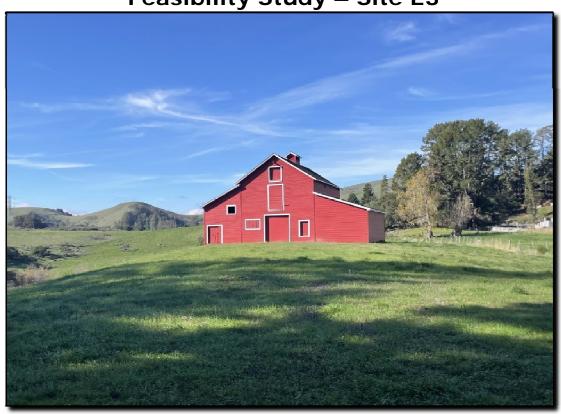


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Delineation of Potential Jurisdictional Waters La Honda Creek Parking and Trailhead Access Feasibility Study – Site E3



La Honda Creek Open Space Preserve San Mateo County, California

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ACRONYMS

ACOE U.S. Army Corps of Engineers

CDFW California Department of Fish and Wildlife

CNPS California Native Plant Society

DEM Digital Elevation Model

EPA Environmental Protection Agency
GIS Geographic Information Systems

GPS Global Positioning Systems
LiDAR Light Detection and Ranging
LSA Lake and Streambed Alteration
NWI National Wetlands Inventory

NWP Nationwide Permit

OHWM Ordinary High Water Mark

PRISM Parameter-Elevation Regressions on Independent Slopes Model

MROSD Midpeninsula Regional Open Space District

RHA Rivers and Harbors Act

RWQCB Regional Water Quality Control Board

SWANCC Solid Waste Agency of Northern Cook County

TNW Traditional Navigable Waters
USDA U.S. Department of Agriculture

USGS U.S. Geological Survey

VNLC Vollmar Natural Lands Consulting

WDR Waste Discharge Requirements

Note: for National Wetlands Inventory habitat acronym definitions, see the following website: https://fwsprimary.wim.usgs.gov/decoders/wetlands.aspx

1.0 INTRODUCTION

This document presents the methods and results of the delineation of potential jurisdictional Waters of the United States and/or State of California within the La Honda Creek Parking and Trailhead Feasibility Study – Site E3. The project site is within the La Honda Creek Open Space Preserve (Preserve), in central San Mateo County (**Figure 1**), and is owned and managed by the Midpeninsula Regional Open Space District (MROSD). The project proposes a small parking lot (size to be determined by physical and other constraints), with limited access (specific constraints to be determined during feasibility study phase, but potential options include permit only/docent-led only conditions). The delineation was conducted in order to identify and map any potentially jurisdictional Waters within the project site. The delineation was conducted by staff from Vollmar Natural Lands Consulting (VNLC) on behalf of MROSD, which is carrying out the project.

All Waters delineated within the study area may be subject to federal jurisdiction by the U.S. Army Corps of Engineers (ACOE) through Section 404 of the Clean Water Act and may also be subject to State jurisdiction by the California Department of Fish and Wildlife (CDFW), and/or the Regional Water Quality Control Board (RWQCB) through state regulations. The results of this delineation are preliminary and must be reviewed and verified in writing by the ACOE to be considered an official delineation.

The delineation resulted in the documentation of a total of 0.040 acre of potentially jurisdictional Waters, consisting of 0.013 acre of non-wetland incised channel and 0.027 acre of non-wetland drainage swale, including associated underground culverts. The incised channel may be jurisdictional at the federal level as well as State (CDFW and RWQCB), while the swale is likely only jurisdictional at the State level (RWQCB only, and the underground portions may be excluded). In addition, the delineation resulted in the documentation of 0.695 acre of riparian habitat that lies beyond the channel bank tops.

2.0 PROJECT BACKGROUND INFORMATION

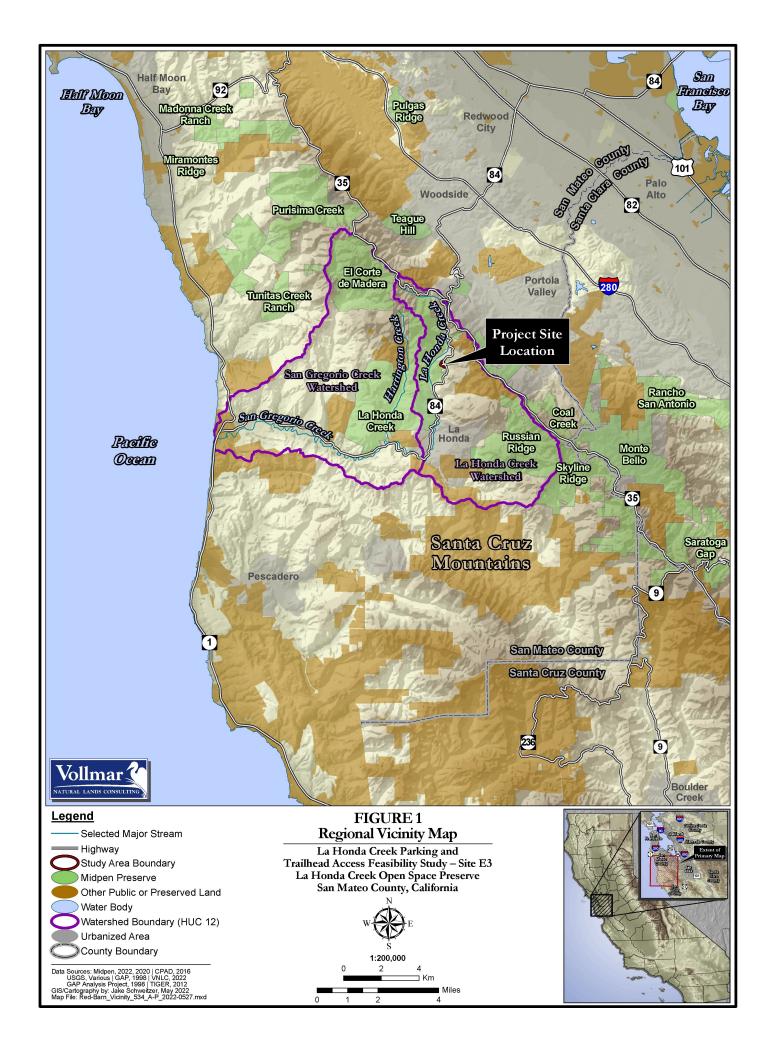
2.1 Extent and Location of Study Area

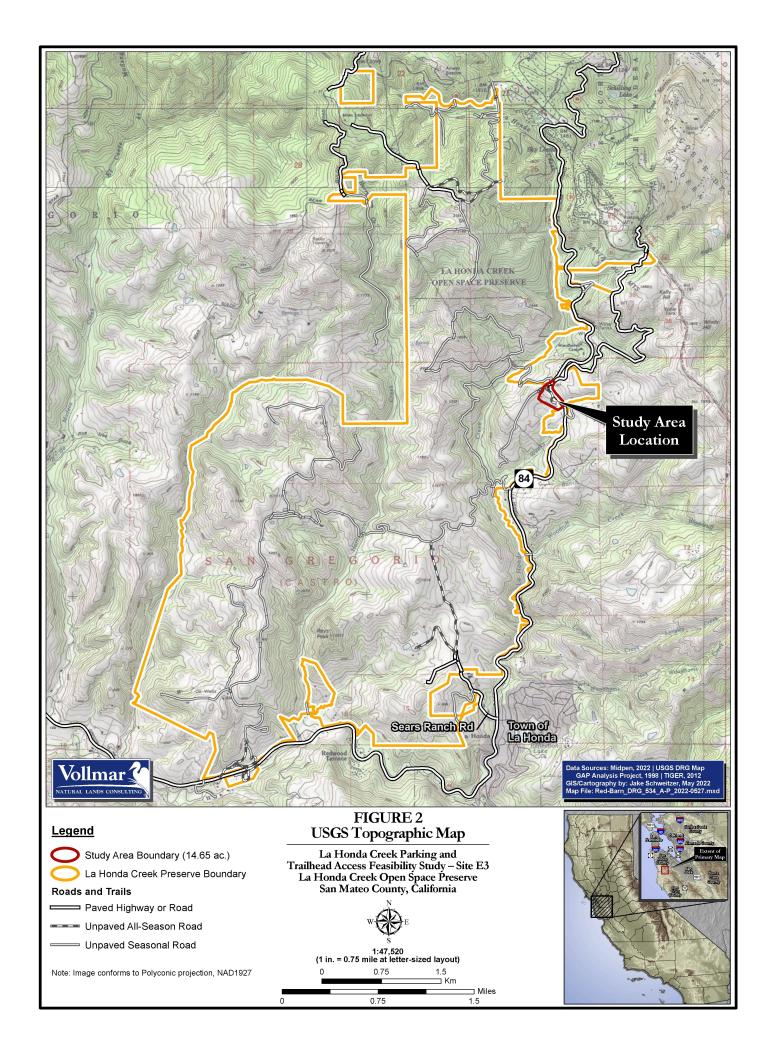
The Preserve lies on the outskirts of the Town of La Honda and is bounded by State Highway 84. The study area is within the Preserve, but also encompasses Highway 84, which passes through the property (**Figure 2**). The study area is 14.65 acres, including a variable buffer area surrounding the proposed project features. The site centroid is located at approximately 37.355417 north and 122.266215 west, and it can be accessed from Highway 84 via a gated MROSD road at its northern edge, which is approximately 3.2 miles north and east of the La Honda town center at Sears Ranch Road (**Figure 2**). The project site is mapped on the La Honda 7.5' United States Geological Survey (USGS) topographic quadrangle within the San Gregorio (Rodriguez) Land Grant (no township, range, or section designations). The project site boundaries are shown in detail in **Figure 3**, **Section 5.1**.

2.2 General Setting of Study Area

The study area is situated within rolling to steep hills in the Santa Cruz Mountains, in the Central Coast Ranges. Elevation ranges from approximately 987 to 1,150 feet above sea level, with the lowest elevation occurring downslope of the Red Barn to the south and the highest elevation occurring upslope to the northwest. Located just over six air miles from the Pacific Ocean, the region is considered to be within the Western Mountains, Valleys, and Coast Region as mapped by the ACOE (ACOE 2010). Climate within the region is described below.

The predominant plant communities within the study area are grasslands and mixed hardwood and conifer woodland/forest, including a variety of planted non-native trees. In addition, there are remnants of vegetation associated with historical occupation of the site by previous property owners. Most of the site consists of annual and perennial grassland habitat that is intermixed with encroaching coastal scrub.





the aforementioned historical horticultural vegetation. An old corral sits in the center of the site northwest of the Red Barn, while the south edge of the site is dominated by vegetation associated with a stream that flows just south of the site.

2.2.1 Land Use

Consistent with the primary objectives set forth by the MROSD, land use in the vicinity of the study area is reflective of the Preserve's legacy as a working cattle ranch. Generally, the Preserve encompasses a network of recreational trails and is dotted with structures such as barns, sheds, and watering stock ponds and troughs, the most notable of which is the Red Barn. Located in the center of the site, the corral is actively used by grazing tenants. Land use surrounding the study area consists of additional preserve lands managed by MROSD and other entities as well as low density rural residential development.

2.2.2 Watersheds

As shown in **Figure 1**, the study area lies within the La Honda Creek Watershed, which in turn is contained within the Greater San Gregorio Creek watershed (USGS 2018). La Honda Creek is a tributary of San Gregorio Creek; it flows southward along Highway 84 and merges into San Gregorio Creek approximately 0.75 mile south of the La Honda Fire Brigade. Ephemeral to seasonal streams in the vicinity of the site conduct water southeastward toward La Honda Creek (**Figure 2**). Overland flows within the site are conducted via non-wetland swales southeastward into Weeks Creek, a tributary of La Honda Creek. Swales are hereby defined as linear drainages that are not incised, thus lacking any bed or bank topography. After absorbing La Honda Creek, San Gregorio Creek flows westward, discharging into the Pacific Ocean approximately eight miles west of its confluence with La Honda Creek.

