: Tresh
Are climatic / hydrologic conditions	The second secon	The state of the s	The state of the s		61
Are Vegetation, Soil		_			
Are Vegetation, Soil				eeded, explain any an	
	A750.7 15	•	·	•	
SUMMARY OF FINDINGS	- Attach site i	map showing	sampling point	ocations, transe	ects, important
Hydrophytic Vegetation Present			la the Cample	4 4	×
Hydric Soil Present?	Yes	No. IV	Is the Sample	a Area	

tant features, etc. VEGETATION – Use scientific names of plants. Dominance Test worksheet: Absolute Dominant Indicator Tree Stratum (Plot size: 30' % Cover Species? Status **Number of Dominant Species** 1. Dalix horomana That Are OBL, FACW, or FAC Total Number of Dominant Species Across All Strata: Percent of Dominant Species = Total Cover That Are OBL, FACW, or FAC: Sapling/Shrub Stratum (Plot size: 5' Prevalence Index worksheet: 1. Rybus WSINUS Total % Cover of: Multiply by: _____ x 1 = ____ OBL species FACW species ___ ____ x 2 = ___ FAC species x 3 = FACU species _____ x 4 = _____ ____ x 5 = ____ UPL species Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.01 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 22 _= Total Cover Woody Vine Stratum (Plot size: 5' Hydrophytic Vegetation Present? = Total Cover % Bare Ground in Herb Stratum Remarks;

Region

Slope (%): Datum: WGS 84

501L			Sampling Folia
Profile Description: (Describe to the	lepth needed to document the indicator or conf	firm the absence	of indicators.)
Depth Matrix	Redox Features		Decreedes
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture	Remarks
0-5 ibyR3/1 100		SCH	
5-15 2.54 4/2 100		GrLS	consacted
15-28+2.54 4/2 87	- 10 YR 5/6 TO C. M	_ <	
10 20 2.37 112 1	75V11/C 2 C M		
	1.544/6 2 0 11		
0			
	- 		-
<u> </u>			
¹ Type: C=Concentration, D=Depletion, I	RM=Reduced Matrix, CS=Covered or Coated Sand		cation: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to	all LRRs, uпless otherwise noted.)	Indicate	ors for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cr	m Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)		d Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA	. 1) Ver	y Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Oth	er (Explain in Remarks)
Depieted Below Dark Surface (A11)	Depleted Matrix (F3)		
Thick Dark Surface (A12)	Redox Dark Surface (F6)		ors of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetla	and hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unle	ss disturbed or problematic.
Restrictive Layer (if present):			
Туре:			Y
Depth (inches):		Hydric Soi	Present? Yes No 🔼
Remarks:		-	
HYDROLOGY	4	7.0	
Wetland Hydrology Indicators:			
Primary Indicators (minimum of one requ	rired; check all that apply)	Seco	endary 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)		Orainage 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		Geomorphic Position (D2)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
— •	Recent Iron Reduction in Tilled Sails		FAC-Neutral Test (D5)
Iron Deposits (B5)	_		
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRI		Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery		— '	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surfa	DE (B8)		
Field Observations:	V		
Surface Water Present? Yes			
Water Table Present? Yes	No X Depth (inches): 25 in		
Saturation Present? Yes	No _X_ Depth (inches): 22 in V	Vetland Hydrolog	gy Present? Yes No 🔼
(includes capillary fringe)		a warene	1
Describe Recorded Data (stream gauge	, monitoring well, aerial photos, previous inspection	ns), if available:	
Demarks			
Remarks:	. 12 in elev. allowe 3p we	land No	hydrology obstrued
Trexcavated approx	. 1211 car above of voo	milen to	and and
20,14			U.

(2VV)
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Consulting Engineers

Applicant/Owner: Humboldt Bay Harbor District Investigatory: Joseph Stafer, Chicy Wilcox Interest Vestigatory: Joseph Stafer, University Vestigatory: Joseph Stafer, University Vestigatory Interest Vestigatory	rologists, Inc. roject/Site: Humboldt Bay Harbor District-RMMT	City/County: Humbold	it	Sampling Date: 5/13/2
Association (Plot size: 5	policant/Owner: Humboldt Bay Harbor District		State: CA	Sampling Point: 1962
andform (hillslope, surrace, setc.): Perunsula Seria buyshold (concave, convex, none): MONL streeting (LRR): A MLRA-4B		Section Township R	ande.	
Long	andform (hillslope terrace etc.): Peningula Soit	- buy side Local relief (concave	convex none): N	ON & Sione (%): O
oil Map Unit Name: 1014-015 and a 1 Aminatric Northand 1 March	Ubrenion (I RR): A. MLRA-4B	10th 40 6/9/12	Jana: 174 187-1	00.3 Deturn WGS 84
re climatic / hydrologic conditions on the site typical for this time of year? Yes	all Man that home ININ-INhan ale a A Anthe	To the XI contract Accor	4-70/0 ADAM -1	Carrier Mond
re Vegetation				
re Vegetation				· V
### Attach site map showing sampling point locations, transects, important feature Hydrophytic Vegetation Present?		• •		* 164
Hydrophytic Vegetation Present? Yes No Wetland Hydrology Present? Yes No Wetland? Yes No Wetland				
Second S			locations, transect	ts, important features, et
Wetland Hydrology Present? Wes No within a Wetland? Absolute Species Folk. Dominant Indicator Status Number of Dominant Species That Aco West Acow, or FAC: Into A Number of Dominant Species Number of Dominant Species Across All Strata: Percont of Dominant Species That Aco West Acow, or FAC: Prevalence Index worksheet: Total Your Office Species 1 = Total Cover Wultiply by Obl. Species 1 = FACW species x 2 = FAC species x 3 = FACU species x 4 = UPL species x 5 = Column Totals: (A) Prevalence Index = BIA = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is 3 of 4 - Morphiological Adaptations? (Provide sugator in Remarks or on a separate sheet) 50 - Total Cover West Now Yes			od Area	
Remarks: WETS normal reinfall The excavated within willow patch of lowest point. Tree Stratum (Plot size: 30'		1,0	and? Yes	No X
Tree Stratum (Plot size: 30 Absolute % Cover Species? Status Submitted (Plot size: 30 Absolute % Cover Species? Status Status (Plot size: 30 Absolute % Cover Species? Status Submitted (Plot size: 30 Absolute % Cover Species? Status Submitted (Plot size: 5 Acc.) Sapling/Shrub Stratum (Plot size: 5 Acc.) Sapling/Shrub Stratum				1211 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Absolute % Cover Status (Plot size: 30') 1. Sq. X. Sirch Act S 2. Proving Machael S 3. Morel (Calibarni (A)	To excavated within will	an patch at lowest p	ioint.	
Tree Stratum (Plot size: 30 % Cover 80 FACW 10	EGETATION – Use scientific names of pla	ants.		The state of the s
That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: 2	201		Dominance Test wor	rksheet:
Total Number of Dominant Species Across All Strata: Sapling/Shrub Stratum (Plot size: 5)	(Plot size: 30')	200		
Sapiling/Shrub Stratum (Plot size: 5) Sapiling/Shrub Str	Safrx 213c May 12		That Are OBL, FACW	/, or FAC: (A)
Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index worksheet: Total % Cover of: Multiply by. OBL species			1	
Prevalence Index worksheet: Total % Cover of:	Morella Californi Ca		Species Across All St	rata: (B)
Prevalence Index worksheet: Total % Cover of	4	= Total Cover		Species 50% (A/E
Total % Cover of:	Sapling/Shrub Stratum (Plot size: 5')			
OBL species x1 = FACW species x2 = FAC species x3 = FACU species x4 = UPL species x5 = 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° 3 - Prevalence Index is ≤3.0° 4 - Morphological Adaptations¹ (Provide sup data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain) Noody, Vine Stratum (Plot size: 5') A Bare Ground in Herb Stratum FACW species x2 = FAC species x3 = FACU species x4 = UPL species x4 =	1.		s.l	
FACW species x2 = FAC species x3 = FACU species x4 = SECU species x4 = SECU species x4 = SECU species x5 = SECU species x4 = SECU species x5 = SECU species				
FAC species				
Solution Prevalence Index Solution Index I		\		
Stratum (Plot size: 5' Stratum (Plot size:			FACU species	x 4 =
Column Totals:	Herb Stratum (Plot size: 5')			
Prevalence Index = B/A =	Cortadnia Jupota	50 / AMCU	Column Totals:	
Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide sur data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explation) 1 - Problematic Hydrophytic Vegetation¹ (Explation) 1 - Total Cover Woody, Vine Stratum (Plot size: 5′ 1 - Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide sur data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ 1 - Indicators of hydric soil and wetland hydrology be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes No X				- D/A -
2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide sup data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explational Stratum (Plot size: 5')) 1.				
4 - Morphological Adaptations¹ (Provide supdata in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explants¹) Indicators of hydric soil and wetland hydrology be present, unless disturbed or problematic. 1	·			
data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explating Stratum (Plot size: 5') The data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ Indicators of hydric soil and wetland hydrology be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes No Bare Ground in Herb Stratum Yes No			3 - Prevalence In-	dex is ≤3.0 ¹
			4 - Morphological	Adaptations ¹ (Provide supportin
Problematic Hydrophytic Vegetation¹ (Explain 1			-0	· ·
1			•	
be present, unless disturbed or problematic. Voody, Vine Stratum (Plot size: 5') Hydrophytic Vegetation Present? Yes No X	0		51	
Voody, Vine Stratum (Plot size: 5') Hydrophytic Vegetation Present? Yes No X	1a ₁			
Hydrophytic Vegetation Present? Yes No No	Voody Vina Stratum (Blot size: 5'	50 = Total Cover	be present, unless dis	
Vegetation Present? Yes No X		2		
6 Bare Ground in Herb Stratum 50%. 2 = Total Cover Present? Yes No	The state of the s		Vegetation	
Remarks:		2 = Total Cover	Present? Y	'es No
Remarks:	6 Bare Ground in Herb Stratum 5 1/.	Total Cover		
The first of the f	Remarks:	Dank and sandar and		

SOIL		Sampling Point:
Profile Description: (Describe to the de	epth needed to document the indicator or conf	firm the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-3 104/24 100		- L
5-17 laye 3/2 100		Mixed till
17-14 INVR 4/2 90	5 V 4/2 10 D m	2
11 11 10 11 10		
		
		-
	<u> </u>	4
		lea
True: C-Consentration D-Depletion B	M=Reduced Matrix, CS=Covered or Coated Sand	Grains. 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	
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):	· X*	The state of the s
Type:		
Depth (inches):		Hydric Soil Present? Yes No
HYDROLOGY		
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	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along Living	Roots (C3) Geomorphic Position (D2)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soils	(C6) FAC-Neutral Test (D5)
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LR	R 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:	10.1	
Surface Water Present? Yes	No Depth (inches):	
Water Table Present? Yes	No Depth (inches): N	V
Saturation Present? Yes	No X Depth (inches): N/A V	Vetland Hydrology Present? Yes No 🔼_
(includes capillary fringe)		Mark Warmelland
Describe Recorded Data (stream gauge,	monitoring well, aerial photos, previous inspectio	ns), ir avaliable.
Remarks:		
Well drained, No hy	grology Indicators.	
, ,	J/	
	AL.	
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Coologisto Los		5/11/23
Project/Site: Humboldt Bay Harbor District-RMMT	City/County: Humboldt	Sampling Date: 5/14/2)
Applicant/Owner: Humboldt Bay Harbor District		State: CA Sampling Point: TP 63 W
Investigator(s): Joseph Saler, Cindy Wilcox	Section, Township, Ra	nge:
Landform (hillslope, terrace, etc.): Renova Spit, F	Local relief (concave,	convex, none): <u>Nove</u> Slope (%): <u>1</u> -1
Subregion (LRR): A, MLRA-4B	Lat: 40. 819585	Long: -124.182949 Datum: WGS 84
Soil Map Unit Name: Urban land - Anthralt		
Are climatic / hydrologic conditions on the site typical for ti		
Are Vegetation, Soil, or Hydrology		'Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology		eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site maj	showing sampling point l	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes		<u> </u>
Hydric Soil Present? Yes		
Wetland Hydrology Present? Yes	No within a Wetlar	nd? Yes No
Remarks: WETS normal rainfall Very Sample only. See	TP 62 for repre	sotative soil + Lydrology.
VEGETATION - Use scientific names of pla	nts.	7 51
Tree Stratum (Plot size: 30'	Absolute Dominant Indicator	Dominance Test worksheet:
1. Salix, he a veriana	% Cover Species? Status	Number of Dominant Species That Are ORL FACILL or FACILL (A)
2. More a Californica	FACW	That Are OBL, FACW, or FAC: (A)
3. Pinu radion	ID WPL	Total Number of Dominant Species Across All Strata: (B)
4.		Species Across Air Strata. (B)
	Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)
Sapling/Shrub Stratum (Plot size: 5'	In . Mail	Prevalence Index worksheet:
1. Rybus vesinu	12 FACU	Total % Cover of: Multiply by:
2. Cotoneaster lacteur	- T IVL	OBL species x 1 =
3,		FACW species x 2 =
4		FAC species x 3 =
5	70 50	FACU species x 4 =
Herb Stratum (Plot size: 5')	= Total Cover	UPL species x 5 =
1. Arthax arthun odoratum	5 FACU	Column Totals: (A) (B)
2. folar lanatus	6 FAC	Prevalence Index = B/A =
3. Contaderia jubota	20 FACU	Hydrophytic Vegetation Indicators:
4		1 - Rapid Test for Hydrophytic Vegetation
5		2 - Dominance Test is >50%
6		3 - Prevalence Index is ≤3.01
7,		4 - Morphological Adaptations ¹ (Provide supporting
8,		data in Remarks or on a separate sheet)
9		5 - Wetland Non-Vascular Plants ¹
10,	<u> </u>	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: 5'	3 = Total Cover 55	Bo present, unless disturbed or problemation
1. Heden Leix	1	
2		Hydrophytic Vegetation
	= Total Cover	Present? Yes No
% Bare Ground in Herb Stratum 69*		
Remarks:	1. 1.1.2 - 11	
representative of what will	in parcles. In the or	ea
Ix Kthe and diff from will me	and Cantanonia	

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×(III	

Sampling Point: Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Redox Features Depth (inches) ²Location: PL=Pore Lining, M=Matrix. ¹Type: 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 Soils³: _ Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Red Parent Material (TF2) Stripped Matrix (S6) Histic Epipedon (A2) 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) 3Indicators of hydrophytic vegetation and Redox Dark Surface (F6) wetland hydrology must be present, Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) unless disturbed or problematic. Redox Depressions (F8) Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type:_ Hydric Soil Present? Yes Depth (inches): Remarks: vey only. See TP 62 for representative soil anditions. **HYDROLOGY** Wetland Hydrology Indicators: Secondary Indicators (2 or more required) Primary Indicators (minimum of one required; check all that apply) Water-Stained Leaves (B9) (MLRA 1, 2, Surface Water (A1) _ Water-Stained Leaves (B9) (except _ High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Drainage Patterns (B10) Saturation (A3) Salt Crust (B11) ___ Dry-Season Water Table (C2) ___ Aquatic Invertebrates (B13) Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Saturation Visible on Aerial Imagery (C9) Oxidized Rhizospheres along Living Roots (C3) ___ Geomorphic Position (D2) Drift Deposits (B3) ___ Shallow Aquitard (D3) Presence of Reduced Iron (C4) _ Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Iron Deposits (B5) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Surface Soil Cracks (B6) __ Other (Explain in Remarks) Inundation Visible on Aerial Imagery (B7) 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? Saturation Present? Yes No ____ Depth (inches): ___ Wetland Hydrology Present? Yes __ (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks See TP62 for representative hydrology conditions.

67M	
CIM	
Consulting Engineers	
Consulting Engineers	

& Geologists, Inc.		16. No.	5/ml.
Project/Site: Humboldt Bay Harbor District-RMMT	City/County: Humboldt		_ Sampling Date: 5/14/22
Applicant/Owner: Humboldt Bay Harbor District		State: CA	_ Sampling Point: 7P64
Investigator(s): Joseph Saler, Cindy Wilcox	Section, Township, Rar	nge:	
Landform (hillslope, terrace, etc.): Peninsula Spit	Local relief (concave, o	convex, none):	ve Slope (%): 0-1
Subregion (LRR): A, MLRA-4B	Lat: 40. 819481	Long: <u>~124.183</u>	652 Datum: WGS 84
Soil Map Unit Name: UV banland - Anthroltic	Xevo-thents assoc. 0-2	96 NWI classif	ication: now
Are climatic / hydrologic conditions on the site typical for this	s time of year? Yes X No _	(If no, explain in I	Remarks.)
Are Vegetation, Soil, or Hydrology s			present? Yes X No
Are Vegetation, Soil, or Hydrology r		eded, explain any answ	
SUMMARY OF FINDINGS – Attach site map			
Hydrophytic Vegetation Present? Yes_X N	0		
Hydric Soil Present? Yes N	o Is the Sampled		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
	o within a Wetlan	r	No
Remarks: WETS normal rainfall TP CXCq Var	ed within deproved	toundation of	former industrial
	taclifies.	Surranded by	/ concrede
VEGETATION – Use scientific names of plan		/	
	Absolute Dominant Indicator	Dominance Test wor	ksheet:
Tree Stratum (Plot size: 30'	% Cover Species? Status	Number of Dominant S	
1. Salix lotiandra	60 FACW	That Are OBL, FACW	or FAC: (A)
2. Morella calitornica	10 <u>FA CW</u>	Total Number of Domi	
3	. — — — —	Species Across All Str	ata: (B)
Contraction (Charles of Charles of S)	70 = Total Cover	Percent of Dominant S That Are OBL, FACW	
Sapling/Shrub Stratum (Plot size: 5		Prevalence Index wo	rksheet:
1		Total % Cover of:	Multiply by:
3.		OBL species	x 1 =
4		Services - Aug	x 2 =
5		STATE STATE STATE	x 3 =
	= Total Cover		x 4 =
Herb Stratum (Plot size: 5'	8 / OBL		x 5 =
1. Typha lotifolia		Column rolais.	(A) (B)
2			x = B/A =
3		Hydrophytic Vegetat	
4			Hydrophytic Vegetation
5		2 - Dominance Te	
7		3 - Prevalence Inc	Dex is \$3.0 Adaptations ¹ (Provide supporting
8		data in Remar	ks or on a separate sheet)
9		5 - Wetland Non-	Vascular Plants ¹
10.		Problematic Hydr	ophytic Vegetation ¹ (Explain)
11		¹ Indicators of hydric se	oil and wetland hydrology must
	= Total Cover	be present, unless dis	turbed or problematic.
Woody Vine Stratum (Plot size: 5'			
1		Hydrophytic	
2		Vegetation Present? Y	es No
% Bare Ground in Herb Stratum 92*	= Total Cover		
		I.	
* Litter and much / peat.			
or is involved by			

Depth Matrix	depth needed to document the indicator or c Redox Features	
inches) Color (moist) %	Color (moist) % Type ¹ L	oc ² Texture Remarks
1-6 10 TR3/1 101	2	Ma P
-12 2,54 3/2 10		MuS
<u>2-18+ 10 </u>		
		
	RM=Reduced Matrix, CS=Covered or Coated Si	
	all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
_ Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
_ Histic Epipedoπ (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3) Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1) (except ML Loamy Gleyed Matrix (F2)	RA 1) Very Shallow Dark Surface (TF12) 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.
estrictive Layer (if present): Type:		
Depth (inches):		Hydric Soil Present? Yes No
temarks: thortive AAD at 41	in ch depth	
rbrology	in ch depth	
POROLOGY Wetland Hydrology Indicators:		Secondary Indicators (2 or more required
POROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reco	quired; check all that apply)	Secondary Indicators (2 or more required
POROLOGY Wetland Hydrology Indicators: rimary Indicators (minimum of one recommend) Surface Water (A1)	quired; check all that apply) Water-Stained Leaves (B9) (exce	pt Water-Stained Leaves (B9) (MLRA
VDROLOGY Wetland Hydrology Indicators: Inimary Indicators (minimum of one reconstructions) Surface Water (A1) High Water Table (A2)	uired; check all that apply) Water-Stained Leaves (B9) (exce	pt Water-Stained Leaves (B9) (MLRA 1 4A, and 4B)
Portive AAD of 47 Portive AAD of 47 Portion of the Portion of th	uired; check all that apply) Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	pt Water-Stained Leaves (B9) (MLRA 1 4A, and 4B) Drainage Patterns (B10)
YDROLOGY Wetland Hydrology Indicators: Irimary Indicators (minimum of one reconstruction (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	uired; check all that apply) Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	pt Water-Stained Leaves (B9) (MLRA 1 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
VDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one red Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	uired; check all that apply) Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	pt Water-Stained Leaves (B9) (MLRA 1 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery
VDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one recommend) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	uired; check all that apply) Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi	pt Water-Stained Leaves (B9) (MLRA 1 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery Roots (C3) Geomorphic Position (D2)
VDROLOGY Vetland Hydrology Indicators: Inimary Indicators (minimum of one recommany Indicators) Vetland Hydrology Indicators:	wuired; check all that apply) Water-Stained Leaves (B9) (exceomLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi X Presence of Reduced Iron (C4)	pt 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)
POROLOGY Vetland Hydrology Indicators: Inimary Indicators (minimum of one recommend) 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)	waired; check all that apply) Water-Stained Leaves (B9) (exceomLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi X Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc	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)
POROLOGY Vetland Hydrology Indicators: Irimary Indicators (minimum of one reconstruction (A3) Mater Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	waired; check all that apply) Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (I	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)
POROLOGY Vetland Hydrology Indicators: Irimary Indicators (minimum of one recommend) 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	wuired; check all that apply) Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi X Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Society (B7) 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 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
POROLOGY Vetland Hydrology Indicators: Irimary Indicators (minimum of one reconstruction (A3) Mater Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	wuired; check all that apply) Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi X Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Society (B7) 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 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
POROLOGY Vetland Hydrology Indicators: Irimary Indicators (minimum of one recommend) 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	wuired; check all that apply) Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Stunted or Stressed Plants (D1) (I	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)
VEROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one reconstruction of the property of th	wuired; check all that apply) Water-Stained Leaves (B9) (excess MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi X Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Society (B7) 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 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
VDROLOGY Vetland Hydrology Indicators: Irimary Indicators (minimum of one reconstruction of the property of	wuired; check all that apply) Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Stunted or Stressed Plants (D1) (I	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)
VOROLOGY Vetland Hydrology Indicators: Irimary Indicators (minimum of one reconstruction (A3) Water Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Driff Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imager Sparsely Vegetated Concave Surfactions: Surface Water Present? Ves Vater Table Present?	waired; check all that apply) Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (I) ry (B7) Other (Explain in Remarks) Depth (inches):	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)
Vetland Hydrology Indicators: Irimary Indicators (minimum of one reconstruction (A3) Water Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Driff Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imager Sparsely Vegetated Concave Surfaction (B4) Field Observations: Surface Water Present? Ves Saturation Present? Ves Includes capillary fringe)	waired; check all that apply) Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (I) Ty (B7) Other (Explain in Remarks) Rece (B8)	water-Stained Leaves (B9) (MLRA 14A, 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) Wetfand Hydrology Present? Yes No
Vetland Hydrology Indicators: rimary Indicators (minimum of one reconstruction of the property of the propert	waired; check all that apply) Water-Stained Leaves (B9) (excendent of the policy of t	water-Stained Leaves (B9) (MLRA 14A, 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) Wetfand Hydrology Present? Yes No

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	sulti	ng Eng	incers

& Geologists, Inc.			-	-
Project/Site: Humboldt Bay Harbor District-RMMT	City/0	County: Humboldt	231	Sampling Date: 5/14/22
Applicant/Owner: Humboldt Bay Harbor District			State: CA	Sampling Point: TP65
Investigator(s): Joseph Saler, Cindy Wilcox	Secti	on, Township, Rar		
Landform (hillslope, terrace, etc.): Pansula Spit, f				/ Slope (%): _5
Subregion (LRR): A, MLRA-4B	Lat: 40.81	9480	Long -124.1836	69 Datum WGS 84
Soil Map Unit Name: Urban land-Arthrathi	c Xevortant	6550C. 0-2	NWI classific	eation: Non-C
Are climatic / hydrologic conditions on the site typical for t				
Are Vegetation, Soil, or Hydrology				present? Yes No
Are Vegetation, Soil, or Hydrology				
SUMMARY OF FINDINGS – Attach site ma			eded, explain any answe ocations, transects	•
Hydrophytic Vegetation Present? Yes	-			
Hydric Soil Present? Yes		Is the Sampled	Area	\
Wetland Hydrology Present? Yes		within a Wetlan	d? Yes	No
Remarks: WETS normal rainfall Cutface slope at edge of co				
VEGETATION – Use scientific names of pla	ints.			
Tree Stratum (Plot size: 30')		minant Indicator ecies? Status	Dominance Test work	_
1. Morella calitornica	20	FACW	Number of Dominant S That Are OBL, FACW,	
2		7.11		
3			Total Number of Domin Species Across All Stra	
4			,	
	20 = To	otal Cover	Percent of Dominant Sp That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: 5)			Prevalence Index wor	ksheet:
1			Total % Cover of:	Multiply by:
3.			OBL species	x 1 =
4				x 2 =
5.				x 3 =
	= To	otal Cover		x 4 =
Herb Stratum (Plot size: 5'	40	× 424	UPL species	
2. Antexathen odoration	- 1	TACY	Column Totals:	(A) (B)
	25	THE		= B/A =
3. Holcus languis 4. Briza Maxima	- 5	110	Hydrophytic Vegetation	
5. Letus corriculatur		FAC.	1 - Rapid Test for I	
6.			2 - Dominance Tes	
7			3 - Prevalence Inde	Adaptations ¹ (Provide supporting
8.				s or on a separate sheet)
9.			5 - Wetland Non-Va	ascular Plants ¹
10			Problematic Hydro	phytic Vegetation ¹ (Explain)
11,				I and wetland hydrology must
5'	_ 7 9_= To	tal Cover 15 %	be present, unless distu	urbed or problematic.
Woody Vine Stratum (Plot size: 5'	5	JACU		
2		quet.	Hydrophytic Vegetation	\
. *	5 = Tai	tal Cover	Present? Yes	s No 🔼
% Bare Ground in Herb Stratum 21		.a. 00v6i		
Remarks:	halle on	nted in h	noting of	a stilling of
* Dut + grave	Millon Loc	JEG IV W	retland not	representative of
J	upland condi	now work	ling wetland,	with tomer tandation.

