

AQUATIC RESOURCES DELINEATION REPORT

92 Young Lane, Manila (Arcata), 95521, Humboldt County, CA

Assessor Parcel Number (APN):

506 – 071 – 020



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Date Prepared:

August 26th, 2025

Certification I certify that the information and conclusions presented in this wetland delineation and aquatic resources report are based on my direct observations, data collection, and professional analysis, and are true and correct to the best of my knowledge, judgment, and belief.

X

Handwritten signature of Mason London.

Mason London, MSc Biology

Naiad Biological Consulting Principal Biologist

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Section 1 Executive Summary

Naiad Biological Consulting (NBC) conducted a formal wetland and aquatic resources delineation for the property located at 92 Young Lane, Manila, Humboldt County, California (APN 506-071-020). This assessment was requested by the County of Humboldt Planning and Building Department to support a Coastal Development Permit (CDP) application for proposed residential development within the California Coastal Zone.

The purpose of this delineation was to determine the presence, extent, and regulatory status of any wetland features or other jurisdictional waters subject to the California Coastal Act, the Clean Water Act (Sections 401 and 404), and the Porter-Cologne Water Quality Control Act. Because the parcel lies within the Coastal Zone, delineation was conducted using both the federal three-parameter methodology (hydrophytic vegetation, hydric soils, and wetland hydrology) and the California Coastal Commission's one-parameter definition.

Fieldwork was conducted on April 18 and June 20, 2025, under seasonally appropriate conditions. Three delineation plots (P1–P3) were established across the 0.29-acre study area to capture variations in microtopography and vegetation. The site is situated on stabilized coastal dune flats and is underlain by excessively drained sandy soils associated with the Samoa–Clambeach complex. Vegetation across the parcel consisted primarily of non-native grasses and ruderal species, with only scattered facultative wetland plants observed.

No indicators of hydric soils or wetland hydrology were identified at any of the delineation plots. Vegetation failed both the Dominance Test and the Prevalence Index for hydrophytic criteria. Although the surrounding Samoa–Clambeach soil series contains a mapped hydric component, no evidence of hydric soils was present within the study boundary. No streams, swales, seeps, or other aquatic features were observed.

Based on these results, no wetlands or other jurisdictional aquatic resources were identified within the project boundary under either federal three-parameter criteria or the Coastal Act's one-parameter definition. Accordingly, no portion of the parcel is subject to regulation under Sections 401/404 of the Clean Water Act, the Porter-Cologne Water Quality Control Act, or the wetland policies of the California Coastal Act and Humboldt County's certified Local Coastal Program.

These findings will support the County's review of the CDP application and confirm that no wetland setbacks, mitigation, or additional delineation are required under existing site conditions. This report is intended to inform regulatory evaluation and may require verification by the appropriate agencies.

Section 2 Introduction, Background, and Project Understanding

2.1 Purpose and Need

The purpose of this wetland and aquatic resources assessment is to identify and map any jurisdictional wetland features or other waters of the United States or the State of California that may occur within the boundaries of Assessor's Parcel Number (APN) 506-071-020, located at 92 Young Lane in Manila, Humboldt County, California. This delineation is being prepared in support of a Coastal Development Permit (CDP) application for proposed residential development within the California Coastal Zone.

The delineation is required to determine whether project activities may affect features subject to regulation under the California Coastal Act, the Clean Water Act (Sections 401 and 404), and the Porter-Cologne Water Quality Control Act. Because the parcel lies within the Coastal Zone, the County of Humboldt and the California Coastal Commission require that wetlands be identified using the one-parameter definition for Coastal Zone wetlands, as outlined in the Coastal Act and Humboldt County's certified Local Coastal Program. These criteria differ from the three-parameter methodology applied by the U.S. Army Corps of Engineers (USACE).

The need for this study arises from a biological scoping survey conducted in November 2022 by Jenell Jackson, a botanist and wetland specialist with NRM. During that site visit, Ms. Jackson observed a small willow complex adjacent to the parcel and recommended a formal wetland delineation to determine whether jurisdictional features were present and to establish appropriate regulatory buffers. While that initial survey provided useful background, it did not include a USACE protocol-level delineation or apply the Coastal Zone's one-parameter wetland criteria. A formal delineation is therefore necessary to document the presence, extent, and regulatory status of any wetland or aquatic resources within the parcel, and to guide project design, agency review, and required avoidance or mitigation measures.

2.2 Delineator's Qualifications

The aquatic resource delineation described in this report was conducted by Mason London. Mr. London holds an M.Sc. in Biology with a specialization in aquatic ecology from Cal Poly Humboldt (formerly Humboldt State University) and serves as the Principal Biologist at Naiad Biological Consulting (NBC). He has over 18 years of professional experience spanning wildlife biology, botany, aquatic ecology, and university-level instruction. His prior roles include wildlife biologist with The Nature Conservancy, botanist with the Bureau of Land Management in Medford, Oregon, and aquatic research scientist with the HSU River Institute. Mr. London has worked extensively on CEQA and NEPA projects, conducting protocol-level surveys for special-status species such as willow flycatcher, Swainson's hawk, California red-legged frog, foothill yellow-legged frog, and western pond turtle, as well as botanical surveys across a variety of upland and aquatic habitats. He also has significant experience in pre-construction and compliance monitoring surveys focused on amphibians, reptiles, nesting birds, and mammals throughout California. In addition, Mr. London has over five years of experience conducting wetland delineations and has completed a 40-hour Introduction to Wetland Delineation course taught by Joe Seney, a Certified Professional Soil Scientist (#243) and retired USDA-NRCS and USDI-NPS Soil Scientist. Mr. London is currently an instructor with the Wetland Training Institute and assistants with leading wetland delineations courses in Northern California.