2.2.3 Climate

The climate of the study area and surrounding vicinity is characterized by cool, wet winters and relatively warm summers that are arid but subject to frequent fog and moderate to high winds. The region is subject to high inter- and intra-annual variability in weather conditions, particularly with respect to precipitation. Being within the Western Mountains, Valleys, and Coast Region, the climate may be defined for floristic analyses as "coastal Mediterranean." On average, the area receives 31.5 inches of precipitation on an annual basis, with over 97 percent occurring during the "wet season," from October through April (PRISM 2022). However, because the study area is significantly influenced by coastal maritime weather patterns, considerable moisture is available as fog through the "dry" summer season. In turn, the moisture serves to moderate temperatures, maintaining relatively cool average summer temperatures with minimal fluctuations. The average annual temperature in the area (from 1981 to 2010) is 54.0 degrees, and average temperatures each month range from a low of 50.3 degrees Fahrenheit in December to a high of 64.6 degrees in September. The highest average monthly temperature is in September because summertime fog serves to suppress temperatures, such that June, July, and August experience average temperatures of only 60.0, 63.1, and 63.6 degrees, respectively (ibid).

The 2021-2022 wet season (from October to April), experienced lower than average precipitation and slightly higher than average temperatures. Specifically, total precipitation during the timeframe amounted to just under 79 percent of the 30-year normal (22.7 verses 28.9 inches), and temperatures were 101 percent of normal (54.2 versus 53.9 degrees). Moreover, the pattern of precipitation in particular was highly inconsistent, with October, December, and April all experiencing considerably higher than average rainfall, but January, February, and March all experiencing much lower than average rainfall. **Table 1** below presents WETS analysis of weather for the timeframe prior to the delineation survey. The analysis confirms that, overall, the region experienced "below average" precipitation. The timing of the precipitation in the three months leading up to the April survey was generally conducive to plant germination and growth—and therefore conducive to a wetland delineation. A large storm in late December was just in time to initiate germination of annual plants, which aided the growth that began following heavy rains in early November. Following a mid-winter drought in January and February, precipitation resumed in peak spring (April) to extend the plant blooming period.

TABLE 1. WETS Weather Analysis

	ipitation Data 30 Years (19		Recent Field Conditions Compared to Precipitation Data from the Last 30 Years, and Analysis							
Date	30th Percentile (inches)	70th 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		
Mar	1.67	4.18	Mar 2022	0.86	Dry	1	3	3		
Feb	1.96	5.47	Feb 2022	0.12	Dry	1	2	2		
Jan	2.28	5.84	Jan 2022	0.66	Dry	1	1	1		
lan 228 584 11 066 Dry 1 1 1										

2.3 Project Personnel

The wetland delineation was conducted by VNLC Senior Ecologist Jake Schweitzer, with project support from Christopher Jamison, Staff Ecologist with VNLC.

3.0 REGULATORY BACKGROUND

3.1 Federal Regulatory Framework

The federal government, through Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act (RHA), has jurisdiction over all Waters of the United States. Waters of the United States are divided into four subsets – territorial seas and traditional navigable waters (TNWs); tributaries to TNWs; lakes, ponds, and impoundments of TNWs; and wetlands adjacent to territorial seas and TNWs. Section 404 of the CWA regulates the discharge of dredged or fill material into Waters of the United States. The CWA grants dual regulatory authority of Section 404 to the U.S. Environmental Protection Agency (EPA) and ACOE. The ACOE is responsible for issuing and enforcing permits for activities in jurisdictional Waters in conjunction with prior permitting authorities in navigable Waters under the RHA of 1899. The EPA is responsible for providing oversight of the permit program. In this capacity, the EPA has developed guidelines for permit review (Section 404 [b][1] Guidelines) and has the authority to veto permits by designating certain sites as non-fill areas (Section 404[c] of the CWA). The EPA also has enforcement authority under Section 404.

The ACOE generally extends its jurisdiction to all areas meeting the criteria for Waters of the United States. Waters of the U.S. by definition exclude isolated Waters that are not hydrologically connected to navigable rivers and streams. Rulings by the U.S. Supreme Court (SWANCC, Rapanos, and Carabell decisions) reduced or eliminated federal jurisdiction over 'Isolated Waters' such as isolated ponds that have no hydrologic connection to tributary Waters serving an interstate function. The rulings concluded

that such Waters are to be regulated by the individual state in which the isolated water occurs rather than by the federal government. Additionally, the ACOE jurisdiction over wetlands created by artificial means is decided on a case-by-case basis. The ACOE generally does not assume jurisdiction over areas that are (1) artificially irrigated and would revert to upland habitat if the irrigation ceased; or, (2) artificial lakes and ponds created by excavating and/or diking of dry land to collect and retain water, used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing. Other areas that are not considered jurisdictional Waters of the United States include waste treatment ponds, ponds formed by construction activities including borrow pits until abandoned, and ponds created for aesthetic reasons such as reflecting or ornamental ponds (33 CFR Part 328.3). It should be noted that the Navigable Waters Protection Rule, which was codified under Federal Register and effective as of 02/12/2020, has been paused and will likely be reversed. That rule states that Waters of the U.S. exclude features that lack hydrological surface connection to territorial seas and TNWs. The ACOE is in the process of crafting specific regulations that modify this ruling, but that still adhere to recent Supreme Court rulings.

Projects which propose activities that fall under the jurisdiction of Section 404 of the CWA and/or Section 10 of the RHA must obtain approval from the ACOE through the individual or nationwide permit (NWP) process. Individual permits entail a full public interest review that includes consultation with other federal and state agencies.

3.2 California State and Regional Regulatory Framework

California Department of Fish and Wildlife

The CDFW regulates river, stream, and lake habitats through Fish and Game Code section 1600 *et seq*. Fish and Game Code section 1602 requires an entity to notify the CDFW prior to commencing any activity that may do one or more of the following:

- Substantially divert or obstruct the natural flow of any river, stream, or lake;
- Substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or
- Deposit debris, waste, or other materials that could pass into any river, stream, or lake.

A "river, stream, or lake" includes those that are episodic (i.e., they are dry for periods of time) as well as those that are perennial. The definition includes ephemeral streams, desert washes, and watercourses with a subsurface flow (CDFW 2016) and may also apply to work undertaken within the flood plain of a body of water, the boundary of which may be identified as a topographic feature or as riparian vegetation. In addition, the CDFW does not distinguish between a "pond" and a "lake," such that relatively small bodies of water, including both natural and artificial features, may be regulated under section 1600.

The CDFW requires a Lake and Streambed Alteration (LSA) Agreement when it determines that the activity, as described in a complete LSA Notification, may substantially adversely affect existing fish or wildlife resources (ibid). A LSA Agreement includes measures necessary to protect existing fish and wildlife resources. The CDFW may suggest ways to modify a project that would eliminate or reduce harmful impacts to fish and wildlife resources. Before issuing a LSA Agreement, CDFW must comply with the California Environmental Quality Act (CEQA).

Regional Water Quality Control Board

The study area is located within the San Francisco Bay (Region 2) Regional Water Board which has authority to regulate projects that could potentially impact wetlands and/or other Waters. According to the California State Water Resources Control Board (State Water Board, 2006), the authority derives from the following:

- The state's Porter-Cologne through Waste Discharge Requirements to protect Waters of the state;
- The CWA under Section 4013;
- Governor's Executive Order W-59-93 (i.e., the "California Wetland's Policy" which requires "No Net Loss of Wetlands");
- Senate Concurrent Resolution No. 28; and
- California Water Code Section 13142.5 (applies to coastal marine wetlands).

In addition to the state directives to protect wetlands, for individual permits (but not NWPs), the Basin Plan also directs the State Water Board staff to use the EPA's CWA 404(b)(1) guidelines to determine circumstances under which the filling of wetlands may be permitted and requires that attempts be made to avoid, minimize, and only lastly to mitigate for adverse impacts (ibid).

California's jurisdiction to regulate its water resources is much broader than that of the federal government. While the U.S. Supreme Court's 2001 decision in Solid Waste Agency of Northern Cook County (SWANCC) vs. U.S. Army Corps of Engineers (the "SWANCC" Decision) called into question the extent to which the federal government may regulate isolated, intrastate, non-navigable waters as "Waters of the United States" under the CWA, state law is unaffected by that decision. The State Water Board's Executive Director issued a memorandum directing the Regional Water Boards to regulate such waters under Porter-Cologne authorities. Porter-Cologne extends to "Waters of the State," which is broadly defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." This definition includes isolated wetlands and any action that may impact isolated wetlands is subject to the Water Board's jurisdiction, which may include the issuance of Statewide General Waste Discharge Requirements (WDRs). For projects that will impact less than 0.2 acre of "isolated" wetlands, the State Water Board issued Order No. 2004-004-DWQ, WDRs for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction (General WDRs). These General WDRs streamline the permitting process for low impact projects in isolated wetlands (ibid).

Activities or discharges from a project that could affect California's surface, coastal, or ground waters, require a permit from the local RWQCB (Region 2, San Francisco Bay Region). Discharging pollutants (or proposing to) into surface water requires the applicant to file a complete National Pollutant Discharge Elimination System permit application form with the RWQCB. Other types of discharges, such as those affecting groundwater or from diffused sources (e.g., erosion from soil disturbance or waste discharges to land) are handled by filing a Report of Waste Discharge with the RWQCB in order to obtain WDRs. For specified situations, some permits may be waived and some discharge activities can be handled through enrollment in an existing general permit (ibid).

4.0 METHODS

4.1 Preliminary Review and Field Preparation

Prior to conducting the field delineation, the project ecologists reviewed site aerial photography, topographic data, existing preliminary wetland and watershed mapping, and geology and soil survey maps of the study area and surrounding areas. High-resolution topographic data was available for the study area, in the form of 1-meter pixel resolution light detection and ranging (LiDAR) data (USGS 2018). The LiDAR data were processed to render detailed topographic, hill shade, depression, and slope data. All of these data were used to help characterize the study area, identify any potential jurisdictional Waters on a preliminary basis, and guide the field surveys. Background imagery and project features were loaded onto a professional GPS unit (Trimble Geo7x) for use in navigation and mapping in the field. A GPS data dictionary was utilized to facilitate and standardize data collection.

4.2 Field Survey

The delineation field survey was conducted on April 26, 2022. During the survey, the ecologist traversed all portions of the study area on foot, primarily using topographic and soils data as well as aerial photography as guides. The ecologist particularly focused on investigating topographic depressions and linear drainages identified remotely with the LiDAR digital elevation models (DEM). At each such feature, detailed habitat information and digital photographs were recorded using GPS to document the locations of the features. The information recorded at each feature included dominant plant species, indicators of wetland hydrology, habitat connectivity, and other habitat characteristics of interest.

The boundaries of all potential Waters were identified using the three primary parameters (soils, hydrology, and vegetation), though topography and vegetation generally served as the primary guides. Soils were investigated in areas where vegetation and hydrology appeared inconclusive with respect to potential jurisdictional status. A total of 6 delineation data points were established throughout the study area. The collection of data points followed the Routine Wetland Determination Method developed by the ACOE and described in the 1987 ACOE Wetlands Delineation Manual (Environmental Laboratory 1987) and the Interim regional supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (ACOE 2010). The boundaries of all potential jurisdictional Waters and other habitats identified in the study area were mapped using sub-meter precise GPS units, as required by the ACOE. In areas where topography and/or tree canopy cover diminished GPS reception and therefore precision (within the riparian corridor), points rather than lines or polygons were recorded along habitat boundaries, with multiple readings for each point to increase precision. In order to further increase the GPS data precision, all data were differentially corrected using the nearest base station (UNAVCO station in La Honda). Where points were recorded in lieu of polygons, they were later connected to form polygons using GIS software.