Depth Matrix	Redox	ent the in Features				
inches) Color (moist), %	Color (moist)	_%	Type ¹	_Loc2	Texture	Remarks
0-3 2.54 2.5/1 00		_	/	/		Many fire roots
<u>-24+ 2.54 4/2 100</u>			_	<u> </u>	GrLS	with was, characal
Type: C=Concentration, D=Depletion, R				d Sand G	rains. ² Lo	cation: PL=Pore Lining, M=Matrix. ors for Problematic Hydric Soils ³ :
lydric Soil Indicators: (Applicable to			a.;			
Histosol (A1)	Sandy Redox (S Stripped Matrix					m Muck (A10) d Parent Material (TF2)
Histic Epipedon (A2) Black Histic (A3)	Stripped Matrix 0	` '	\ (evcen	MIRA 1		y Shallow Dark Surface (TF12)
Black Histic (A3) Hydrogen Sulfide (A4)	Loamy Gleyed N			recent i		er (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix					(
Thick Dark Surface (A12)	Redox Dark Sur				³ Indicate	ors of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark 5	Surface (F	7)		wetla	and hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressi	ons (F8)			unle	ss disturbed or problematic.
lestrictive Layer (if present):						
Туре:						X
Depth (inches):					Hydric Soi	Present? Yes No
GIIIIINS.				2		
YDROLOGY				2		
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one regu	ired: check all that apply	<i>(</i>)		÷	Secc	andary Indicators (2 or more required)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requ				except		andary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requ Surface Water (A1)	Water-Stai	ned Leave		except		
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requing Surface Water (A1) High Water Table (A2)	Water-Stai	ned Leave 1, 2, 4 A , a		except	_ \	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requested Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stai	ned Leave 1, 2, 4A, a (B11)	nd 4B)	except	_ '	Water-Stained Leaves (B9) (MLRA 1, 2
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requing Surface Water (A1) High Water Table (A2)	Water-Stai MLRA Salt Crust	ned Leave 1, 2, 4A, a (B11) /ertebrates	nd 4B)	except	_ \ _ \ _ \	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requestions) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stai MLRA Salt Crust Aquatic Inv	ned Leave 1, 2, 4A, a (B11) /ertebrates Sulfide Od	nd 4B) s (B13) lor (C1)	·	_ \ ! :	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen	ned Leave 1, 2, 4A, a (B11) /ertebrates Sulfide Od Rhizospher	nd 4B) s (B13) lor (C1) res 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
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requestions Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence c Recent Iro	ned Leave 1, 2, 4A, a (B11) vertebrates Sulfide Od Rhizospher of Reduce n Reduction	nd 4B) s (B13) lor (C1) res along d Iron (C	Living Ro 4) ad Soils (C	ats (C3) (6)	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)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required in the surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	Water-Stai	ned Leave 1, 2, 4A, a (B11) vertebrates Sulfide Od Rhizospher of Reduce n Reduction Stressed	nd 4B) s (B13) lor (C1) res along d Iron (C on in Tille Plants (E	Living Ro 4) ad Soils (C	ots (C3) (6) (1)	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)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required in the control of the cont	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence of Recent Iro Stunted or (B7) Water-Stai	ned Leave 1, 2, 4A, a (B11) vertebrates Sulfide Od Rhizospher of Reduce n Reduction Stressed	nd 4B) s (B13) lor (C1) res along d Iron (C on in Tille Plants (E	Living Ro 4) ad Soils (C	ots (C3) (6) (1)	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)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requestions) 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-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence G Recent Iro Stunted or (B7) Other (Exp	ned Leave 1, 2, 4A, a (B11) vertebrates Sulfide Od Rhizospher of Reduce n Reduction Stressed	nd 4B) s (B13) lor (C1) res along d Iron (C on in Tills Plants (E marks)	Living Ro 4) ad Soils (C	ots (C3) (6) (1)	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)
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 Sparsely Vegetated Concave Surface Field Observations:	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence G Recent Iro Stunted or (B7) Other (Exp	ned Leave 1, 2, 4A, a (B11) vertebrates Sulfide Od Rhizospher of Reduce n Reduction Stressed	nd 4B) s (B13) lor (C1) res along d Iron (C on in Tills Plants (E marks)	Living Ro 4) ad Soils (C	ots (C3) (6) (1)	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)
VDROLOGY 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	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence of Recent Iro Stunted or (B7) Other (Exp ce (B8) Depth (inv Depth (inv	ned Leave 1, 2, 4A, a (B11) vertebrates Sulfide Od Rhizospher of Reduce in Reduction Stressed olain in Reduction ches):	nd 4B) s (B13) lor (C1) res along d Iron (C on in Tills Plants (E marks)	Living Ro 4) ed Soils (C 01) (LRR A	ots (C3) ; 6) ;	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Primary Indicators (minimum of one requestions) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes (includes capillary fringe)	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence of Recent Iro Stunted or Other (Exp te (B8) No Depth (inv Depth (inv	ned Leave 1, 2, 4A, a (B11) vertebrates Sulfide Od Rhizospher of Reduce n Reduction Stressed plain in Reduction ches):	s (B13) lor (C1) res along d Iron (C on in Tille Plants (E marks)	Living Ro 4) ed Soils (C 21) (LRR #	ots (C3) ; 6) ; 14) ;	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)
VDROLOGY 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	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence of Recent Iro Stunted or Other (Exp te (B8) No Depth (inv Depth (inv	ned Leave 1, 2, 4A, a (B11) vertebrates Sulfide Od Rhizospher of Reduce n Reduction Stressed plain in Reduction ches):	s (B13) lor (C1) res along d Iron (C on in Tille Plants (E marks)	Living Ro 4) ed Soils (C 21) (LRR #	ots (C3) ; 6) ; 14) ;	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)

GIM
CIN/
Consulting Engineers
& Geologists, Inc.

& Geologists, Inc.	MIMION	n – mestern mon	mains, valleys, and Coast Region
Project/Site: Humboldt Bay Harbor District-RMMT	(City/County: Humboldt	Sampling Date: 5 14 2 2
Applicant/Owner: Humboldt Bay Harbor District			State: CA Sampling Point: 1966
Investigator(s): Joseph Saler, Cindy Wilcox			nge:
			convex, none): Slope (%): _57.
Subregion (LRR): A, MLRA-4B	Lat: 40	.818237	Long: -12-4-185179 Detum: WGS 84
Soil Map Unit Name: Urban land - Anthral	HIC XXIVEY	Ments assis.	0-20/0 MAII classification: 1000.
Are climatic / hydrologic conditions on the site typical for			
Are Vegetation, Soil, or Hydrology			Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology			eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site ma	p showing		ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No X		\
Hydric Sail Present? Yes		Is the Sampled within a Wetlan	~
Wetland Hydrology Present? Yes	No _X	Within a Wetlan	ur resNo
Remarks: WETS normal rainfall Upland pit for EmTI TP7. On hi	l slage of	and Almi's	
		- arminage	
VEGETATION – Use scientific names of pla			
Tree Stratum, (Plot size: 30'	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet:
	50	#ACW	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2			
3			Total Number of Dominant Species Across All Strata: (B)
4			
Sapling/Shrub Stratum (Plot size: 5')		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 50/(A/B)
1. RADIN Armiaci	47	IN FAC	Prevalence Index worksheet:
2. Rybus wanus	- 20	FACU	Total % Cover of: Multiply by:
3.		177001	OBL species x 1 =
4			FACW species x 2 =
5,			FAC species x 3 =
,	42	= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 5'	70	1 000	UPL species x 5 =
1 Contadenia jubata		FACU	Column Totals: (A) (B)
3			Prevalence Index = B/A =
3			Hydrophytic Vegetation Indicators:
5.			1 - Rapid Test for Hydrophytic Vegetation
6			2 - Dominance Test is >50%
7.			3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting
8			data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants ¹
10			Problematic Hydrophytic Vegetation1 (Explain)
11,			¹ Indicators of hydric soil and wetland hydrology must
Wqody Vine Stratum (Plot size: 5	70	= Total Cover	be present, unless disturbed or problematic.
1. Heara Wix	5	FACU	
2.		IACU	Hydrophytic Vegetation
	-5	= Total Cover	Present? Yes No
% Bare Ground in Herb Stratum 30*		. otal Govel	
Remarks:	(.	1 1/	- el. 11 (1 1
litter, duffand thatch, primorly-	tran cont	adria. Veg C	two, item "is literations of indiana
		arder	2 30 wetland.

Sampling Point: TPU6 Consulting Engine

	th needed to document the indicator or conf	
DepthMatrix	Redox Features Color (moist) % Type Loc²	Texture Remarks
inches) Color (moist) %	Color (moist) % Type Loc2	
7-3 10TR 3/1 106		<u> </u>
3-24 104R4/2 100		5
	<u> </u>	
		
Type: C=Concentration, D=Depletion, RM:	Reduced Matrix, CS=Covered or Coated Sand	Grains. ² Location: PL=Pore Lining, M=Matrix.
ydric 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	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	³ Indicators of hydrophytic vegetation and
_ Thick Dark Surface (A12)	Redox Dark Surface (F6)	wetland hydrology must be present,
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	unless disturbed or problematic.
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed of problematic.
Restrictive Layer (if present):		
Type:		U. V. 5 U.S. V. N. V.
Depth (inches):		Hydric Soil Present? Yes No
Netland Hydrology Indicators:	id; check all that apply)	Secondary Indicators (2 or more required)
Netland Hydrology Indicators:	id; check all that apply) Water-Stained Leaves (B9) (except	
Netland Hydrology Indicators: Primary Indicators (minimum of one require		
Vetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Vetland Hydrology Indicators: <u>Primary Indicators (minimum of one require</u> <u>Surface Water (A1)</u> <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) Drainage Patterns (B10) Dry-Season Water Table (C2)
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, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Vetland 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)
Netland 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 (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) 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 	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)
Netland 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 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) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) 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)	Water-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	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) (C6) FAC-Neutral Test (D5)
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)	Water-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) (C6) 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 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) (C6) 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) Inundation Visible on Aerial Imagery (ES) 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR 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) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) 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 (B1) 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR Other (Explain in Remarks) No Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) 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 (E Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one 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? 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR Other (Explain in Remarks) 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) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology 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? 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland 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 (E Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR Other (Explain in Remarks) 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) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one 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? Water Table Present? Yes Saturation Present? Yes (includes capillary frince)	Water-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) 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) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one 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? Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, m	Water-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) No Depth (inches): NA NA NA NA NA NA NA NA NA 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) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology 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? Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, m	Water-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) No Depth (inches): NA NA NA NA NA NA NA NA NA 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) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

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CIN
Consulting Engineers

z Geologists, Inc.		mamo, vanojo, am	
Project/Site: Humboldt Bay Harbor District-RMMT	City/County: Humbold	t	Sampling Date: 5/11/22
Applicant/Owner: Humboldt Bay Harbor District			Sampling Point: TP67
Investigator(s): Joseph Saler, Cindy Wilcox	Section, Township, Ra	inge:	
Landform (hillslope, terrace, etc.): Physua, Ind	Local relief (concave,	convex, none): Conca	Slope (%): 0-1
Subregion (LRR): A, MLRA-4B	Lat: 40.817353	Long: 124.1859	155 Datum: WGS 84
Soil Map Unit Name: Urbanland - Anthyaltic	. Ken whents assoc o.	2% NWI classific	eation: 10 NA
Are climatic / hydrologic conditions on the site typical for			
Are Vegetation, Soil, or Hydrology			present? Yes No
Are Vegetation, Soil, or Hydrology			of water (194)
SUMMARY OF FINDINGS – Attach site ma		eeded, explain any answe	·
Hydrophytic Vegetation Present?			
Hydric Soil Present? Yes	No Is the Sample	d Area	* Meets C
Wetland Hydrology Present? Yes	No within a Wetla	nd? Yes	_ No welland d
Remarks: WETS normal rainfall			The second secon
High Base of hillslope, slight d	rainage parallel to	N Bay View St.	wh slightly deprosed
VEGETATION – Use scientific names of pl		is any store at	, swale
201	Absolute Dominant Indicator	Dominance Test work	sheet:
Tree Stratum (Plot size: 30'	<u>% Cover Species? Status</u>	Number of Dominant S	
1.		That Are OBL, FACW,	or FAC: (A)
2,		Total Number of Domin	
3. 4.		Species Across All Stra	ta:(B)
4,	= Total Cover	Percent of Dominant St	
Sapling/Shrub Stratum (Plot size: 5'		That Are OBL, FACW,	
1. Rubus armbiocus	15 V 8AC	Prevalence Index wor	
2		Total % Cover of:	
3			x 1 =
4			x 2 = x 3 =
5			x4 =
Herb Stratum (Plot size: 5'	= Total Cover	UPL species	
1. Junew ettions	20 V FACW		(A)(B)
2 Holew langth	50 V FAC		
3. Agrostis Stolan fera	15 FAC		= B/A =
4. Anthoxantrum odoratum	TO FACU	Hydrophytic Vegetation	Hydrophytic Vegetation
5. Egysetum lapvidatum	1 FACW	2 - Dominance Tes	
6. <u>V</u>		3 - Prevalence Inde	
7			Adaptations ¹ (Provide supporting
8			or on a separate sheet)
9		5 - Wetland Non-Va	ascular Plants ¹
10			phytic Vegetation1 (Explain)
11			l and wetland hydrology must
Woody Vine Stratum (Dist.	96 = Total Cover 43	be present, unless distu	irbed or problematic.
Woody Vine Stratum (Plot size:)			
2		Hydrophytic Vegetation	1
5*	= Total Cover	Present? Ye.	s No
% Bare Ground in Herb Stratum	- Total Cover		
Remarks:		1	
* Thatch			
	Q*		

Profile Description: (Describe to the de	oth needed to document the indicator or confin	m the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (mgist) %	Color (moist) % Type Loc²	Texture Remarks
0-3 104R2/1, 100		My P Decomposing sawdist wood.
3-11 7544/2 100		GrLS w/ woo dy debris, brich + Cabble
11 24 2 5 × 11/2 90	2.5 × 4/3 20 C M	
11-17-11/10 00	1.71 7/3 W C II	
		
Tues: C-Consentration D=Depletion PA	=Reduced Matrix, CS=Covered or Coated Sand C	Grains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to al		Indicators for Problematic Hydric Soils ³ :
•		2 cm Muck (A10)
Histosol (A1)	Sandy Redox (S5)	Red Parent Material (TF2)
Histic Epipedon (A2)	 Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except MLRA 1	
Black Histic (A3)		Other (Explain in Remarks)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	³ Indicators of hydrophytic vegetation and
Thick Dark Surface (A12)	Redox Dark Surface (F6)	
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:		
Depth (inches):		Hydric Soil Present? Yes No V
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (minimum of one requir		
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 R	oots (C3) 🔀 Geomorphic Position (D2)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)	Recent from 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 Imagery (B7) Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface	, 	
Field Observations:	\$	
Surface Water Present? Yes	No Depth (inches): NA	
Water Table Present? Yes	No Depth (inches): 11.75 in	2.2
	14)	etland Hydrology Present? Yes No
Saturation Present? Yes	No Depth (inches): 10 in We	etiand hydrology Fresents Tes No
(includes capillary fringe) Describe Recorded Data (stream gauge, I	monitoring well, aerial photos, previous inspections	s), if available:
Remarks:	1	-
	italta a ala	
Hydribyy indicates room	nace to Mate.	
Jr		

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Cons	ulting Eng	gineers

Project/Site: Humboldt Bay Harbor District-RMMT	_ City/County: Humboldt Sampling Date: 5/14/22
Applicant/Owner: Humboldt Bay Harbor District	State: CA Sampling Point: 1P66
Investigator(s): Joseph Saler, Cindy Wilcox	Section, Township, Range:
	Local relief (concave, convex, none): New Slope (%): 7
Subregion (LRR): A, MLRA-4B Lat:	40. 8/13 6 Long: - 124.185976 Datum: WGS 84
Soil Man Hait Name Likhan Land Anthrollin Verni	ents assoc 020/0 NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of	
Are Vegetation, Soil, or Hydrology significant	
Are Vegetation, Soil, or Hydrology naturally p	
	ng sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area
Hydric Soil Present? Wetland Hydrology Present? Yes No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present? Yes No X	-
Hillslope above TP67	
HISTOPE ADONE 7P67	· · · · · · · · · · · · · · · · · · ·
VEGETATION – Use scientific names of plants.	1
Absolut	
	er Species? Status Number of Dominant Species 1
2	That Are OBL, FACW, or FAC: (A)
3.	Total Number of Dominant
4.	Species Across All Strata: [B]
	= Total Cover Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)
Sapling/Shrub Stratum (Plot size: 5'	Prevalence Index worksheet:
2. Cotoneaster Jacyew 25	
3	OBL species x 1 =
4	FACW species x 2 =
5.	FAC species x 3 =
55	= Total Cover 17 FACU species x 4 =
1. Antaxwim odoratum 65	UPL species x 5 =
1. Dathaxathun a daratur 65	(A) (B)
2-fragaria verca 34	Prevalence Index = B/A =
3. Holeus languis 8	Hydrophytic Vegetation Indicators:
4. Gerarum dissectum 1	1 - Rapid Test for Hydrophytic Vegetation
5	2 - Dominance Test is >50%
6	
7	— — 4 - Morphological Adaptations ¹ (Provide supporting
8	
9	
11	¹Indicators of hydric soil and wetland hydrology must
108	= Total Cover 21.6 be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:	
1,	— — Hydrophytic
2	Vegetation
% Bare Ground in Herb Stratum	_= Total Cover Present? Yes No
Pomorko:	
Vegetation compatition representative of	wland slope.
A. I. W. A.	

Sampling Point:

	Sin
TP	Son Silting Engined

rofile Description: (Describe t			x Features			
nches) Color (moist)	%	Color (maist)	% <u>Tyr</u>	pe¹ Loc²	Texture	Remarks
1-2 104R 2/1	100				SL	
- 16 2.54 3/2	100				45	
			·—-		-	
6-24 2.57 4/2	100					
	-					
ype: C=Concentration, D=Dep	letion, RM=I	Reduced Matrix, CS	S=Covered or C	Coated Sand Gr	rains. ² Lo	cation: PL=Pore Lining, M=Matrix. ors for Problematic Hydric Soils ³ :
dric Soil Indicators: (Application						
_ Histosol (A1)	-	Sandy Redox (m Muck (A10)
_ Histic Epipedon (A2)	_	Stripped Matrix	-			d Parent Material (TF2)
_ Black Histic (A3)	-	Loamy Mucky I		(cept MLRA 1		ry Shallow Dark Surface (TF12)
_ Hydrogen Sulfide (A4)	_	Loamy Gleyed			Oth	ner (Explain in Remarks)
_ Depleted Below Dark Surface	e (A11)	Depleted Matri:	x (F3)			
Thick Dark Surface (A12)		Redox Dark Su	ırface (F6)			ors of hydrophytic vegetation and
Sandy Mucky Mineral (S1)		Depleted Dark	Surface (F7)		wetl	and hydrology must be present,
Sandy Gleyed Matrix (S4)		Redox Depress			unle	ss disturbed or problematic.
estrictive Layer (if present):						
Type:						
Depth (inches):					Hydric Soi	il Present? Yes No
Vetland Hydrology Indicators:		i; check all that app	oly)		Sec.	ondary Indicators (2 or more required)
/etland Hydrology Indicators: rimary Indicators (minimum of c				B9) (except		
Vetland Hydrology Indicators: rimary Indicators (minimum of c Surface Water (A1)		Water-Sta	ained Leaves (E			Water-Stained Leaves (B9) (MLRA 1, 2
Vetland Hydrology Indicators: rimary Indicators (minimum of c Surface Water (A1) High Water Table (A2)		Water-Sta	ained Leaves (E 1, 2, 4A, and		_	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
fetland Hydrology Indicators: rimary Indicators (minimum of c Surface Water (A1) High Water Table (A2) Saturation (A3)		Water-Sta MLRA Salt Crus	ained Leaves (E 1, 2, 4A, and d t (B11)	4B)	_	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10)
Vetland Hydrology Indicators: rimary Indicators (minimum of c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		Water-Sta MLRA Salt Crus Aquatic I	ained Leaves (E 1, 2, 4A, and on t (B11) nivertebrates (B	4B)		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Vetland Hydrology Indicators: rimary Indicators (minimum of c Surface Water (A1) High Water Table (A2) Saturation (A3)		Water-Sta MLRA Salt Crus Aquatic II Hydroger	ained Leaves (B 1, 2, 4A, and a t (B11) overtebrates (B o Sulfide Odor (4B) (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
Vetland Hydrology Indicators: rimary Indicators (minimum of c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		Water-Sta MLRA Salt Crus Aquatic II Hydroger	ained Leaves (B 1, 2, 4A, and a t (B11) overtebrates (B o Sulfide Odor (4B)		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
retland Hydrology Indicators: rimary Indicators (minimum of compared to Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		Water-Sta MLRA Salt Crus Aquatic II Hydroger Oxidized	ained Leaves (B 1, 2, 4A, and a t (B11) overtebrates (B o Sulfide Odor (4B) i13) (C1) 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
fetland Hydrology Indicators: rimary Indicators (minimum of c 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 II Hydroger Oxidized Presence	ained Leaves (B 1, 2, 4A, and of t (B11) nvertebrates (B n Sulfide Odor (Rhizospheres a n of Reduced in	4B) i13) (C1) 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)
Vetland Hydrology Indicators: rimary Indicators (minimum of c 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 II Hydroger Oxidized Presence Recent Ir	ained Leaves (B 1, 2, 4A, and a t (B11) nvertebrates (B n Sulfide Odor (Rhizospheres a of Reduced Indon Reduction in	4B) (C1) along Living Roon (C4) n Tilled 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)
Vetland Hydrology Indicators: rimary Indicators (minimum of of of source 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 required	Water-Sta MLRA Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted o	ained Leaves (B 1, 2, 4A, and a t (B11) nvertebrates (B n Sulfide Odor (Rhizospheres a e of Reduced in on Reduction in or Stressed Plan	4B) (C1) along Living Ro on (C4) n Tilled Soils (C nts (D1) (LRR)	oots (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)
Vetland Hydrology Indicators: rimary Indicators (minimum of of of source 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	one required	Water-Sta MLRA Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted of	ained Leaves (B 1, 2, 4A, and a t (B11) nvertebrates (B n Sulfide Odor (Rhizospheres a of Reduced Indon Reduction in	4B) (C1) along Living Ro on (C4) n Tilled Soils (C nts (D1) (LRR)	oots (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)
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Vetland Hydrology Indicators: rimary Indicators (minimum of c 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 Sparsely Vegetated Concaviled Observations:	Imagery (Ba	Water-Sta MLRA Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted of Other (Ex	ained Leaves (B 1, 2, 4A, and a t (B11) nvertebrates (B n Sulfide Odor (Rhizospheres a of Reduced Iro on Reduction in or Stressed Plan oplain in Remar	4B) (C1) along Living Roon (C4) n Tilled Soils (Cnts (D1) (LRR Arks)	oots (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)
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Vetland Hydrology Indicators: Irimary Indicators (minimum of 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 Sparsely Vegetated Concaverial (B4) Surface Water Present? Vater Table Present?	Imagery (Bare Surface (Bare Surface (Bare Surface (Bare Surface (Bare Surface	Water-Sta MLRA Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted of Other (Extended of the companion	ained Leaves (B. 1, 2, 4A, and to (B11) nvertebrates (B. 1) n Sulfide Odor (Rhizospheres and to of Reduced incomposition in Remarkable (B1) nches):	4B) (C1) along Living Roon (C4) n Tilled Soils (Conts (D1) (LRR Arks)	nots (C3) =================================	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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Vetland Hydrology Indicators: Irimary Indicators (minimum of 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 Sparsely Vegetated Concave Field Observations: Surface Water Present? Vater Table Present? Saturation Present? Saturation Present? Secribe Recorded Data (stream)	Imagery (Bare Surface (Bare Surface (Bare Surface (Bare Surface (Bare Surface	Water-Sta MLRA Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted of Other (Extended of the companion	ained Leaves (B. 1, 2, 4A, and to (B11) nvertebrates (B. 1) n Sulfide Odor (Rhizospheres and to of Reduced incomposition in Remarkable (B1) nches):	4B) (C1) along Living Roon (C4) n Tilled Soils (Conts (D1) (LRR Arks)	nots (C3) =================================	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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Vetland Hydrology Indicators: Irimary Indicators (minimum of 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 Sparsely Vegetated Concaverield Observations: Surface Water Present? Vater Table Present? Saturation Present? Saturation Present? Second Concaverield Concaverield Concaverield Observations: Surface Water Present? Saturation Present? Second Concaverield C	Imagery (Bree Surface (I	Water-Sta MLRA Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted of Other (Extended of the companion	ained Leaves (B. 1, 2, 4A, and to (B11) nvertebrates (B. 1) n Sulfide Odor (Rhizospheres and to of Reduced incomposition in Remarkable (B1) nches):	4B) (C1) along Living Roon (C4) n Tilled Soils (Conts (D1) (LRR Arks)	nots (C3) =================================	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

onsulting Engineers WETLAND DETERMINATION DATA FORM —	Western Mountains, Valleys, and Coast Region
& Geologists, Inc. Project/Site: Humboldt Bay Harbor District-RMMT City/C	5/17/2
Applicant/Owner: Humboldt Bay Harbor District	County: Humboldt Sampling Date: 71 / 1/2 Sampling Point: 71 / 69
0.1.4	
Landform (hillslope, terrace, etc.): Knissila Spit, Baysidefil Loca	on, Township, Range:
	5338 Long: 124.185182 Datum: WGS 84
Soil Map Unit Name: UV ban land - Anthroltic Xerothents	
Are climatic / hydrologic conditions on the site typical for this time of year? Y	
Are Vegetation, Soil, or Hydrology significantly distur	
Are Vegetation, Soil, or Hydrology naturally problems	
SUMMARY OF FINDINGS - Attach site map showing san	
Hydrophytic Vegetation Present? Yes No _X	\$ 6
Hydric Soil Present? Yes No	is the Sampled Area
Wetland Hydrology Present? Yes No	within a Wetland? Yes No
TP excavated in y and site approx 5	i of from wetlandedge.
VEGETATION – Use scientific names of plants.	J
301	ninant Indicator Dominance Test worksheet:
Tree Stratum (Plot size: 30 % Cover Spe	Cles? Status Number of Dominant Species 1
2	
3	Total Number of Dominant Species Across All Strata: (B)
4	Percent of Dominant Species Z 2 '/
Sapling/Shrub Stratum (Plot size: 5'	Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index worksheet:
1. Kubus ursinus	Total % Cover of: Multiply by:
2. Kubus armeniacus 15 L	OBL species x1 =
3,	FACW species x 2 =
5.	FAC species x 3 =
22 = To	tal Cover 44 FACU species x 4 =
Herb Stratum (Plot size:	DPL species x5 =
1. Antoxothum odoratum 2. Holicus lanatus	FACU Column Totals: (A) (B)
3. Helmintotte Ca echioi des 2	Prevalence Index = B/A =
4. Vicia sativa	Hydrophytic Vegetation Indicators:
5. Geraium dissection 1	1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
6. Loty corriculates 4	3 - Prevalence Index is ≤3.01
7. Juneus Xiplioides T	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	al Cover 1 Indicators of hydric soit and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 5	
1,	Hydrophytic
2	Vegetation Present? Yes No
% Bare Ground in Herb Stratum	al Cover
Remarks:	cannothe consent to a
Some wordy debris preset ~ 10% cover. Veg	· Outharting this product of