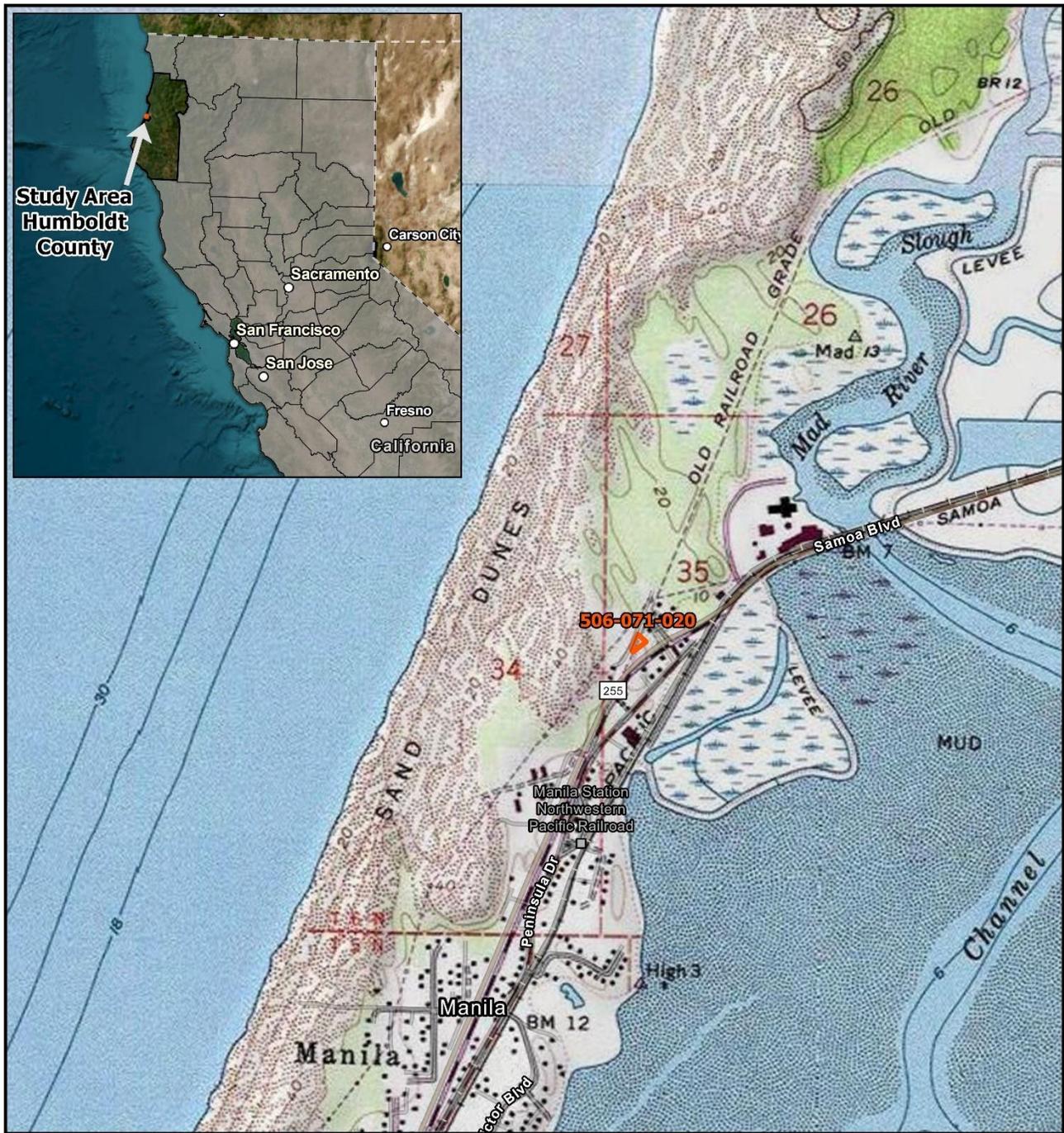
2.3 Study Area Description and Geographic Setting

The Study Area encompasses a single parcel (Assessor's Parcel Number [APN] 506-071-020) located at 92 Young Lane in the unincorporated community of Manila, Humboldt County, California. Manila lies on the Samoa Peninsula, a narrow barrier spit separating Humboldt Bay from the Pacific Ocean, and is characterized by a mix of residential development, dune habitats, and coastal wetlands. The parcel lies within the California Coastal Zone and is subject to regulation under the California Coastal Act and Humboldt County's certified Local Coastal Program (Figure 1).

The parcel is approximately 0.35 acres in assessed lot size, with a GIS-derived area of 0.29 acres, based on Humboldt County Web GIS records. The topography is nearly flat, with elevations ranging from approximately 19 to 23 feet above mean sea level (AMSL), as measured in Google Earth Pro (2025) (Photo 1 & 2). Vegetation consists primarily of non-native grasses and ruderal species, with one dead myrtle tree noted during a 2022 scoping survey, but appeared to have been cleared prior to NBC's 2025 surveys. Immediately east of the parcel boundary is a small willow thicket, which NRM had pointed out may represent a wetland-associated feature. Surrounding land use comprises low-density residential development, undeveloped parcels supporting coastal dune vegetation, and paved roadway infrastructure (Figures 2 & 3).

Regionally, the parcel falls within the U.S. Geological Survey (USGS) Hydrologic Unit Code (HUC-12) 180101020605, known as the Humboldt Bay subwatershed (Figure 1). Hydrology on the Samoa Peninsula is strongly influenced by dune swales, perched groundwater, and seasonal wetlands, with limited perennial drainage features. The Study Area itself does not contain mapped streams or tidal channels, but localized hydrology may connect to nearby wetland complexes and coastal drainages that ultimately discharge to Humboldt Bay.

The Study Area occurs within Major Land Resource Area (MLRA) 4 – Northern California Coastal Forest, part of Land Resource Region A (LRR-A). This MLRA is characterized by a cool, moist maritime climate, frequent coastal fog, sandy soils derived from dune deposits, and a mosaic of forest, scrub, and wetland communities. Geomorphically, the parcel is part of the Samoa Peninsula subunit of the Coast Ranges province, underlain by unconsolidated dune sands and alluvium deposited over Franciscan Complex bedrock. These physical conditions contribute to the ecological sensitivity of the area and underscore the importance of site-specific wetland assessments to ensure compliance with state and federal regulatory frameworks.



<p>Map 1: Project Location</p>  <p>0 500 1,000 2,000 Feet</p> <p>Source: Eureka 7.5-Minute USGS Quadrangle</p> <p> Study Area</p>	<p><u>Friesen Homes</u></p> <p>Project Location: 92 Young Ln. Manila, Humboldt County, CA APN: 506-071-020</p>
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Figure 1. Study Area Locator Map

Section 3 Regulatory Framework

This section provides an overview of the federal, state, and local regulatory context relevant to wetland and aquatic resource delineation at the Study Area located in Manila, Humboldt County, California. Due to the property's location within the California Coastal Zone, it is subject to a combination of federal Clean Water Act provisions, state water quality regulations, and Coastal Act policies.

3.1 Federal Regulatory Framework

At the federal level, the regulation of Waters of the United States (WOTUS) is governed by Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act (RHA). These regulations apply to a variety of aquatic features, including Traditional Navigable Waters (TNWs), their tributaries, lakes, ponds, impoundments, and wetlands that are adjacent to those waters.