Aside from potential jurisdictional Waters, stream bank tops and riparian habitat were identified and mapped as potentially jurisdictional under the CDFW. The top of bank was identified as the break in slope at the top of incised channel banks, and riparian habitat was identified as the edge of vegetation along a stream corridor that was found to be distinct from the surrounding upland habitats.

Potentially jurisdictional habitats were classified according to the National Wetlands Inventory (NWI) system, which is adapted from Cowardin et al. (1979). This is a scalable classification system that was developed to support a detailed inventory and periodic monitoring of the wetland habitats of the United States, using remote sensing. It became a national standard in 1996, but has been the de facto standard for mapping U.S. wetlands and deepwater habitats since 1976, and has also been used internationally.

4.2.1 Soils

Soil profiles were taken at each data point using a tile spade shovel and/or a mattock (for difficult digging situations). Soils were examined for positive hydric soil indicators such as low matrix chromas, reduction-oxidation (redox) features, gleys, and iron and manganese concretions. The color and texture of the soil layers encountered were recorded on the delineation forms. A standardized soil texture chart used by the California Native Plant Society (CNPS) for assessing soils (adapted from Brewer and McCann 1982) was used to determine texture (e.g., clay versus clay loam, etc.). Soil color was identified using a Munsell soil color chart (Kollmorgen 2009). All soil samples were moistened before determining the color. Soil map units were cross-referenced with the California hydric soils list (SCS 1993, USDA 2020) and the national hydric soils list (SCS 1991, USDA 2020). Determination of whether or not the hydric soil criterion was met was based upon the criteria specified by the National Technical Committee for Hydric Soils (ibid) and the Western Mountains, Valleys, and Coast Region Supplement (ACOE 2010). In most cases, soils with a matrix chroma of 1, and mottled soils with a matrix chroma of 2 or less are considered to meet the hydric soil criteria. Soils that do not have low matrix chromas but are inundated or

saturated within 12 inches of the surface are considered to be hydric when those conditions persist for at least 5 percent of the growing season (14 consecutive days).

4.2.2 Hydrology

Indicators of wetland hydrology were investigated for presence, such as the presence of surface soil cracks, sediment deposits, sub-surface soil characteristics, and water-stained leaves or vegetation/thatch. Hydrological connectivity was investigated throughout the study area and surrounding habitats. It should be noted that some wetlands in the western U.S. periodically lack indicators of wetland hydrology. If a given theoretical location is in a geomorphic position where a wetland could occur but the site visit was during the dry season and follows a wet season of below-normal rainfall or snowpack, indicators of wetland hydrology might not be present. According to the ACOE regional supplement, "under these conditions, a site that contains hydric soils and hydrophytic vegetation and no evidence of hydrologic manipulation should be considered a wetland" (ACOE 2010). This delineation was conducted during peak spring, following a mix of heavy early winter storms, mid-winter drought, and a return of rains in spring, as described above (Section 2.2.3). However, based on plant phenology as well as the WETS analysis, climate conditions appeared to be suitable for assessing wetland habitats, as annual herbaceous plant cover appeared generally typical for the region (author's observation based on experience in the region).

4.2.3 Vegetation

At each delineation data point, all herbaceous plant species within a five-foot radius were identified and a visual estimate of percent coverage for each species was recorded. The nearest trees and shrubs were accounted for at distances of 25 and 15 feet, respectively, as appropriate for the small study area. Plant species and strata cover estimations were calibrated using CNPS percent cover templates—see the following website: http://www.cnps.org/cnps/vegetation/pdf/percent_cover_diag-cnps.pdf.

The indicator status of each species was then checked using the most recent ACOE National Wetland Plant List—Version 3.5 (Lichvar et al. 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

NL = not listed (plants not listed in Lichvar et al. [2020], including some known to occur occasionally or primarily in wetlands). Note: unlisted taxa are included as UPL on the delineation data forms included in **Appendix G**.

The wetland plant cover criterion is met when the vegetation passes the dominance test: greater than 50 percent of the dominant plants are designated as OBL, FACW, or FAC wetland indicators. The ACOE defines dominant plant species as those that, when included in descending order of their percent cover, together sum up to 50 percent of the total cover in their stratum (tree, sapling/shrub/subshrub, herb, or woody vine). In addition, all species with at least 20 percent coverage of the total canopy within a stratum are always counted as dominants. All scientific and common plant names correspond to Baldwin et al. (2012) and/or the Calflora database (2022).

If the dominance test is not passed, vegetation can be considered hydrophytic if it meets the requirements of the prevalence index, morphological adaptations, or problematic wetland situations (ACOE 2010).

5.0 RESULTS

5.1 Overview

The delineation identified a total of 0.735 acre of potential jurisdictional habitats, including potential Waters of the United States and/or Waters of the State of California (CDFW and/or RWOCB) as well as riparian habitat beyond the tops of channel banks. Of these potential jurisdictional habitats, there were no wetland habitats, but 0.013 acre of incised non-wetland channel was mapped which would potentially be jurisdictional as other Waters of the United States and would likely be jurisdictional under both the CDFW and RWQCB. This feature lacked wetland vegetation and did not feature indicators of an ordinary high water mark (OHWM), due to ephemeral hydrology—it may be artificially incised by the configuration of a culvert (see below), so may not be federally jurisdictional. In addition, 0.695 acre of riparian habitat may be jurisdictional under the CDFW, and 0.027 acre of non-wetland swale that could be jurisdictional under the RWOCB, including 0.012 acre that flows underground through culverts. The riparian habitat is present along Weeks Creek at the southern edge of the study area, in the form of redwood forest and other vegetation that does not occur beyond the stream's influence. The interconnected swales feature ephemeral hydrology, are not incised, and do not exhibit defined bed and bank topography or any indicators of wetland hydrology. However, after passing through the second of two culverts (both corrugated steel pipes), the swale empties out into a drainage channel that feeds into Weeks Creek. The pipe concentrates flow and is above grade, thus forming a "waterfall" that has scoured the channel there. The channel may or may not be incised in the absence of the culvert configuration. Weeks Creek is a seasonal tributary to La Honda Creek, a TNW.

All habitat features are listed by habitat type and acreage in **Table 2** below and are mapped on **Figure 3**. Representative photographs of the habitats and the study area as a whole are presented in **Appendix A**.

TABLE 2. Inventory of Mapped Potential Jurisdictional Habitats

Feature ID	Habitat Type	NWI Code	Acreage	Potential Jurisdictional Status
Potential Juriso	lictional Waters			
5	Incised non-wetland Channel	R4SBA	0.013	ACOE, CDFW, RWQCB
1	Non-wetland drainage Swale*	R4SBA	0.003	RWQCB
3	Non-wetland drainage Swale*	R4SBA	0.012	RWQCB
2	Underground drainage pipe	N/A	0.001	N/A
4	Underground drainage pipe	N/A	0.011	N/A
Total Acreage			0.040	
Riparian Habit	at			
6	Riparian Habitat	N/A	0.644	CDFW
7	Riparian Habitat	N/A	0.018	CDFW
8	Riparian Habitat	N/A	0.033	CDFW
Total Acreage			0.695	
TOTAL ACRE	AGE		0.735	

^{*} Likely excavated at least in part, so NWI code may include the "x" modifier (R4SBAx).

NWI Code Definitions

- R System RIVERINE: The Riverine System includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated
 by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts of 0.5 ppt or greater. A channel is an
 open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies
 of standing water.
- 4 Subsystem INTERMITTENT: This Subsystem includes channels that contain flowing water only part of the year. When the water is not flowing, it may remain in isolated pools or surface water may be absent.
- SB Class STREAMBED: Includes all wetlands contained within the Intermittent Subsystem of the Riverine System and all channels of the Estuarine System or of the Tidal Subsystem of the Riverine System that are completely dewatered at low tide.
- A Water Regime Temporary Flooded: Surface water is present for brief periods (from a few days to a few weeks) during the growing season, but the water table
 usually lies well below the ground surface for the most of the season.

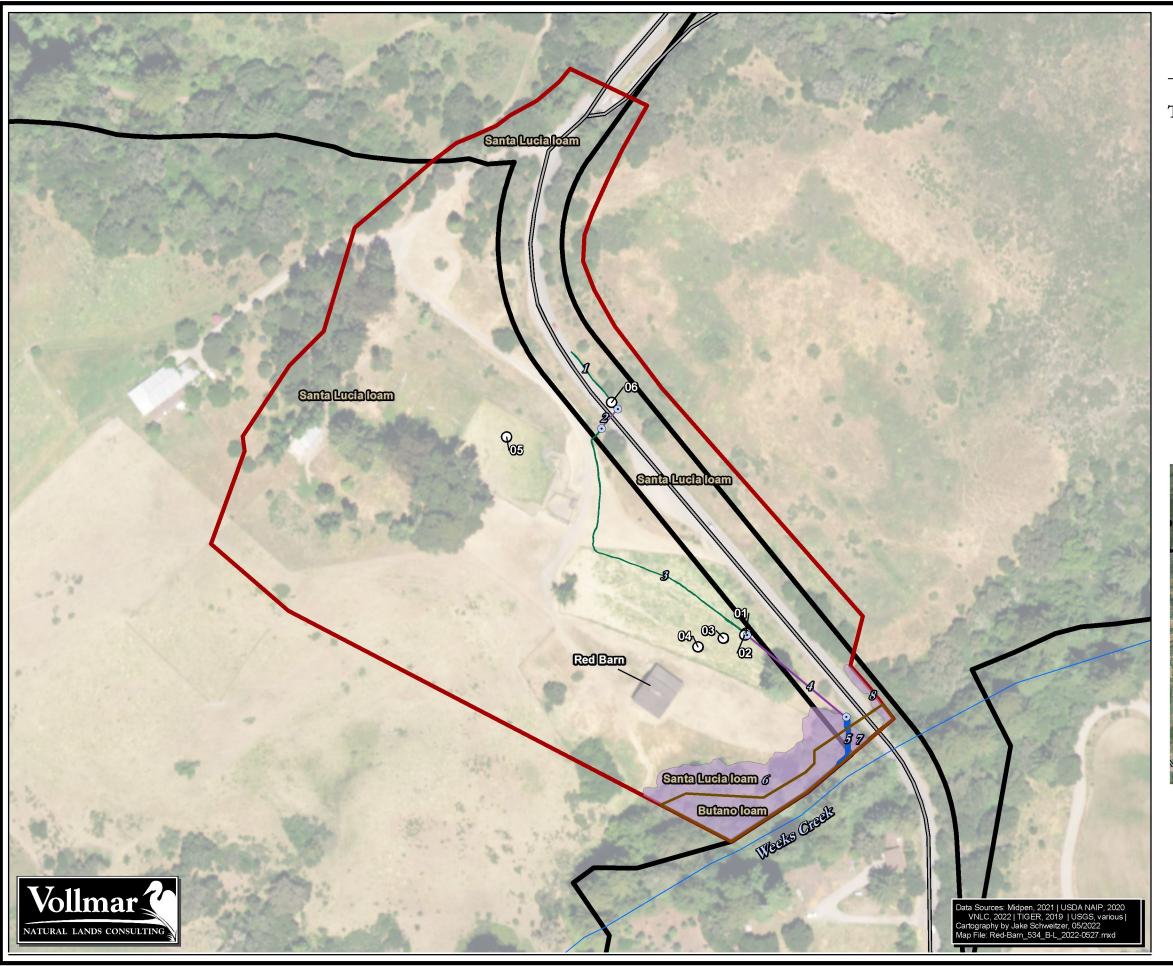


FIGURE 3 Potential Jurisdictional Habitats

La Honda Creek Parking and Trailhead Access Feasibility Study – Site E3 La Honda Creek Open Space Preserve San Mateo County, California

<u>Legend</u>

- O Delineation Data Point (with point ID label)
- Culvert Endpoint

Stream

---- Highway

Soils Unit Boundary

La Honda Creek Preserve

Study Area Boundary (14.65 ac.)