Profile Description: (Describe to the dep	th needed to document the indicator or conf	firm the absence of indicators.)
DepthMatrix	Redox Features	
(inches) Cotor (moist) %	Color (moist) % Type ¹ Loc ²	
0-2 10482/1 100		/ SL
2-9 2.54 3/2 100		LS
9-20 2.54 4/2 100		Color LS
20-24+ 2.54 4/2 >99		
W-L1. 2.11 4/L 299		w/charcoal +Slells
10 1/2 2/8 27		mixed fill
	Reduced Matrix, CS=Covered or Coated Sand	
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 (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA	·
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	³ Indicators of hydrophytic vegetation and
Thick Dark Surface (A12)	Redox Dark Surface (F6)	wetland hydrology must be present,
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)Redox Depressions (F8)	unless disturbed or problematic.
Sandy Gleyed Matrix (S4) Restrictive Layer (if present):	Redox Depressions (1 b)	unicas distance of prodictinatio.
Type:	_	Hydric Soil Present? Yes No
Depth (inches):		Tryunc Son Fresents 165 165
Remarks:	- 105 1	
Mixed filsils. Asphall	- @ 187ndrs	
The state of the s		
HYDROLOGY		
HYDROLOGY Westland Hydrology Indicators:		
Wetland Hydrology Indicators:	of sheek all that each)	Secondary Indicators (2 or more required)
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 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 required) Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) (exceptMLRA 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-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)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living 	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)
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) Roots (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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solls	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) (C6) 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)	Water-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)	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) (C6) FAC-Neutral Test (D5) R A) 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)	Water-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)	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) (C6) 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI 7) 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) (C6) FAC-Neutral Test (D5) R A) 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI 7) 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) (C6) FAC-Neutral Test (D5) R A) 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI 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) (C6) FAC-Neutral Test (D5) R A) 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? 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 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI 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) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one 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	Water-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) No Depth (inches): NA 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) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one 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)	Water-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) No Depth (inches): NA No Depth (inches): NA Depth (inches): NA	Water-Stained Leaves (B9) (MLRA 1, 2,
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)	Water-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) No Depth (inches): NA No Depth (inches): NA	Water-Stained Leaves (B9) (MLRA 1, 2,
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)	Water-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) No Depth (inches): NA No Depth (inches): NA Depth (inches): NA	Water-Stained Leaves (B9) (MLRA 1, 2,
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) Describe Recorded Data (stream gauge, minimum)	Water-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) (LRI Other (Explain in Remarks) 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) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Netland 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 (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, minimum)	Water-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) (LRI Other (Explain in Remarks) 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) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Netland 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 (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, minimum)	Water-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) No Depth (inches): NA 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) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Netland 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 (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, minimum)	Water-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) (LRI Other (Explain in Remarks) 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) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Netland Hydrology Present? Yes No

Project/Site: Humboldt Bay Harbor District-RMMT		City/County:	Humboldt		Sampling Date: 5 17 27
Applicant/Owner: Humboldt Bay Harbor District					Sampling Point: 1P70
Investigator(s): Joseph Saler, Cindy Wilcox		Section, Tow	nship, Rai	nge:	
Landform (hillslope, terrace, etc.): Parisula /S (it					Slope (%): 0 = 1
					676 Datum: WGS 84
Soil Map Unit Name: 1014-Orban Land Anthr					
Are climatic / hydrologic conditions on the site typical for thi					
Are Vegetation, Soil, or Hydrology	-		Are "	Normal Circumstances"	present? Yes No
Are Vegetation, Soil, or Hydrology				eded, explain any answe	
SUMMARY OF FINDINGS – Attach site map	showing	sampling	point le	ocations, transects	, important features, etc.
	10 🗶	la disa			
	No V	1	Sampled n a Wetlan		No
Wetland Hydrology Present? YesN Remarks: WETS normal rainfall	No				
To excavated in flat study area.					
VEGETATION – Use scientific names of plan					
Tree Stratum (Plot size: 30	Absolute % Cover	Dominant Species?		Dominance Test work	
1				Number of Dominant S That Are OBL, FACW,	
2				Total Number of Domin	ant 🔚
3				Species Across All Stra	ita:(B)
4		= Total Cov	———— ег	Percent of Dominant Sp That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: 5')	20		CALL	Prevalence Index wor	
2. Wind arbonew	15	7	(10)	Total % Cover of:	Multiply by:
3. Rubur arminiacus	3		IN	OBL species	x 1 =
4.				FACW species	x 2 =
5.			-		x 3 =
	38	= Total Cov	er 🍱	FACU species	
Herb Stratum (Plot size: 5'			1.6		x 5 =
1. Potestila, anserina	20		000	Column Totals:	(A) (B)
2. Polystichum muitum	20	~	FACU	Prevalence Index	= B/A =
3 Equisetyn avese	- 2		MO	Hydrophytic Vegetation	on Indicators:
4. Threw brewering	30		FACI	1 - Rapid Test for H	
A SECRETARY OF THE STATE OF THE SECRETARY OF THE SECRETAR			MILL	2 - Dominance Tes	
6				3 - Prevalence Inde	
7					Adaptations ¹ (Provide supporting sor on a separate sheet)
9				5 - Wetland Non-Va	
10				I 	phytic Vegetation ¹ (Explain)
11.					I and wetland hydrology must
	78	= Total Cove	39	be present, unless distu	
Woody Vine Stratum (Plot size: 5'			D.O.		
1,				Hydrophytic	
2.		Total Cove		Vegetation Present? Yes	s No
% Bare Ground in Herb Stratum 12					

Depth Matrix Color (moist) %	Redox Features Color (moist)%Type ¹ Lo	2	
			Remarks
	<u> </u>	Texture	Remans
5-16 251 4/2 95	7548 46 5 C N	-	
2 16 201 -2 -	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 12	
16-26+ 2544/2 80	1.5x164/8 2 C M		
	1.54K5/8 18 C N		
		.10	
	<i>h</i> .	• •	
			21
¹ Type: C=Concentration, D=Depletion, RM=R Hydric Soil Indicators: (Applicable to all L		nd Grains.	² Location: PL=Pore Lining, M=Matrix. cators for Problematic Hydric Soils ³ :
			2 cm Muck (A10)
	Sandy Redox (S5) Stripped Matrix (S6)		Red Parent Material (TF2)
Histic Epipedon (A2) Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLI		Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)		Other (Explain in Heritalia)
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³Indi	cators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		retland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)		nless disturbed or problematic.
Restrictive Layer (if present):			
Type:			\checkmark
Depth (inches):		Hydric 5	Soil Present? Yes No
Pomarke:	1-1		. 1
of flat, fill topography		1/1- [of anditions on account
HYDROLOGY			
Wetland Hydrology Indicators:	about all that apply	9	econdary Indicators (2 or more required)
Primary Indicators (minimum of one required;			
Surface Water (A1)	Water-Stained Leaves (B9) (excep	nt	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	g 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	ils (C6)	_ FAC-Neutral Test (D5)
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (L	RR 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 (B	88)		
Field Observations:	N/ N/L		
Surface Water Present? Yes N	lo Depth (inches): NA		N.
	lo X Depth (inches): 22		
	lo X Depth (inches): 19	Wetland Hydro	ology Present? Yes No
(includes capillary fringe)			
Describe Recorded Data (stream gauge, mor	nitoring well, aerial photos, previous inspec	ions), if available	
Remarks: Elevated Sandysoi	1s. No evidence of 1	ydology.	

nsulting Engineers (Ceologists, Inc.) WETLAND DETERMINATION		ountains, Valleys, and Coast Region
Project/Site: Humboldt Bay Harbor District-RMMT	City/County: Humbol	Idt Sampling Date: 5/17/22
Applicant/Owner: Humboldt Bay Harbor District		State: CA Sampling Point: TP 71
Investigator(s): Joseph Saler, Cindy Wilcox	Section, Township, F	
Landform (hillslope, terrace, etc.): Pensula/Sp	the partie til Local relief (concave	e, convex, none): None Slope (%): 0
Subregion (LRR): A, MLRA-4B		Long: -124.185137 Datum: WGS 84
Soil Map Unit Name: 1014-urbanfand Ant		
Are climatic / hydrologic conditions on the site typic		
Are Vegetation, Soil, or Hydrology	•	- Communication - Communication
Are Vegetation, Soil, or Hydrology		needed, explain any answers in Remarks.)
	Ĭ₩.	
SUMMARY OF FINDINGS – Attach site	map showing sampling point	locations, transects, important features, etc
	No X	
	No Is the Sample within a Wetl	
	No within a Wetl	163 NO
Remarks: WETS normal rainfall TP excavated in WIMD, M	oved, fill, former indus	trial
VEGETATION – Use scientific names of	of plants	
	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30'	% Cover Species? Status	
2. 3.		Total Number of Dominant Species Across All Strata: (B)
4. Sapling/Shrub Stratum (Plot size: 5'	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 33½ (A/B)
1	_	Prevalence Index worksheet:
2.		Total % Cover of: Multiply by:
3		OBL species x 1 =
4		FACW species x 2 =
5		FAC species x 3 =
5	= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 5'	15 / FACY	UPL species x 5 =
1. Caracteria Jubata		_ Column Totals: (A) (B)
2. DISTICULS SPICAT	15 V FACW	Prevalence Index = B/A =
3. Antoxontum Odoratum	10 7 1100	Hydrophytic Vegetation Indicators:
4. Holcus Janatus		1 - Rapid Test for Hydrophytic Vegetation
5. Briza Marina	<u> </u>	2 - Dominance Test is >50%
6. Ayona barbata	8 mpc	3 - Prevalence Index is ≤3.01
7. Lotus Cornicy lotus		4 - Morphological Adaptations¹ (Provide supporting
8 Totalium Sylatmoneum		data in Remarks or on a separate sheet)
a. Germin dispectum	3 UPL	5 - Wetland Non-Vascular Plants ¹
10. Medicage polymorpha	1) FACU	Problematic Hydrophytic Vegetation' (Explain)
11. Dathaus Katota "	2 PACU	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

= Total Cover

Dave berbaceous veg. Regularly move

Remarks:

Woody Vine Stratum (Plot size: 5'

% Bare Ground in Herb Stratum

Hydrophytic Vegetation Present?

SOIL		Sampling Point:
Profile Description: (Describe to the d	lepth needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist) % 0-5 2.573/1 100	Color (moist) % Type¹ Loc²	Texture Remarks
5-18 2.544/1 92		rLS Mixed fill.
10/3/1 3		jochets trongpart.
18-24+ 2.5 × 4/1 100		GrLS shells + fill more conjucted.
¹ Type: C=Concentration, D=Depletion, R Hydric Soil Indicators: (Applicable to	tM=Reduced Matrix, CS=Covered or Coated Sand Gra	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)	Suppled Matrix (S6) Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Mucky Milleral (F1) (except MERA 1) Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	Other (Explain in Remarks)
Thick Dark Surface (A12)	Redox Dark Surface (F6)	3Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Type:		The state of the s
Depth (inches):		Hydric Soil Present? Yes No
Remarks:		nyane controcon.
HYDROLOGY		
Wetland Hydrology Indicators:		0 1 1 5 1 6
Primary Indicators (minimum of one requ		Secondary Indicators (2 or more 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)
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		Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface		
Field Observations:		
Surface Water Present? Yes	No Depth (inches): WA	
Water Table Present? Yes	No Depth (inches): NA	
Saturation Present? Yes (includes capillary fringe)		and Hydrology Present? Yes No
Describe Recorded Data (stream gauge,	monitoring well, aerial photos, previous inspections), i	ir avaliable:
Remarks:		
Elevated fill prism	· ·	
,		

	TA FORM – Western Mou	ntains, Valleys, and Coast Region
Geologists, Inc. Project/Site: Humboldt Bay Harbor District-RMMT	City/County: Humboldt	Sampling Date: 5/17/22
Applicant/Owner: Humboldt Bay Harbor District	City/Odulity.	State: CA Sampling Point: TP 72
Investigator(s): Joseph Saler, Cindy Wilcox	Section, Township, Rai	
Landform (hillslope, terrace, etc.) Physical hauside	671	convex, none): Slope (%): 0 - 1
Subregion (LRR): A, MLRA-4B		Long: -124.185277 Datum: WGS 84
Soil Map Unit Name: 1014-Urban land Anth		
Are climatic / hydrologic conditions on the site typical for this		
Are Vegetation, Soil, or Hydrology sign		Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology na	aturally problematic? (If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map s	showing sampling point l	ocations, transects, important features, etc.
	la the Barrela d	
	Is the Sampled within a Wetlar	
violand Hydrology Freedom:	— Within a Wetlan	10
TP excavated in depression de	jacet to DI W	saffmont regitation. No tidegate
VEGETATION – Use scientific names of plant	s.	
Tree Stratum (Plot size: 30' 1. 2. 3. 4. Sapling/Shrub Stratum (Plot size: 5'	Absolute % Cover Species? Status = Total Cover	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index worksheet:
1. 2. 3. 4.		Total % Cover of: Multiply by: OBL species x 1 = FACW species x 2 =
5		FACUlarceira x 3 =
	= Total Cover	FACU species x 4 = UPL species x 5 =
Herb Stratum (Plot size: 5' 1. Districts Stratum	an V KANI	Column Totals: (A) (B)
2 Potentia averina	5 - 17CW	
3. Atropax Ocostrata	5 - FAC.	Prevalence Index = B/A =
4. Har drum brachiastown	3 FACW	Hydrophytic Vegetation Indicators:
5 Agrantis Strontea	TO FAC	1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
6.	-110	3 - Prevalence Index is \$3.01
7		4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9		5 - Wetland Non-Vascular Plants ¹

Woody Vine Stratum (Plot size: 5 % Bare Ground in Herb Stratum

Hydrophytic Vegetation Present? = Total Cover

= Total Cover

re salt-gran cover. DI ad likely

Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Depth	Matrix		Redo	x Feature	s			
inches)	Color (moist)	%	Color (moist)	%	Type'	Loc2	Texture	Remarks
7-2	7.54R 2.5/1	100			_	/	my	
2-14	104R 3/2	99	104R 4/co	1	C	m	15	al wood chunks, copble
6-19+	10441	100	1 10 . 4				-	
						<u> </u>		
vpe: C=Co	oncentration, D=Dep	oletion, RM	=Reduced Matrix, C	S=Covered	d or Coate		rains. ² Loc	cation: PL=Pore Lining, M=Matrix.
			LRRs, unless othe					ors for Problematic Hydric Soils ³ :
Histosol ((A1)		Sandy Redox ((S5)			× 2 cr	n Muck (A10)
Histic Ep	ipedon (A2)		Stripped Matrix	(S6)				Parent Material (TF2)
_ Black His	stic (A3)		Loamy Mucky I	Mineral (F	1) (except	MLRA 1)	Ver	y Shallow Dark Surface (TF12)
_ Hydroger	n Sulfide (A4)		Loamy Gleyed	Matrix (F2	2)		Oth	er (Explain in Remarks)
	Below Dark Surfac	ce (A11)	Depleted Matrix					
	rk Surface (A12)		Redox Dark Su					ors of hydrophytic vegetation and
	lucky Mineral (S1)		Depleted Dark		-7)			and hydrology must be present,
	leyed Matrix (S4)		Redox Depress	sions (F8)			unies	ss disturbed or problematic.
	ayer (if present):							S
Type:							1	
Depth (inc	ches):	-					Hydric Soil	Present? Yes No
HAqu	csoils re	un de	d to low p	drt i	armo	A D	L.	
YDROLOG	GY		d to low p	drt (ormo) V	L.	
YDROLOG	GY drology Indicators		ed; check all that app		armo) V.	Seco	ndary Indicators (2 or more required)
YDROLOG Vetland Hyd	GY drology Indicators eators (minimum of		ed; check all that app	ly)				ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2,
/DROLOG /etland Hyd rimary Indic _ Surface N	GY drology Indicators cators (minimum of a		ed; check all that app	ly)	res (B9) (e			ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2,
/DROLOG /etland Hyd rimary Indic _ Surface N	GY drology Indicators cators (minimum of a		ed; check all that app Water-Sta MLRA	ly) ained Leav 1, 2, 4A, a	res (B9) (e		v	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
YDROLOG Vetland Hyd Primary Indic Surface N High Wat Saturatio	GY drology Indicators eators (minimum of a Water (A1) ter Table (A2) on (A3)		od; check all that app Water-Sta MLRA Salt Crust	ly) ained Leav 1, 2, 4A, a	es (B9) (e and 4B)		v	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Vetland Hyderimary Indice Surface Note High Wat Saturation Water Ma	GY drology Indicators cators (minimum of a		ed; check all that app Water-Sta MLRA Salt Crust — Aquatic In	ly) ained Leav 1, 2, 4A, a	es (B9) (e and 4B) es (B13)		v	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2)
Vetland Hydelimary Indice Surface Note High Water March Water March Sedimen	GY drology Indicators eators (minimum of a Water (A1) ter Table (A2) on (A3) arks (B1)		ed; check all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen	lv) ained Leav 1, 2, 4A, a t (B11) overtebrate Sulfide O	res (B9) (e and 4B) es (B13) dor (C1)		v	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2)
YDROLOG Vetland Hyd Vetland Indic Surface V High Wat Saturatio Water Ma Sedimen Drift Dep	GY drology Indicators eators (minimum of a Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2)		ed; check all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I	lv) ained Leav 1, 2, 4A, a t (B11) overtebrate Sulfide O	es (B9) (e and 4B) es (B13) dor (C1) eres along	xcept Living Roo	V C S ots (C3) 🔀 C	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
/DROLOG Vetland Hyd rimary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Ma	GY drology Indicators eators (minimum of eators (Mater (A1) ter Table (A2) on (A3) arks (B1) arks (B2) oosits (B2)		ed; check all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I	ly) ained Leav 1, 2, 4A, a t (B11) evertebrate Sulfide O Rhizosphe of Reduce	es (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4)	xcept Living Roo	V C C S ots (C3) S	Vater-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)
Vetland Hydrimary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep	GY drology Indicators eators (minimum of a Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) cosits (B3) at or Crust (B4)		d; check all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I	ly) ained Leav 1, 2, 4A, a t (B11) evertebrate Sulfide O Rhizosphe of Reduce on Reducti	res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4) ion in Tille	xcept Living Roc	V C C S S S S S S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Seomorphic Position (D2) Shallow Aquitard (D3)
Vetland Hydelimary Indicated National Saturation Water May Sedimento Drift Deput Algal May Iron Deput Surface	drology Indicators eators (minimum of a Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	: one require	ed; check all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized In Presence Recent Ind Stunted o	ly) ained Leav 1, 2, 4A, a (B11) avertebrate Sulfide O Rhizosphe of Reduce on Reducti	res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4 ion in Tille Plants (D	Eliving Roo 4) d Soils (C6	ots (C3) X F 5)	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Seomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
/ OROLOG // Vetland Hyd // Imary Indic // Surface // High Wai // Saturatio // Water Ma // Sedimen // Drift Dep // Algal Ma // Iron Dep // Surface // Inundation	drology Indicators eators (minimum of eators (minimum of eators (Minimum of eators (Ma)) eators (Ma) eators (Minimum of eato	: one require	d; check all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Ird Stunted o Other (Ex	ly) ained Leav 1, 2, 4A, a (B11) avertebrate Sulfide O Rhizosphe of Reduce on Reducti	res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4 ion in Tille Plants (D	Eliving Roo 4) d Soils (C6	ots (C3) X F 5)	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-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)
VDROLOG Vetland Hyd Vetland Hyd Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Depo Surface S Inundatio Sparsely	GY drology Indicators eators (minimum of a Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial at Vegetated Concav	: one require	d; check all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Ird Stunted o Other (Ex	ly) ained Leav 1, 2, 4A, a (B11) avertebrate Sulfide O Rhizosphe of Reduce on Reducti	res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4 ion in Tille Plants (D	Eliving Roo 4) d Soils (C6	ots (C3) X F 5)	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-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)
VDROLOG Vetland Hyd Vetland Hyd Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio Sparsely ield Observ	drology Indicators eators (minimum of a Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) Soil Cracks (B6) on Visible on Aerial at Vegetated Concav vations:	: one require	d; check all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Ird Stunted o Other (Ex	ly) ained Leav 1, 2, 4A, a t (B11) evertebrate Sulfide O Rhizosphe of Reduce on Reducti r Stressed plain in Re	res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4 ion in Tille Plants (D	Eliving Roo 4) d Soils (C6	ots (C3) X F 5)	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-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)
Vetland Hydelimary Indice Surface Notes and Water May Saturation Water May Sedimen Drift Dep Algal May Iron Dep Surface Solution Inundation Sparsely Surface Water Surface Water	drology Indicators cators (minimum of a Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6) on Visible on Aerial at Vegetated Concav vations:	: one require Imagery (E re Surface (wd; check all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Inc Stunted o Other (Ex	ained Leav 1, 2, 4A, a (B11) nvertebrate Sulfide O Rhizosphe of Reduce on Reducti r Stressed plain in Re	res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4 ion in Tille Plants (D	Eliving Roo 4) d Soils (C6	ots (C3) X F 5)	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-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)
YDROLOG Vetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio Sparsely Sield Observ Surface Water Table I Saturation Pri	drology Indicators sators (minimum of a Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) sosits (B3) at or Crust (B4) sosits (B5) Soil Cracks (B6) on Visible on Aerial at Vegetated Concav vations: ar Present? Present?	: one require Imagery (E re Surface	wd; check all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent In Stunted o Other (Ex	ained Leav 1, 2, 4A, a t (B11) avertebrate Sulfide O Rhizosphe of Reducti on Reducti r Stressed plain in Re	res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4) ion in Tille Plants (Demarks)	Living Rock 4) d Soils (C6 1) (LRR A	ots (C3) X F 5)	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Seomorphic Position (D2) Shallow Aquitard (D3) EAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
YDROLOG Vetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio Sparsely Field Observ Surface Water Vater Table I Saturation Princludes cap	drology Indicators cators (minimum of a Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6) on Visible on Aerial at Vegetated Concav vations: ar Present? Present?	Imagery (Ere Surface of the Surface	McRA Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized In Presence Recent Inc Stunted o Other (Ex (B8) No Depth (in No Depth (in	ained Leav 1, 2, 4A, a t (B11) overtebrate Sulfide O Rhizosphe of Reducti or Stressed plain in Re aches):	res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4) ion in Tille Plants (Demarks)	Living Rock 4) d Soils (C6 1) (LRR A	ots (C3) X C ots (C3) F ots (C3) F and Hydrolog	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Seomorphic Position (D2) Shallow Aquitard (D3) EAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
YDROLOG Vetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio Sparsely Field Observ Surface Water Vater Table I Saturation Princludes cap	drology Indicators cators (minimum of a Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6) on Visible on Aerial at Vegetated Concav vations: ar Present? Present?	Imagery (Ere Surface of the Surface	wd; check all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Ind Stunted o Other (Ex (B8)	ained Leav 1, 2, 4A, a t (B11) overtebrate Sulfide O Rhizosphe of Reducti or Stressed plain in Re aches):	res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4) ion in Tille Plants (Demarks)	Living Rock 4) d Soils (C6 1) (LRR A	ots (C3) X C ots (C3) F ots (C3) F and Hydrolog	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Seomorphic Position (D2) Shallow Aquitard (D3) EAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
YDROLOG Vetland Hyd Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio Sparsely Field Observ Surface Water Vater Table I Saturation Princludes cap Describe Rec	drology Indicators cators (minimum of a Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6) on Visible on Aerial at Vegetated Concav vations: ar Present? Present?	Imagery (Ere Surface of the Surface	McRA Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized In Presence Recent Inc Stunted o Other (Ex (B8) No Depth (in No Depth (in	ained Leav 1, 2, 4A, a t (B11) overtebrate Sulfide O Rhizosphe of Reducti or Stressed plain in Re aches):	res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4) ion in Tille Plants (Demarks)	Living Rock 4) d Soils (C6 1) (LRR A	ots (C3) X C ots (C3) F ots (C3) F and Hydrolog	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Seomorphic Position (D2) Shallow Aquitard (D3) EAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
YDROLOG Vetland Hyd Vetland Hyd Surface N High Wai Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio Sparsely Sield Observ Surface Water Vater Table Includes cap	drology Indicators cators (minimum of a Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6) on Visible on Aerial at Vegetated Concav vations: ar Present? Present?	Imagery (Ere Surface of the Surface	McRA Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized In Presence Recent Inc Stunted o Other (Ex (B8) No Depth (in No Depth (in	ained Leav 1, 2, 4A, a t (B11) overtebrate Sulfide O Rhizosphe of Reducti or Stressed plain in Re aches):	res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4) ion in Tille Plants (Demarks)	Living Rock 4) d Soils (C6 1) (LRR A	ots (C3) X C ots (C3) F ots (C3) F and Hydrolog	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Seomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

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Consulting En	gineer
& Geologists Project/5	