The U.S. Army Corps of Engineers (USACE) and the U.S. Environmental Protection Agency (EPA) share authority for enforcing these regulations. The USACE is responsible for issuing permits and conducting jurisdictional determinations (JDs)—formal decisions that identify whether a water feature meets the criteria for federal jurisdiction. The EPA provides oversight and retains the authority to veto permits when necessary.

The current regulatory interpretation is guided by the “Revised Definition of Waters of the United States,” which became effective on September 8, 2023. Under this rule, a wetland or other aquatic feature may qualify as jurisdictional if it exhibits a persistent surface hydrologic connection to a TNW or another qualifying waterbody. Wetlands must meet the three-parameter criteria—hydrophytic vegetation, hydric soils, and wetland hydrology—to be considered for jurisdiction, and must also demonstrate an appropriate physical or functional connection to jurisdictional waters. Features such as ephemeral drainages, isolated depressions, or disconnected artificial channels may be excluded from federal jurisdiction under this framework.

Projects proposing the discharge of dredged or fill material into WOTUS—including jurisdictional wetlands, streams, or other surface waters—must obtain approval from the USACE, typically through either a Nationwide Permit (NWP) or an Individual Permit (IP), depending on the scope and potential environmental impacts of the activity. A formal wetland delineation and a jurisdictional determination are generally required to support the permitting process and to define the extent of federally regulated waters at a given site.

3.2 California State and Regional Regulatory Framework

3.2.1 California Department of Fish and Wildlife

The California Department of Fish and Wildlife exercises jurisdiction over stream and lakebeds under Section 1600–1607 of the California Fish and Game Code. Any project that may alter the bed, bank, or channel of a river, stream, or lake—including ephemeral or intermittent watercourses—requires the project proponent to submit a Lake and Streambed Alteration (LSA) Notification. If CDFW determines that the activity may substantially impact fish or wildlife resources, an LSA Agreement with enforceable conditions must be executed prior to construction.

CDFW also implements the California Endangered Species Act (CESA), which prohibits the unauthorized “take” of state-listed threatened or endangered species. If such species are present or potentially impacted by a project, appropriate avoidance, minimization, or incidental take permits must be obtained.

3.2.2 North Coast Regional Water Quality Control Board

The Study Area lies within the jurisdiction of the North Coast Regional Water Quality Control Board (Region 1), which enforces state water quality laws through the Porter-Cologne Water Quality Control Act. This includes regulation of “Waters of the State,” which encompasses all surface and groundwater, including wetlands regardless of federal jurisdiction status.

Projects discharging dredged or fill material into wetlands or other waters may require Waste Discharge Requirements (WDRs) or certification under Section 401 of the CWA. The State Water Resources Control Board’s (SWRCB) “State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State” (Dredge and Fill Procedures), effective May 28, 2020, establishes consistent requirements for wetland delineation and impact analysis. These procedures define wetlands using the federal three-parameter method, while also allowing the State to assert jurisdiction over features excluded from federal regulation.

3.2.3 California Coastal Commission and Coastal Zone Jurisdiction

The entire Study Area is located within the California Coastal Zone (Figure 1) and is subject to oversight by the California Coastal Commission (CCC) and Humboldt County’s certified Local Coastal Program (LCP). Development within the Coastal Zone generally requires a Coastal Development Permit (CDP) and must conform to Coastal Act policies, including those pertaining to environmentally sensitive habitat areas (ESHA) and wetlands.

Under the Coastal Act, wetlands are defined using a “one-parameter” approach, meaning that the presence of just one of the three federal wetland indicators (hydrophytic vegetation, hydric soils, or wetland hydrology) is sufficient for classification. As a result, areas that may not qualify as wetlands under federal or state criteria could still be regulated as wetlands under the Coastal Act.

Given the property’s location within the certified LCP boundary, wetland delineation and development proposals must be reviewed for consistency with both federal/state wetland regulations and the Coastal Act’s more protective definitions. Delineation results will inform the County’s CDP review and any necessary agency consultations

Section 4 Methods

4.1 Pre-Site Visit Data Compilation and Preparation

Prior to fieldwork, a comprehensive desktop review was conducted to characterize site conditions and guide the delineation approach. Data sources included recent aerial imagery, topographic mapping, watershed boundaries, the California Aquatic Resource Inventory (CARI), National Wetlands Inventory (NWI) mapping, and Natural Resources Conservation Service (NRCS) Web Soil Survey data for the Study Area and surrounding landscape (Figure 2; Appendices A). CARI provides a standardized statewide inventory of aquatic resources and was reviewed to identify any previously mapped wetlands or surface waters in the vicinity of the parcel. In addition, the November 2022 biological scoping letter prepared by NRM (Jenell Jackson, Botanist/Wetland Specialist) was reviewed to incorporate prior observations and recommendations regarding potential wetland indicators adjacent to the property.

The Study Area boundary and base imagery were uploaded to a Trimble GeoXH 6000 GPS unit to support accurate navigation and in-field mapping.

To evaluate antecedent hydrologic conditions, a Wetland Ecosystem Technical Standard (WETS) table was generated prior to the in-field delineation (April 18th, 2025) to determine relative site conditions prior to the site visit (Table 1). The WETS table is generated using the Antecedent Precipitation Tool (APT) v2.0.0, a tool developed jointly by the NRCS and the USACE (Appendix B). The table is calculated by analyzing historical precipitation data from nearby weather stations to establish monthly precipitation normals and compare them with actual precipitation for the period of interest. APT evaluates conditions as "normal," "wetter than normal," or "drier than normal" based on deviation from long-term averages, using statistical thresholds set by NRCS guidelines. This analysis helps determine hydrologic conditions relevant to wetland assessments. Precipitation in the region follows a very strong seasonal pattern of a wet season (October to April) and a dry season (May to September).