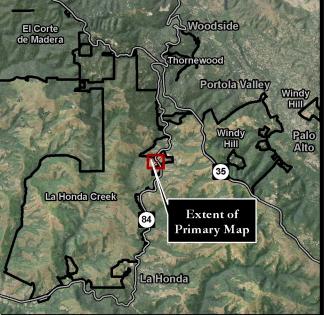
Potential Jurisdictional Waters/Habitats (with ID number)

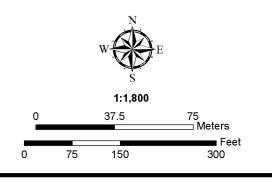
Incised Non-wetland Channel (0.013 ac.)

Non-wetland Drainage Swale (0.015 ac.)
Underground Culvert (0.012 ac.)

Riparian Corridor Habitat (0.695 ac.)

* National Wetland Inventory Code for all features is R4SBA. For code definitions, see Table 2 in report.





5.2 Potential Jurisdictional Waters

5.2.1 Soils

Including all sub-units based on slope and other modifiers, two distinct soil units are mapped in the study area (**Figure 3**). As indicated in bold text in **Table 3** below, neither of the soil units are classified as "hydric." Consistent with the United States Department of Agriculture (USDA) classification, soil textures were typically some form of clay loam, often with some amount of gravel and/or gritty material. Soils in the area surrounding the Red Barn were relatively similar in texture and composition. High bioturbation was present in the uplands to the west of the Red Barn, presumably as a result of rodent activity. Soil moisture was slightly higher in the swale that directs water from Highway 84 across the study area.

In general, soils examined at soil pits were found to be very dark with some redox features in the upper strata of soil along the drainage swale. Hydric and non-hydric soils across the site had the same hues and values as the upland sites; however, potentially jurisdictional water features consistently had high redox concentrations in the matrix of the upper 8 inches of soil. Soil samples ubiquitously had yellow to red (YR) hues with value/chromas of 3/2, indicating they are not hydric. Redox features had the same hue of 10YR as the rest of the site with high contrast values and chromas of 5/6 within the Munsell soil color chart. Overall, redox features were common, with 3 of the 6 soil pit sites exhibiting redox features in the upper 8 inches of soil. The region had experienced rainfall within two weeks of the survey in April, such that soils were generally moist in the drainage channels and, to a lesser extent, the adjacent upland areas.

TABLE 3. Mapped Soil Units in the Study Area

Soil Unit ¹	Surface Texture ²	Hydric Rating	Drainage Class	Pct of Study Area
Santa Lucia loam	Chanerry loam	Not Hydric	Well-drained	97.6%
Butano loam	Loam	Not Hydric	Well-drained	2.4%

^{1.} Combining sub-units

5.2.2 Hydrology

The study area sits adjacent to a Weeks Creek, a seasonal stream that originates upslope of the preserve and drains into La Honda Creek, which in turn converges with San Gregorio Creek south and west of the study area. The macro-scale watershed hydrology is described in detail in **Section 2.2.2**.

Indicators of wetland hydrology were lacking throughout the entire study area except for the presence of a defined bed and bank at the Weeks Creek tributary (non-wetland incised swale). Water is conveyed along the roadsides of Highway 84 into culverts that convey water through the grasslands surrounding the Red Barn. The water follows the relief of a narrow non-wetland swale, ultimately discharging from an elevated steel corrugated pipe that spills into a small tributary of Weeks Creek. Water in this drainage flows at sufficient velocity to incise the channel but not for a duration sufficient to support wetland vegetation or to develop a clear OHWM—the soils, vegetation, and topography are consistent along the channel bank slopes.

^{2.} Top 24 inches of soil unit

5.2.3 Vegetation

Non-wetland Channel and Riparian Habitat

A single incised drainage channel is present within the study area, amounting to 0.013 acre (**Figure 3**). The channel forms a small tributary to Weeks Creek, and thus is potentially jurisdictional as an other Water of the U.S., but it does not support wetland vegetation. However, the tributary and Weeks Creek as a whole do support vegetation that is restricted to the stream corridor, in the form of redwood forest and a mesic understory. Plant species in the tree stratum throughout this area consist of coast redwood (*Sequoia sempervirens*) [NL], California buckeye (*Aesculus californica*) [NL], California bay (*Umbellularia californica*) [FAC], and bigleaf maple (*Acer macrophyllum*) [FACU]. There are no trees rooted within the channel. The underlying shrub/vine and herb strata, which are consistent within the drainage channel as well as areas beyond (throughout the riparian corridor) include beaked hazelnut (*Corylus cornuta*) [FACU], California blackberry (*Rubus ursinus*) [FACU], western swordfern (*Polystichum munitum*) [FACU], brackenfern (*Pteridium aquilinum*) [FACU], thimbleberry (*Rubus parviflorus*) [FACU], redwood sorrel (*Oxalis oregana*) [FACU], and rough hedgenettle (*Stachys rigida*) [FACW].

Non-wetland Swale

This habitat includes 0.015 acre of non-wetland swales in the study area, excluding their unvegetated culverts. These drainages have likely been excavated, at least in part, for the purpose of consolidating and redirecting water away from Highway 84 (see **Figure 3**). While they do feature some hydric soils and also convey water during and perhaps shortly after rain events, they do not support a predominance of wetland vegetation. Plants observed within the swales are primarily weedy herbaceous species, including Harding grass (*Phalaris aquatica*) [FACU], common vetch (*Vicia sativa*) [FACU], English plantain (*Plantago lanceolata*) [FACU], soft chess (*Bromus hordeaceus*) [FACU], and Italian wild rye (*Festuca perennis*) [FACU]. The few native and/or wetland plants that were observed in the swales include limited numbers of Mexican rush (*Juncus mexicanus*) [FACW], California canary grass (*Phalaris californica*) [FAC], and encroaching coyote brush (*Baccharis pilularis*) [NL].

Upland

The flat areas beyond the drainage channel are dominated by the same plant species found in within the channel. Harding grass [FACU] is the most widespread species in both habitats, and comprises a majority of the vegetation along either side of Highway 84. All of the other species observed within the interconnected swales are also found in the adjacent areas. Farther from the channel, remnant cultivar tree species that were planted prior to site acquisition by MROSD are present on the western and northwestern sides of the site. Cultivar tree species include Monterey pine [NL], olive (*Olea europaea*) [NL], and eucalyptus (*Eucalyptus globulus*) [NL]. Associated species are weedy and invasive, including French broom (*Genista monspessulana*) [NL], Italian thistle (*Carduus pycnocephalus*) [NL], milk thistle (*Silybum marianum*) [NL], and Himalayan blackberry (*Rubus armeniacus*) [FAC]. Coyote brush [NL] borders the site and is spreading across the grassland areas. Other common species include rose clover (*Trifolium hirtum*) [NL], cultivated radish (*Raphanus sativus*) [NL], winter vetch (*Vicia villosa*) [NL], and ripgut brome (*Bromus diandrus*) [NL].

6.0 REFERENCES

- Brewer, R. and M.T. McCann 1982. Laboratory and field manual of ecology. Saunders College Publishing, New York.
- Calflora. 2022. Calflora online database for California plants. Available online (as of 5/2022) at: http://www.calflora.org/
- 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. Fish and Wildlife Service. FWS/OBS-79/31. Washington, DC.
- Environmental Laboratory. 1987. Corps of Engineers (ACOE) Wetlands Delineation Manual. Technical Report Y-87-1. U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS. 100 pp. plus appendices.
- Kollmorgen Instruments Corporation. 2009. Munsell Soil Book of Color. Kollmorgen Instruments Corp., Baltimore, Md.
- Lichvar, R.W., M. Butterwick, N.C. Melvin, and W.N. Kirchner. 2020. The National Wetland Plant List: April 2020 Update of Wetland Ratings.
- PRISM Climate Group (PRISM). 2022. Data from PRISM website. Oregon State University, Corvallis. Website available (as of 05/2022) at: http://www.prism.oregonstate.edu/
- Reed, Porter B. 1996 (Revised Edition). National list of plants that occur in wetlands: California (Region O). U.S. Fish and Wildlife Service.
- US Army Corps of Engineers (ACOE). 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0). ERDC/EL TR-10-3, May 2010.
- U.S. Department of Agriculture (USDA). 2020. Agricultural Applied Climate Information System (AGACIS). WETS Table from 1990 to 2020 for Martinez Water Plant weather station. Website Available (as of 12/2020) at: http://agacis.rcc-acis.org/
- U.S. Department of Agriculture (USDA) Soil Conservation Service (USDA-NRCS). 2022. Web Soil Survey Website. Available (as of 05/2022) at: http://websoilsurvey.sc.egov.usda.gov/app/WebSoilSurvey.aspx
- USDA. 1991 Rev. Edition. Hydric Soils of the United States. SCS in cooperation with the National Technical Committee for Hydric Soils. Misc. Publication No. 1491.
- USDA. 1993. Hydric Soils of California. SCS, Davis California. Revised January 1, 1993.
- U.S. Geological Survey (USGS). 2018. USGS NED one-meter DEMs for San Mateo County. U.S. Geological Survey. Available (as of 05/2020) at: https://viewer.nationalmap.gov/
- U.S. Geological Survey (USGS). 2013. California Watershed GIS Database.

APPENDIX A:

REPRESENTATIVE PHOTOGRAPHS OF THE STUDY AREA

(Recorded April 26, 2022)



View of culvert at northern side of Highway 84 near Delineation Data Point 06. Facing northwest.



Non-hydric soils from Delineation Data Point 06 at northeastern portion of the study area.



View of study area from the center of the site. Facing southwest toward the Red Barn.



Shallow depression within grassland habitat dominated by Harding grass. At Delineation Data Point 04. Facing west.



Soils with redox features at Delineation Data Point 01.



View of non-wetland swale at culvert and Delineation Data Point 01. Facing southeast.



Southeastern edge of culvert at top of incised non-wetland channel. Facing northwest.



View of non-wetland channel below culvert. Facing northeast.



View of non-wetland channel. Facing southwest.



View of non-wetland channel where it joins Weeks Creek.
Facing northeast.