Geologists, Inc.				El .1
Project/Site: Humboldt Bay Harbor District-RMMT	City/	County: Humbol	dt	_ Sampling Date: 5/17/27
Applicant/Owner: Humboldt Bay Harbor District			State: CA	Sampling Point:
Investigator(s): Joseph Saler, Cindy Wilcox	Sect	ion, Township, F	Range:	
Landform (hillslope, terrace, etc.): Por la Spit, baysi de	Local Local	al relief (concave	e, convex, none):	ave Slope (%): 0-1
	Lat: 40.8	14826	Long: -124. 185	185 Datum: WGS 84
Soil Map Unit Name: 1014- Whan land Anthralti				
Are climatic / hydrologic conditions on the site typical for this tin				
./				
Are Vegetation, Soil, or Hydrology signi			e "Normal Circumstances"	
Are Vegetation, Soil, or Hydrology natu SUMMARY OF FINDINGS - Attach site map she			needed, explain any answ locations, transect	
	o iiiiig oui	npinig point	- Toodilono, transcoo	
	X	is the Sample		Meets CCC 1-p definition
Wetland Hydrology Present? Yes No		within a Wetl	and? Yes	No
Demokratik METO 1 1 1 1 1		1 .	(2-a)	
TP excavated in high salt most	dsocia	ted with	DIS.	
VEGETATION – Use scientific names of plants.				
A A		minant Indicato		rksheet:
Tree Stratum (Plot size: 30'	Cover Sp	ecies? Status	- Number of Dominant	
2.			_ That Are OBL, FACW	V, or FAC: (A)
3.			Total Number of Dom Species Across All St	1
4.				1
	= T	otal Cover	Percent of Dominant That Are OBL, FACW	
Sapling/Shrub Stratum (Plot size: 5'			Prevalence Index we	
1			Total % Cover of	
2				x 1 =
3,		77		x 2 =
4			FAC species	x 3 =
5.		atal Oawar	FACU species	x 4 =
Herb Stratum (Plot size: 5'		otal Cover	UPL species	×5=
1. Sporting desiflora	20	OBL	Column Totals:	(A) (B)
2. Porterilla asprica	8	OBL	- Prevalence Inde	ev = R/A =
3. Atriplex brostness	5	TAG	Hydrophytic Vegeta	
4. Salicorn'ia pacifica	15	OBL	X 1 - Rapid Test fo	r Hydrophytic Vegetation
5. Distriction Spices	3	FACU	- L Donninanoc i	est is >50%
6. Hardeun brachyanterun	<u>_</u>	FACH	3 - Prevalence In	ndex is ≤3.01
7. Laty coniculatus	3	TAC	_ 4 - Morphologica	Adaptations ¹ (Provide supporting
8. Festuca pecennis	-	PAC		rks or on a separate sheet)
9. Agrostis, Stamiford	<u> </u>	FAC	5 - Wetland Non-	
10. Brown hordeacers		FACU		rophytic Vegetation ¹ (Explain) soil and wetland hydrology must
11,	116 -	2.3.3	may at the second secon	sturbed or problematic.
Woody Vine Stratum (Plot size: 5'	110 = 10	otal Cover 23.	CO	
1			- Hydrophytic	
2			Vegetation	X
OX	= To	otal Cover	Present?	res / No
% Bare Ground in Herb Stratum		-		
Dose behavens vegetation 5 sate	mash is	wicotor	species presat.	according for 61%
	JO CAL	T	· * · · · · · · · · · · · · · · · · · ·	

epth Matrix nches) Color (moist) %	Redox Features Color (moist) % Type Loc²	Texture	Remarks
$\frac{\text{color (moist)}}{1000}$	Color (moist) 76 Type Loc)	Remarks
-9 10 VR 3/1 100		45	dhi
-24 2.54 2.5/1 90	matrix	15	dark material gy no h?
104R311 10	1 -prit movement		Occ. sheels Charoal pro
	M=Reduced Matrix, CS=Covered or Coated Sand Gra		cation: PL=Pore Lining, M=Matrix.
dric Soil Indicators: (Applicable to	all LRRs, unless otherwise noted.)		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) Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1) (except MLRA 1) Loamy Gleyed Matrix (F2)		y Shallow Dark Surface (TF12) er (Explain in Remarks)
_ Depleted Below Dark Surface (A11)	Depleted Matrix (F3) Redox Dark Surface (F6)	3Indicate	ors of hydrophytic vegetation and
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		and hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)		ss disturbed or problematic.
estrictive Layer (if present):			
Type:			/
Depth (inches):	-	Hydric Soi	Present? Yes No
on site. Lecently	disturbed? Chose this sites	in not	t o.material accumul Repression. Possibly
on site. Lecently	disturbed? Chose this sites	in not	t o.material accumul Repression. Possibly
/DROLOGY /etland Hydrology Indicators:			
PROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requ	tired; check all that apply)	Seco	ondary Indicators (2 or more required)
PROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requ Surface Water (A1)	tired; check all that apply) Water-Stained Leaves (B9) (except	Seco	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requestrate Surface Water (A1) High Water Table (A2)	uired; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Seco	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
PROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requing the second	uired; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	<u>Secc</u>	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requipment of some requipment of the requipment	ired; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	Seco	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 /etland Hydrology Indicators: rimary 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)	Seco	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 (C9
/DROLOGY /etland Hydrology Indicators: rimary 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 (89) (except MLRA 1, 2, 4A, and 4B) — Salt Crust (811) — Aquatic Invertebrates (813) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along Living Roo	<u>Seco</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 (C9 Geomorphic Position (D2)
/DROLOGY /etland Hydrology Indicators: rimary 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)	wired; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4)	Secondary Second	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 (C9 Geomorphic Position (D2) Shallow Aguitard (D3)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requirement of the property of the pr	wired; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	Secondary Second	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 (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requirement Indicators (Minimum of one requirement Indicators (Maximum of one requirement Indicators	water-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 Second	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 (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
PROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requirement of the property of the p	water-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 Second	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 (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
retland Hydrology Indicators: rimary Indicators (minimum of one requirement Indicators (Minimum	water-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 Second	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 (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requination of the property of the pr	wired; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living 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 Second	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 (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
/DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one requirement Indicators (Minimum of one requirement Indicators (Minimum of one requirement Indicators (Maximum of one requirement Indicators	wired; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living 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) Depth (inches): V/A	Secondary Second	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 (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
/DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one requirement of the property of the following of the property of the following of the property of the following of the property 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 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) Depth (inches):	ots (C3)	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 (C9) Geomorphic Position (D2) Shallow Aguitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
/DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one requirement of the property of the following of the property of the following of the property of the	water-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) Depth (inches):	Secondary Second	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 (C9) Geomorphic Position (D2) Shallow Aguitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
/DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one requination of the property of the p	water-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) Depth (inches): No Depth (inches): Depth (inches): No Depth (inches): No Depth (inches): No Depth (inches): Depth (inc	ots (C3)	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 (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D5) (LRR A) Frost-Heave Hummocks (D7)
/DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one requination of the property of the p	wired; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living 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) Depth (inches): No Depth (inches): No Depth (inches):	ots (C3)	Andary 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)

Insulting Engineers WETLAND DETERMINATION DA	ATA FOR	, M – Western Mo	ountains, Valleys, ar	nd Coast Region
& Geologists, Inc. Project/Site: Humboldt Bay Harbor District-RMMT		City/County: Humbo	oldt	_ Sampling Date: <u>5/17/22</u>
Applicant/Owner: Humboldt Bay Harbor District	-	City/County: Ttalibo		Sampling Date: 1774 Sampling Point: 1774
Investigator(s): Joseph Saler, Cindy Wilcox		Section, Township,		_ Sampling Form
Landform (hillslope, terrace, etc.): Phisula /spt, Bay	side fill		ve, convex, none): None	2 Slope (%): 1 1/2
Subregion (LRR): A, MLRA-4B	Lat: 4	10.814275	Long 124.185	5450 Datum: WGS 84
Soil Map Unit Name: 1014 - Urban land Anthra				
Are climatic / hydrologic conditions on the site typical for th				
Are Vegetation, Soil, or Hydrology	-		re "Normal Circumstances"	X
Are Vegetation, Soil, or Hydrology			f needed, explain any answ	
SUMMARY OF FINDINGS – Attach site map	showing	sampling poin	t locations, transect	s, important features, etc.
Hydrophytic Vegetation Present? Yes M Hydric Soil Present? Yes M		Is the Sampl		*
	No X	within a Wet	tland? Yes	No
Remarks: WETS normal rainfall TP excavated in Slightly raise	d onea	above wet	and w/i willow	rath See TP 15 for
VEGETATION – Use scientific names of plan				A Olling collabora
Tree Stratum (Blat size, 30'	Absolute	Dominant Indicate		rksheet:
1. Sali X, OS on ora	50	Species? Status		
2 Sall X hocheriana	30	FACV	V	
3. Marella Califonica	10	FAC	Total Number of Dom Species Across All St	
4			Percent of Dominant	
Sapling/Shrub Stratum (Plot size: 5')	90	= Total Cover	That Are OBL, FACW	
1. RANK INSTITUTE	10	FACE	Prevalence Index wo	orksheet:
2. Rubus ormaniacus	20	FAC	Total % Cover of:	
3.				x 1 =
4				x 2 =
5,			FACU species	x 3 = x 4 =
Hosh Stratum (Blot sing, 5'	30	_ = Total Cover 🕇		x 5 =
Herb Stratum (Plot size: 5'	25	- FACI	And the second s	(A) (B)
2. Earlsetun Japvisatilm	1	FACI	•/	
3. TIMOW efforts)	3	FACU	Prevalence Inde	ex = B/A =
4				Hydrophytic Vegetation
5			2 - Dominance Te	
6			3 - Prevalence In	
7			_	Adaptations ¹ (Provide supporting
8			data in Remar	ks or on a separate sheet)
9			5 - Wetland Non-	
10				rophytic Vegetation ¹ (Explain)
11	00			oil and wetland hydrology must sturbed or problematic.
Wopdy Vine Stratum (Plot size: 5'	29	= Total Cover	be present, unless dis	starbed or problematic.
1. He dem helix	40	- FACL)	
2		1000	Vegetation	
71*	40	= Total Cover	Present? Y	'es No
% Bare Ground in Herb Stratum /			/ /	()
* litter, duff and lederatelix co	ver, i	leg composit	in representativ	re at upland
	0	'ortions' ot	Willow palch.	

ampling Point: TP1 Fix Geologists, In

Profile Description: (Describe to the dep	th needed to docum	ent the i	ndicator	or confirm	the absenc	e of indicators.)
Depth Matrix		Feature				
(inches) Color (moist) %	Color (moist)	%	Type ¹	Loc2	<u>Texture</u>	Remarks
0-2 10YR 2/1 100					Peat	wwood chunks
2-3 104RZ 100		-			ms	
3-9 10 yr 2/1 100					LS	
9-24+ 10484/1 90	10 YR 4/2	10		M	5	
1011111	10/10/1/2	10				-
2—————————————————————————————————————	-				-	
·		-			è	-
						3
	0					
¹ Type: C=Concentration, D=Depletion, RM				d Sand Gr		ocation: PL=Pore Lining, M=Matrix. tors for Problematic Hydric Soils ³ :
Hydric Soil Indicators: (Applicable to all			eu.j			
Histosol (A1)	Sandy Redox (SStripped Matrix (_	om Muck (A10) ed Parent Material (TF2)
Histic Epipedon (A2) Black Histic (A3)	Simpped Matrix (1\ (except	MI RA 1)		ery Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed N			inicion 1,		ther (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix		-,			, , , , , , , , , , , , , , , , , , , ,
Thick Dark Surface (A12)	Redox Dark Sur		•		³ Indica	itors of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark S	Surface (F	- 7)		wet	tland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressi	ons (F8)			unle	ess disturbed or problematic.
Restrictive Layer (if present):						2.17
Туре:				1_		\times
Depth (inches):				-	Hydric Sc	oil Present? Yes No
HYDROLOGY						
Wetland Hydrology Indicators:						
Primary Indicators (minimum of one require						condary Indicators (2 or more required)
Surface Water (A1)	Water-Stai			xcept		Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)		I, 2, 4A,	and 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 \$					Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized R	•	_		—	Geomorphic Position (D2)
Algal Mat or Crust (B4)	Presence o			•		Shallow Aquitard (D3) FAC-Neutral Test (D5)
Iron Deposits (B5)	Recent IronSturited or				_	Raised Ant Mounds (D6) (LRR A)
Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B				I) (LKK A	'' <u> </u>	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface		iain in ra	emaina)		-	Trost-freave trummocks (D7)
Field Observations:	(66)			-1-		
Surface Water Present? Yes	No X Depth (inc	shoot:	ALV			
				-		\
	1		AIN	-		neu Pennant2 Von Na
Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, m	5 (2-22-)		revious ins			ogy Present? Yes No
Determine recorded Data (Stream gauge, II	simoning won, acriai p	, news, p		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	2.44.12010.	
Remarks: Rised, No evid	lace of h	y de	gy			

(2V)
CIN/
Consulting Engineers
& Geologists, Inc.

ject/Site: Humboldt Bay Harbor District-RMMT	City	//County: Humboldt		Sampling Date: 5/18/21
licant/Owner: Humboldt Bay Harbor District			State: CA	Sampling Point: TP75
estigator(s): Joseph Saler, Cindy Wilcox	See	ction, Township, Range	e:	
dform (hillslope, terrace, etc.): Rolosula 501	basside fill Lo	cal relief (concave, con	vex, none): 51ia	W conswith Slope (%): 25
pregion (LRR): A. MLRA-4B	Lat: 40.	814273	ong: -124.18	7155 Datum: WGS 84
Map Unit Name: Woanland - Anth	calty veror	ment 0-201	D NIMI cines	rification: NON 4
climatic / hydrologic conditions on the site typica				
				*114-Y-1011/1401
Vegetation, Soil, or Hydrology _				s" present? Yes No
Vegetation, Soil, or Hydrology _			ed, explain any ans	·
MMARY OF FINDINGS - Attach site	map showing sa	impling point loca	ations, transec	cts, important features, etc
rdrophytic Vegetation Present? Yes		is the Sampled Ar		* Meets CC
rdric Soil Present? Yes		within a Wetland?	Yes Yes	No X 1-P
etland Hydrology Present? Yes X emarks: WETS normal rainfall	No	Training Training.		definition
Marks. WETS Hollilai falmali				
GETATION – Use scientific names o				
ee Stratum (Plot size: 30'		necies? Status	ominance Test w	
Salix hopkeriona	80	TACIAL IN	lumber of Dominan hat Are OBL, FAC\	
Salix sitchausis	15	FACW		
			otal Number of Dor pecies Across All S	
	(*)			
	95		ercent of Dominant hat Are OBL, FAC\	
pling/Shrub Stratum (Plot size:			revalence Index w	(10)
			Total % Cover of	
				x1 =
	\			x 2 =
			AC species	
	-			x 4 =
rb Stratum (Plot size: 5')	=	roial Cover	PL species	
Eleochanis macrostachya	15	NL (OBL) C	olumn Totals:	(A) (B)
ptu coniculatu	10	FAC		
				dex = B/A =
			ydrophytic Vegeta	ation indicators: or Hydrophytic Vegetation
			2 - Dominance	- CARDO 976 U
			_ 3 - Prevalence I	
		1		al Adaptations ¹ (Provide supporting
			4 - Morphologica	arks or on a separate sheet)
			_ 5 - Wetland Nor	n-Vascular Plants ¹
			_ Problematic Hyd	drophytic Vegetation ¹ (Explain)
		1		soil and wetland hydrology must
	25 _{= T}	otal Cover 125 be	e present, unless d	isturbed or problematic.
ody Vine Stratum (Plot size: 5'		3	4	
			ydrophytic	1
			egetation resent?	Yes X No
Bare Ground in Herb Stratum	=T	otal Cover		
to a that	111.	4.0.	1	1 6 1
leocharis Macrostachya is not	isted in A	DE manual	, however	oks of this 11
Maria Maria Maria	The second secon	1	A STATE STATE OF	11/1/100
pecies in the north coast r	egian suga	of tACW	or OBL des	rightim and IT I The
pecies in the north coast r	edia und			y grath ANT UTOS., Valleys, and Coast - Version 2.0

rofile Description: (Describe to the co Depth Matrix	Redox Features		
inches) Color (moist) %		_oc ² Texture	Remarks
5-3 104R 2/1 100		Pear	
5-4 104R311 100		- Cols	
1-14 2.5 × 2.5/1 100		COGTIS	Whicks, charcoal, bothom a
bleck charrow ash?			Total Control of the Control
		7	
4-36 2.542.511		<u> </u>	1
		21	Dispose Links (A-Matrix
lype: C=Concentration, D=Depletion, F lydric Soil Indicators: (Applicable to	RM=Reduced Matrix, CS=Covered or Coated Stall LRRs, unless otherwise noted.)		cation: PL=Pore Lining, M=Matrix. 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 MI		y Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		ier (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)		
_ Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicat	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.
lestrictive Layer (if present):			
Туре:			
Depth (inches):		Hydric Soi	l Present? Yes No 🚣
3	organic 2.54 25/1 coloris	sand color p	m
	organic 2.54 2511 coloris	sand color p	w
Stepped @ 36". A12 - not		·	ondary Indicators (2 or more required)
S-Igned @ 36". A12 - not YDROLOGY Vetland Hydrology Indicators:		Seco	ondary Indicators (2 or more required)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required)	uired; check all that apply)	Seco	ondary Indicators (2 or more required)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requestrates Water (A1) High Water Table (A2)	uired; check all that apply) Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B)	ept Seco	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required Water (A1) High Water Table (A2) Saturation (A3)	uired; check all that apply) Water-Stained Leaves (B9) (exc	ept Sect	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requestrates Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	uired; check all that apply) Water-Stained Leaves (B9) (exceeding the second seco	ept Sect	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required Water (A1) High Water Table (A2) Saturation (A3)	uired; check all that apply) Water-Stained Leaves (B9) (exceeding the proof of	ept Sect	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requestrated Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	uired; check all that apply) Water-Stained Leaves (B9) (exceeding the second s	ept Security	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 (CS
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requestrated Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	uired; check all that apply) Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv	ept Section Se	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 (CS) Geomorphic Position (D2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requirement) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	wired; check all that apply) Water-Stained Leaves (B9) (excess 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)	ept Secondary Se	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 (C9 Geomorphic Position (D2) Shallow Aquitard (D3)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requestry) 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)	wired; check all that apply) Water-Stained Leaves (B9) (exceedings) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liventes (B13) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Seconds	ring Roots (C3) X Soils (C6)	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 (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
/DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requestry) 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	wired; check all that apply) Water-Stained Leaves (B9) (exceeding to the content of the content	ring Roots (C3) X Soils (C6)	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 (C9 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 requested 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)	wired; check all that apply) Water-Stained Leaves (B9) (exceeding to the content of the content	ring Roots (C3) X Soils (C6)	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 (C9 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 requirement of the property of the	wired; check all that apply) Water-Stained Leaves (B9) (exceed MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Live Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Second Standard or Stressed Plants (D1) (B7) Other (Explain in Remarks) De (B8)	ring Roots (C3) X Soils (C6)	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 (C9 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 requestions) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Orift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface (B1) Surface Water Present? Yes	wired; check all that apply) Water-Stained Leaves (B9) (exceeding to the content of the content	ring Roots (C3) X Soils (C6)	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 (C9 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 requestions) 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 (B6) Inicipations:	wired; check all that apply) Water-Stained Leaves (B9) (exceed MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Live Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Second Stanted or Stressed Plants (D1) (B7) Other (Explain in Remarks) Depth (inches):	ring Roots (C3) X Soils (C6)	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 (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requested 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 Present? Vater Table Present? Ves Saturation Present? Yes Saturation Present?	wired; check all that apply) Water-Stained Leaves (B9) (exceeding to the process of the process	ept ving Roots (C3) Soils (C6) (LRR A) Wetland Hydrolo	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 (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requested 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 Present? Vater Table Present? Ves Saturation Present? Yes Saturation Present?	wired; check all that apply) Water-Stained Leaves (B9) (exceed MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Live Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled State or Stressed Plants (D1) (B7) Other (Explain in Remarks) Depth (inches): No Depth (inches):	ept ving Roots (C3) Soils (C6) (LRR A) Wetland Hydrolo	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 (C9) 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 requirement Indicators (Manager Marks (Manager Manager Marks (Manager Manager Marks (Manager Manager	wired; check all that apply) Water-Stained Leaves (B9) (exceed MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Live Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Second Stanted or Stressed Plants (D1) (B7) Other (Explain in Remarks) Depth (inches): No Depth (inches):	ept ving Roots (C3) Soils (C6) (LRR A) Wetland Hydrolo	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 (C9) 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 requestions) 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 (Sield Observations: Surface Water Present? Yes Vater Table Present? Yes Saturation Present? Yes Includes capillary fringe) Describe Recorded Data (stream gauge	wired; check all that apply) Water-Stained Leaves (B9) (exceeding to the process of the process	ept ving Roots (C3) Soils (C6) (LRR A) Wetland Hydrolo	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 (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

	7
28-11	
CILL	
Consulting Engineer	s

z Geologists, Inc.		Slight
	City/County: Humboli	
Applicant/Owner: Humboldt Bay Harbor District		State: CA Sampling Point: TP 76
Investigator(s): Joseph Saler, Cindy Wilcox	Section, Township, R	ange:
Landform (hillslope, terrace, etc.): PANOMA Spit Bay		
		Long:124. 187374 Datum: WGS 84
Soil Map Unit Name: 1014-Urban land Anthra	eltic Xerorthents ass	OC 0-296 NWI classification: None
Are climatic / hydrologic conditions on the site typical for the	nis 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 r	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	* * * * * * * * * * * * * * * * * * * *
-	No Is the Sample within a Wetle	X .
Wetland Hydrology Present? Yes	No X	10310
TP excavated in Carex obnightal	patch, slightly shoping	•
VEGETATION – Use scientific names of pla	, ,	
	Absolute Dominant Indicator	Dominance Test worksheet:
1. Salix hoover and	90 Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2		Total Number of Dominant
3		Species Across All Strata: (B)
4	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)
Sapling/Shrub Stratum (Plot size: 5'	10 (110)	Prevalence Index worksheet:
1. Baccharis Dilylons	- B WL	7Total % Cover of: Multiply by:
2. Morella Californica	<u> </u>	OBL species x 1 =
3		FACW species x 2 =
4		FAC species x 3 =
5	= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 5'	= Total Cover	UPL species x 5 =
1. Carex obnupta	90 V OBL	Column Totals: (A) (B)
2. Vicia sativa	1 <u>UPL</u>	Prevalence Index = B/A =
3. Vicia villosa	2 UPL	Hydrophytic Vegetation Indicators:
4		1 - Rapid Test for Hydrophytic Vegetation
5		2 - Dominance Test is >50%
6		3 - Prevalence Index is ≤3.01
7		4 - Morphological Adaptations¹ (Provide supporting
8.		data in Remarks or on a separate sheet)
9		5 - Wetland Non-Vascular Plants Problematic Hydrophytic Vegetation (Explain)
10,		Indicators of hydric soil and wetland hydrology must
11.	93 = Total Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 5'	= Total Cover	
1. Hedera helix	1 PACY	- Hydrophytic
2		Vegetation
17*	= Total Cover	Present? Yes No
A pare create in tiers endoni		
* Littler and duff Deve Carex o	DOWNER CALOR	
* Littler and duft. Deve carex a	ormalia consti	

Profile Description: (Describe to the	depth needed to document the indicator o	r confirm	the absence	of indicators.)
Depth Matrix	Redox Features			•
(inches) Color (moist) %	Color (moist) % Type ¹	Loc²	Texture	Remarks
0-8 10YR3/1 100		/	Peat	
8-24+ 10484/1 60	75 VR 4/6 40 C	M	5	7.5 YR5/8 brick fill church
U = TOTALLI S	_ 1.771\ 110 _ 10 _ 10			1. 1. 10 11.1. 1.6.33.44.
	—); 			
	<u></u>			<u> </u>
1				*
			. 2,	a second
Type: C=Concentration, D=Depletion, Hydric Soil Indicators: (Applicable to	RM=Reduced Matrix, CS=Covered or Coate	s Sand Gra		cation: PL=Pore Lining, M=Matrix. ors for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)			m Muck (A10)
Histic Epipedon (A2)	Sainty Redox (35) Stripped Matrix (S6)			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)			er (Explain in Remarks)
Depleted Below Dark Surface (A11			_	
Thick Dark Surface (A12)	Redox Dark Surface (F6)		3Indicate	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)		unles	ss disturbed or problematic.
Restrictive Layer (if present):				
Туре:				
Depth (inches):			Hydric Soi	Present? Yes X No No
Remarks:				
HYDROLOGY				
Wetland Hydrology Indicators:	S 13			
Primary Indicators (minimum of one rec	uired; check all that apply)		Seco	ndary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (e.	cept	_ '	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)			4A, and 4B)
Saturation (A3)	Salt Crust (B11)		[Orainage 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	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	l Soils (C6)) <u>√</u> F	FAC-Neutral Test (D5)
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D	1) (LRR A)		Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Image				Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surfa	ice (B8)			
Field Observations:	n.lo			
Surface Water Present? Yes	No Depth (inches): NA			
Water Table Present? Yes	No Depth (inches):	_		
Saturation Present? Yes	No Depth (inches): N/A	_ Wetla	ınd Hydrolog	gy Present? Yes No 🔀
(includes capillary fringe)	e, monitoring well, aerial photos, previous ins	nections) i	if available:	
Describe Recorded Data (stream gauge	s, monitoring well, aerial priotos, previous ins	pections), i	ii avallable.	
Remarks:			١.	1
Sloping, no evidence of	nooting or	Stano	ling w	ater at any time.
Sinhis) In Chiance a	7	- 101 10		TO ONLY MESO.
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Project/Site: Humboldt Bay Harbor District-RMMT	City/County: Hu	mboldt	Sampling Date: 5/18/23
Applicant/Owner: Humboldt Bay Harbor District	Only/County	State: CA	Sampling Point: 1977
nvestigator(s): Joseph Saler, Cindy Wilcox	Coelias Tarres		Sampling Point:
andform (hillslope, terrace, etc.): Wins Ma Sp	Section, Townsh		ave Slope (%):0-1
Subregion (LRR): A, MLRA-4B	Local relief (con		7 729 Datum: WGS 84
oil Map Unit Name: 1014-Vahanland Anth	in the Yearth out Acco	Long: 101,10	Datum; WGS 04
re climatic / hydrologic conditions on the site typical			
re Vegetation, Soil, or Hydrology		Are "Normal Circumstances	" present? Yes No
re Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any answ	wers in Remarks.)
UMMARY OF FINDINGS - Attach site i	map showing sampling p	oint locations, transec	ts, important features, et
Hydrophytic Vegetation Present? Yes	No ,	-	L Meals (C.
Hydric Soil Present? Yes	2 190	mpled Area	1-p defi
Wetland Hydrology Present? Yes X	No within a	Wetland? Yes	No
Remarks: WETS normal rainfall	1 1 0		1111
Thex correct in depression	on boint. Delicazion 6	xists between con	GOE/ASPLAH
EGETATION – Use scientific names of	plants.		
ree Stratum (Plot size: 30'	Absolute Dominant Indi % Cover Species? Sta	atue	2
Salix hookeriana	30 V F	Number of Dominant That Are OBL, FACV	
		Total Number of Don Species Across All S	,
			4
- \	= Total Cover	Percent of Dominant That Are OBL, FACV	
Sapling/Shrub Stratum (Plot size: 5')	Prevalence Index w	
		Total % Cover of	
	\		x 1 =
·	\	FACW species	x 2 =
	- +	FAC species	x 3 =
	- Tatal Course	FACU species	x 4 =
lerb Stratum (Plot size; 5')	= Total Cover	UPL species	x 5 =
lotus corniculatus.	40 V FA		(A) (B
Elevationis macrostactiva	1 × NL	(OBL) Prevalence Ind.	ex = B/A =
Runex Cisas	<u> </u>	Hydrophytic Vegeta	
Alopecury"	5 0		r Hydrophytic Vegetation
Metha pykain		2 - Dominance T	
Agrostis Stoloniera	45 V F	3 - Prevalence Ir	ndex is ≤3.0 ¹
_ J		4 - Morphologica	l Adaptations¹ (Provide supportin
·			rks or on a separate sheet)
		5 - Wetland Non-	
0			rophytic Vegetation ¹ (Explain)
1,			soil and wetland hydrology must sturbed or problematic.
Voody Vine Stratum (Plot size: 5')	Total Cover	Do present, unless di	starged or problematic.
YOUNG VINE SURLUM (FIDESIZE.			
		Hydrophytic Vegetation	\vee

Dose Lobacow vy with depension.
It Eleocharis macros-burganotin USACE manual but obs. in North coestregion suggest actor Front

Remarks:

Profile Description: (Describe to the dep	til liceded to document the malcator of commit	THE THEORY OF THE PROPERTY OF
DepthMatrix	Redox Features	120 min v / /
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-05 loye 3/2 100		SIL Recent secumps deposit
0.5-5 10 yr 2/2 100		MuP
5-12 10 VR 4/1 100	<i></i>	Gels
12-21 2-54 4/1 70	2.54 4/2 30 C M	VIES
10	L.71 1/2 30 C M	-2
21-24+ 2.5 y 2.5/1 160		3
	=Reduced Matrix, CS=Covered or Coated Sand Gr	
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 (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) Depleted Below Dark Surface (A11)	Loamy Gleyed Matrix (F2) Depleted Matrix (F3)	Other (Explain in Remarks)
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Type:		
Depth (inches):		Hydric Soil Present? Yes No
Remarks:		
HYDROLOGY		
HYDROLOGY Wetland Hydrology Indicators:		
	ed; check all that apply)	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one require		
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 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) 	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 Roce 	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 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) State (C3) 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 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) Stailow 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 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) Staturation 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 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 (C9) Stailow 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) Inundation Visible on Aerial Imagery (B5) 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) 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) Sts (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 (Base of Sparsely Vegetated Concave Surface of 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 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 (C9) Staturation 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 (B5) 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 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) Staturation 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 (ESparsely 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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 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 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 (ESparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Saturation Present?	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 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) Sts (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 (ESparsely Vegetated Concave Surface Field Observations: Surface Water Present? 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) Other (Explain in Remarks) No Depth (inches): NA No Depth (inches): NA Wetl	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) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (ESparsely Vegetated Concave Surface Field Observations: Surface Water Present? 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) Other (Explain in Remarks) 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)
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 Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, m	Water-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) No Depth (inches): NA Depth (inches): NA No Depth (inches): NA N	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) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, m	Water-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) No Depth (inches): NA Depth (inches): NA No Depth (inches): NA N	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) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (ESparsely 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	Water-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) No Depth (inches): NA No Depth (inches): NA Wetle Inchison 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)
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 (ESparsely 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	Water-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) No Depth (inches): NA No Depth (inches): NA Wetl	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)

& Geologists, Inc.		ntains, Valleys, and Coast Region
Project/Site: Humboldt Bay Harbor District-RMM⊺	City/County: Humboldt	Sampling Date: 5/19/22
Applicant/Owner: Humboldt Bay Harbor District		State: CA Sampling Point: TP 78
Investigator(s): Joseph Saler, Cindy Wilcox	Section, Township, Rar	nge:
Landform (hillslope, terrace, etc.): Peninsula so		
		Long: -124.188143 Datum: WGS 84
Soil Map Unit Name: 1014-Urbanland Anthraf		
Are climatic / hydrologic conditions on the site typical for th	is time of year? Yes X No	(If no, explain in Remarks.)
Are Vegetation, Sail, or Hydrology	significantly disturbed? Are "	Normal Circumstances" present? Yes V
Are Vegetation, Soil, or Hydrology		
SUMMARY OF FINDINGS - Attach site map		
Hydric Soil Present? Yes Yes Yes I	Is the Sampled within a Wetlan	X
Remarks: WETS normal rainfall TP excavated ~ 5H from 3p M	Handedge, slightlye	levated.
VEGETATION – Use scientific names of plan	nts.	4
Tree Stratum (Plot size: 30'	Absolute Dominant Indicator % Cover Species? Status	Dominance Test worksheet:
1-Salix Strhasis	70 FACW	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: 5'	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
1. Rubus Word	11 FACU.	Prevalence Index worksheet:
2. Marella Californica	4 FACW	Total % Cover of:Multiply by:
3		OBL species x 1 =
4		FACW species x 2 = FAC species x 3 =
5	72-	FACU species x 4 =
Herb Stratum (Plot size: 5'	= Total Cover $\frac{7.5}{3}$	UPL species x 5 =
1. Antexantum odoratum	17 V SAU	Column Totals: (A) (B)
2 Holas lonatus,	6 FAC	
3. Contactria juliata	15 FACU	Prevalence Index = B/A = Hydrophytic Vegetation Indicators:
		1 - Rapid Test for Hydrophytic Vegetation
5		2 - Dominance Test is >50%
6		3 - Prevalence Index is ≤3.0¹
7 8.		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)

_= Total Cover

= Total Cover

Remarks:

Woody Vine Stratum (Plot size: 5'

% Bare Ground in Herb Stratum

___ 5 - Wetland Non-Vascular Plants¹

Hydrophytic Vegetation Present?

Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Profile Description: (Describe to the	depth needed to docum	ent the i	indicator	or confirm	n the absenc	e of indicators.)
Depth Matrix		Feature				
(inches) Color (moist) %	Color (moist)	%	Type'	_Loc ² _	<u>Texture</u>	Remarks
0-4 759R 25/1 100		_		-	mus	
4-24+ 2544/2 80		5		m	S	- Redox color increussulde
	10 4R 4/p	15	<u></u>	m		
¹ Type: C=Concentration, D=Depletion, Hydric Soil Indicators: (Applicable to				ed Sand G		ocation: PL=Pore Lining, M=Matrix. tors for Problematic Hydric Soils ³ :
Histosol (A1)	✓ Sandy Redox (S					cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (ed Parent Material (TF2)
Black Histic (A3)	Loamy Mucky M		1) (excep	MLRA 1		ery Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed N					ther (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix	(F3)				
Thick Dark Surface (A12)	Redox Dark Sur					tors of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark S	•				tland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressi	OUS (FR)			unie	ess disturbed or problematic.
Restrictive Layer (if present):						× .
Type:					Hudrio Sc	oil Present? Yes No
Depth (inches): Remarks:					nyunc sc	OIL LESCHILL LES TO THE
HYDROLOGY						
Wetland Hydrology Indicators:	wiseds shoots all that apply	A.			Sec	condary Indicators (2 or more required)
Primary Indicators (minimum of one req			(DO) /		<u>Sec</u>	
Surface Water (A1) High Water Table (A2)	Water-Stail		ves (B9) (6 and 4B)	except	-	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Saturation (A3)	Salt Crust		,			Drainage Patterns (B10)
Water Marks (B1)	Aquatic Inv		es (B13)			Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen \$					Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized R	hizosphe	eres along	Living Ro	ots (C3)	Geomorphic Position (D2)
Alga! Mat or Crust (B4)	Presence of	of Reduc	ed Iron (C	4)		Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron	n Reduct	tion in Tille	d Soils (C	(6)	FAC-Neutral Test (D5)
Surface Soil Cracks (B6)	Stunted or	Stressed	d Plants ([01) (LRR /		Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imager		lain in R	emarks)			Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surfa	ice (B8)					
Field Observations:	V/		MIL			
	No Depth (inc		N/A			
Water Table Present? Yes			1	_		X
Saturation Present? Yes (includes capillary fringe)	No Depth (inc	ches):	A/N	Wei	lland Hydrold	ogy Present? Yes No
Describe Recorded Data (stream gauge	e, monitoring well, aerial p	hotos, p	revious in	spections)	, if available:	
Remarks:		1 1	17	1 1	102	N 1 1 1
Elevated above adjo	west 3p wet	lmd	. H	quelos	y with	vely to ever be present.
				U		54

(21V)
CIM
Consulting Engineers
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t Geologists, Inc.	ATA TORM - Western mountains, valleys, and coast Region
Project/Site: Humboldt Bay Harbor District-RMMT	City/County: Humboldt Sampling Date: 511912-
Applicant/Owner: Humboldt Bay Harbor District	State: CA Sampling Point: TP19
Investigator(s): Joseph Saler, Cindy Wilcox	Section, Township, Range:
Landform (hillslope, terrace, etc.): Prince la spit	Local relief (concave, convex, none): Slope (%):
Subregion (LRR): A, MLRA-4B	Lat: _40.813892 Long:124. 188202 Datum: WGS 84
	raltic xerorthents assoc. 0-290 NWI classification: hone
	nis time of year? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	
Are Vegetation, Soil, or Hydrology I	
SUMMARY OF FINDINGS - Attach site map	showing sampling point locations, transects, important features, etc
Hydrophytic Vegetation Present? Yes X	No
Hydric Soil Present? Yes N	No Is the Sampled Area
	No within a Wetland? Yes No
Remarks: WETS normal rainfall TI excavated of low point in is	solated depression. Bot described as PSSICsOg.
VEGETATION – Use scientific names of plan	nts.
Tree Stratum (Plot size: 30'	Absolute Dominant Indicator Dominance Test worksheet: % Cover Species? Status
1	Number of Dominant Species 3 That Are OBL, FACW, or FAC: (A)
2	_
3	Total Number of Dominant
4	1000
80. W W80 0040 W	= Total Cover Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size: 5'	
1. Alaw rubra	30 FAC Prevalence Index worksheet: Total % Cover of: Multiply by:
2	OBL species x 1 =
3	FACW species x 2 =
6	FAC species x 3 =
0	= Total Cover
Herb Stratum (Plot size: 5'	UPL species x 5 =
1. Holgys lanatus	
2. Potestila avering	Prevalence Index = B/A =
3. Carex obnupta	Hydrophytic Vegetation Indicators:
4 Lysimachia arrivers	1 - Rapid Test for Hydrophytic Vegetation
5. Totalium repus	
6. Lotu comiculatu	
7 Germun dispectum	4 - Morphological Adaptations (Provide supporting
8. Motha pulegium	data in Remarks or on a separate sheet)
9	5 - Wetland Non-Vascular Plants ¹
10	Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must
11	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 5'	TU U = Total Cover 36
1	Hydrophytic
2	Vegetation
2	= Total Cover Present? Yes No
% Bare Ground in Herb Stratum	
Hydrophytic very downance refle	ective at small depressional wetland.

rofile Description: (Describe to the de					
epth Matrix nches) Color (moist) %	Color (moist)	% Type	Loc2	Texture	Remarks
10 YR 3/1 100				Reat	
	7510 1/1 2	7		100	-
-24+ 2.5 / 4/1 70	7.5 YR 4/6 3	0 C	- <u>/v(</u>		-
ype: C=Concentration, D=Depletion, R			ted Sand Gr		ation: PL=Pore Lining, M=Matrix.
ydric Soil Indicators: (Applicable to a	all LRRs, unless otherwise	e 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)	Loarny Mucky Miner		pt MLRA 1)		Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matr			Othe	r (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3			3 ₁	o of hydrophytic ventation and
_ Thick Dark Surface (A12)	Redox Dark Surface				s of hydrophytic vegetation and id hydrology must be present,
Sandy Mucky Mineral (S1)	Depleted Dark Surfa				s disturbed or problematic.
_ Sandy Gleyed Matrix (S4)	Redox Depressions	(10)		umess	sustained of problematic,
estrictive Layer (if present):					1 .
Туре:					X
Depth (inches):				Hydric Soil I	Present? Yes 🔼 No
emarks;				Tiyane dan	
emarks: /DROLOGY Vetland Hydrology Indicators:				Tiyana dan	
POROLOGY Wetland Hydrology Indicators:					dary Indicators (2 or more required)
/DROLOGY Vetland Hydrology Indicators: trimary Indicators (minimum of one requ	ired; check all that apply)	Leaves (B9)	(except	Secon	dary Indicators (2 or more required)
IDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requi	ired; check all that apply) Water-Stained			Secon	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2
IDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requing Surface Water (A1) High Water Table (A2)	ired; check all that apply) Water-Stained MLRA 1, 2,	, 4A, and 4B)		Secon	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
TDROLOGY Tetland Hydrology Indicators: Timary Indicators (minimum of one requing Surface Water (A1) High Water Table (A2) Saturation (A3)	ired; check all that apply) Water-Stained MLRA 1, 2, Salt Crust (B1	, 4A , and 4B) 1)		<u>Secon</u> W	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10)
TOROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requing Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	ired; check all that apply) Water-Stained MLRA 1, 2, Salt Crust (B1	, 4A , and 4B) 1) ebrates (B13)		Secon W	dary Indicators (2 or more required) later-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2)
/DROLOGY /etland Hydrology Indicators: rimary 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 MLRA 1, 2, Salt Crust (B1) Aquatic Inverte Hydrogen Sulf	, 4A , and 4B) 1) ebrates (B13) ide Odor (C1)		<u>Secon</u> W Di Di S:	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C5
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requing 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 MLRA 1, 2, Salt Crust (B1: Aquatic Inverte Hydrogen Sulf Oxidized Rhize	, 4A , and 4B) 1) ebrates (B13) ide Odor (C1) ospheres alon	g Living Ro	Secon W Di Di Si ots (C3) X G	dary Indicators (2 or more required) (ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) (rainage Patterns (B10) (ry-Season Water Table (C2) (aturation Visible on Aerial Imagery (Cs) (comorphic Position (D2)
fDROLOGY /etland Hydrology Indicators: rimary 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)	ired; check all that apply) Water-Stained MLRA 1, 2, Salt Crust (B1: Aquatic Inverte Hydrogen Sulf Oxidized Rhize Presence of R	, 4A, and 4B) 1) ebrates (B13) ide Odor (C1) ospheres alon educed fron (g Living Roo C4)	Secon W Di Significants (C3) X G	dary Indicators (2 or more required) (ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) (rainage Patterns (B10) (ry-Season Water Table (C2) (aturation Visible on Aerial Imagery (Cseomorphic Position (D2) (nallow Aquitard (D3)
rDROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requing 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)	ired; check all that apply) Water-Stained MLRA 1, 2, Salt Crust (B1: Aquatic Inverte Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re	, 4A, and 4B) 1) ebrates (B13) ide Odor (C1) ospheres alon reduced fron (leduction in Til	g Living Roo C4) led Soils (C0	Secon W Di Di Si outs (C3) \(\times \) G S S S	dary Indicators (2 or more required) later-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) laturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requing 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 MLRA 1, 2, — Salt Crust (B1) — Aquatic Inverte — Hydrogen Sulf — Oxidized Rhize — Presence of R — Recent Iron Re	, 4A, and 4B) 1) abrates (B13) ide Odor (C1) ospheres alon educed fron (feduction in Tilessed Plants (feduction)	g Living Roo C4) led Soils (C0	Secon W Di Di Si outs (C3) \(\times \) G S Si Si Si Si R	dary Indicators (2 or more required) later-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) laturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) laised Ant Mounds (D6) (LRR A)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requing 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	ired; check all that apply) Water-Stained MLRA 1, 2, Salt Crust (B1) Aquatic Inverte Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Stunted or Stre (B7) Other (Explain	, 4A, and 4B) 1) abrates (B13) ide Odor (C1) ospheres alon educed fron (feduction in Tilessed Plants (feduction)	g Living Roo C4) led Soils (C0	Secon W Di Di Si outs (C3) \(\times \) G S Si Si Si Si R	dary Indicators (2 or more required) later-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) laturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5)
retland Hydrology Indicators: rimary Indicators (minimum of one requications) 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 MLRA 1, 2, Salt Crust (B1) Aquatic Inverte Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Stunted or Stre (B7) Other (Explain	, 4A, and 4B) 1) abrates (B13) ide Odor (C1) ospheres alon educed fron (feduction in Tilessed Plants (feduction)	g Living Roo C4) led Soils (C0	Secon W Di Di Si outs (C3) \(\times \) G S Si Si Si Si R	dary Indicators (2 or more required) later-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) laturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) laised Ant Mounds (D6) (LRR A)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requing 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 Indicators:	ired; check all that apply) — Water-Stained MLRA 1, 2, — Salt Crust (B1) — Aquatic Inverte — Hydrogen Sulf — Oxidized Rhize — Presence of R — Recent Iron Re — Stunted or Struct (B7) — Other (Explain e (B8)	, 4A, and 4B) 1) abrates (B13) ide Odor (C1) ospheres alon educed fron (feduction in Till essed Plants (fin Remarks)	g Living Roo C4) led Soils (C0	Secon W Di Di Si outs (C3) \(\times \) G S Si Si Si Si R	dary Indicators (2 or more required) later-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) laturation Visible on Aerial Imagery (Cseomorphic Position (D2) latural Test (D3) AC-Neutral Test (D5) laised Ant Mounds (D6) (LRR A)
/DROLOGY //etland Hydrology Indicators: //mary Indicators (minimum of one requised 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: // Surface Water Present? // Yes	ired; check all that apply) Water-Stained MLRA 1, 2, Salt Crust (B1) Aquatic Inverte Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Stunted or Street (B7) Other (Explain e (B8) No Depth (inches	, 4A, and 4B) 1) abrates (B13) ide Odor (C1) ospheres alon educed fron (eduction in Til essed Plants (n in Remarks)	g Living Roo C4) led Soils (C0	Secon W Di Di Si outs (C3) \(\times \) G S Si Si Si Si R	dary Indicators (2 or more required) [ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) [ater-Stained Patterns (B10) [ater-Stained Patterns (B10) [ater-Stained Patterns (B2) [ater-stained Visible on Aerial Imagery (C9) [ater-stained Position (D2) [ater-stained Patterns (D3) [ater-stained Patterns (D5) [ater-stained Patterns (D5) [ater-stained Patterns (D5) (LRR A)
Vetland Hydrology Indicators: Irimary Indicators (minimum of one requirement) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface (Bild Observations: Surface Water Present? Ves Water Table Present?	ired; check all that apply) Water-Stained MLRA 1, 2, Salt Crust (B1) Aquatic Inverte Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Stunted or Struct (B7) Other (Explain e (B8) Depth (inches	, 4A, and 4B) 1) abrates (B13) fide Odor (C1) ospheres alon educed fron (feduction in Till essed Plants (for in Remarks) b): NA s): NA s):	g Living Roo C4) led Soils (Ci D1) (LRR A	Secon W Di Si Otts (C3) G Si F F F F	dary Indicators (2 or more required) later-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) laturation Visible on Aerial Imagery (CS) eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) laised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
/DROLOGY //etland Hydrology Indicators: //mary Indicators (minimum of one requications) // 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: // Surface Water Present? Yes // Saturation Present? Yes // Saturation Present? Yes	ired; check all that apply) — Water-Stained MLRA 1, 2, — Salt Crust (B1) — Aquatic Inverte — Hydrogen Sulf — Oxidized Rhize — Presence of R — Recent Iron Re — Stunted or Structed or Structed (B7) — Other (Explain e (B8) — No Depth (inches Dept	, 4A, and 4B) 1) abrates (B13) fide Odor (C1) ospheres alon educed fron (feduction in Till essed Plants (for in Remarks) s): NA NA NA NA S):	g Living Roo C4) led Soils (Ci (D1) (LRR A	Secon W Di Sts (C3) X G Si Si Fi All All All All All All All	dary Indicators (2 or more required) later-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) laturation Visible on Aerial Imagery (CS) eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) laised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
Vetland Hydrology Indicators: Irimary Indicators (minimum of one requirement) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface (Bild Observations: Surface Water Present? Ves Water Table Present?	ired; check all that apply) — Water-Stained MLRA 1, 2, — Salt Crust (B1) — Aquatic Inverte — Hydrogen Sulf — Oxidized Rhize — Presence of R — Recent Iron Re — Stunted or Structed or Structed (B7) — Other (Explain e (B8) — No Depth (inches Dept	, 4A, and 4B) 1) abrates (B13) fide Odor (C1) ospheres alon educed fron (feduction in Till essed Plants (for in Remarks) s): NA NA NA NA S):	g Living Roo C4) led Soils (Ci (D1) (LRR A	Secon W Di Sts (C3) X G Si Si Fi All All All All All All All	dary Indicators (2 or more required) later-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) laturation Visible on Aerial Imagery (CS) eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) laised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
Vetland Hydrology Indicators: rimary Indicators (minimum of one requirement Indicators (minimum of one requirement 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) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surfactive Water Present? Ves Saturation Present? Yes Saturation Present? Yes Includes capillary fringe) Describe Recorded Data (stream gauge,	ired; check all that apply) — Water-Stained MLRA 1, 2, — Salt Crust (B1) — Aquatic Inverte — Hydrogen Sulf — Oxidized Rhize — Presence of R — Recent Iron Re — Stunted or Structed or Structed (B7) — Other (Explain e (B8) — No Depth (inches Dept	, 4A, and 4B) 1) abrates (B13) fide Odor (C1) ospheres alon educed fron (feduction in Till essed Plants (for in Remarks) s): NA NA NA NA S):	g Living Roo C4) led Soils (Ci D1) (LRR A	Secon W Di Sts (C3) X G Si Si Fi All All All All All All All	dary Indicators (2 or more required) later-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) laturation Visible on Aerial Imagery (Cseomorphic Position (D2) laturation Ac-Neutral Test (D5) laised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)

Ting Engineers WETLAND DETERMINATION	N DATA FORM – Western Mou	ntains, Valleys, and Coast Region
ologists, Inc. ologists: Humboldt Bay Harbor District-RMMT		
	City/County:	Sampling Date: 5/19/27
oplicant/Owner: Humboldt Bay Harbor District	-	State: Sampling Point: B U
vestigator(s): Joseph Saler, Cindy Wilcox	Section, Township, Ra	
		convex, none): New Slope (%):
sbregion (LRR): A, MLRA-4B	Lat: 40.813864	Long: 124.188213 Datum: WGS 84
oil Map Unit Name: 1014-Urban Land Anti	hraltic Xerothents a 5500	NWI classification: No Ne
e climatic / hydrologic conditions on the site typical f	for this time of year? Yes No _	(If no, explain in Remarks.)
e Vegetation, Soil, or Hydrology	significantly disturbed? Are "	Normal Circumstances" present? Yes X No _
e Vegetation, Soil, or Hydrology	naturally problematic? (If ne	eded, explain any answers in Remarks.)
	·	ocations, transects, important features, e
		ocations, transects, important leatures, e
Hydrophytic Vegetation Present? Yes		Area
Hydric Soil Present? Yes Wetland Hydrology Present? Yes		
		, , , , , , , , , , , , , , , , , , ,
TO avenues With course & or	rea surandian 30 degree	ocional method. Conditions represe
IT EXCAVATED WITHIN TWISCES	and sommeral shakes	of upland inthis or
EGETATION – Use scientific names of	nlants	-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -
TOTALISM - OSC SCIENCING HAMES OF	Absolute Dominant Indicator	Dominance Test worksheet:
ree Stratum (Plot size: 30'	% Cover Species? Status	Number of Dominant Species
Alpus rubra	10 V FAC	That Are OBL, FACW, or FAC: (A
4		Total Number of Dominant
		Species Across All Strata:
·		Percent of Dominant Species 5/1/
Section (Charles Charles Colored Color	= Total Cover	That Are OBL, FACW, or FAC:(A
Sapling/Shrub Stratum (Plot size: 5')	5 PACW	Prevalence Index worksheet:
Eurinus orboneus	7-2 1101	Total % Cover of: Multiply by:
Rubu ureinu	18 V FALL	OBL species x 1 =
Rulaus primeiracus	3 FAC	FACW species x 2 =
. Issue Mundo		FAC species x 3 =
·	= Total Cover	FACU species x 4 =
lerb Stratum (Plot size: 5')		UPL species x 5 =
Molcus langitur,	74 V PAC	Column Totals: (A) (
Geranium dissectum	<u> 9 </u>	Prevalence Index = B/A =
Lotus corniculatus		Hydrophytic Vegetation Indicators:
Sunchus olerqueur		1 - Rapid Test for Hydrophytic Vegetation
Dancis careta	<u> </u>	2 - Dominance Test is >50%
Bromes dondres	UPL	3 - Prevalence Index is ≤3.01
		4 - Morphological Adaptations ¹ (Provide suppor
to		data in Remarks or on a separate sheet)
		5 - Wetland Non-Vascular Plants ¹
0		Problematic Hydrophytic Vegetation¹ (Explain)
1×	127 - 31	Indicators of hydric soil and wetland hydrology mus be present, unless disturbed or problematic.
E!	Total Cover 51	so process, amoso distances of problematic.
Voody Vine Stratum (Plot size: 5'		
Voody Vine Stratum (Plot size:		Hydrophytic Vegetation

dominance creates weal hydrophytic vegin herbacen layer. Up

Remarks:

Holas

% Bare Ground in Herb Stratum Z

Profile Description: (Describe to the de Depth Matrix	Redo	x Feature	S			
(inches) Color (moist) %	Color (moist)	_ %	Type ¹	Loc²	Texture	Remarks
0-5 OYR 3/1 100						1
5-24+ 2.5 × 4/1 90	2.5 4 4/2	10	C	M		asphaltchunk
					-	-
			-	- 1		
			· · ·	- ;		
	- (5	-		=====	-	
Type: C=Concentration, D=Depletion, RI	M-Reduced Matrix C	S=Covere	d or Cont	ad Sand C	raine 2	ocation: PL=Pore Lining, M=Matrix.
lydric Soil Indicators: (Applicable to a				eu sanu G		tors for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (,			cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix					ed Parent Material (TF2)
Black Histic (A3)	Coamy Mucky	. ,	1) (eycer	H MI RA 1)		ery Shallow Dark Surface (TF12)
= ····	Loamy Gleyed			JI MILITA I)		ther (Explain in Remarks)
Hydrogen Sulfide (A4)			2)			ther (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matri				3 Indian	ators of hydrophytic vegetation and
_ Thick Dark Surface (A12)	Redox Dark St	, ,				
Sandy Mucky Mineral (S1)	Depleted Dark	-	-			tland hydrology must be present,
Sandy Gleyed Matrix (S4) testrictive Layer (if present):	Redox Depres	sions (F8)			uni	ess disturbed or problematic
Type:						
Depth (inches):					Hydric Sc	oil Present? Yes No 🔀
						JII 1 100 110
YDROLOGY						
YDROLOGY Wetland Hydrology Indicators:	red: check all that and	olv)				
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requi			une (BO) (avaant		condary Indicators (2 or more required)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requi	Water-Sta	ained Leav		except		condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2)	Water-Str	ained Leav		except		condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Sta MLRA Salt Crus	ained Leav 1, 2, 4A , t (B11)	and 4B)	except	Sec	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Str MLRA Salt Crus Aquatic Ir	ained Leav 1, 2, 4A, it (B11) nvertebrate	and 4B) es (B13)	except	Sec	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Standard MLRA Salt Crus Aquatic In Hydrogen	ained Leav 1, 2, 4A, it (B11) invertebrate i Sulfide C	and 4B) es (B13) odor (C1)	\$1° \$4	Sec	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 (CS
YDROLOGY Vetland 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)	Water-Standard MLRA Salt Crus Aquatic In Hydroger Oxidized	ained Leav 1, 2, 4A, it (B11) invertebrate in Sulfide C Rhizosphe	and 4B) es (B13) dor (C1) eres along	g Living Ro	Sec	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 (CS) Geomorphic Position (D2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Standard MLRA Salt Crus Aquatic In Hydroger Oxidized	ained Leav 1, 2, 4A, it (B11) invertebrate i Sulfide C	and 4B) es (B13) dor (C1) eres along	g Living Ro	Sec	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 (CS
YDROLOGY Vetland 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)	Water-Str MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence	ained Leav 1, 2, 4A, it (B11) invertebrate 1 Sulfide C Rhizosphe 2 of Reduc	and 4B) es (B13) edor (C1) eres along ed Iron (C	g Living Ro	<u>Sec</u>	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 (CS) Geomorphic Position (D2)
YDROLOGY Vetland 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)	Water-Str MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent Ir	ained Leav 1, 2, 4A, it (B11) invertebrate Sulfide C Rhizosphe of Reduct	and 4B) es (B13) edor (C1) eres along ed Iron (Ction in Till	g Living Ro	Sec	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 (CS) Geomorphic Position (D2) Shallow Aquitard (D3)
YDROLOGY Vetland 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)	Water-Standard Water-	ained Leav 1, 2, 4A, it (B11) invertebrate Sulfide C Rhizosphe of Reduct	and 4B) es (B13) edor (C1) eres along ed Iron (C tion in Till d Plants (I	g Living Ro C4) ed Soils (C	Sec	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 (CS) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
YDROLOGY Vetland 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)	Water-Standard Water-Standard Water-Standard Crus Aquatic In Hydroger Oxidized Presence Recent In Stunted Co	ained Leav 1, 2, 4A, it (B11) invertebrate in Sulfide C Rhizosphe e of Reduct or Stressed	and 4B) es (B13) edor (C1) eres along ed Iron (C tion in Till d Plants (I	g Living Ro C4) ed Soils (C	Sec	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 (CS 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 requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface	Water-Str MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent Ir Stunted co (B7) Other (Exercise)	ained Leav 1, 2, 4A, it (B11) nvertebrate in Sulfide C Rhizosphe e of Reduc- con Reduct or Stressed xplain in Re	and 4B) es (B13) edor (C1) eres along ed Iron (C tion in Till d Plants (I	g Living Ro C4) ed Soils (C	Sec	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 (CS 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 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	Water-Str MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent Ir Stunted of (B7) Other (Exercise)	ained Leav A 1, 2, 4A, it (B11) invertebrate in Sulfide C Rhizosphe e of Reduct on Reduct on Reduct or Stressed cplain in Re inches):	and 4B) es (B13) edor (C1) eres along ed Iron (C tion in Till d Plants (I	g Living Ro C4) ed Soils (C	Sec	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 (CS Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Print Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Wolden (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Surface Water Present? Yes	Water-Sta MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent Ir Stunted of Other (Exist) (B7) Depth (iii	ained Leav 1, 2, 4A, it (B11) nvertebrate in Sulfide C Rhizosphe of Reduct or Reduct or Stressed explain in Re- inches):	and 4B) es (B13) edor (C1) eres along ed Iron (C tion in Till d Plants (I	g Living Ro C4) ed Soils (C D1) (LRR A	ots (C3) 6)	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 (CS Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Proposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes	Water-Str MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent Ir Stunted of (B7) Other (Extended to the content of the cont	ained Leav A 1, 2, 4A, it (B11) nivertebrate in Sulfide C Rhizosphe is of Reduct on Reduct on Reduct on Stressed eplain in Re inches): inches): inches): inches):	and 4B) es (B13) ed (C1) eres along ed Iron (Cition in Till d Plants (I emarks) N/A N/A	g Living Ro C4) ed Soils (C D1) (LRR A	ots (C3) 6)	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 (CS Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 Table Present? Yes Saturation Present? Yes Saturation Present? Yes Situration Present? Yes	Water-Str MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent Ir Stunted of (B7) Other (Extended to the content of the cont	ained Leav A 1, 2, 4A, it (B11) nivertebrate in Sulfide C Rhizosphe is of Reduct on Reduct on Reduct on Stressed eplain in Re inches): inches): inches): inches):	and 4B) es (B13) ed (C1) eres along ed Iron (Cition in Till d Plants (I emarks) N/A N/A	g Living Ro C4) ed Soils (C D1) (LRR A	ots (C3) 6)	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 (CS Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Cincludes capillary fringe) Describe Recorded Data (stream gauge,	Water-Str MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent Ir Stunted of (B7) Other (Extended to the content of the cont	ained Leav A 1, 2, 4A, it (B11) nivertebrate in Sulfide C Rhizosphe is of Reduct on Reduct on Reduct on Stressed eplain in Re inches): inches): inches): inches):	and 4B) es (B13) ed (C1) eres along ed Iron (Cition in Till d Plants (I emarks) N/A N/A	g Living Ro C4) ed Soils (C D1) (LRR A	ots (C3) 6)	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 (CS Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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 Table Present? Yes Saturation Present? Yes Saturation Present? Yes Situration Present? Yes	Water-Str MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent Ir Stunted of (B7) Other (Extended to the content of the cont	ained Leav A 1, 2, 4A, it (B11) nivertebrate in Sulfide C Rhizosphe is of Reduct on Reduct on Reduct on Stressed eplain in Re inches): inches): inches): inches):	and 4B) es (B13) ed (C1) eres along ed Iron (Cition in Till d Plants (I emarks) N/A N/A	g Living Ro C4) ed Soils (C D1) (LRR A	ots (C3) 6)	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 (CS Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

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C	sulting Engineers
	Goologiete Inc

& Geologists, Inc.				, ,-
Project/Site: Humboldt Bay Harbor District-RMMT		City/County: Humboldt		_ Sampling Date: 05/19/2.
Applicant/Owner: Humboldt Bay Harbor District			State: CA	_ Sampling Point: TP 81
Investigator(s): Joseph Saler, Cindy Wilcox		Section, Township, Rar	nge:	
Landform (hillslope, terrace, etc.): His a (Spit		Local relief (concave, o	convex, none):	QVC Slope (%): 2
Subregion (LRR): A, MLRA-4B			Long: 124,187	
Soil Map Unit Name: 1014-Urbanland Anthratt	cxion	thents assoc	0-290 NWI classif	ication: None
Are climatic / hydrologic conditions on the site typical for th			A II CALL TO THE PARTY.	The first of the f
Are Vegetation, Soil or Hydrology			Normal Circumstances	
Are Vegetation, Soil, or Hydrology	Control of the Control of the			The second secon
SUMMARY OF FINDINGS – Attach site map		•	eded, explain any answ ocations, transect	,
	No			
	No	is the Sampled	Area	
	No	within a Wetlan	d? Yes 🔼	No
Remarks: WETS normal rainfall TP excavated in enstand depress	sion Cal	wedly failur	e of alvert,	tidal & E2f03Nx
VEGETATION - Use scientific names of plan	nts.	1		
	Absolute	Dominant Indicator	Dominance Test wor	ksheet:
Tree Stratum (Plot size: 30'	% Cover	Species? Status	Number of Dominant	Species
1. Morella Californica	- 50	TACW	That Are OBL, FACW	, or FAC: (A)
2 Salix lariandra	20	-V FACU	Total Number of Domi	-1/
3			Species Across All Str	rata: (B)
Sapling/Shrub Stratum (Plot size: 5)		= Total Cover	Percent of Dominant S That Are OBL, FACW	
1			Prevalence Index wo	rksheet:
2			Total % Cover of:	Multiply by:
3.			OBL species	x 1 =
4.				x 2 =
5.				x 3 =
	1	= Total Cover		x 4 =
Herb Stratum (Plot size: 5'				x 5 =
1.			Column Totals:	(A)(B)
2.				x = B/A =
3	-		Hydrophytic Vegetat	
4 5				Hydrophytic Vegetation
6			2 - Dominance Te	
7.			3 - Prevalence Inc	
8			4 - Morphological data in Remark	Adaptations ¹ (Provide supporting ks or on a separate sheet)
9.			5 - Wetland Non-\	•
10.				phytic Vegetation ¹ (Explain)
11,				oil and wetland hydrology must
_		= Total Cover	be present, unless dis	turbed or problematic.
Woody Vine Stratum (Plot size: 5'				
1			Hydrophytic	
2	_		Vegetation Present? Yes	es No
% Bare Ground in Herb Stratum 00 1/	1	= Total Cover	- recent T	
Remarks:	1 1 2		1	
No beforeow veg. Sporsely veg	Josed	(my ave sur	tace.	
The same of the sa		- 0		

	the change of indicators \
Profile Description: (Describe to the depth needed to document the indicator or confirm	n the absence of indicators.)
Depth Matrix Redox Features	B water
(inches) Color (moist) % Color (moist) % Type¹ Loc²	Texture Remarks
0-1 2.542.5/1 100	MUY
1-16 2542.5/ 307	L5 Mixed ended till
	LS Mixed erodectill
7.54R 1.5/ 25	Deat order mixed eroden
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand G	rains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
	2 cm Muck (A10)
- · · ·	Red Parent Material (TF2)
Histic Epipedon (A2) Stripped Matrix (S6)	_
Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1)	
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)	X Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Depleted Matrix (F3)	36 16 16 16 16 16 16 16 16 16 16
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:	
	Hydric Soil Present? Yes No
Depart (money)	
thicking of he and the thing indicator	L.
thistype of hydrology - an ticipa to hydric indicators	£
Wetland Hydrology Indicators:	
	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators:	
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	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; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	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; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Water Marks (B1) Water Marks (B1) Water Marks (B1)	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)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Wetland 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; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Wetland Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres 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 (C9) oots (C3) Geomorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	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) Oots (C3) Calculate the secondary of the secondary
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	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) Soots (C3) C6) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) 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	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) Secondary Indicators (2 or more required) A Secondary Indicators (B9) (MLRA 1, 2, 2) A Secondary Indicators (B10) A Seconda
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Water 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 Ro	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) Oots (C3) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) 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 Material that apply) Water-Stained Leaves (B9) (except Material that apply) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Romandor (C4) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Caster of Standard or Stressed Plants (D1) (LRR 4) 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) Secondary Indicators (2 or more required) A Secondary Indicators (B9) (MLRA 1, 2, 2) A Secondary Indicators (B10) A Seconda
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	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) Secondary Indicators (2 or more required) A Secondary Indicators (B9) (MLRA 1, 2, 2) A Secondary Indicators (B10) A Seconda
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Surface (B8) 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 Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Caches (B6)) 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) Secondary Indicators (2 or more required) A Secondary Indicators (B9) (MLRA 1, 2, 44) A Secondary Indicators (B10) A Secondary Indicators (B
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z Geologists, Inc.			-1 1
	с	ity/County: Humboldt	2 4 4
Applicant/Owner: Humboldt Bay Harbor District			State: CA Sampling Point:
Investigator(s): Joseph Saler, Cindy Wilcox	s	ection, Township, Rai	nge:
Landform (hillslope, terrace, etc.): PRINTED A SIT	L	ocal relief (concave, o	convex, none): \) One Slope (%): 0 - 2
Subregion (LRR): A, MLRA-4B	Lat: 40	.811570	Long: 124. 87969 Datum: WGS 84
Soil Map Unit Name: 1014 - Urbanland An			
Are climatic / hydrologic conditions on the site typical for		* *	
Are Vegetation, Soil, or Hydrology			Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology	_ naturally prob	lematic? (If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site ma	p showing s	sampling point le	ocations, transects, important features, etc
Hydrophytic Vegetation Present? Yes			
Hydric Soil Present? Yes		Is the Sampled within a Wetlan	
Wetland Hydrology Present? Yes	No	Willia Wetlar	165
Remarks: WETS normal rainfall	20 1	uetland. Upl	an andtions representative of
To excavated just outside vasion	unicon sp	wallow the	ac willow patch
VECETATION III i - titi	The state of the s	\ lor	2 willer haler
VEGETATION Use scientific names of pl		Descionet Indicate	Descinence Test westerbests
Tree Stratum (Plot, size: 30'		Dominant Indicator Species? Status	Dominance Test worksheet:
1. Morella Californica	40	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2. Salix logiandra	60	FACW	
3			Total Number of Dominant Species Across All Strata: (B)
4			Paranet of Daminant Species CAY
5	100	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: [A/B]
Sapling/Shrub Stratum (Plot size: 5')	30	L CAU	Prevalence Index worksheet:
2. Rubus asmeriacus	_ 50	FAC	Total % Cover of: Multiply by:
		170	OBL species x 1 =
3			FACW species x 2 =
5.			FAC species x 3 =
	35	= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 5')	-	*	UPL species x 5 =
1. Polyotichum Ministrum	_12	1 FACU	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 ≤3.01
7			 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
8			5 - Wetland Non-Vascular Plants ¹
9 10			Problematic Hydrophytic Vegetation ¹ (Explain)
11			Indicators of hydric soil and wetland hydrology must
	10	: Total Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 5'	10	Total Cover	
1			Hydrophytic
2			Vegetation Present? Yes No
% Bare Ground in Herb Stratum		· Total Cover	Present? Yes No
	1 4 1	1	
* Liter and dist from tree a	ndshub	layer.	
2170 W(O 0001 1100	Section 1	- 10	

Depth Matrix	Redo	ment the inc x Features					
inches) Color (moist) %	Color (moist)		Type ¹	Loc2	Texture		Remarks
-36 25 V3/1 100			/	/	5	GI	- Septimental Control
<u> </u>					0	1111.	
					-	-	
		-			-	-	
							
				-		_	
ype: C=Concentration, D=Depletion, RM=	Reduced Matrix, C	S=Covered o	or Coated	Sand Gr			Pore Lining, M=Matrix.
ydric Soil Indicators: (Applicable to all	LRRs, unless othe	rwise noted	l.)		Indicat	ors for Prot	olematic Hydric Soils ² :
Histosol (A1)	Sandy Redox (S5)			2 c	m Muck (A1	0)
Histic Epipedon (A2)	Stripped Matrix	(S6)			Re	d Parent Ma	terial (TF2)
Black Histic (A3)	Loamy Mucky I	Mineral (F1)	(except	MLRA 1)	Ver	ry Shallow D	ark Surface (TF12)
_ Hydrogen Sulfide (A4)	Loamy Gleyed		•	,			in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matri						•
Thick Dark Surface (A12)	Redox Dark Su				3Indicat	ors of hydro	phytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark		١			-	gy must be present,
Sandy Gleyed Matrix (S4)	Redox Depress		,				or problematic.
estrictive Layer (if present):		(-,					
Type:							
					Undria Sai	il Present?	Yes No X
Depth (inches):					Tiyane 30	ii Freaent:	165 110
				, i			
YDROLOGY				3			
Vetland Hydrology Indicators:	d: check all that app	lv)		8	Seco	ondary Indica	ators (2 or more required)
Vetland Hydrology Indicators: rimary Indicators (minimum of one required			o (B9) (m	1			ators (2 or more required)
Vetland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1)	Water-Sta	ained Leaves		1		Water-Staine	ed Leaves (B9) (MLRA 1, 2,
fetland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2)	Water-Sta	ained Leaves 1, 2, 4A, an		1	_	Water-Staine 4A, and	ed Leaves (B9) (MLRA 1, 2, 4B)
Vetland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Sta	ained Leaves 1, 2, 4A, an		1		Water-Staine 4A, and 4 Drainage Pa	ed Leaves (B9) (MLRA 1, 2 4B) tterns (B10)
fetland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2)	Water-Sta MLRA Salt Crus Aquatic Ir	ained Leaves 1, 2, 4A, an t (B11) nvertebrates	(B13)	1		Water-Staine 4A, and 4 Drainage Pa Dry-Season	ed Leaves (B9) (MLRA 1, 2 4B) tterns (B10) Water Table (C2)
Vetland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Sta MLRA Salt Crus Aquatic Ir	ained Leaves 1, 2, 4A, a n t (B11)	(B13)	1		Water-Staine 4A, and 4 Drainage Pa Dry-Season	ed Leaves (B9) (MLRA 1, 2 4B) tterns (B10) Water Table (C2)
fetland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen	ained Leaves 1, 2, 4A, an t (B11) nvertebrates	(B13) or (C1)	cept		Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V	ed Leaves (B9) (MLRA 1, 2 4B) tterns (B10) Water Table (C2)
Vetland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized	ained Leaves 1, 2, 4A, and t (B11) nvertebrates i Sulfide Odd	id 4B) (B13) or (C1) es along l	ccepf		Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V	ed Leaves (B9) (MLRA 1, 2, 4B) Itterns (B10) Water Table (C2) isible on Aerial Imagery (C9 Position (D2)
fetland 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)	Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized Presence	ained Leaves 1, 2, 4A, and t (B11) nvertebrates s Sulfide Odd Rhizosphere	id 4B) (B13) or (C1) es along l	ccepf Living Roco		Water-Staind 4A, and Drainage Pa Dry-Season Saturation V Geomorphic	ed Leaves (B9) (MLRA 1, 2, 4B) itterns (B10) Water Table (C2) isible on Aerial Imagery (C9 Position (D2) itard (D3)
fetland 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)	Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ir	ained Leaves 1, 2, 4A, and t (B11) evertebrates Sulfide Odo Rhizosphere of Reduced on Reduction	id 4B) (B13) or (C1) es along l Iron (C4	ccept Living Roo) I Soils (C6	ots (C3)	Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutra	ed Leaves (B9) (MLRA 1, 2, 4B) itterns (B10) Water Table (C2) isible on Aerial Imagery (C9 Position (D2) itard (D3)
Fetland 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)	Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Iri Stunted o	ained Leaves 1, 2, 4A, and t (B11) Invertebrates I Sulfide Odd Rhizosphere of Reduced on Reduction or Stressed P	(B13) or (C1) es along l Iron (C4 n in Tilled	ccept Living Roo) I Soils (C6	ots (C3)	Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant f	ed Leaves (B9) (MLRA 1, 2, 4B) Itterns (B10) Water Table (C2) isible on Aerial Imagery (C9 Position (D2) itard (D3) I Test (D5) Mounds (D6) (LRR A)
fetland 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 (B3)	Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted of	ained Leaves 1, 2, 4A, and t (B11) evertebrates Sulfide Odo Rhizosphere of Reduced on Reduction	(B13) or (C1) es along l Iron (C4 n in Tilled	ccept Living Roo) I Soils (C6	ots (C3)	Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant f	ed Leaves (B9) (MLRA 1, 2, 4B) Itterns (B10) Water Table (C2) Isible on Aerial Imagery (C9 Position (D2) Itard (D3)
Fetland 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 (B3) Sparsely Vegetated Concave Surface (I	Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted of	ained Leaves 1, 2, 4A, and t (B11) Invertebrates I Sulfide Odd Rhizosphere of Reduced on Reduction or Stressed P	(B13) or (C1) es along l Iron (C4 n in Tilled	ccept Living Roo) I Soils (C6	ots (C3)	Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant f	ed Leaves (B9) (MLRA 1, 2, 4B) Itterns (B10) Water Table (C2) isible on Aerial Imagery (C9 Position (D2) itard (D3) I Test (D5) Mounds (D6) (LRR A)
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Vetland Hydrology Indicators: Vrimary 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 (Bistel Observations: Surface Water Present? Yes	Water-Sta	ained Leaves 1, 2, 4A, and t (B11) evertebrates Sulfide Odo Rhizosphere of Reduced on Reduction or Stressed P eplain in Rem	(B13) or (C1) es along li Iron (C4 n in Tillec Plants (D- harks)	ccept Living Roo) I Soils (C6	ots (C3)	Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant f	ed Leaves (B9) (MLRA 1, 2, 4B) Itterns (B10) Water Table (C2) isible on Aerial Imagery (C9 Position (D2) itard (D3) I Test (D5) Mounds (D6) (LRR A)
Vetland Hydrology Indicators: Vrimary 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 (Bisparsely Vegetated Concave Surface (Bield Observations: Surface Water Present? Ves	Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted of Other (Ex	ained Leaves 1, 2, 4A, and t (B11) evertebrates Sulfide Odd Rhizosphere of Reduced on Reduction or Stressed P splain in Remembers enches):	(B13) (B13) or (C1) es along l Iron (C4 n in Tillec Plants (D narks)	ccept Living Roc) I Soils (C6	ots (C3)	Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant f Frost-Heave	ed Leaves (B9) (MLRA 1, 2, 4B) Itterns (B10) Water Table (C2) isible on Aerial Imagery (C9 Position (D2) itard (D3) I Test (D5) Mounds (D6) (LRR A) Hummocks (D7)
Vetland Hydrology Indicators: Vrimary 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 (Indicate Water Present? Vater Table Present? Ves Saturation Present?	Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted of Other (Ex	ained Leaves 1, 2, 4A, and t (B11) evertebrates Sulfide Odo Rhizosphere of Reduced on Reduction or Stressed P eplain in Rem	(B13) (B13) or (C1) es along l Iron (C4 n in Tillec Plants (D narks)	ccept Living Roc) I Soils (C6	ots (C3)	Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant f Frost-Heave	ed Leaves (B9) (MLRA 1, 2, 4B) Itterns (B10) Water Table (C2) isible on Aerial Imagery (C9 Position (D2) itard (D3) I Test (D5) Mounds (D6) (LRR A) Hummocks (D7)
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 (Bister of Companies (B5) Sparsely Vegetated Concave Surface (Bister of Companies (B5) Water Table Present? Ves	Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted of Other (External of the companion	ained Leaves 1, 2, 4A, and t (B11) nvertebrates Sulfide Odo Rhizosphere of Reduced on Reduction or Stressed P cplain in Rem nches): N nches): N	(B13) (B13) or (C1) es along la lron (C4 n in Tillect Plants (D) narks)	Living Roo) I Sails (C6 I) (LRR A	ots (C3)	Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant f Frost-Heave	ed Leaves (B9) (MLRA 1, 2 4B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9 Position (D2) itard (D3) I Test (D5) Mounds (D6) (LRR A) Hummocks (D7)
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 (Bister of Communication Visible on Aerial Imagery (Bister of Comm	Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted of Other (External of the companion	ained Leaves 1, 2, 4A, and t (B11) nvertebrates Sulfide Odo Rhizosphere of Reduced on Reduction or Stressed P cplain in Rem nches): N nches): N	(B13) (B13) or (C1) es along la lron (C4 n in Tillect Plants (D) narks)	Living Roo) I Sails (C6 I) (LRR A	ots (C3)	Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant f Frost-Heave	ed Leaves (B9) (MLRA 1, 2, 4B) Itterns (B10) Water Table (C2) isible on Aerial Imagery (C9 Position (D2) itard (D3) I Test (D5) Mounds (D6) (LRR A) 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 (Biseld Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes Sincludes capillary fringe) Describe Recorded Data (stream gauge, mo	Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted or Other (External of the continuous of the cont	ained Leaves 1, 2, 4A, and t (B11) evertebrates Sulfide Odd Rhizosphere of Reduced on Reduction or Stressed P eplain in Rem enches): N photos, prev	(B13) or (C1) es along la Iron (C4 en in Tillect Plants (Denarks)	Living Roo) I Sails (C6 I) (LRR A	ots (C3)	Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant f Frost-Heave	ed Leaves (B9) (MLRA 1, 2, 4B) Itterns (B10) Water Table (C2) isible on Aerial Imagery (C9 Position (D2) itard (D3) I Test (D5) Mounds (D6) (LRR A) Hummocks (D7)
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 (Bisteria Water Present? Ves	Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted or Other (External of the continuous of the cont	ained Leaves 1, 2, 4A, and t (B11) evertebrates Sulfide Odd Rhizosphere of Reduced on Reduction or Stressed P eplain in Rem enches): N photos, prev	(B13) or (C1) es along la Iron (C4 en in Tillect Plants (Denarks)	Living Roo) I Sails (C6 I) (LRR A	ots (C3)	Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant f Frost-Heave	ed Leaves (B9) (MLRA 1, 2, 4B) Itterns (B10) Water Table (C2) isible on Aerial Imagery (C9 Position (D2) itard (D3) I Test (D5) Mounds (D6) (LRR A) Hummocks (D7)
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 (Biseld Observations: Surface Water Present? Vater Table Present? Ves Saturation Present? Yes Saturation Present? Yes Second Recorded Data (stream gauge, moderness)	Water-Sta MLRA Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted or Other (External of the continuous of the cont	ained Leaves 1, 2, 4A, and t (B11) evertebrates Sulfide Odd Rhizosphere of Reduced on Reduction or Stressed P eplain in Rem enches): N photos, prev	(B13) or (C1) es along la Iron (C4 en in Tillect Plants (Denarks)	Living Roo) I Sails (C6 I) (LRR A	ots (C3)	Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant f Frost-Heave	ed Leaves (B9) (MLRA 1, 2, 4B) Itterns (B10) Water Table (C2) isible on Aerial Imagery (C9 Position (D2) itard (D3) I Test (D5) Mounds (D6) (LRR A) Hummocks (D7)

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c Geologists, Inc.			, , , , , , , , , , , , , , , , , , , ,	-/ I
Project/Site: Humboldt Bay Harbor District-RMMT		ity/County: Humboldt		Sampling Date: 5/19/22
Applicant/Owner: Humboldt Bay Harbor District			State: CA	Sampling Point: TP 83
Investigator(s): Joseph Saler, Cindy Wilcox	8	Bection, Township, Rai	nge:	
Landform (hillslope, terrace, etc.): Reninsula Spit		Local relief (concave, o	convex, none): Nove	Slope (%): 0-2
Subregion (LRR): A, MLRA-4B	Lat: <u>40</u>	.811343	Long:124.18	7553 Datum: WGS 84
Soil Map Unit Name: 1014-Urbanland And				
Are climatic / hydrologic conditions on the site typical for t				
Are Vegetation, Soil, or Hydrology				present? Yes No No
Are Vegetation, Soil, or Hydrology			eded, explain any answe	
SUMMARY OF FINDINGS – Attach site ma			•	· ·
Hydrophytic Vegetation Present? Yes	No X		-	No.
Hydric Soil Present? Yes		Is the Sampled		X
Wetland Hydrology Present? Yes	No X	within a Wetlan	ıd? Yes	No
Remarks: WETS normal rainfall TP excavated within conter of	willowp	atch. Conditi	and perposetativ	ie of willow patch.
VEGETATION – Use scientific names of pla				
30'	Absolute	Dominant Indicator	Dominance Test work	ksheet:
1. Salix hookeriana		Species? Status	Number of Dominant S	
		1 jacov	That Are OBL, FACW,	or FAC: (A)
3			Total Number of Domin	7
4.			Species Across All Stra	
	95	= Total Cover	Percent of Dominant S That Are OBL, FACW,	or FAC: 50 // (A/B)
Sapling/Shrub Stratum (Plot size: 5'			Prevalence Index wo	
1. Rubus ursinus	_ 70_	1 HACU	Total % Cover of:	
2,				x1 =
3				x 2 =
5.			FAC species	x 3 =
5.	70	= Total Cover	FACU species	x 4 =
Herb Stratum (Plot size: 5'		- Total Cover	UPL species	x 5 =
1			Column Totals:	(A) (B)
2			Prevalence Index	x = B/A =
3			Hydrophytic Vegetati	
4			1 - Rapid Test for	Hydrophytic Vegetation
5			2 - Dominance Te	st is >50%
6.			3 - Prevalence Ind	
7			4 - Morphological .	Adaptations ¹ (Provide supporting as or on a separate sheet)
8	\		5 - Wetland Non-V	
9				ophytic Vegetation ¹ (Explain)
11.				il and wetland hydrology must
		Total Cover	be present, unless dist	
Woody Vine Stratum (Plot size: 5'	-			
1		-	Hydrophytic	
2			Vegetation Present? Yes	es No
% Bare Ground in Herb Stratum	1	= Total Cover	riesent: 16	10
Remarks: \ (((1			
* liter + dut from thee and she	ub layers	•		
Will dell live	7			