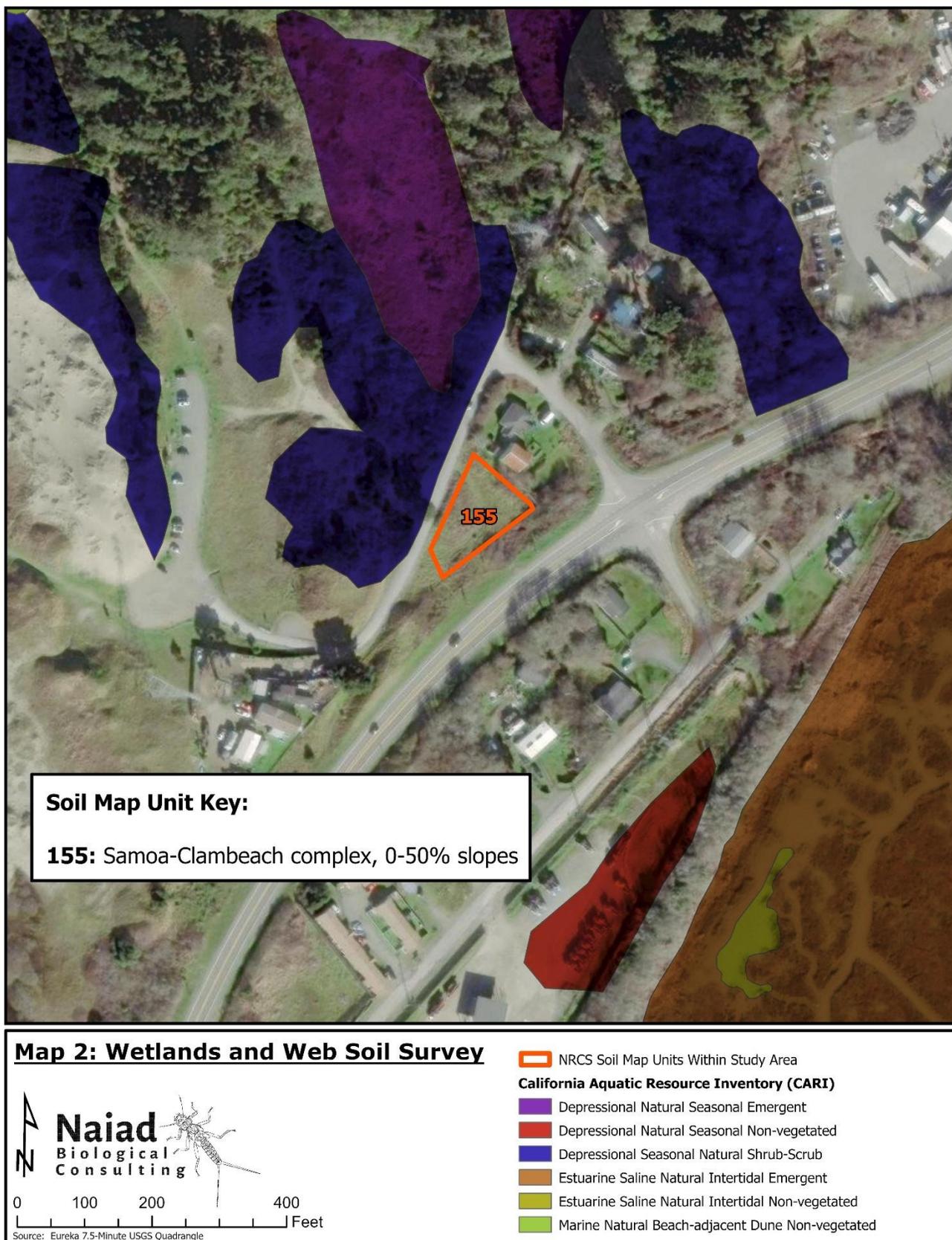


Figure 2. The NRCS Soil Map Unit for the Study Area, as well as surrounding mapped NWI and CARI wetlands.

Table 1. WETS Table Analysis for the April 18th, 2025 Survey

Precipitation Data from the Last 30 Years (1995 – 2025) ¹			Recent Field Conditions Compared to Precipitation Data from the Last 30 Years, and Analysis ¹					
30 Days Ending	30 th Percentile (inches)	70 th Percentile (inches)	Date	Recorded Rainfall (inches)	Rainfall Condition Compared to Previous 30 years ²	Numeric Condition Value ³	Weighting Factor ⁴	Product of Condition Value and Weighting Factor ⁵
Apr 18	2.84	7.05	Apr 18 2025	5.33	Normal	2	3	6
Mar 19	3.85	7.83	Mar 19 2025	8.24	Wet	3	2	6
Feb 17	4.52	7.09	Feb 17 2025	6.84	Normal	2	1	2
¹ All precipitation data is obtained from Weather Station: Eureka WFO Woody Is ² Below 30th percentile = dry; between 30th and 70th percentile = normal; above 70th percentile = wet. ³ Relative rainfall conditions are then translated to a numeric condition value, as follows: dry = 1, normal = 2, wet = 3. ⁴ Greater weight is given to the most recent month as this would most likely influence what hydrologic or vegetative characteristics are observed. ⁵ The numeric condition value is then multiplied by the weighting factor, then the subtotals are added to get the total value. Total value equivalents: 6-9 = dry; 10-14 = normal; 15-18 = wet								TOTAL ⁵ 14, or Normal (wet side of normal)

4.2 Field Survey

A wetland delineation of the Study Area was conducted on April 18, 2025, with a follow up site visit to check site features on June 20, 2025, by NBC Principal Biologist Mason London. The survey included a systematic traverse of the parcel to evaluate vegetation, soils, and hydrologic indicators in accordance with both federal and state regulatory standards, specifically the USACE three-parameter method and the CCC’s one-parameter definition applicable within the Coastal Zone.

A total of three delineation plots (P1–P3) were established to document representative site conditions across the parcel. Data points were selected based on site topography and habitat characteristics: P1 was placed at the lowest point of the parcel, P2 at an intermediate elevation, and P3 at the highest elevation. This distribution ensured that the full range of site variability was captured. At each plot, vegetation, soils, and hydrology were assessed, and georeferenced photographs were taken to illustrate habitat features and hydrologic indicators. Conducting the survey during the spring growing season of the 2025 water year allowed for accurate detection of hydrophytic vegetation, hydric soil characteristics, and evidence of wetland hydrology.

All data collection procedures followed the protocols outlined in the USACE Wetlands Delineation Manual (Environmental Laboratory, 1987) and the Regional Supplement for the Western Mountains, Valleys, and Coast Region, Version 2.0 (USACE, 2010). For purposes of Coastal Act compliance, areas meeting any one of the three federal wetland parameters (hydrophytic vegetation, hydric soils, or wetland hydrology) were also identified and evaluated under the CCC’s one-parameter standard.

Spatial data were recorded using a Trimble GeoXH 6000 handheld GPS unit with sub-foot nominal precision, allowing for accurate mapping of delineation points, data plots, and any potential jurisdictional

wetland or aquatic features within the parcel. Detailed methods and criteria for vegetation, soils, and hydrology assessments are provided in the subsections below.