APPENDIX B: LIST OF PLANT TAXA IDENTIFIED AT DELINEATION DATA POINTS

Scientific Name	Common Name	Origin	Wetland Indicator Status
Baccharis pilularis	Coyote brush	Native	Not listed
Bromus diandrus	Ripgut brome	Naturalized	Not listed
Bromus hordeaceus	Soft chess	Naturalized	FACU
Carduus pycnocephalus	Italian thistle	Naturalized	Not listed
Convolvulus arvensis	Field bindweed	Naturalized	Not listed
Festuca perennis	Italian rye grass	Naturalized	FAC
Geranium dissectum	Cutleaf crane's bill	Naturalized	Not listed
Helminthotheca echioides	Bristly ox-tongue	Naturalized	FAC
Hordeum marinum	Meadow barley	Naturalized	FAC
Juncus mexicanus	Mexican rush	Native	FACW
Kickxia elatine	Sharp point fluellin	Naturalized	FAC
Phalaris aquatica	Harding grass	Naturalized	FACU
Phalaris californica	California canary grass	Native	FAC
Rumex crispus	Curly dock	Naturalized	FAC
Vicia sativa	Garden vetch	Naturalized	UPL
Vicia villosa	Hardy vetch	Naturalized	Not listed

APPENDIX C: DELINEATION DATA FORMS

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

Project/Site: Red Barn Public Access Pro	ject		City/County	y: San Mat	eo County	Sam	Sampling Date: 04/26/2022		
Applicant/Owner: Midpeninsula Regional (Open Space Dist	rict			State:CA	Sam	pling Point:	01	
Investigator(s): Jake Schweitzer, VNLC			Section, To	ownship, Ra	nge: San Gregori	—— o (Rodrigi	ıez) Land	Grant	
Landform (hillslope, terrace, etc.): swale			Local relie	f (concave,	convex, none): cor	ncave	Slo	ope (%): <1	
Subregion (LRR): Northwest Forests and	Coast La	at: 37.3	355		Long: -122.265		 Datu	um:NAD83	
Soil Map Unit Name: Santa Lucia Loam					NWI cl	assification	: N/A		
Are climatic / hydrologic conditions on the site	typical for this time	e of ye	ar? Yes	No ((If no, expla	in in Remar	ks.)		
Are Vegetation Soil or Hydrolog	gy 🗙 signif	cantly	disturbed?	Are '	'Normal Circumstar	nces" prese	nt? Yes 💿	No 🔘	
Are Vegetation Soil or Hydrolog	gy natura	ally pro	blematic?	(If ne	eeded, explain any a	answers in I	Remarks.)		
SUMMARY OF FINDINGS - Attach	site map sho	wing	samplin	g point lo	ocations, trans	ects, imp	ortant fe	atures, etc	
Hydrophytic Vegetation Present? Ye	es No (•								_
	es No		ls ti	he Sampled	l Area				
Wetland Hydrology Present? Ye	es No 🕞		witl	nin a Wetlaı	nd? Yes		No 💿		
Remarks:									
Non wetland swale near culve	rt								
VEGETATION - Use scientific nar	nes of plants.								
		olute	Dominant	Indicator	Dominance Test	workshee	t:		_
Tree Stratum Plot size: 25 feet	<u>% C</u>	Cover	Species?	Status	Number of Domir				
1. <i>N/A</i>					That Are OBL, FA	ACW, or FA	C: (0 (A)	
2. 3.					Total Number of		,	1 (D)	
4.					Species Across A	All Strata:		1 (B)	
		%			Percent of Domir That Are OBL, FA			.0 % (A/B)	
Sapling/Shrub Stratum Plot size: 15 feet		70						.0 % (A/B)	
1. <u>N/A</u>					Prevalence Inde				
2					Total % Cove	er of:	Multip		
3					OBL species FACW species		x 1 = x 2 =	0	
4					FAC species		x 3 =	0	
o	Total Cover:	%			FACU species	75	x 4 =	300	
Herb Stratum Plot size: 5 feet					UPL species	73	x 5 =	0	
1. Phalaris aquatica		75	Yes	FACU	Column Totals:	75	(A)	300 (B))
2					Dravalanaa	Indox = D/	^ -	4.00	
3					Prevalence Hydrophytic Veg			4.00	
4					Dominance	_			
5 6.					Prevalence I				
7					Morphologica	al Adaptatio	ns¹ (Provide	supporting	
8.					l		n a separate		
	Total Cover:	75 %			Problematic	Hydrophytic	: Vegetation	' (Explain)	
Woody Vine Stratum Plot size: 15 feet					1 Indicators of by	معانه مما	المصالمين ا	udrala av mariat	
1					¹ Indicators of hydbe be present.	and son and	i welland ny	/arology must	
2		0/			Hydrophytic				_
	Total Cover:	%			Vegetation				
% Bare Ground in Herb Stratum25 %	% Cover of E	Biotic C	rust	<u>%</u>	Present?	Yes 🖯	No ()	
Remarks: Upland vegetation									-
opiana vegetation									

US Army Corps of Engineers Arid West - Version 2.0

nches)	Matrix Color (moist)	%	Color	(moist)	x Feature %	es Type ¹	_Loc²	Textu	re ³	Remarks	
0-8 1	10YR 3/2	90	10YR 5		10	C	M	Clay Loa		Gravelly, moist	
	10 TR 3/2 10 YR 3/2	$-\frac{90}{100}$	- 101K 3	70		<u> </u>	_ IVI	Clay Loa		Gravelley, moist	
8-20 1	101 K 3/2							Clay Loai	<u>n</u>	Graveney, moist	
		_									
		-									
	ncentration, D=Deps: Clay, Silty Clay, S									on: PL=Pore Lining, M=Mat n, Silt Loam, Silt, Loamy Sal	
	dicators: (Applicat									Problematic Hydric Soils	
Histosol (` '			Sandy Redo	, ,			1	cm Muc	k (A9) (LRR C)	
	ipedon (A2)			Stripped M	•					k (A10) (LRR B)	
Black His	` '			Loamy Mud	•	` '				Vertic (F18)	
, ,	n Sulfide (A4)			Loamy Gle	•	` '				nt Material (TF2)	
	Below Dark Surface	ce (A11)		Depleted M				\Box (other (Ex	plain in Remarks)	
J	rk Surface (A12)		×	Redox Darl		` '		⁴ Indic	ators of I	nydrophytic vegetation and	
1	ucky Mineral (S1) leyed Matrix (S4)			Depleted D Redox Dep		. ,				drology must be present.	
Saliuy Gi	leyeu Matrix (34)			Redux Dep	162210112	(ГО)		ur	less dist	urbed or problematic	
strictive La	ayer (if present):										
Type: N/A	<u> </u>										
Depth (inch	hes):							Hydric	Soil Pre	esent? Yes 💿 No	\circ
DROLOG	3V										
etland Hyd	rology Indicators:		ufficient)						Seconda	ry Indicators (2 or more regu	uired)
etland Hydi mary Indica	rology Indicators: ators (any one indic		ufficient)	Water-Sta	ined Lea	ves (B9)				ry Indicators (2 or more requer-Stained Leaves (B9)	uired)
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mary Indica Surface V High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely	rology Indicators: ators (any one indicators) Water (A1) For Table (A2) In (A3) For Kellin (B4) For Crust (B4) For Crust (B4) For Crust (B5) For Cracks (B6) For Visible on Aerial For Vegetated Concave ations: For Present? Yester (A1) For Crust (B4) For Crust (B6) For Crus	Imagery (e Surface	[B7] = (B8)	(exc. MLR Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp	(B11) vertebrat Sulfide (Rhizosph of Reduce on Reduce r Stresse plain in F	es (B13) Odor (C1) eres along ed Iron (C tion in Till d Plants (c4) ed Soils (Co	ots (C3)	Wate (RMI) Drair Dry-S Satu Geor Shall FAC	er-Stained Leaves (B9) LRA 1, 2, 4A/B) nage Patterns (B10) Season Water Table (C2) ration Visible on Aerial Image morphic Position (D2) low Aquitard (D3) -Neutral Test (D5) ed Ant Mounds (D6) (LRR A	gery ((
etland Hydromary Indicated Status and Saturation Saturation Pressure Saturation Sparsely Saturation Pressure Saturation Pressu	rology Indicators: ators (any one indicators) Water (A1) For Table (A2) In (A3) For Kall (B4) For Crust (B4) For Crust (B5) For Crust (B6) For Visible on Aerial (Vegetated Concaverations: For Present? For Crust (Present? For Crust (Present) For C	Imagery (e Surface	(B7) (B8) No (•)	(exc. MLR Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp	AA 1, 2, 4 (B11) vertebrat Sulfide (Rhizosph of Reduc on Reduc r Stresse ches): ches):	es (B13) Odor (C1) eres along ed Iron (C tion in Till d Plants (ed Soils (Co	ots (C3)	Wate (RMI) Drair Dry-5 Satu Geor Shall FAC Raise Fros	er-Stained Leaves (B9) LRA 1, 2, 4A/B) nage Patterns (B10) Season Water Table (C2) ration Visible on Aerial Image morphic Position (D2) low Aquitard (D3) -Neutral Test (D5) ed Ant Mounds (D6) (LRR A	Qgery ((
etland Hydromary Indica Surface V High Water Saturation Water Ma Sediment Drift Depor Algal Mat Iron Depor Surface S Inundation Sparsely eld Observation atter Table Folloudes capi	rology Indicators: ators (any one indicators) Water (A1) For Table (A2) In (A3) For Kall (B4) For Crust (B4) For Crust (B5) For Crust (B6) For Visible on Aerial (Vegetated Concaverations: For Present? For Crust (Present? For Crust (Present) For C	Imagery (e Surface	(B7) (B8) No (a) No (b) No (c) No (c)	(exc. MLR Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp Depth (in Depth (in	(B11) vertebrat Sulfide (Rhizosph of Reduce on Reduce or Stresse clain in F	es (B13) Odor (C1) eres alone ed Iron (C tion in Till d Plants (emarks)	ed Soils (Control of the Control of	ots (C3)	Wate (RMI) Drair Dry-5 Satu Geor Shall FAC Raise Fros	er-Stained Leaves (B9) LRA 1, 2, 4A/B) nage Patterns (B10) Season Water Table (C2) ration Visible on Aerial Image morphic Position (D2) low Aquitard (D3) -Neutral Test (D5) ed Ant Mounds (D6) (LRR At-Heave Hummocks (D7)	Query ((
etland Hydrimary Indica Surface V High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely eld Observation are Table Featuration Precidudes capites	rology Indicators: ators (any one indicators) Autor (A1) For Table (A2) In (A3) Arks (B1) It Deposits (B2) It Deposits (B3) It or Crust (B4) It or Crust (B4) It or Crust (B6) In Visible on Aerial If Vegetated Concave ations: If Present? Present? Yesent? Yesent? Autor (A1) Autor (A2) Autor (A3) Autor (A3) Autor (B4) Aut	Imagery (e Surface	(B7) (B8) No (a) No (b) No (c) No (c)	(exc. MLR Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp Depth (in Depth (in	(B11) vertebrat Sulfide (Rhizosph of Reduce on Reduce or Stresse clain in F	es (B13) Odor (C1) eres alone ed Iron (C tion in Till d Plants (emarks)	ed Soils (Control of the Control of	ots (C3)	Wate (RMI) Drair Dry-5 Satu Geor Shall FAC Raise Fros	er-Stained Leaves (B9) LRA 1, 2, 4A/B) nage Patterns (B10) Season Water Table (C2) ration Visible on Aerial Image morphic Position (D2) low Aquitard (D3) -Neutral Test (D5) ed Ant Mounds (D6) (LRR At-Heave Hummocks (D7)	Qgery ((
etland Hydrimary Indica Surface V High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely eld Observation atter Table F saturation Presidudes capit esscribe Reco	rology Indicators: ators (any one indicators (any one indicators) ators (any one indicators) arks (A1) arks (B1) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Goil Cracks (B6) an Visible on Aerial I Vegetated Concave ations: ar Present? Present? Present? Yesent?	Imagery (e Surface	(B7) (B8) No No No No monitoring	(exc. MLR Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp Depth (in Depth (in Depth (in	AA 1, 2, 4 (B11) vertebral Sulfide (Rhizosph of Reduct on Reduct or Stresse clain in Re ches): ches): ches):	es (B13) Odor (C1) eres along ed Iron (C tion in Till d Plants (emarks)	Wetl spections),	ots (C3) 6) A) and Hydi	Wate (RMI) Drair Dry-5 Satu Geor Shall FAC Raise Fros	er-Stained Leaves (B9) LRA 1, 2, 4A/B) nage Patterns (B10) Season Water Table (C2) ration Visible on Aerial Image morphic Position (D2) low Aquitard (D3) -Neutral Test (D5) ed Ant Mounds (D6) (LRR At-Heave Hummocks (D7)	A)
etland Hydromary Indicas Surface V High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely eld Observation atter Table F aturation Presidudes capit esscribe Reco	rology Indicators: ators (any one indicators) Autor (A1) For Table (A2) In (A3) Arks (B1) It Deposits (B2) It Deposits (B3) It or Crust (B4) It or Crust (B4) It or Crust (B6) In Visible on Aerial If Vegetated Concave ations: If Present? Present? Yesent? Yesent? Autor (A1) Autor (A2) Autor (A3) Autor (A3) Autor (B4) Aut	Imagery (e Surface	(B7) (B8) No No No No monitoring	(exc. MLR Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp Depth (in Depth (in Depth (in	AA 1, 2, 4 (B11) vertebral Sulfide (Rhizosph of Reduct on Reduct or Stresse clain in Re ches): ches): ches):	es (B13) Odor (C1) eres along ed Iron (C tion in Till d Plants (emarks)	Wetl spections),	ots (C3) 6) A) and Hydi	Wate (RMI) Drair Dry-5 Satu Geor Shall FAC Raise Fros	er-Stained Leaves (B9) LRA 1, 2, 4A/B) nage Patterns (B10) Season Water Table (C2) ration Visible on Aerial Image morphic Position (D2) low Aquitard (D3) -Neutral Test (D5) ed Ant Mounds (D6) (LRR At-Heave Hummocks (D7)	A)