SOIL		Sampling Forne, 1
Profile Description: (Describe to the dep	th needed to document the indicator or confirm	the absence of indicators.)
DepthMatrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type Loc2	Texture Remarks
0-7 1048 41 100	, , ,	mu Peat not insitu material &
		ASP Lat
4-9 blackashalt 100		
9-18 254 3/2 100		arco 15 very compacted
(R-24+ 104R 4 /3 70		Erls
25 3 72 20		
- 251 J/L 30		- mixed matrix
	=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) No	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:		Hydric Soil Present? Yes No
Depth (inches):		Hydric Soil Present? Yes No
not from leap litter devive	ed from onsite vege taken - no	+ 125ing A2 or 43, 230tis old
This material is placed or	n very compacted gravel ped.	slfly ash from local industry- t using A2 or 43. ~ 30 tis old Typical for this willow putch.
HYDROLOGY	n very compected gravel ped.	Typical for this willow patch.
HYDROLOGY Wetland Hydrology Indicators:		
Wetland Hydrology Indicators: Primary Indicators (minimum of one require	ed; check all that apply)	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1)		Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one require	ed; check all that apply)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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,
Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2)	d; 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)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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)
HYDROLOGY Wetland Hydrology Indicators: Primary 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 (C9)
HYDROLOGY 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)	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 Roc	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)
HYDROLOGY 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)	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 Roco 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)
HYDROLOGY 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)	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)	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)
HYDROLOGY 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)	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 Roce 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) Stallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLOGY 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	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 Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 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)
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Consult	tion Eng	ninoark

Geologists, Inc. Project/Site: Humboldt Bay Harbor District-RMMT	Citud	County: Humboldt		_ Sampling Date: 5/19/2
Applicant/Owner: Humboldt Bay Harbor District	City/	County.	State: CA	_ Sampling Point: TP84
			nge:	
Landform (hillslope, terrace, etc.): Penisula spit				
Subregion (LRR): A, MLRA-4B				400 Datum: WGS 84
Soil Map Unit Name: 1014-Urban land Inth		No.	Contract of the Contract of th	
		\/		
Are climatic / hydrologic conditions on the site typical for			(If no, explain in	
Are Vegetation, Soil, or Hydrology				present? Yes No
Are Vegetation, Soil, or Hydrology		·	eded, explain any answ	
SUMMARY OF FINDINGS - Attach site ma		mpling point le	ocations, transect	
Hydrophytic Vegetation Present? Yes	No	Is the Sampled	Area	* Meets CCC
Hydric Soil Present? Wetland Hydrology Present? Yes Yes	No No	within a Wetlar		No X 1-p definition
Remarks: WETS normal rainfall	NO			
Fly ach basin				
VEGETATION – Use scientific names of pla	ants.			
201	(A) 2 (A) 4	minant Indicator	Dominance Test wo	rksheet:
Tree Stratum (Plot size: 30')	% Cover Sp	ecies? Status	Number of Dominant	
1. Salix horizing	- HO -	TAW	That Are OBL, FACW	/, or FAC:(A)
3		1100	Total Number of Dom	
4.			Species Across All St	rata: (B)
	=T	otal Cover	Percent of Dominant That Are OBL, FACW	
Sapling/Shrub Stratum (Plot size: 5'	20	100	Prevalence Index we	
1. Rubus armaiacus	$-\frac{30}{10}$	TAC	Total % Cover of	
2. Rubur unsintu	_ 10	THU		x 1 =
4		(4)2.	FACW species	x 2 =
5.			FAC species	x 3 =
	40 =т	otal Cover	The state of the s	x 4 =
Herb Stratum (Plot size: 5				x5=
1	——————————————————————————————————————		Column Totals:	(A)(B)
2			Prevalence Inde	ex = B/A =
3.			Hydrophytic Vegeta	
5				r Hydrophytic Vegetation
6.			2 - Dominance To	
7.			3 - Prevalence In	
8			data in Remai	I Adaptations ¹ (Provide supporting rks or on a separate sheet)
9			5 - Wetland Non-	Vascular Plants ¹
10			Problematic Hydi	rophytic Vegetation ¹ (Explain)
11				oil and wetland hydrology must
Wheels Vice Chester (5)	= To	otal Cover	be present, unless dis	sturbed or problematic.
Woody Vine Stratum (Plot size: 5'				
1			Hydrophytic Vegetation	\vee
192	= T/	otal Cover	Present? Y	'es No
% Bare Ground in Herb Stratum		JIGI GOVEI		CO.
	1	. 1	1000 11100 000	
No horbstratum an account of	once shade	and c	leep litter and	CIWI.

	cription: (Describe to the	depth needed to document the indicator or confirm	m the absence of indicators.)
Depth	Matrix	Redox Features	
(inches)	Color (moist) / %	Calor (moist) % Type ¹ Loc ²	
0-15	N2.5/ 100	blacker, but no color chip	SICL fly woh turning into soil
15-27	2.59 4/2 97	1048416 3 c m	S
2			
-			
	· =		
1			2
		RM=Reduced Matrix, CS=Covered or Coated Sand G	
		o all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histoso		Sandy Redox (S5)	2 cm Muck (A10)
	pipedon (A2) Histic (A3)	Stripped Matrix (S6) Loarny Mucky Mineral (F1) (except MLRA 1	Red Parent Material (TF2)) Very Shallow Dark Surface (TF12)
	en Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
	ed Below Dark Surface (A11		Other (Explain in Normalico)
	Park Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
	Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
	Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive	Layer (if present):		
Type:			
Depth (in	nches):		Hydric Soil Present? Yes No
Domesica			
			A12 - not organic matter
Wetland H	ydrology Indicators:		
Wetland Hy	ydrology Indicators: icators (minimum of one rea	guired; check all that apply)	Secondary Indicators (2 or more required)
Wetland Hy Primary Ind Surface	ydrology Indicators: icators (minimum of one red e Water (A1)	quired; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hy Primary Ind Surface High W	ydrology Indicators: icators (minimum of one red e Water (A1) /ater Table (A2)	quired; 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)
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Wetland Hy Primary Ind Surface High W Satural Water I	ydrology Indicators: icators (minimum of one red e Water (A1) /ater Table (A2) tion (A3) Marks (B1)	cuired; 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)
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Wetland Hy Primary Ind Surface High W Satural Water I Sedime Drift De	ydrology Indicators: icators (minimum of one receivater (A1) fater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) fat or Crust (B4)	wuired; 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 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 (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
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Wetland Hy Primary Ind Surface High W Satural Water I Sedime Drift De Algal M Iron De Surface Inunda	ydrology Indicators: icators (minimum of one red water (A1) fater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) fat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial Image	wuired; 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 Rough and the control of the con	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)
Wetland Hy Primary Ind Surface High W Satural Water I Sedime Drift De Algal M Iron De Surface Inunda Sparse	ydrology Indicators: icators (minimum of one receivater (A1) fater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial Image	wuired; 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 Rough and the control of the con	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) A) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal W Iron De Surface Inunda Sparse Field Obse	ydrology Indicators: icators (minimum of one receive Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial Image ely Vegetated Concave Surfervations:	Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Romand Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Called Iron (B7) Other (Explain in Remarks) ace (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) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Ind Surface High W Satural Water I Sedime Drift De Algal M Iron De Surface Inunda Sparse Surface Water	ydrology Indicators: icators (minimum of one receive Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial Image ely Vegetated Concave Surfervations: ater 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 Roman Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Campus) Stunted or Stressed Plants (D1) (LRR Ampus) Ty (B7) Other (Explain in Remarks) 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) A) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Ind Surface High W Satural Water I Sedime Drift De Algal M Iron De Surface Inunda Sparse Field Obse Surface Water Table	ydrology Indicators: icators (minimum of one red water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial Image ely Vegetated Concave Surfervations: ater Present? Yes e Present? Yes		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) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hy Primary Ind Surface High W Satural Water I Sedime Drift De Algal M Iron De Surface Inunda Sparse Field Obse Surface Water Table Saturation I	ydrology Indicators: icators (minimum of one red water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial Image ely Vegetated Concave Surfervations: ater Present? Present? Yes 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 Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C) Stunted or Stressed Plants (D1) (LRR A) Ty (B7) Other (Explain in Remarks) 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) A) Raised Ant Mounds (D6) (LRR A)
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Wetland Hy Primary Ind Surface High W Satural Water I Sedime Drift De Algal M Iron De Surface Inunda Sparse Field Obse Surface Water Table Saturation I (includes ca Describe R	ydrology Indicators: icators (minimum of one receive Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial Image ely Vegetated Concave Surfervations: ater Present? Present? Present? Yes epoillary fringe) ecorded Data (stream gauge)		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) tland Hydrology Present? Yes No
Wetland Hy Primary Ind Surface High W Satural Water I Sedime Drift De Algal M Iron De Surface Inunda Sparse Field Obse Surface Water Table Saturation I (includes ca Describe R	ydrology Indicators: icators (minimum of one receive Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial Image ely Vegetated Concave Surfervations: ater Present? e Present? Present? yes apillary fringe)		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) A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

(ALA)
Consulting Engineers
& Geologists, Inc.

Geologists, Inc.				-1.1
Project/Site: Humboldt Bay Harbor District-RMMT	City/	County: Humboldt		_ Sampling Date: 5/20/22
Applicant/Owner: Humboldt Bay Harbor District				_ Sampling Point:
Investigator(s): Joseph Saler, Cindy Wilcox	Sect	ion, Township, Rar	nge:	
Landform (hillslope, terrace, etc.):	Loca	al relief (concave, o	convex, none): Nov	Slope (%): 0-1
Subregion (LRR): A, MLRA-4B				70178 Datum: WGS 84
Soil Map Unit Name: 1014-Urban Land Anth				
Are climatic / hydrologic conditions on the site typical for t				And the state of t
				No. of the contract of the con
Are Vegetation, Soil, or Hydrology				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 sai	npling point lo	ocations, transec t	s, important features, etc.
Hydrophytic Vegetation Present? Yes	-			\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Hydric Soil Present? Yes		Is the Sampled within a Wetlan	Area	No_X_
Wetland Hydrology Present? Yes	No _X_	within a vvettan	iur 168	NO
Remarks: WETS normal rainfall TPEX CAVOTE O WITHIN WILLIAM	patch. R	epresentative	at conditions	theein.
VEGETATION – Use scientific names of pla	1			
The state of the s		minant Indicator	Dominance Test wor	kehaat:
Tree Stratum (Plot size: 30'	Annual Control of the	ecies? Status	Number of Dominant	-
1. Salix, hoskeriana	90 1	FACW.	That Are OBL, FACW	
2. Morel A Calitornica	10	FACW	Total Number of Domi	nant 11
3			Species Across All Str	
4	160		Percent of Dominant 5	Species CAY
Sapling/Shrub Stratum (Plot size: 5')	100 = T	otal Cover	That Are OBL, FACW	
1. Runs Acminación	25	FAC	Prevalence Index wo	rksheet:
2 RUDW USINW	12 1		Total % Cover of:	Multiply by:
3			OBL species	x 1 =
4			FACW species	x 2 =
5.			FAC species	x 3 =
-	37 =T	otal Cover		x 4 =
Herb Stratum (Plot size: 5'		7.4	UPL species	x5=
1			Column Totals:	(A) (B)
2.			Prevalence Inde	x = B/A =
3			Hydrophytic Vegetat	
4			1 - Rapid Test for	Hydrophytic Vegetation
5			2 - Dominance Te	est is >50%
6			3 - Prevalence Inc	dex is ≤3.0¹
7			4 - Morphological	Adaptations ¹ (Provide supporting
8				ks or on a separate sheet)
9	\		5 - Wetland Non-\	
10				ophytic Vegetation ¹ (Explain)
11,				oil and wetland hydrology must intuition turbed or problematic.
Woody Vine Stratum (Plot size: 5'	= To	tal Cover		
1. Hedera helix	6	FACY	Hydrophytic	
2			Vegetation	
160*		tal Cover	Present? Ye	es No
% Bare Ground in Herb Stratum 160*				9
Veg mosaic of Rubus winns a	nd some	VIC IN UM	Lanctonic Don	inance harror
veg mode of know delines of	10 Millians	NOW IV W	A DOLL	WALCE VINTO
·			,	

Profile Description: (Describe to the de	pth needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix	.adox Features	
(inches) Color (moist) %	Color (moist) % Type Loc²	Texture Remarks
0-2 7.5 yr 2.5/1 100		Pert
2-8 17482/1 100		Sich
8-16+ 104R3/2 70		GrSL
10101111 10	-	Jaivo J Lill
101 K 4 16 20		Mintalli
10YR 4/2 10		
Type: C=Concentration D=Depletion RI	M=Reduced Matrix, CS=Covered or Coated Sand Gra	ains. ² Location: PL=Pore Lining, M=Matrix.
lydric 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:		X
Depth (inches):		Hydric Soil Present? Yes No
Wetland Hydrology Indicators:	red: check all that analy)	Secondary indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requi		Secondary indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1.2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Netland Hydrology Indicators: Primary Indicators (minimum of one requi 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 requi 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 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) 	 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 requi 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 requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Oeposits (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)
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)	 Water-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)
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)	Water-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 ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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)	Water-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 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 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 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)	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 requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface	Water-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)	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 requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface	Water-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) 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) FAC-Neutral Test (D5) Raised 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 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 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) (B8) Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (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 requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? 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 Other (Explain in Remarks) (B7) 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)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Saturation Present?	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living 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) 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 Desire (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 requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? 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 Other (Explain in Remarks) (B7) 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 requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge,		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 obs (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 Indicate the proof of t
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 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,	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roce 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): No Depth (inches): No Depth (inches): Wetlemonitoring 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 obs (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 Indicate the proof of t
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 Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation 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 Roce 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): No Depth (inches): No Depth (inches): Wetlemonitoring 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) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

		City/County: Humboldt		
plicant/Owner: Humboldt Bay Harbor District			State: CA	Sampling Point: 1186
vestigator(s): Joseph Saler, Cindy Wilcox		Section, Township, Rar	nge:	
ndform (hillslope, terrace, etc.): Daing (hillslope, terrace, etc.):			convex, none): None	
bregion (LRR): A, MLRA-4B	Lat: 40	0.807815°	Long: -124.1917	96° Datum: WGS 84
il Map Unit Name: Urban land-Anthra	ltic Xero	orthen to associ	. 0-3% NWI classifi	cation: none
e climatic / hydrologic conditions on the site typical for		1		
e Vegetation, Soil, or Hydrology			Normal Circumstances"	//
e Vegetation, Soil, or Hydrology			eded, explain any answe	,
Arthurston Between Castle Control				
UMMARY OF FINDINGS – Attach site ma		sampling point le	ocations, transects	s, important features, e
Hydrophytic Vegetation Present? Yes		is the Sampled	Aros	\2
Hydric Soil Present? Yes Wetland Hydrology Present? Yes	7	within a Wetlar		No X
Remarks: WETS parmal rainfall			N	
to excevated on Slove immediately	i above d	MAN SPANO	within excavat	ed sommer teal
THE REALITIES OF TOPING THIN COUNTY	See	TP 20 for No	windschooly condition	3
EGETATION – Use scientific names of p	lants.		7	
	Absolute	Dominant Indicator	Dominance Test wor	ksheet:
ree Stratum (Plot size: 30'		Species? Status	Number of Dominant S	
Salk lasiandra	48	- HKW	That Are OBL, FACW,	
			Total Number of Domi	nant 2
			Species Across All Str	ata:(B
·	- - 1		Percent of Dominant S	
Sapling/Shrub Stratum (Plot size: 5'	<u>40</u>	= Total Cover	That Are OBL, FACW,	
Rubus armenacus	45_	- FAC	Prevalence Index wo	
			Total % Cover of:	
				x1=
				x 2 = x 3 =
	- 110			x4=
erb Stratum (Plot size: 5'	77	= Total Cover		x 5 =
To ystichum MUNTUM	ユ	LIDATE /	· —	(A) (
		73 73 700		
			Prevalence Inde:	c = B/A =
				Hydrophytic Vegetation
			2 - Dominance Te	· · ·
			3 - Prevalence Inc	
				Adaptations¹ (Provide suppor
			data in Remark	s or on a separate sheet)
			5 - Wetland Non-\	
0				phytic Vegetation ¹ (Explain)
1.,			Indicators of hydric so be present, unless dis	oil and wetland hydrology mus
Joseph Vine Stratum (Dist -i	_7 _	= Total Cover	be present, unless dis	arved or problematic.
Voody Vine Stratum (Plot size:)				
			Hydrophytic Vegetation	\ \ \
6 Bare Ground in Herb Stratum 93*		= Total Cover	Present? You	es No
		- Total Cover	I	

ampling Point: TP 86 Sulfing Engines
Geologists, Inc

Profile Description: (Describe to the dept	h needed to docum	ent the inc	licator o	r confirm	the absen	ce of indicators.)
Depth Matrix		Features			_	
(inches) Color (moist) %	Color (moist)	%	Type'	Loc2	<u>Texture</u>	Remarks
0-7.5 104R3/2 100					<u>LS</u>	deposition surface on slope
7.5-13 7.54R 312 100					1	bune garbay surface
13-20+ 1048314 100					gas	fill very compa-tod
15 70 10 71 10					401	- The state of
¹ Type: C=Concentration, D=Depletion, RM= Hydric Soil Indicators: (Applicable to all I				I Sand G		Location: PL=Pore Lining, M=Matrix. ators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S	5)			2	cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (ted Parent Material (TF2)
Black Histic (A3)	Loamy Mucky M	, ,	(except	MLRA 1)		ery Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed N				_ c	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix				3	
Thick Dark Surface (A12)	Redox Dark Surf					ators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark S	. ,	1			etland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressi	ons (FB)			un	less disturbed or problematic.
Restrictive Layer (if present):						
Type:						-!! P17 - W N- X
Depth (inches):	_				nyuric 3	oil Present? Yes No
HYDROLOGY Wetland Hydrology Indicators:						
Primary Indicators (minimum of one required	check all that apply	1			Se	condary Indicators (2 or more required)
Surface Water (A1)	Water-Stair		(B9) (ev	cent		Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)		, 2, 4A, an		copt	_	4A, and 4B)
Saturation (A3)	Salt Crust (u 40,			Drainage Patterns (B10)
Water Marks (B1)	Aquatic Inv		(B13)		-	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen \$					Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized R			ivina Por	nte (C3)	Geomorphic Position (D2)
Aigal Mat or Crust (B4)	Presence of	•	-	•	M3 (O3)	Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron				E)	FAC-Neutral Test (D5)
Surface Soil Cracks (B6)	Stunted or					Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery (B7				/ (E1414 A	·/	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface (B	· — · ·	idii iii reeii	iui ko,		-	Trest ricare riaminisate (57)
Field Observations:	-					
	No 🔀 Depth (inc	has). N	A			
	No Depth (inc	N.I	/A	- -		\/
(includes capillary fringe)	No Depth (inc		AV			ogy Present? Yes No
Describe Recorded Data (stream gauge, mo	mπoring well, aerial p	motos, prev	nous insp	ections),	ir available:	
Remarks:	and thoo	hami	intel	ahne	1-1-	nge way floor.
The excavated in well d	Januar Jule		1 /	1	(-1	
Atthoropoic inorigin axd	casimoted	wa	7.10CW	Mater	reavure	

A.A.		ii.
builting Engineers WETLAND DETERMINATIO	N DATA FORM – Western Mou	ntains, Valleys, and Coast Region
Geologists, Inc. Project/Site: Humboldt Bay Harbor District-RMMT	City/County: Humboldt	Sampling Date: 7/29/2
pplicant/Owner: Humboldt Bay Harbor District	An-	State: CA Sampling Point: TP 8
vestigator(s): Joseph Saler, Cindy Wilcox	Section, Township, Ra	
andform (hillslope, terrace, etc.): Drainage way		
ubregion (LRR): A, MLRA-4B	Lat. 40.90VA 13°	Long: -124. [91 132" Datum: WGS 84
oil Map Unit Name: UV banland - Anthy	althe Xerorthants 1550	26.0-23 NM classification: MAN &
re climatic / hydrologic conditions on the site typical		
re Vegetation, Soil, or Hydrology		Normal Circumstances" present? Yes No
re Vegetation, Soil, or Hydrology		
		eded, explain any answers in Remarks.)
UMMARY OF FINDINGS – Attach site	map showing sampling point l	ocations, transects, important features, et
Hydrophytic Vegetation Present? Yes		
Hydric Soil Present? Yes	441 1	V
Vetland Hydrology Present? Yes	140 7	^
Remarks: WETS normal rainfall	TPEXCAVOTED ON S	lone of anthropogenic drain ademay
upland pit to TP21 (R	MTZ) for storminator	lone of anthropogenic drainageway
All and the control and the second se		Colice 181
EGETATION – Use scientific names of	plants.	
Free Stratum (Plot size: 30'	Absolute Dominant Indicator <u>% Cover Species? Status</u>	Dominance Test worksheet:
Morella Californica	45 / JACW	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
Salix oriended.	45 V FACW	14
		Total Number of Dominant Species Across All Strata: (B)
J,		
	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B
Sapling/Shrub Stratum (Plot size: 5'	25 1 5001	Prevalence Index worksheet:
Lubus Ursinus		Total % Cover of: Multiply by:
		OBL species x 1 =
·		FACW species x 2 =
·		FAC species x 3 =
·	= Total Cover	FACU species x 4 =
lerb Stratum, (Plot size: 5',		UPL species x 5 =
Polystichum munitum		Column Totals: (A) (B
		Prevalence index = B/A =
3		Hydrophytic Vegetation Indicators:
<u> </u>		1 - Rapid Test for Hydrophytic Vegetation
5,		2 - Dominance Test is >50%
5		3 - Prevalence Index is ≤3.0¹
3		4 - Morphological Adaptations ¹ (Provide supportind data in Remarks or on a separate sheet)
9.		5 - Wetland Non-Vascular Plants ¹

_= Total Cover

Remarks: ** 50% litter and 45% bane grand

Woody Vine Stratum (Plot size:

% Bare Ground in Herb Stratum _

Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

The state of the s		
Profile Description: (Describe to the de	pth needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix	Redox Features	A Secretary of the secr
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-0.5 7.5 yk25/2 10		
05-26+2.5/4/2 99		S
INV0 3/1 1		SiL occ. inclusion
		DIL OCCUMUNIO
·	. —————————	
		
¹ Type: C=Concentration, D=Depletion, RI	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
Remarks:		l .
HYDROLOGY		
Wetland Hydrology Indicators:		
		70. 0
L Driman, Indicators /minimum of one requi	rod; chack all that apply)	Secondary Indicators (2 or more required)
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,
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) Dts (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 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) Dts (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 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) Dts (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)	Water-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) 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	Water-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)	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)
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) (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)
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 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)	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 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) 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 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 Roc 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):	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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Project/Site: Humboldt Bay Harbor District-RMMT	City/County: Humbol	dt	_ Sampling Date: <u> 名/ レ/ レ</u> 2
Applicant/Owner: Humboldt Bay Harbor District		State: CA	_ Sampling Point: TP 88
Investigator(s): Joseph Saler, Cindy Wilcox	Section, Township, F		
Landform (hillslope, terrace, etc.): Tenins old	Local relief (concave	convex none): Noop	Slone (%): 58
Subregion (LRR): A, MLRA-4B	Lat: 40,807040°	Long: -124.18	75 35° Datum: WGS 84
Subregion (LRR): A. MLRA-4B Soil Map Unit Name: UV banland - And	walte Kerorthents assoc.	0-3% slope NWI classi	fication: Note
Are climatic / hydrologic conditions on the site typical	I for this time of year? Yes No	X (If no explain in	Remarks)
Are Vegetation, Soil, or Hydrology _			present? Yes No
Are Vegetation, Soil, or Hydrology _		needed, explain any answ	
SUMMARY OF FINDINGS - Attach site			·
	No_X	locations, transect	s, important reatures, etc
	No Is the Sample		V
	No within a Wetl	and? Yes	No
		0 100	
Remarks: WETS mormal rainfall TPEXCOVORED ON CUT book of S	stormwater conveyonce teg	the see it	to condition
	at bottom of t	reature,	
VEGETATION – Use scientific names of	f plants.		
Tree Stratum (Plot size: 30'	Absolute Dominant Indicator % Cover Species? Status	Dominance Test wo	rksheet:
1. Salix hookeriana	10 Cover Species? Status	Number of Dominant That Are OBL, FACW	
2,			3
3.		Total Number of Dom Species Across All St	
4			
Sapling/Shrub Stratum (Plot size: 5'	= Total Cover	Percent of Dominant : That Are OBL, FACW	
1. Rubus Ursinus		Prevalence Index wo	orksheet:
2		Total % Cover of:	Multiply by:
3			x 1 =
4			x 2 =
5			x 3 =
Herb Stratum (Plot size: 5')	= Total Cover	FACU species	
1. Juve of the size: 5"	5 FACU		x 5 = (B)
2. B.C.Z.A. Maxima	30 100		
3. Holeus lanatus	TAC		x = B/A =
4. Vicia Sativa	2 4/	Hydrophytic Vegetal	
5. Raphonus, SouthMS	3 UIPL	2 - Dominance Te	Hydrophytic Vegetation
6. Symphyotrichum chiese	1 FAC	3 - Prevalence In	
7		I —	Adaptations ¹ (Provide supporting
8		data in Remar	ks or on a separate sheet)
9		5 - Wetland Non-'	Vascular Piants¹
10			ophytic Vegetatión¹ (Explain)
11	112 /10	Indicators of hydric se be present, unless dis	oil and wetland hydrology must turbed or problematic
Woody Vine Stratum (Plot size:	43 = Total Cover 2.5	p. soork, arress dis	in the dispression of the second
1		Hydronhytic	
2		Hydrophytic Vegetation	
% Bare Ground in Herb Stratum	= Total Cover	Present? Y	es No
		1	

nches) Color (mojst) %	Redox Features Color (moist) % Type ¹	Loc ² Tex	ture Remarks
-3 2.5 × 3/2 100			
-27 57 4/3 100		7	
-17 57 9/5 100			
	2 15		
	the second of the second of the second		
	RM=Reduced Matrix, CS=Covered or Coate	ed Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
dric Soil Indicators: (Applicable to	o all LRRs, unless otherwise noted.)		ndicators for Problematic Hydric Soils ³ :
_ Histosol (A1)	Sandy Redox (S5)	37	2 cm Muck (A10)
_ Histic Epipedon (A2)	Stripped Matrix (S6)		Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except	t MLRA 1)	Very Shallow Dark Surface (TF12)
_ Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	T	Other (Explain in Remarks)
_ Depleted Below Dark Surface (A11		:	Indicators of hydrophytic vegetation and
_ Thick Dark Surface (A12)	Redox Dark Surface (F6)		wetland hydrology must be present,
Sandy Mucky Mineral (S1)	 Depleted Dark Surface (F7) Redox Depressions (F8)		unless disturbed or problematic.
_ Sandy Gleyed Matrix (S4) estrictive Layer (if present):	Redox Depressions (i d)		diffees distances of productive co.
	11-9	45	1 1/3/11
Type:		Llve	Iric Soil Present? Yes No 🔀
Depth (inches):		1190	inte don't resent.
Uniturm 3 and		E	7.
	T.) *	,
Uniform 3 and C	Ţ.) . e(
Virturn 3 and C)	Secondary Indicators (2 or more required)
VICTOR SAN & COROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one recommend)		t t t t t t t t t t	Secondary Indicators (2 or more required)
Virtur Sand. VDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one recommend) Surface Water (A1)	Water-Stained Leaves (B9) (e	except	Water-Stained Leaves (B9) (MLRA 1, 2
Virturn 34n d. VDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one recommendation) Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (c MLRA 1, 2, 4A, and 4B)	except	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one red Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) (control of the MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	except	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10)
Virtur M 34n d. Vetland Hydrology Indicators: rimary Indicators (minimum of one recognized Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leaves (B9) (control MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	except	 Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Vortor M 360 d. Vetland Hydrology Indicators: rimary Indicators (minimum of one recommend) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)		 Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
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Volume 340 d. Vetland Hydrology Indicators: rimary Indicators (minimum of one recommend) 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) (control of the MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C) Recent Iron Reduction in Tille Stunted or Stressed Plants (I)	y Living Roots (C3 (4) ed 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)
Vortor Sand Vetland Hydrology Indicators: rimary Indicators (minimum of one recommend) 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) (control of the MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C) Recent Iron Reduction in Tille Stunted or Stressed Plants (D) ary (B7) Other (Explain in Remarks)	y Living Roots (C3 (4) ed 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)
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Vetland Hydrology Indicators: rimary Indicators (minimum of one recommendation) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surficient Observations: Surface Water Present? Yes	Water-Stained Leaves (B9) (control of the property of the prop	Living Roots (C3 4) ed Soils (C6) O1) (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 (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Vetland Hydrology Indicators: rimary Indicators (minimum of one recommendation) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surficient Observations: Surface Water Present? Yes	Water-Stained Leaves (B9) (control of the MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C) Recent Iron Reduction in Tille Stunted or Stressed Plants (I) ory (B7) occ (B8) Depth (inches):	Living Roots (C3 4) ed Soils (C6) O1) (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)
Vetland Hydrology Indicators: rimary Indicators (minimum of one recommendation) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surficient Observations: Surface Water Present? Yes Vater Table Present? Yes Saturation Present? Yes Saturation Present? Yes Describe Recorded Data (stream gauge)	Water-Stained Leaves (B9) (control of the provided Heaves (B9) (control of the provided Heaves (B14)) Water-Stained Leaves (B9) (control of the provided Heaves (B13)) Water Stained Invertebrates (B13) Water Stained Odor (C1) Water Stained Odo	Living Roots (C3 (4) ed Soils (C6) (C1) (LRR A) Wetland Haspections), if ava	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)
Vetland Hydrology Indicators: rimary Indicators (minimum of one recommendation) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surficient Observations: Surface Water Present? Yes Vater Table Present? Yes Saturation Present? Yes Saturation Present? Yes Describe Recorded Data (stream gauge)	Water-Stained Leaves (B9) (control of the property of the prop	Living Roots (C3 (4) ed Soils (C6) (C1) (LRR A) Wetland Haspections), if ava	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)



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



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





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



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





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



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





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



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





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



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





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



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





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



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





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



Photo 16: An example of Estuarine Intertidal Shoreline, looking west toward Wetland 15. Note narrow band of estuarine wetland between the MHHW and upland conditions. Photo taken April 5, 2022.