4.2.1 Soils

At each data point, soil profile pits were excavated using a rounded drain spade shovel, and an examination was conducted to identify positive hydric soil indicators. These indicators are characteristic features resulting from anaerobic conditions and persist in the soil during both saturated (reduced) and dry (oxidized) states within the upper 12 inches of soil. Examples include mottled color patterns from iron or manganese reduction and reoxidation, and the accumulation of organic matter due to saturated environments promoting slow decomposition rates. Hydric soil field indicators exhibit distinct morphologies due to the accumulation or loss of iron, manganese, sulfur, or carbon compounds in anaerobic conditions. These indicators include assessing features such as low matrix chromas, redox features, gleys, and the presence of iron and manganese concretions. Detailed records of soil color and texture encountered at each layer were documented on delineation forms. Soil color was determined using a Munsell soil color chart (Kollmorgen, 2000), while soil texture was assessed using a standardized chart endorsed by the California Native Plant Society (CNPS), adapted from Brewer and McCann (1982). Prior to assessment, all soil samples were moistened. Soil map units were cross-referenced with both the California hydric soils list (SCS, 1993) and the national hydric soils list (SCS, 1991). Determination of whether the hydric soil criterion was met followed guidelines outlined by the National Technical Committee for Hydric Soils and the 2010 Regional Supplement: Western Mountains, Valleys, and Coast Region (Version 2.0) (USACE, 2010). Typically, soils with a matrix chroma of 1, and mottled soils with a matrix chroma of 2 or less, are considered to meet hydric soil criteria. Additionally, soils not exhibiting low matrix chromas but experiencing inundation or saturation within 12 inches of the surface for at least 5 percent of the growing season (14 consecutive days) are also classified as hydric.

4.2.2 Hydrology

Indicators of wetland hydrology were noted at each data point, such as the presence of surface water, surface soil cracks, saturated soil, water-stained vegetation, drainage patterns, and sediment deposits. Hydrological connectivity was investigated throughout the study area and surrounding habitats. Although wetland hydrology indicators are important in delineating wetlands, they are the least credible compared to soil and vegetation indicators due to variability of seasonal and local weather patterns that influence hydrology. Wetland hydrology exists at a site when it is flooded (A1), ponded (A1), or has groundwater within 12 inches of the ground surface (A2) for 14 or more consecutive days during the growing season in at least 5 out of 10 years. Wetland hydrology is the most seasonal and transitory of the three parameters. The USACE manual describes primary and secondary wetland hydrology "Indicators" that allow delineators to evaluate hydrology throughout the growing season, even late in the dry season when saturation in the upper part of the soil may no longer be present. Examples of primary indicators include surface water (A1), a high-water table (A2) (groundwater within 12 inches of soil surface), saturated soil (A3), oxidized iron along live root channels or on live root surfaces (C3), sparsely vegetated concave surfaces (B8), water-stained leaves (B9), sediment deposits (B2), stunted vegetation or stressed plants (D1) or drainage patterns (B10). Examples of secondary indicators include presence of a "dry season water table" between 12 and 24 inches below the ground surface (C2), a shallow aquitard (D3), a dense layer within 24 inches of the soil surface, the FAC Neutral Test (D5), and "geomorphic position" (D2) of

the site (e.g., toe slopes, drainageways, depressions, and swales). The presence of one primary or two secondary indicators confirms wetland hydrology.

The delineation was conducted during and throughout the wet season with “normal” precipitation and therefore normal potential wetland conditions (Table 1).

4.2.3 Vegetation

At each delineation data point, plant species were identified and recorded by stratum. Herbaceous species were documented within a 5-foot radius, with visual estimates of percent cover made for each taxon. Sapling and shrub species, when present, were identified within a 30-foot radius, and tree species were also recorded within a 30-foot radius. Percent cover estimates for each stratum were calibrated using California Native Plant Society (CNPS) percent cover templates¹.

The indicator status of each species was then checked using the most recent USACE National Wetland Plant List—Version 3.5 (USACE, 2020).

Indicator status categories are as follows:

- OBL = obligate wetland; >99% probability of occurring in a wetland
- FACW = facultative wetland; 67%-99% probability of occurring in a wetland
- FAC = facultative; 33%-67% probability of occurring in a wetland
- FACU = facultative upland; 1%-33% probability of occurring in a wetland
- UPL = obligate upland; <1% probability of occurring in a wetland
- NI = no indicator (plants not listed in the 2020 ACOE National Wetland Plant List—Version 3.5)

The wetland vegetation criterion is met when the dominant plants pass the dominance test, showing that over 50 percent of these species are designated as OBL, FACW, or FAC wetland indicators. Dominant plant species collectively account for 50 percent of the total cover within their stratum (tree, sapling/shrub/subshrub, herb, or woody vine), listed in descending order of percent cover. Additionally, any species with at least 20 percent coverage within a stratum are always considered dominant. Plant names follow Baldwin et al. (2012) and/or the Calflora database (2019). If the dominance test is not met, vegetation may still be considered hydrophytic if it meets the prevalence index, morphological adaptations, or addresses problematic wetland situations (USACE 2008).

¹ CNPS percent cover templates: http://www.cnps.org/cnps/vegetation/pdf/percent_cover_diag-cnps.pdf

Section 5 Results

5.1 Aquatic Resources

A wetland delineation was conducted on April 18, and June 20, 2025 by Principal Biologist Mason London of Naiad Biological Consulting. Three delineation plots (P1–P3) were established to assess the presence or absence of aquatic resources subject to federal and Coastal Zone jurisdiction (Figure 3, Photos 3–8, Appendix D). Sampling was conducted using the Routine Determination Method as outlined in the 1987 U.S. Army Corps of Engineers Wetlands Delineation Manual and the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region.

Plot sizes were stratified by vegetation layer and adjusted slightly from standard USACE protocol to accommodate spatial limitations and vegetation structure observed in the field. The tree, sapling/shrub, and woody vine strata were assessed over a 30-ft radius ($\approx 262 \text{ m}^2$), while the herbaceous stratum was assessed over a 5-ft radius ($\approx 7.35 \text{ m}^2$). These plot sizes were appropriate for the stabilized dune flat setting and allowed representative sampling without incorporating uncharacteristic adjacent habitat.

All three delineation plots were located within the mapped Samoa–Clambeach complex, 0–50 percent slopes (NRCS 2024). This mapping unit occurs on coastal dune landforms and is composed primarily of excessively to somewhat poorly drained sandy soils derived from marine and eolian sands. The Samoa component (65%) is excessively drained and non-hydric, while the Clambeach component (30%) is very poorly drained and considered hydric. A minor unmapped hydric component (Oxyaquic udipsamments) may occur in small deflation basins but was not observed within the study plots.

The results of the delineation are presented below.