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

Project/Site: Red Barn Public Access Project		City/Co	unty: San Mat	eo County	San	npling Date:	04/26/2022
Applicant/Owner: $\underline{\text{Midpeninsula Regional Open S}}$	pace District			State:CA	Sarr	npling Point:	02
Investigator(s): Jake Schweitzer, VNLC		Section	n, Township, Ra	nge: San Gregori	o (Rodrigi	uez) Land	Grant
Landform (hillslope, terrace, etc.): flat upland		Local r	relief (concave,	convex, none): nor	ie	Slo	ope (%): <u><1</u>
${\hbox{Subregion (LRR):}} \underline{\hbox{Northwest Forests and Coast}}$	Lat: <u>37.</u>	355		_ Long: <u>-122.265</u>		Dat	um: NAD83
Soil Map Unit Name: Santa Lucia Loam				NWI cl	assification	: <u>N/A</u>	
Are climatic / hydrologic conditions on the site typical	for this time of ye	ear? Ye	s • No ((If no, explai	n in Remar	ks.)	
Are Vegetation Soil or Hydrology X	significantly	disturb	ed? Are	'Normal Circumstan	ces" prese	nt? Yes 🖲	No 🔘
Are Vegetation Soil or Hydrology	naturally pro	oblemat	ic? (If ne	eeded, explain any a	answers in I	Remarks.)	
SUMMARY OF FINDINGS - Attach site n	nap showing	samp	oling point lo	ocations, trans	ects, imp	ortant fe	eatures, etc.
Hydrophytic Vegetation Present? Yes (No 💿						
Hydric Soil Present? Yes	No (Is the Sampled	l Area			
Wetland Hydrology Present? Yes	No 💿		within a Wetlaı			No 💿	
Remarks: Upland above P-01							
VEGETATION - Use scientific names of	f plants.						
	Absolute	Domin	ant Indicator	Dominance Test	workshee	t:	
Tree Stratum Plot size: 25 feet	% Cover	Specie	es? Status	Number of Domir			
1. N/A				That Are OBL, FA	CW, or FA	.C:	(A)
3.				Total Number of I Species Across A			1 (B)
4				Percent of Domin			
Sapling/Shrub Stratum Plot size: 15 feet	%			That Are OBL, FA	CW, or FA	.C: 0).0 % (A/B)
1. <u>N/A</u>				Prevalence Inde	x workshe	et:	
2				Total % Cove	er of:	Multip	
3				OBL species		x 1 =	0
4				FACW species		x 2 =	0
5				FAC species	0.5	x 3 =	0
Herb Stratum Plot size: 5 feet	Cover: %			FACU species UPL species	85	x 4 = x 5 =	340
1. Phalaris aquatica	85	Yes	FACU	- Column Totals:	85	(A)	0 340 (B)
2.				_		, ,	` ,
3				Prevalence			4.00
4				Hydrophytic Vec			
5				Dominance 1			
6				Prevalence I			
7				Morphologica data in Re		ons" (Provide on a separat	
8Total	Cover: 85 %			Problematic	Hydrophytic	: Vegetation	ı¹ (Explain)
Woody Vine Stratum Plot size: 15 feet 1	05 70			¹ Indicators of hyd	dric soil and	d wetland h	ydrology must
2.			 -	be present.			
Total	Cover: %			Hydrophytic Vegetation			
	Cover of Biotic C	crust	<u>%</u>	Present?	Yes 🖯	No (<u>•</u>)
Remarks: Upland vegetation							
Optand vegetation							

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Sampling Point: 02

SOIL

inches) 0-8	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ³	Remarks
0 0	10YR 3/2	90	10YR 5/6	10	C	M	Clay Loam	Gravelly, moist
8-20	$\frac{101R3/2}{10YR3/2}$	100	101103/0		· 		Clay Loam	Gravelly, moist
oil Textur vdric Soil Histos Histic Black Hydrog Deplet Thick I Sandy Sandy	Indicators: (Application (A1) Epipedon (A2) Histic (A3) gen Sulfide (A4) ted Below Dark Surface Dark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) E Layer (if present):	Sandy Cla	ay, Loam, Sandy Clay	v Loam, Some noted.) ox (S5) Matrix (S6) ocky Mine eyed Matrix (F3) ork Surface Dark Surface	andy Loan) ral (F1) rix (F2) rix (F2) rix (F6) rix (F6)		Indicators Indicators 1 cm 2 cm Redu Red Othe	ocation: PL=Pore Lining, M=Matrix. Loam, Silt Loam, Silt, Loamy Sand, Sa
etland H	ydrology Indicators: dicators (any one indic			ained Lea	ves (B0)			ondary Indicators (2 or more required)
imary Inc Surface High W Satura Water	ydrology Indicators: dicators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1)		Water-Sta (exc. ML Salt Crus Aquatic I	RA 1, 2, 4 t (B11) nvertebrat	IA/B)			Water-Stained Leaves (B9) (RMLRA 1, 2, 4A/B) Drainage Patterns (B10) Dry-Season Water Table (C2)
etland H imary Inc Surface High W Satura Water Sedime Drift De Algal N Iron De Surface	ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3)	cator is su	Water-Statex. ML Salt Crus Aquatic In Hydroger Oxidized Presence Recent Ir Stunted of B7) Other (E)	RA 1, 2, 4 t (B11) nvertebrai n Sulfide (Rhizosph of Reduct on Reduct or Stresse	tes (B13) Ddor (C1) Heres along Hered Iron (C Hittion in Tille Hered Plants (E	4) ed Soils (C	ots (C3)	Water-Stained Leaves (B9) (RMLRA 1, 2, 4A/B) Drainage Patterns (B10)
etland H mary Inc Surface High W Satura Water Sedime Drift De Algal M Iron De Surface Inunda Sparse	ydrology Indicators: dicators (any one indicators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) e Soil Cracks (B6) ation Visible on Aerial ely Vegetated Concavervations:	Imagery (e Surface	Water-Sta (exc. ML) Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted of B7) Other (Except)	RA 1, 2, 4 t (B11) nvertebrai n Sulfide (Rhizosph e of Reduct on Reduct or Stresse	tes (B13) Ddor (C1) Heres along Hered Iron (C Hittion in Tille Hered Plants (E	4) ed Soils (C	ots (C3)	Water-Stained Leaves (B9) (RMLRA 1, 2, 4A/B) 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)
etland H mary Inc Surface High W Satura Water Sedime Drift De Algal N Iron De Surface Inunda Sparse	ydrology Indicators: dicators (any one indicators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) e Soil Cracks (B6) ation Visible on Aerial ely Vegetated Concavervations: ater Present?	Imagery (e Surface	Water-Statex. ML Salt Crus Aquatic In Hydroger Oxidized Presence Recent In Stunted of Other (Ex) (B8) No Depth (in	RA 1, 2, 4 t (B11) nvertebrat n Sulfide (Rhizosph e of Reduct on Reduct or Stresse cplain in F	tes (B13) Ddor (C1) Heres along Hered Iron (C Hittion in Tille Hered Plants (E	4) ed Soils (C	ots (C3)	Water-Stained Leaves (B9) (RMLRA 1, 2, 4A/B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Caeomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
etland H mary Inc Surface High W Satura Water Sedime Drift De Algal N Iron De Surface Inunda Sparse Hid Obse rface Wa ater Table	ydrology Indicators: dicators (any one indicators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) e Soil Cracks (B6) ation Visible on Aerial ely Vegetated Concavervations: ater Present?	Imagery (e Surface	Water-Sta (exc. ML) Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted (B7) (B8) No Depth (ii No Depth (ii	RA 1, 2, 4 t (B11) nvertebrat n Sulfide (Rhizosph e of Reduct on Reduct or Stresse cplain in R	tes (B13) Ddor (C1) Heres along Hered Iron (C Hittion in Tille Hered Plants (E	4) ed Soils (C	ots (C3)	Water-Stained Leaves (B9) (RMLRA 1, 2, 4A/B) 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)
etland H mary Inc Surface High W Satura Water Sedime Drift De Algal N Iron De Surface Inunda Sparse Hid Obse rface Wa ater Tabl turation cludes ca	ydrology Indicators: dicators (any one indicators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) e Soil Cracks (B6) ation Visible on Aerial ely Vegetated Concavervations: ater Present?	Imagery (e Surface	Water-Statex. ML Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted of Other (Ex) (B8) No Depth (ii No Depth (ii Depth (ii	RA 1, 2, 4 t (B11) nvertebrat n Sulfide (Rhizosph e of Reduct on Reduct or Stresse cplain in F	tes (B13) Ddor (C1) eres along ced Iron (C tion in Tille d Plants (E	4) ed Soils (C 017) (LRR	ots (C3)	Water-Stained Leaves (B9) (RMLRA 1, 2, 4A/B) 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 DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Red Barn Public Access Project		City/Cou	unty: <u>San Mate</u>	eo County	Sam	pling Date: (04/26/2022	
${\small \textbf{Applicant/Owner:}} \ \underline{Midpeninsula} \ \underline{Regional} \ \underline{Open} \ \underline{Space} \ \underline{I}$	District			State:CA	CA Sampling Point: <u>03</u>			
Investigator(s): Jake Schweitzer, VNLC		Section	, Township, Rar	nge: San Gregorio	(Rodrigi	ıez) Land C	Grant	
Landform (hillslope, terrace, etc.): flat grassland		Local re	elief (concave, d	convex, none): non	ıe	Slop	pe (%): <u><1</u>	
Subregion (LRR): Northwest Forests and Coast	Lat: <u>37.3</u>	355		Long: <u>-122.265</u>		Datu	m: NAD83	
Soil Map Unit Name: Santa Lucia Loam				NWI cla	assification	: <u>N/A</u>		
Are climatic / hydrologic conditions on the site typical for this	time of ye	ar? Yes	s • No C	(If no, explai	n in Remar	ks.)		
Are Vegetation Soil or Hydrology X sign	gnificantly	disturbe	ed? Are "	Normal Circumstan	ces" preser	nt? Yes 💿	No 🔘	
Are Vegetation Soil or Hydrology na	aturally pro	oblemati	c? (If ne	eded, explain any a	ınswers in f	Remarks.)		
SUMMARY OF FINDINGS - Attach site map s	howing	samp	ling point lo	cations, trans	ects, imp	oortant fea	atures, etc.	
Hydrophytic Vegetation Present? Yes No	• •							
		ı	s the Sampled	Area				
Wetland Hydrology Present? Yes No	•	·	within a Wetlan	ıd? Yes	\bigcirc	No 💿		
Remarks: Grassy pasture								
VEGETATION - Use scientific names of plan	te							
•	Absolute	Domina	ant Indicator	Dominance Test	workshee	t·		
Tree Stratum Plot size: 25 feet			s? Status	Number of Domin				
1. <u>N/A</u>				That Are OBL, FA	CW, or FA	C: 0	(A)	
3.				Total Number of I Species Across A		1	(B)	
4.				Percent of Domin	ant Snecie	2		
Sapling/Shrub Stratum Plot size: 15 feet	%			That Are OBL, FA			0 % (A/B)	
Sapling/Shrub Stratum Plot size: 15 feet 1. N/A				Prevalence Inde	x workshe	et:		
2.				Total % Cove	er of:	Multiply	y by:	
3.				OBL species		x 1 =	0	
4.				FACW species	8	x 2 =	16	
5.				FAC species	8	x 3 =	24	
Total Cover:	%			FACU species	50	x 4 =	200	
Herb Stratum Plot size: 5 feet 1. Phalaris aquatica	50	Yes	FACU	UPL species	2	x 5 =	10	
2. Juncus mexicanus	8		FACW	Column Totals:	68	(A)	250 (B)	
3. Phalaris californica	7		FAC	Prevalence	Index = B/	A =	3.68	
4. Vicia sativa			UPL	Hydrophytic Veg	etation Inc	dicators:		
5. Rumex crispus	1		FAC	Dominance T	est is >50%	6		
6.				Prevalence Ir				
7				Morphologica		ns ¹ (Provide n a separate		
8				Problematic I		•	,	
Total Cover: Woody Vine Stratum Plot size: 15 feet	68 %				,	3	(
1				¹ Indicators of hyd be present.	ric soil and	d wetland hy	drology must	
2Total Cover:				Hydrophytic				
	% of Biotic C	crust	%	Vegetation Present?	Yes 〇	No 🖲)	
Remarks:				L				
Ruderal upland vegetation								