Photo 17: An example of Estuarine Intertidal Shoreline, east of Wetland 03, looking across Humboldt Bay towards Eureka. Photo taken July 7, 2022.



Photo 18: An example of 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. Photo taken July 8, 2022.





Photo 19: An example of Intertidal Shoreline, with armored shoreline east of TP71, looking east towards Eureka. Photo taken August 2, 2022.



Photo 20: Potential non-jurisdictional feature at TP64 and TP65- an abandoned concrete vault and foundation that has developed into a three-parameter wetland.





Photo 21: Potential non-jurisdictional feature- abandoned drying shed foundations beginning to incorporate three parameters. Photo taken May 28, 2020.



Photo 22: Potentially non-jurisdictional features- abandoned drying shed foundations beginning to incorporate three parameters. Photo taken May 28, 2020.





Photo 23: Potentially non-jurisdicitonal feature- stormwater collection system at TP86. Culvert drains impervious surfaces formerly used for chip storage. Photo taken on June 28, 2022.



Photo 24: Potentially non-jurisdicitonal feature- stormwater collection system near TP87. One of several stormwater culverts that drain into this feature. Photo taken on June 29, 2022.





Photo 25: Potentially non-jurisdicitonal featurestormwater collection system near TP88. Photo taken on August 2, 2022.



Photo 26: Potentially non-jurisdicitonal featurestormwater collection system near TP88, near one of weirs before the entrance to Humboldt Bay. Photo taken on August 2, 2022.



Botanical Species Observed 4 R	/28/2020, 6/4/2020, and 4/5- MMT Biological Assessment		nd ////2022
Scientific Name	Common Name	Family	Native?
	Trees		
Acacia melanoxylon	blackwood acacia	Fabaceae	I 1
Alnus rubra	red alder	Betulaceae	Y ²
Cordyline australis	cabbage tree	Laxmanniaceae	N ³
Eucalyptus globulus	bluegum	Myrtaceae	ı
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. contorta	beach pine	Pinaceae	Y
Pinus radiata	Monterey pine	Pinaceae	N
Populus trichocarpa	black cottonwood	Salicaceae	Y
Prunus cerasifera	wild plum	Rosaceae	i
Prunus persica	wild peach	Rosaceae	N
Pseudotsuga menziesii var. menziesii	Douglas fir	Pinaceae	Y
Salix hookeriana	coast willow	Salicaceae	Y
Salix lasiandra var. lasiandra	pacific willow	Salicaceae	Y
Salix scouleriana	Scouler's willow	Salicaceae	Y
Salix sitchensis	Sitka willow	Salicaceae	Y
Julia Sitcherisis	Shrubs	Sancaceae	
Arctostaphylos uva-ursi	bear mat	Ericaceae	Υ
Baccharis pilularis ssp.	Dear mat	Liicaceae	'
consanguinea	coyote brush	Asteraceae	Y
Ceanothus prostrates var. prostratus	mahala mat	Rhamnaceae	Y
Cistus salvifolius	rock rose	Cistaceae	N
Cotoneaster franchetii	Franchet's cotoneaster	Asteraceae	1
Cotoneaster Jacteus	milk flower cotoneaster	Asteraceae	<u> </u>
Cotoneaster simonsii	Simon's cotoneaster	Asteraceae	N
Crataegus monogyna	English hawthorn	Rosaceae	1
Cydonia oblonga	quince	Rosaceae	N
Cytisus scoparius	Scotch broom	Fabaceae	1
Elaeagnus ebbingei	lemon leaf	Elaeagnaceae	N
Escallonia rubra	red escallonia	Grossulariaceae	N
Frangula purshiana ssp. purshiana	cascara	Rhamnaceae	Y
Fuchsia magellanica	hardy fuchsia		N
Garrya elliptica	coast silk tassel	Onagraceae	Y
·	French broom	Garryaceae	T
Genista monspessulana		Fabaceae	I NI
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 sweetbriar	Grossulariaceae	Y
Rosa rubiginosa	1	Rosaceae	N



Botanical Species Observed 4	/28/2020, 6/4/2020, and 4/5-4 MMT Biological Assessment		nd 7/7/2022
Scientific Name	Common Name	Family	Native?
Rubus armeniacus	Himalayan berry	Rosaceae	I
Rubus ursinus	California blackberry	Rosaceae	Υ
Vaccinium ovatum	evergreen huckleberry	Ericaceae	Y
	Ferns and Allies		
Athyrium filix-femina 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
Equisetum telmateia ssp. braunii	giant horsetail	Equisetaceae	Y
Pentagramma triangularis ssp.	Source rear Second	294.50440040	
triangularis	gold back fern	Pteridaceae	Υ
Polypodium californicum	California polypody	Polypodiaceae	Υ
Polypodium glycyrrhiza	licorice fern	Polypodiaceae	Y
Polystichum munitum	sword fern	Dryopteridaceae	Y
Pteridium aquilinum var. pubescens	bracken fern	Pteridaceae	Y
Sceptridium multifidum	leather grape fern	Ophioglossaceae	Y
Woodwardia fimbriata	western chain fern	Blechnaceae	Y
Woodwardia jiinsirata	Sedges and Rushes		
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		Y
Juncus balticus ssp. ater	Baltic rush	Cyperaceae	Y
Juncus balticus ssp. ater Juncus bolanderi		Juncaceae	Y
,	Bolander's rush Brewer's rush	Juncaceae	Y
Juncus breweri		Juncaceae	
Juncus bufonius var. bufonius	toad rush	Juncaceae	Y
Juncus capitatus	leafy bracted dwarfrush	Juncaceae	N Y
Juncus effusus ssp. pacificus	common rush	Juncaceae	
Juncus ensifolius	sword leaf rush	Juncaceae	Y
Juncus hesperius	coast rush	Juncaceae	Y
Juncus lescurii	dune rush	Juncaceae	Y
Juncus patens	spreading rush	Juncaceae	Y
Juncus phaeocephalus var.	hanna handad ayah	lungagaga	V
phaeocephalus	brown headed rush	Juncaceae	Y
Juncus xiphioides	iris-leaved rush	Juncaceae	
Luzula subsessilis	Pacific woodrush	Juncaceae	Y
Schoenoplactus americanus	chairmakers bulrush	Cyperaceae	Y
Schoenoplectus pungens var.	three square	Cyporacoac	
longispicatus Scirnus microcarnus	three square	Cyperaceae	Y
Scirpus microcarpus	panicled bulrush	Cyperaceae	Y
A superties signature	Grasses	Danasa	N.1
Agrostis gigantea	giant bentgrass	Poaceae	N
Agrostis stolonifera	creeping bentgrass	Poaceae	<u> </u>
Aira caryophyllea	silver hairgrass	Poaceae	N
Alopecurus geniculatus	marsh foxtail	Poaceae	Y



Botanical Species Observed	4/28/2020, 6/4/2020, and 4/5-4/ RMMT Biological Assessment,		nd 7/7/2022
Scientific Name	Common Name	Family	Native?
Ammophila arenaria	European beachgrass	Poaceae	I
Anthoxanthum odoratum	sweet vernal grass	Poaceae	I
Avena barbata	wild oat	Poaceae	I
Briza maxima	large quaking grass	Poaceae	I
Briza minor	small quaking grass	Poaceae	N
Bromus diandrus	ripgut brome	Poaceae	ı
Bromus hordeaceus	soft chess	Poaceae	ı
Bromus racemosus	smooth brome	Poaceae	N
Bromus sitchensis var. carinatus	California brome	Poaceae	Y
Cortaderia jubata	jubata grass	Poaceae	ı
Cynodon dactylon	bermuda grass	Poaceae	ı
Cynosurus echinatus	dogtail grass	Poaceae	i
Dactylis glomerata	orchard grass	Poaceae	<u> </u>
Deschampsia caespitosa ssp.	0.01010.000		
holciformis	coast tufted hairgrass	Poaceae	Υ
Digitaria sanguinalis	hairy crabgrass	Poaceae	N
Distichlis spicant	salt grass	Poaceae	Y
Elymus mollis ssp. mollis	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	<u>'</u>
Festuca perennis	Italian wildrye	Poaceae	<u> </u>
Festuca rubra ssp. pruinosa	red fescue	Poaceae	Y
Gastridium phleoides	nit grass	Poaceae	N
Glyceria declinata	waxy mannagrass	Poaceae	I
Holcus lanatus	velvet grass	Poaceae	<u>'</u>
Hordeum brachyantherum ssp.	vervet grass	roaceae	ı
brachyantherum	meadow barley	Poaceae	Υ
Hordeum marinum var.	Incadow barrey	1 odecae	'
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	1
Spartina densiflora	dense cordgrass	Poaceae	1
Contra acrisgiora	Herbs		'
Abronia latifolia	yellow sand verbena	Nyctaginaceae	Υ
Achillea millefolium	yarrow	Asteraceae	Y
Acmispon americanus var.	yantow	Asteraceae	1
americanus	American bird's foot trefoil	Fabaceae	Υ
Acmispon parviflorus	hill lotus	Fabaceae	Y
Agapanthus praecox	African lily	Liliaceae	N



Botanical Species Observed 4/28/2020, 6/4/2020, and 4/5-4/8, 4/13-4/19, 5/3-5/6/2022 and 7/7/2022 RMMT Biological Assessment, Samoa CA				
Scientific Name	Common Name	Family	Native?	
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	Υ	
Angelica lucida	seacoast angelica	Apiaceae	Υ	
Anthemis cotula	dog fennel	Asteraceae	N	
Aphanes occidentalis	lady's mantle	Rosaceae	Υ	
Arctotheca prostrata	creeping capeweed	Asteraceae	1	
Armeria maritima ssp. californica	sea thrift	Plumbaginaceae	Y	
Artemisia douglasii	California mugwort	Asteraceae	Y	
Artemisia pycnocephala	beach sagewort	Asteraceae	Y	
Atriplex prostrata	fat-hen	Chenopodiaceae	N	
Baccharis glutinosa	saltmarsh baccharis	Asteraceae	Y	
Barbarea vulgaris	yellow rocket	Brassicaceae	N N	
Bellardia trixago	Mediterranean linseed	Orobanchaceae	1	
Bellis perennis	English daisy	Brassicaceae	N N	
Bergenia crassifolia	elephant ear saxifrage	Saxifragaceae	N	
Brassica nigra	black mustard	Brassicaceae	1	
Brassica rapa	common mustard	Brassicaceae	<u>'</u>	
Cakile maritima	sea rocket	Brassicaceae	<u>'</u>	
Calandrinia menziesii	red maids	Montiaceae	Y	
Callitriche heterophylla var.	Teu maius	Wortdaceae	<u>'</u>	
heterophylla	starwort	Plantaginaceae	Y	
Calystegia silvatica	false bindweed	Convolvulaceae	N	
Calystegia soldanella	beach morning glory	Convolvulaceae	Y	
Camissoniopsis cheiranthifolia ssp.	beach morning giory	Convolvalaceae	<u>'</u>	
cheiranthifolia	beach evening primrose	Onagraceae	Υ	
Centaurium erythraea	European centaury	Gentianaceae	N	
Capsella bursa-pastoris	shepherd's purse	Brassicaceae	N	
Cardamine oligosperma	bittercress	Brassicaceae	Y	
Cardionema ramosissimum	sand mat	Caryophyllaceae	Y	
Carduus pycnocephalus ssp.		- caryopriyilaceae	· ·	
pycnocephalus	Italian thistle	Asteraceae	1	
Carpobrotus chilensis	seafig	Aizoaceae	I	
Carpobrotus edulis	iceplant	Aizoaceae	1	
Castilleja ambigua var.				
humboldtiensis	Humboldt Bay owl's clover	Orobanchaceae	Υ	
Castilleja attenuata	narrowleaf owl's clover	Orobanchaceae	Y	
Centranthus ruber	red valerian	Valerianaceae	N	
Cerastium fontanum ssp. vulgare	small mouse-ear	Caryophyllaceae	N	
Chloropyron maritimum	Point Reyes bird's-beak	Orobanchaceae	Υ	
Cirsium arvense	Canada thistle	Asteraceae	I	
Cirsium vulgare	bull thistle	Asteraceae	I	
Claytonia parviflora ssp. parviflora	narrowleaf miner's lettuce	Monitaceae	Y	
Claytonia perfoliata ssp. perfoliata	miner's lettuce	Montiaceae	· Y	
Claytonia rubra	redstem spring beauty	Montiaceae	Y	
Conium maculatum	poison hemlock	Apiaceae	· ·	



Botanical Species Observed 4/28/2020, 6/4/2020, and 4/5-4/8, 4/13-4/19, 5/3-5/6/2022 and 7/7/2022 RMMT Biological Assessment, Samoa CA			
Scientific Name	Common Name	Family	Native?
Corethrogyne filaginifolia var.		•	
californica	California sandaster	Asteraceae	Υ
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
Cuscuta pacifica var. pacifica	dodder	Convolvulaceae	Y
Daucus carota	Queen Anne's lace	Apiaceae	N
Daucus pusillus	American wild carrot	Apiaceae	Y
Dipsacus fullonum	teasel	Dipsacaceae	ı
Epilobium brachycarpum	annual fireweed	Onagraceae	Y
Epilobium ciliatum ssp. ciliatum	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	· ·
Erodium moschatum	white stem filaree	Geraniaceae	N
Eschscholzia californica	California poppy	Papaveraceae	Y
Euphorbia oblongata		Euphorbiaceae	N
Euphorbia peplus	eggleaf spurge	Euphorbiaceae	N
Foeniculum vulgare	petty spurge fennel	- '	IN
		Apiaceae Rosaceae	Y
Fragaria chiloensis	beach strawberry		
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	1
Geranium molle	cranes bill geranium	Geraniaceae	N
Geranium robertianum	Robert's geranium	Geraniaceae	N
Grindelia stricta var. stricta	coastal gumplant	Asteraceae	Y
Helminthotheca echioides	bristly ox-tongue	Asteraceae	ı
Hirschfeldia incana	hoary mustard	Brassicaceae	I
Hyacinthoides non-scripta	blue bells	Asparagaceae	N
Hypericum perforatum ssp.			
perforatum	Klamathweed	Hypericaceae	l
Hypochaeris glabra	smooth cat's ear	Asteraceae	I
Hypochaeris radicata	hairy cat's-ear	Asteraceae	I
Jaumea 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	Υ
Lemna minor	smaller duckweed	Araceae	Y
Leontodon saxatilis	hawkbit	Asteraceae	N
Lepidium didymum	lesser swinecress	Brassicaceae	N
Leucanthemum vulgare	oxeye daisy	Asteraceae	1
Limonium californicum	marsh rosemary	Plumbaginaceae	Y



Botanical Species Observed 4/28/2020, 6/4/2020, and 4/5-4/8, 4/13-4/19, 5/3-5/6/2022 and 7/7/2022 RMMT Biological Assessment, Samoa CA				
Scientific Name	Common Name	Family	Native?	
Linum bienne	flax	Linaceae	N	
Lobularia maritima	sweet alyssum	Brassicaceae	ı	
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	1	
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	T	
Melilotus albus	white sweet clover	Fabaceae	N	
Melilotus indicus	annual yellow sweetclover	Fabaceae	N	
Mentha pulegium	pennyroyal	Lamiaceae	1	
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	
Oenanthe sarmentosa	water parsley	Apiaceae	Y	
Oenothera glazioviana	red sepal primrose	Onagraceae	N	
Oxalis corniculata	creeping woodsorrel	Oxalidaceae	N	
Oxalis pes-caprae	Bermuda buttercup	Oxalidaceae	I	
Oxalis purpurea	purple wood sorrel	Oxalidaceae	N	
Parentucellia viscosa	yellow glandweed	Orobanchaceae	1	
Persicaria hydropiper	common smartweed	Polygonaceae	N	
Petrorhagia dubia	windmill pink	Caryophyllaceae	N	
Piperia elegans ssp. elegans	elegant piperia	Orchidaceae	Y	
Plantago coronopus	buckhorn plantain	Plantaginaceae	N	
Plantago elongata	coastal plantain	Plantaginaceae	Y	
Plantago erecta	California plantain	Plantaginaceae	Y	
Plantago lanceolata	English plantain	Plantaginaceae	ı	
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	
Polycarpon tetraphyllum var.				
tetraphyllum	four leaf allseed	Caryophyllaceae	N	
Polygonum aviculare ssp. aviculare	prostrate knotweed	Polygonaceae	N	
Polygonum paronychia	dune knotweed	Polygonaceae	Y	
Potentilla anserina ssp. pacifica	silverweed	Rosaceae	Y	
Pseudognaphalium luteoalbum	Jersey cudweed	Asteraceae	N N	
Ranunculus muricatus	buttercup	Ranunculaceae	N	
Ranunculus repens	creeping buttercup	Ranunculaceae	1	
Raphanus sativus	wild radish	Brassicaceae	1	
Rumex acetosella	sheep sorrel	Polygonaceae	1	
Rumex acetoseila Rumex conglomeratus	clustered dock	Polygonaceae	N	



Botanical Species Observed 4/28/2020, 6/4/2020, and 4/5-4/8, 4/13-4/19, 5/3-5/6/2022 and 7/7/2022 RMMT Biological Assessment, Samoa CA			
Scientific Name	Common Name	Family	Native?
Rumex crispus	curly dock	Polygonaceae	1
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	1
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	i
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		Caryophyllaceae	N
spergularia rubra	pink sand-spurry	Caryophynaceae	IN
Spiranthes romanzoffiana	hooded ladies tresses	Orchidaceae	Υ
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
Taraxacum officinale ssp. officinale	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
Triphysaria eriantha ssp. eriantha	butter n' eggs	Orobanchaceae	Y
Tropaeolum majus	garden nasturtium	Tropaeolaceae	N N
Typha latifolia	cattail	Typhaceae	Y
Typila laajona	Cattaii	Турписсис	'
Verbascum blattaria	moth mullein	Scrophulariaceae	N
Veronica arvensis	speedwell	Plantaginaceae	N
Vicia hirsuta	hairy vetch	Fabaceae	N
Vicia sativa ssp. sativa	spring vetch	Fabaceae	N
Vicia villosa ssp. villosa	hairy vetch	Fabaceae	N



Scientific Name	RMMT Biological Assessment, Common Name	Family	Native?
Vinca major	large vinca	Apocynaceae	I
Zantedeschia aethiopica	calla lily	Araceae	I
Zostera marina	eelgrass	Zosteraceae	Y
	Vines		
Hedera helix	English ivy	Araliaceae	ı
Lonicera hispidula	pink honeysuckle	Caprifoliaceae	Y
Toxicodendron diversilobum	poison oak	Anacardiaceae	Y
	Lichens, Bryophytes, Fu		
Alsia californica	California alsia	Leucodontaceae	Υ
Anthocerotophyta 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
Isothecium 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
			51%
346 Species			Native

- 1: Invasive species
- 2: Native species
- 3: Non-native species



Wetland Datapoint Descriptions

Wetland Datapoint Index

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	Upland	Upland	40.818893°	-124.180425°
TP7	Wetland	Wetland 16	40.818233°	-124.185136°
TP8	Upland	Upland	40.817859°	-124.185512°
TP9	Wetland	Drying Shed Human Induced Feature	40.817383°	-124.185802°
TP10	Wetland	Drying Shed Human Induced Feature	40.817066°	-124.185555°
TP11	Wetland	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	Upland	Upland	40.814764°	-124.184870°
TP15	Wetland	Wetland 19	40.814260°	-124.185571°
TP16	Wetland	Upland	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	Upland	Stormwater Feature	40.807064°	-124.189517°
TP21	Upland	Stormwater Feature	40.806915°	-124.191134°
TP22	Upland	Stormwater Feature	40.807821°	-124.191760°
TP23	Wetland	Wetland 3	40.823699°	-124.174337°
TP24	Upland	Wetland 3	40.823726°	-124.174348°
TP25	Upland	Upland	40.823340°	-124.175161°
TP26	Wetland	Wetland 2	40.824108°	-124.174208°
TP27	Upland	Wetland 2	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 5	40.820944°	-124.177503°
TP32	Wetland	Wetland 5	40.820907°	-124.177639°



Datapoint ID	Туре	Associated Feature	Latitude (Datum- WGS 84)	Longitude (Datum- WGS 84)
TP33	Upland	Wetland 5	40.820793°	-124.177880°
TP34	Upland	Upland	40.821082°	-124.177511°
TP35	Upland	Upland	40.821749°	-124.177533°
TP36	Upland	Upland	40.821711°	-124.177883°
TP37	Wetland	Wetland 6	40.821384°	-124.179684°
TP38	Upland	Wetland 6	40.821421°	-124.179723°
TP39	Wetland	Wetland 7	40.820668°	-124.178999°
TP40	Upland	Wetland 7	40.820650°	-124.179053°
TP41	Wetland	Wetland 8	40.820351°	-124.178848°
TP42	Upland	Wetland 8	40.820367°	-124.178882°
TP43	Wetland	Wetland 9	40.819992°	-124.178802°
TP44	Upland	Wetland 9	40.819952°	-124.178839°
TP45	Wetland	Wetland 11	40.819634°	-124.179067°
TP46	Upland	Wetland 11	40.819624°	-124.179131°
TP47	Wetland	Wetland 13	40.819178°	-124.179663°
TP48	Upland	Wetland 13	40.819159°	-124.179666°
TP49	Upland	Upland	40.818947°	-124.180274°
TP50	Upland	Upland	40.818988°	-124.180302°
TP51	Upland	Upland	40.819118°	-124.180744°
TP52	Upland	Upland	40.819156°	-124.180682°
TP53	Wetland	Wetland 14	40.819489°	-124.180644°
TP54	Upland	Wetland 14	40.819499°	-124.180599°
TP55	Upland	Wetland 14	40.819469°	-124.180532°
TP56	Upland	Upland	40.819379°	-124.180675°
TP57	Wetland	Wetland 12	40.819395°	-124.179674°
TP58	Upland	Wetland 12	40.819346°	-124.179781°
TP59	Upland	Wetland 12	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	Wetland	Concrete Vault Human Induced Feature	40.819481°	-124.183652°
TP65	Upland	Anthropogenic Feature	40.819480°	-124.183669°
TP66	Upland	Wetland 16	40.818237°	-124.185179°
TP67	Upland	Upland	40.817353°	-124.185955°



Datapoint ID	Туре	Associated Feature	Latitude (Datum- WGS 84)	Longitude (Datum- WGS 84)
TP68	Upland	Upland	40.817366°	-124.185976°
TP69	Upland	Wetland 17	40.815338°	-124.185182°
TP70	Upland	Upland	40.814670°	-124.185678°
TP71	Upland	Upland	40.814903°	-124.185132°
TP72	Wetland	Wetland 18	40.814851°	-124.185277°
TP73	Upland	Upland	40.814826°	-124.185185°
TP74	Upland	Upland	40.814275°	-124.185450°
TP75	Upland	Wetland 20	40.814273°	-124.187155°
TP76	Upland	Upland	40.814272°	-124.187374°
TP77	Upland	Upland	40.814261°	-124.187729°
TP78	Upland	Wetland 21	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	Upland	Upland	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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