5.1.1 Watercourses

No streams, swales, seeps, or springs were observed within the Study Area. The site is characterized by stabilized dune flats and hummocky topography, with no evidence of surface hydrology or channel morphology (e.g., bed/bank, scour, sediment deposition, or flow patterns). Therefore, no watercourses subject to USACE, CDFW, or Coastal Commission jurisdiction occur within the Study Area.

5.1.2 Wetlands

Three delineation plots (P1–P3) were established to evaluate vegetation, soils, and hydrology (Figure 3). Plots were positioned at different microtopographic elevations across the dune flat: P1 was located in the lowest position (Photo 3 & 4), P2 at an intermediate elevation (Photo 5 & 6), and P3 at the highest elevation (Photo 7 & 8). None of the plots met all three criteria (hydric soils, hydrophytic vegetation, and wetland hydrology).

Table 2. Wetland Plot Summary (Datasheets Provided in Appendix D)

Plot	Soils	Hydrology	Vegetation	Wetland Status
P1	Non-hydric	Absent	Upland/FACU with scattered FACW (insufficient to meet criteria)	Non-Wetland
P2	Non-hydric	Absent	Upland/FACU/NI	Non-Wetland
P3	Non-hydric	Absent	Upland/FACU/NI	Non-Wetland

5.1.2.1 Soils

Soil pits were excavated at each delineation point to depths of 12 inches. All plots exhibited uniform sandy textures with high permeability and no evidence of gleying, redoximorphic features, or saturation.

- **P1:** Surface soils consisted of 0–2 inches 10YR 3/2 sand, underlain by 10YR 4/3 sand to 12 inches. Substrates were well-aerated, freely draining sands with no hydric indicators.
- **P2:** Profile of 10YR 4/3 sand from 0–12 inches. Well-drained, lacking hydric indicators.
- **P3:** Profile of 10YR 4/3 sand from 0–12 inches. Well-drained, no hydric features.

These findings are consistent with the Samoa component of the Samoa–Clambeach complex, which is excessively drained and mapped as non-hydric. No evidence of the Clambeach hydric component was observed in the Study Area.

5.1.2.2 Hydrology

No indicators of wetland hydrology (e.g., surface water, saturation within the upper 12 inches, water-stained leaves, oxidized rhizospheres, or drift deposits) were observed at any of the delineation points. Substrates were highly permeable sands with little to no capacity for water retention. The APT confirmed typical seasonal conditions at the time of the April 2025 survey.

5.1.2.3 Vegetation

Vegetation across the plots was composed primarily of upland or facultative upland species, with scattered facultative species but insufficient to meet hydrophytic criteria.

- **P1:** Dominated by *Rubus ursinus* (FACU), *Prunus emarginata* (FACU), *Salix hookeriana* (FACW, low cover), *Anthoxanthum odoratum* (FACU), *Juncus patens* (FACW), and *Equisetum telmateia* (FACW). While some FACW species were present, the Dominance Test returned 0% hydrophytic dominants (0/2), and the Prevalence Index was 3.69 (>3.01). Thus, P1 failed hydrophytic vegetation criteria.
- **P2:** Dominated by *Festuca bromoides* (NI), *Bromus diandrus* (NI), *Medicago polymorpha* (FACU), *Rumex acetosella* (FACU), *Anthoxanthum odoratum* (FACU), and *Hypochaeris radicata* (FACU). The Dominance Test returned 0% hydrophytic dominants (0/3), and the Prevalence Index was 4.0. Fails hydrophytic vegetation criteria.
- **P3:** Dominated by *Bromus diandrus* (NI), *Briza maxima* (NI), *Rumex acetosella* (FACU), *Anthoxanthum odoratum* (FACU), and *Hypochaeris radicata* (FACU). The Dominance Test returned 0% hydrophytic dominants (0/5), and the Prevalence Index was 4.0. Fails hydrophytic vegetation criteria.

Across all plots, hydrophytic vegetation indicators were not met.



Map 3: Aquatic Resource Test Plots



Figure 3. Map showing the locations of all three negative wetland delineation plots within the Study Area.

Section 6 Conclusions, Discussion, and Recommendations

6.1 Conclusions

Based on the April 18, and June 20, 2025 wetland delineation and supporting NRCS soil data, no wetlands or other jurisdictional aquatic features were identified within the Study Area under either the federal three-parameter approach or the CCC's one-parameter definition for the Coastal Zone.

All three delineation plots (P1–P3) failed to meet wetland criteria:

- **Vegetation:** Dominance Test and Prevalence Index values confirmed upland/FACU communities with only scattered FACW species, insufficient to qualify as hydrophytic vegetation.
- **Soils:** Uniform sandy substrates (10YR hues) lacked hydric indicators such as gleying, redox features, or low-chroma matrices.
- **Hydrology:** No evidence of saturation, ponding, or hydrologic indicators was observed; the Antecedent Precipitation Tool confirmed conditions were seasonally typical.

Accordingly, no portion of the parcel qualifies as a wetland under USACE, CCC, or Humboldt County Local Coastal Program criteria, and no features are subject to Sections 401/404 of the Clean Water Act, the Porter-Cologne Water Quality Control Act, or Coastal Act wetland policies.

6.2 Discussion

The delineation addressed agency concerns regarding potential wetland features within the parcel. Plots were positioned across topographic gradients of the stabilized dune flat: P1 at the lowest position, P2 at an intermediate elevation, and P3 at the highest. None exhibited hydrophytic vegetation, hydric soils, or hydrology.

Although the NRCS mapping unit (Samoa–Clambeach complex) includes a hydric Clambeach component, only excessively drained Samoa-type soils were observed in the Study Area. These well-aerated sands are consistent with upland dune habitats, which lack the capacity to retain surface or subsurface water.

Given the size of the parcel, uniform sandy profiles, and absence of hydric or hydrophytic indicators during a seasonally appropriate survey, the likelihood of unmapped wetlands elsewhere on site is very low.

6.3 Recommendations

Based on the findings of this delineation, the following recommendations are provided:

1. Proceed with Coastal Development Permit Review:

The delineation confirms the absence of CCC- and County-jurisdictional wetlands within the Study Area. The County of Humboldt and Coastal Commission should be provided with this delineation report to support the CDP application and confirm that no wetland setbacks or mitigation measures pertaining to wetlands are required.

2. No Further Delineation Necessary Unless Site Conditions Change:

If site conditions remain consistent and no significant changes to drainage patterns or vegetation occur, this delineation should remain valid for regulatory purposes for a period of 5 years. However, if grading, vegetation clearing, or hydrologic modifications occur prior to permit issuance, an updated site inspection may be warranted.