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Sampling Point: 03

SOIL

Profile Des	cription: (Describe	to the de	pth needed t	o docum	ent the	indicator	or confirm	n the absence of	indicators.)		
Depth	Matrix			Redox			. 2	- . 3			
(inches)	Color (moist)	%	Color (m	oist)	<u>%</u>	Type ¹	_Loc ²	Texture ³		Remarks	
0-8	10YR 3/2	_ 95	10YR 5/6		5	<u>C</u>	<u>M</u>	Silty Clay Loam	moist		
8-20	10YR 3/2	100						Silty Clay Loam	moist		
-									_		
l 									_		
	-								_		
l											
1Type: C=C	Concentration, D=Dep	letion PM	M-Reduced M	atriy 2		overed or (Coated Sai	nd Grains. Loca	tion: PI =Pore	Lining M=M	atriv
	es: Clay, Silty Clay, \$										
	Indicators: (Applicat						<u>, , , , , , , , , , , , , , , , , , , </u>		Problematic I		<u> </u>
Histoso		,,,, ,,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		ndy Redox					ck (A9) (LRR	-	
	Epipedon (A2)			pped Mat	, ,)			ck (A10) (LRR		
Black H	Histic (A3)		Lo	amy Muck	y Miner	al (F1)			Vertic (F18)	,	
Hydrog	en Sulfide (A4)			amy Gleye		` '		Red Par	ent Material (T	F2)	
I — ·	ed Below Dark Surfac	e (A11)		pleted Ma	,	•		Other (E	xplain in Rema	arks)	
l L	Oark Surface (A12)			dox Dark		` '		⁴ Indicators of	hydrophytic v	ogotation and	4
1 H	Mucky Mineral (S1)		=	pleted Da		. ,			ydrology must		ı
Sandy	Gleyed Matrix (S4)		Re	dox Depre	essions	(F8)			turbed or prob		
Restrictive	Layer (if present):							_			
Type: N/											
Depth (in								Hydric Soil P	recent? Ve	s 💿 N	0 (
Remarks:								Tryunc 3011 F	resent: res	3 (6)	
ixemarks.											
	NCV										
HYDROLC	JGT										
Wetland Hy	drology Indicators:										
Primary Indi	icators (any one indic	ator is suf	ficient)					Second	ary Indicators	(2 or more re	quired)
Surface	Water (A1)			ater-Stain					ter-Stained Le		
High W	ater Table (A2)		`	xc. MLRA	, ,	A/B)		(RN	ILRA 1, 2, 4A	/B)	
Saturat	ion (A3)		=	alt Crust (☐ Dra	inage Patterns	s (B10)	
Water N	Marks (B1)			quatic Inve				Dry	-Season Wate	r Table (C2)	
Sedime	ent Deposits (B2)			/drogen S				Sat	uration Visible	on Aerial Ima	agery (C9)
Drift De	posits (B3)					eres along	-	ots (C3) 🔲 Geo	omorphic Posit	tion (D2)	
Algal M	at or Crust (B4)					ed Iron (C	,	Sha	allow Aquitard	(D3)	
	posits (B5)					tion in Tille		· I FAG	C-Neutral Test	(D5)	
1 ==	Soil Cracks (B6)					d Plants (D)17) (LKK	A) Rai	sed Ant Mound	ds (D6) (LRR	A)
l <u>—</u>	ion Visible on Aerial	0, 1	́ Ш	her (Expl	aın ın K	emarks)		Fro	st-Heave Hum	mocks (D7)	
	ly Vegetated Concave	- Juliace	(00)								
Field Obser											
Surface Wa	ter Present? Y	'es 🔘	No 💿 🛚 🗈	epth (incl	nes):						
Water Table	e Present?	′es 🔘	No 💿 🛚 🗈	epth (incl	nes):						
Saturation F		'es 🔘	No 💿	epth (incl	nes):		307.4				
	ipillary fringe) ecorded Data (stream		onitoring wol	L garial pl	notoo n	rovious in		land Hydrology F	resent? Ye	s C r	lo 💿
Describe Re	ecorded Data (Stream	ı gauge, ii	ionitoring wei	ı, aeriai pi	10ι05, μ	irevious iris	spections),	ii avaliable.			
Remarks:	sindiace	lond 1- 1	.alaa								
INC	indicators of wetl	iana nyai	rology								

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

Project/Site: Red Barn Public Access Project	City/Coun	ty: San Mate	eo County	Sam	Sampling Date: 04/26/2022		
Applicant/Owner: Midpeninsula Regional Open Space District			State:CA	Sam	pling Point: $\overline{04}$	ļ	
Investigator(s): Jake Schweitzer, VNLC	Section, T	ownship, Rar	nge: San Gregorio	o (Rodrigu	ez) Land Gr	ant	
Landform (hillslope, terrace, etc.): depression	Local reli	ef (concave, c	convex, none): non	ie	Slope	e (%): <u>10-2</u>	0
Subregion (LRR): Northwest Forests and Coast Lat: 37	.355		Long: <u>-122.266</u>		Datum	:NAD83	
Soil Map Unit Name: Santa Lucia Loam			NWI cla	assification:	N/A		
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes (● No C	(If no, explai	n in Remarl	rs.)		
Are Vegetation Soil or Hydrology X significantly	y disturbed	? Are "	Normal Circumstan	ces" preser	nt? Yes 💿	No 🔘	
Are Vegetation Soil or Hydrology naturally pr	roblematic?	(If ne	eded, explain any a	nswers in F	Remarks.)		
SUMMARY OF FINDINGS - Attach site map showing	ر sampliı	ng point lo	cations, trans	ects, imp	ortant feat	ures, etc	; .
Hydrophytic Vegetation Present? Yes No No							
Hydric Soil Present? Yes No (ls t	the Sampled	Area				
Wetland Hydrology Present? Yes No (wif	thin a Wetlan	d? Yes	O 1	No 💿		
Remarks: Artificial depression.							
Artificial depression.							
VEGETATION - Use scientific names of plants.							
Absolute		t Indicator	Dominance Test	worksheet	:		
Tree Stratum Plot size: 25 feet % Cover 1. N/A	Species?	Status_	Number of Domin That Are OBL, FA			(A)	
2.					<i>J</i> . 0	(A)	
3.		_	Total Number of I Species Across A		1	(B)	
4.			Percent of Domin			,	
Sopling/Shrub Stratum Diet size. 45 f. d)		That Are OBL, FA			% (A/B)	
Sapling/Shrub Stratum Plot size: 15 feet 1. N/A			Prevalence Inde	x workshee	et:		\dashv
2.			Total % Cove	er of:	Multiply	by:	
3.			OBL species		x 1 =	0	
4.			FACW species		x 2 =	0	
5			FAC species		x 3 =	0	
Herb Stratum Plot size: 5 feet Total Cover: %	1		FACU species UPL species	80	x 4 = x 5 =	320	
1. Phalaris aquatica 80	Yes	FACU	Column Totals:	80	(A)	0 320 (E	87
2.					` '		,
3			Prevalence			4.00	
4		_	Hydrophytic Veg				
5			Dominance T Prevalence Ir				
6					ns¹ (Provide s	upporting	
8.			data in Re	marks or or	n a separate s	heet)	
Total Cover: 80 %			Problematic I	-lydrophytic	Vegetation ¹ (I	Explain)	
Woody Vine Stratum Plot size: 15 feet			¹ Indicators of hyd	lric soil and	wetland hydr	ology must	
1			be present.	inc son and	welland nyui	ology musi	
Total Cover: %			Hydrophytic				_
% Bare Ground in Herb Stratum 20 % % Cover of Biotic		0/	Vegetation	Yes 〇	No 💿		
Remarks:		<u>%</u>	Present?	169	NO (\dashv
Upland vegetation							

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SOIL Sampling Point: 04

Depth (inches)	Matrix Color (moist)	%	Color (moist)	Features	_Loc² _ Tex	cture ³	Remarks
0-20	10YR 3/2	100			Silty C	lay Loam	moist, some gravel
ydric Soil ydric Soil Histos Histic Black Hydroe Deplet Thick Sandy	Indicators: (Application (A1) Epipedon (A2) Histic (A3) gen Sulfide (A4) ted Below Dark Surface Dark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4)	Sandy Clay, L ble to all LRRs	oam, Sandy Clay I , unless otherwise Sandy Redox Stripped Ma Loamy Mucl Loamy Gley Depleted Ma Redox Dark Depleted Da	noted.) ((S5) trix (S6) ky Mineral (F1) ed Matrix (F2)	, Clay Loam, Silty Ind	r Clay Loan icators for 1 cm Muc 2 cm Muc Reduced Red Pare Other (Ex	on: PL=Pore Lining, M=Matrix. n, Silt Loam, Silt, Loamy Sand, Problematic Hydric Soils k (A9) (LRR C) k (A10) (LRR B) Vertic (F18) nt Material (TF2) plain in Remarks) hydrophytic vegetation and drology must be present. urbed or problematic
Depth (i					Hvd	ric Soil Pre	esent? Yes No 💽
/DROL							
	ydrology Indicators: dicators (any one indic		ant)			0	
Surfac High W Satura Water Sedime Drift De Algal N Iron De Surfac Inunda Sparse	e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) e Soil Cracks (B6) ation Visible on Aerial ely Vegetated Concav	Imagery (B7)	Water-Stair (exc. MLR/ Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iror Stunted or Other (Exp	ned Leaves (B9) A 1, 2, 4A/B) (B11) ertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced Iron (C4) n Reduction in Tiller Stressed Plants (D	l) d Soils (C6)	Wate (RMI Drain Dry-1 Satu Geon Shal FAC Rais	ry Indicators (2 or more require er-Stained Leaves (B9) LRA 1, 2, 4A/B) nage Patterns (B10) Season Water Table (C2) ration Visible on Aerial Imager morphic Position (D2) low Aquitard (D3) -Neutral Test (D5) ed Ant Mounds (D6) (LRR A) t-Heave Hummocks (D7)
	ervations:	. 0	0 -				
			Depth (inc	· -			
		_	Depth (inc	· ————			
	Present? apillary fringe) ecorded Data (stream		Depth (inc	·	_		resent? Yes O No