3. Maintain Supporting Documentation:

It is recommended that the applicant retain a copy of this delineation report and associated data forms in project records to address any future regulatory review or inquiries regarding wetland status on the property.

4. Consult Agencies If New Features Are Observed:

Should any new or unanticipated features (e.g., standing water, saturated depressions) be observed during or after project implementation, consultation with the County, Coastal Commission, or qualified biologist is advised to determine whether a supplemental delineation is necessary.

6.4 Conditions and Limitations

This delineation represents professional judgment based on conditions observed on April 18, and June 20, 2025, and current regulatory guidance. Results are valid only for the date and site conditions documented. Changes in land use, vegetation, hydrology, or soils could alter wetland determinations.

This report does not constitute a formal jurisdictional determination by the U.S. Army Corps of Engineers, California Coastal Commission, or any other agency. Final authority rests with the relevant regulatory agencies, and the applicant is responsible for submitting this delineation for verification.

Section 7 References

- California Coastal Commission (CCC). 2021. *California Coastal Act and Local Coastal Program Regulations*. Available at: <https://www.coastal.ca.gov>
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Department of the Interior, Fish and Wildlife Service, FWS/OBS-79/31.
- Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- Natural Resources Conservation Service (NRCS). 2024. *Web Soil Survey for Humboldt County, California, Western Part*. U.S. Department of Agriculture. Accessed June 2025. <https://websoilsurvey.nrcs.usda.gov>
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- U.S. Army Corps of Engineers (USACE). 2020. *National Wetland Plant List, Western Mountains, Valleys, and Coast Region*. Available at: <https://wetland-plants.sec.usace.army.mil>
- U.S. Environmental Protection Agency (EPA) and U.S. Army Corps of Engineers (USACE). 2008. *Compensatory Mitigation for Losses of Aquatic Resources; Final Rule*. Federal Register 73(70):19594–19705.
- U.S. Geological Survey (USGS). 2024. *Topographic Map Viewer*. Accessed via <https://apps.nationalmap.gov>
- Western Regional Climate Center (WRCC). 2025. *Antecedent Precipitation Tool (APT)*. U.S. Army Corps of Engineers Regulatory Program. Accessed June 2025.

Photo Documentation



Photo 1. The relatively flat dune habitat that makes up the entire Study Area. Photo taken April 18, 2025



Photo 2. The flat dune habitat that makes up the entire Study Area. Photo taken June 20, 2025



Photo 4. P1 location in the lowest portion of the Study Area.



Photo 3. P1 soil profile showing no hydrologic soil indicators.



Photo 5. P2 location within the intermediate elevation of the Study Area.



Photo 6. P2 soil profile showing no hydrologic soil indicators.



Appendix A

Web Soil Survey Report

AQUATIC RESOURCES DELINEATION

92 Young Lane, Manila (Arcata), 95521, Humboldt County, CA
Assessor Parcel Number (APN):
506 – 071 – 020

August 2025



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, shoulder, backslope

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

O_i - 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 (K_{sat}): 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: F004B1100CA - 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

Data Source Information

Soil Survey Area: Humboldt County, Central Part, California
Survey Area Data: Version 11, Aug 28, 2024

Appendix B

Antecedent Precipitation Tool Graph

AQUATIC RESOURCES DELINEATION

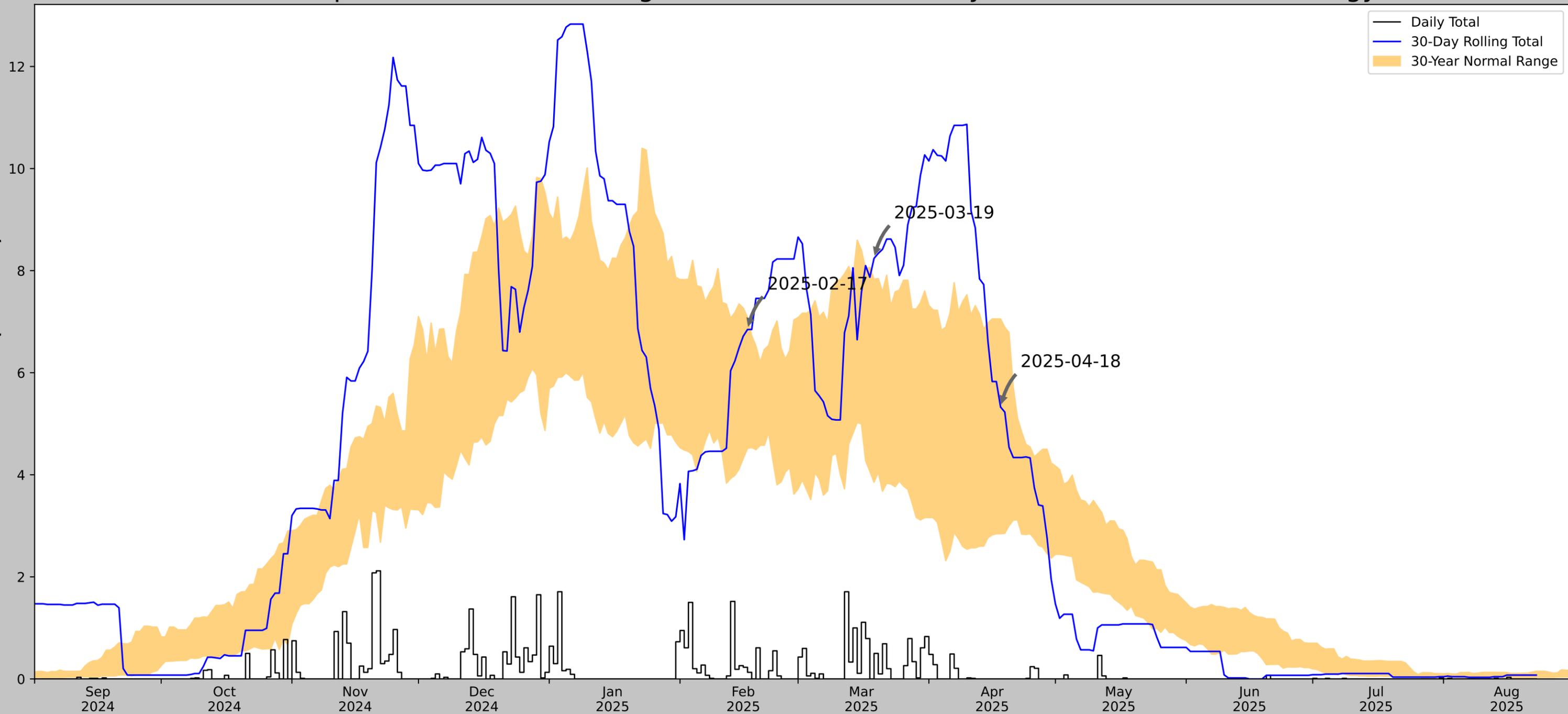
92 Young Lane, Manila (Arcata), 95521, Humboldt County, CA
Assessor Parcel Number (APN):
506 – 071 – 020

August 2025



Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network

Rainfall (Inches)



Coordinates	40.8621, -124.15804
Observation Date	2025-04-18
Elevation (ft)	22.025
Drought Index (PDSI)	Incipient drought
WebWIMP H ₂ O Balance	Not available

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-04-18	2.843701	7.053937	5.326772	Normal	2	3	6
2025-03-19	3.852756	7.831103	8.240158	Wet	3	2	6
2025-02-17	4.516929	7.08504	6.846457	Normal	2	1	2
Result							Normal Conditions - 14

Figures and tables made by the
Antecedent Precipitation Tool
Version 3.0



US Army Corps
of Engineers



Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
EUREKA WFO WOODLEY IS	40.8097, -124.1603	20.013	3.622	2.012	1.637	11353	90

Appendix C

Wetland Determination Data Forms

AQUATIC RESOURCES DELINEATION

92 Young Lane, Manila (Arcata), 95521, Humboldt County, CA
Assessor Parcel Number (APN):
506 – 071 – 020

August 2025



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

Project/Site: 92 Young Ln. City/County: Manila, Humboldt Co. Sampling Date: 04/18/2025
 Applicant/Owner: Friesen Homes State: CA Sampling Point: P1
 Investigator(s): Mason London Section, Township, Range: SEC35, T6N, R1W
 Landform (hillslope, terrace, etc.): dune flat Local relief (concave, convex, none): concave Slope (%): 2 %
 Subregion (LRR): LRR A Lat: 40.862164 Long: -124.157737 Datum: WGS84
 Soil Map Unit Name: 155 - Samoa-Clambeach complex, 0-50% slopes NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: The plot is located adjacent to a county road and appears to contain fill material that were likely deposited during road construction.	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30 ft r</u>)				
1. <u>Prunus emarginata</u>	<u>5</u>	No	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0/2 = 0%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>48</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>30 ft r</u>)				
1. <u>Salix hookeriana</u>	<u>5</u>	No	FACW	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>-</u> x 1 = <u>-</u> FACW species <u>17</u> x 2 = <u>34</u> FAC species <u>3</u> x 3 = <u>9</u> FACU species <u>100</u> x 4 = <u>400</u> UPL species <u>-</u> x 5 = <u>-</u> Column Totals: <u>120</u> (A) <u>443</u> (B) Prevalence Index = B/A = <u>443/120 = 3.69</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>60</u> = Total Cover				
Herb Stratum (Plot size: <u>5 ft r</u>)				
1. <u>Anthoxanthum odoratum</u>	<u>60</u>	Yes	FACU	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Juncus pattens</u>	<u>10</u>	No	FACW	
3. <u>Equisetum telmateia</u>	<u>2</u>	No	FACW	
4. <u>Scrophularia californica</u>	<u>3</u>	No	FAC	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>79</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft r</u>)				
1. <u>Rubus ursinus</u>	<u>35</u>	Yes	FACU	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. _____	_____	_____	_____	
<u>15</u> = Total Cover				
% Bare Ground in Herb Stratum <u>approx 20%</u>				
Remarks: NA				

SOIL

Sampling Point: P1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2"	10YR 3/2	100%	-----	-----	-----	-----	Sandy	completely sand
2-12"	10YR 4/3	100%	-----	-----	-----	-----	Sandy	completely sand

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils³ <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if present): Type: <u>NA</u> Depth (inches): <u>NA</u>	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
--	---

Remarks:

Substrate comprised well-aerated sandy soils with high permeability and appears to have limited to no water retention ability due to sand feature.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Frost-Heave Hummocks (D7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D7)

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
---	---

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

NA

Remarks:

No evidence of hydrology or hydrologic indicators at this location.

SOIL

Sampling Point: P2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12"	10YR 4/3	100%	-----	-----	-----	-----	Sandy	completely sand

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if present): Type: <u>NA</u> Depth (inches): <u>NA</u>	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
--	---

Remarks:

Substrate comprised well-aerated sandy soils with high permeability and appears to have limited to no water retention ability due to sand feature.

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Frost-Heave Hummocks (D7)

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
--	---

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

NA

Remarks:

No evidence of hydrology or hydrologic indicators at this location.

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

Project/Site: 92 Young Ln. City/County: Manila, Humboldt Co. Sampling Date: 06/20/2025
 Applicant/Owner: Friesen Homes State: CA Sampling Point: P3
 Investigator(s): Mason London Section, Township, Range: SEC35, T6N, R1W
 Landform (hillslope, terrace, etc.): dune flat Local relief (concave, convex, none): none Slope (%): <1%
 Subregion (LRR): LRR A Lat: 40.861982 Long: -124.158134 Datum: WGS84
 Soil Map Unit Name: 155 - Samoa-Clambeach complex, 0-50% slopes NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					
The plot is located adjacent to a county road and appears to contain fill material that were likely deposited during road construction.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>5</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0/5 = 0%</u> (A/B)	
4. _____	_____	_____	_____		
			= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	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 <u>45</u> x 4 = <u>180</u>	
			= Total Cover	UPL species _____ x 5 = _____	
			= Total Cover	Column Totals: <u>45</u> (A) <u>136</u> (B)	
				Prevalence Index = B/A = <u>180/45= 4</u>	
Herb Stratum (Plot size: <u>5 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:	
1. <u>Anthoxanthum odoratum</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation	
2. <u>Bromus diandrus</u>	<u>20</u>	<u>Yes</u>	<u>NI</u>	<input type="checkbox"/> 2 - Dominance Test is >50%	
3. <u>Rumex acetosella</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>	<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹	
4. <u>Raphanus raphanistrum</u>	<u>15</u>	<u>Yes</u>	<u>NI</u>	<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
5. <u>Briza maxima</u>	<u>15</u>	<u>Yes</u>	<u>NI</u>	<input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹	
6. <u>Hypochaeris radicata</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
7. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
			<u>95</u> = Total Cover		
Woody Vine Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?	
1. _____	_____	_____	_____	Yes <input type="checkbox"/>	
2. _____	_____	_____	_____	No <input checked="" type="checkbox"/>	
			= Total Cover		
% Bare Ground in Herb Stratum <u>approx 20%</u>					
Remarks:					
NA					