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

Project/Site: Red Barn Public Access Project		City/Cour	nty: <u>San Mat</u>	teo County	Sam	pling Date: 0	04/26/2022
Applicant/Owner: Midpeninsula Regional Open	Space District			State:CA	Sam	pling Point: $\overline{\underline{0}}$	15
Investigator(s): Jake Schweitzer, VNLC		Section,	Township, Ra	ange: San Gregorio	(Rodrigu	iez) Land G	rant
Landform (hillslope, terrace, etc.): Flat grassland		Local rel	lief (concave,	convex, none): non	e	Slop	pe (%): <u>1-5</u>
Subregion (LRR): Northwest Forests and Coas	t Lat: 37.	.356		Long: -122.267		Datur	m: NAD83
Soil Map Unit Name: Santa Lucia Loam				NWI cla	assification:	N/A	
Are climatic / hydrologic conditions on the site typica	al for this time of y	ear? Yes	No ((If no, explain	n in Remarl	ks.)	
Are Vegetation Soil or Hydrology X	significantly	disturbed	d? Are	"Normal Circumstan	ces" preser	nt? Yes 💿	No 🔘
Are Vegetation Soil or Hydrology	naturally pr	oblematic	? (If n	eeded, explain any a	nswers in F	Remarks.)	
SUMMARY OF FINDINGS - Attach site	map showing	ı sampli	ing point l	ocations, transe	ects, imp	ortant fea	atures, etc.
Hydrophytic Vegetation Present? Yes	No 🕞						
Hydric Soil Present? Yes	No (le	the Sample	l Δrea			
Wetland Hydrology Present? Yes	No (ithin a Wetla		\bigcirc	No 💿	
Remarks:							
Grassland pasture with some hydro	phytic plant spe	cies.					
VEGETATION - Use scientific names	of plants.						
Two Chatum Districts Of C	Absolute		nt Indicator	Dominance Test	worksheet	t:	
Tree Stratum Plot size: 25 feet 1. N/A	% Cover	_Species	? Status	Number of Domin That Are OBL, FA			(A)
2.				- Illat Ale OBL, FA	CVV, OI FA	0.	(A)
3.				Total Number of D Species Across A		2	(B)
4.				-		_	(D)
	9/0			Percent of Domina That Are OBL, FA) % (A/B)
Sapling/Shrub Stratum Plot size: 15 feet							, ,0 (112)
1. N/A				Prevalence Index			
2				Total % Cove	er of:	Multiply	0
3.			_	OBL species FACW species		x 1 = x 2 =	0
5.		-	 ,	FAC species	1	x 3 =	3
	al Cover: %		_ .	FACU species	40	x 4 =	160
Herb Stratum Plot size: 5 feet				UPL species	.0	x 5 =	0
1. Festuca perennis		Yes	FACU	Column Totals:	41	(A)	163 (B)
2. Bromus hordeaceus		Yes	FACU		la de la Di	. ,	2.00
3. Convolvulus arvensis	5	No	Not Listed	Prevalence			3.98
4. Geranium dissectum	$\frac{10}{5}$	No No	Not Listed FACU	Hydrophytic Veg Dominance T			
5. Phalaris aquatica 6. Carduus pycnocephalus	$\frac{3}{2}$	No	Not Listed	Prevalence Ir			
7. Bromus diandrus	$\frac{2}{1}$	No	Not Listed	Morphologica			supporting
8. Hordeum marinum		No	FAC			n a separate	
	al Cover: 59 %			Problematic H	- Hydrophytic	Vegetation ¹	(Explain)
Woody Vine Stratum Plot size: 15 feet	39 %						
1				Indicators of hyd be present.	ric soil and	l wetland hyd	trology must
2				_			
Tot:	al Cover: %			Hydrophytic Vegetation			
% Bare Ground in Herb Stratum41 %	% Cover of Biotic	Crust	%	Present?	Yes 🔘	No 💿	,
Remarks:							

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(inches)	Matrix Color (moist)	%	Color	(moist)	x Features	_Type ¹	Loc ²	Textu	ıre ³			Remar	ks	
0-20	10YR 3/2	100						Clay loar		Dry, cr	umbl			
	-				·									
dric Soil Histos Histos Histic Black Hydrog Deplet Thick Sandy Sandy	Epipedon (A2) Histic (A3) gen Sulfide (A4) ted Below Dark Surfa Dark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) E Layer (if present):	Sandy Cla	y, Loam, S	Sandy Clay	e noted.) x (S5) atrix (S6) cky Minera yed Matrix latrix (F3) x Surface (ark Surface	I (F1) (F2) F6) e (F7)		am, Silty C Indic		n, Silt Loa Problema k (A9) (L k (A10) (Vertic (F nt Materi plain in F nydrophy drology r	am, Sil atic Hy RR C) LRR B 18) al (TF2 Remark tic veg must be	t, Loam dric Soi	y Sand ils and	
Type: N												_		
Depth (i emarks:	nches):							Hydric	Soil Pre	sent?	Yes (No 🤄)
rimary Inc	ydrology Indicators dicators (any one indi		ficient)			(DS)			Seconda	•			•	<u></u>
_	e Water (A1) Vater Table (A2)			Water-Stai		` '				r-Staine -RA 1, 2		٠,		
Satura Water Sedime Drift De Algal N Iron De Surface	tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) e Soil Cracks (B6) ation Visible on Aerial	0 , (′ —	Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp	vertebrates Sulfide Oc Rhizospher of Reduce in Reduction Stressed	or (C1) es along d Iron (C ² on in Tilled Plants (D	l) d Soils (Ce	6)	Dry-S Satul Geor Shall FAC- Raise	nage Pat Season Vistion Vistion Vision Morphic Iow Aquit Neutral Ted Ant Minder Indianal Minder Iowania (Neutral Ted Ant Minder Iowania Iowani	Vater Table or Position (Dard	Table (Con Aerial n (D2) 3) (D6) (L	Imager	у (С
Jopaise	ervations:													
<u>.</u>		Yes 🔘	No 💿	Depth (in	ches):									
eld Obse	ater Present?		No 💿	Depth (in	ches):									
eld Obse urface Wa		Yes 🔘												
ield Obsection urface Warlater Table aturation includes car	e Present?	Yes 🔿	No 💿	Depth (inwell, aerial p		evious ins		land Hyd , if availab		esent?	Yes	0	No	•

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

Project/Site: Red Barn Public Access Project		City/Count	ty: San Mate	eo County	San	npling Date:	04/26/20	22
${\it Applicant/Owner:} \ \underline{Midpeninsula} \ Regional \ Open \ Space \ \Gamma$	District			State:CA	Sam	npling Point:	06	
Investigator(s): Jake Schweitzer		Section, T	ownship, Ra	nge: San Gregorio	(Rodrig	uez) Land	Grant	
Landform (hillslope, terrace, etc.): Road ditch		Local relie	ef (concave,	convex, none): non	ıe	Slo	pe (%): <u>1</u> -	-5
Subregion (LRR): Northwest Forests and Coast	Lat: <u>37.</u>	356		_ Long: <u>-122.266</u>		Datu	ım: <u>NAD</u> 8	33
Soil Map Unit Name: Santa Lucia Loam				NWI cla	assification	: <u>N/A</u>		
Are climatic / hydrologic conditions on the site typical for this	time of ye	ear? Yes (• No ((If no, explai	n in Remar	ks.)		
Are Vegetation \square Soil \square or Hydrology $\boxed{\mathbf{X}}$ significant \square	gnificantly	disturbed	? Are "	'Normal Circumstan	ces" prese	nt? Yes 🖲	No (\bigcirc
Are Vegetation Soil or Hydrology na	aturally pro	oblematic?	(If ne	eded, explain any a	nswers in	Remarks.)		
SUMMARY OF FINDINGS - Attach site map si	howing	samplir	ng point lo	ocations, trans	ects, imp	oortant fe	atures,	etc.
Hydrophytic Vegetation Present? Yes No	•							
	•	ls t	he Sampled	Area				
Wetland Hydrology Present? Yes No	•	wit	hin a Wetlar	nd? Yes	\bigcirc	No 💿		
Remarks: Roadside drainage swale.								
reducide dramage sware.								
VEGETATION - Use scientific names of plant	ts.							
	Absolute		Indicator	Dominance Test				
Tree Stratum Plot size: 25 feet 1. N/A	% Cover	Species?	_Status_	Number of Domin That Are OBL, FA) (/	A)
2.				-		0. (, (,	Λ)
3.				Total Number of I Species Across A		1	l (B)
4.		-		Percent of Domin		c	,	,
Cooling/Church Ctrotum District. 45.5	%			That Are OBL, FA			.0 % (A	A/B)
Sapling/Shrub Stratum Plot size: 15 feet 1. Baccharis pilularis	5	No	Not Listed	Prevalence Inde	x workshe	et:		
2.			- Tior Elsted	Total % Cove		Multip	ly by:	
3.				OBL species		x 1 =	0	
4.				FACW species		x 2 =	0	
5.				FAC species	3	x 3 =	9	
Total Cover:	5 %			FACU species	20	x 4 =	80	
Herb Stratum Plot size: 5 feet 1. Phalaris aquatica	20	Yes	FACU	UPL species		x 5 =	0	
2. Vicia villosa	$\frac{20}{5}$	No	Not Listed	Column Totals:	23	(A)	89	(B)
3. Carduus pycnocephalus		No	Not Listed	Prevalence	Index = B/	'A =	3.87	
4. Helminthotheca echioides	2	No	FAC	Hydrophytic Veg	etation In	dicators:		
5. Kickxia elatine	1	No	FAC	Dominance T				
6		-		Prevalence Ir	ndex is ≤3.0) ¹		
7.				Morphologica				ıg
8.				Problematic I		n a separate		
Total Cover: Woody Vine Stratum Plot size: 15 feet	31 %			1 Toblematio 1	тушорпуш	, vogotation	(Explair)	
1				¹ Indicators of hyd	ric soil and	d wetland hy	/drology m	nust
2.				be present.				
Total Cover:	%			Hydrophytic				
% Bare Ground in Herb Stratum 69 % % Cover 6	of Biotic C	Crust	%	Vegetation Present?	Yes 🔘	No 🤄		
Remarks:				1				
Ruderal upland vegetation.								

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Depth inches)	Matrix Color (moist)	%	Color	(moist)	x Feature %	Type ¹	Loc ²	Tosa	ure ³		Don	narks
				(IIIOISI)		_ <u>rype</u> _				11		iaiks
0-20	10YR 2/2	_ 100	_					Clay Lo	am	gravell	у	
			_									
						-		-				
ype: C=C	concentration, D=De	pletion, R	M=Reduce	d Matrix.	² CS=Co	vered or C	oated Sar	nd Grain	s. Locati	on: PL=P	ore Lining,	M=Matrix.
oil Texture	es: Clay, Silty Clay,	Sandy Cl	ay, Loam,	Sandy Clay	Loam, S	andy Loam	, Clay Loa	am, Silty	Clay Loan	n, Silt Loa	m, Silt, Lo	amy Sand, S
dric Soil	Indicators: (Applica	ble to all l	LRRs, unle	ss otherwis	e noted.)			Indi	cators for	Problema	tic Hydric :	Soils
Histoso	` '			Sandy Red	, ,				1 cm Muc	k (A9) (Li	RR C)	
⊒'	Epipedon (A2)			Stripped M	` '				2 cm Muc	, , ,	,	
_	listic (A3) en Sulfide (A4)		\vdash	Loamy Mu	•	` '			Reduced			
_ ,	()	(044)	\vdash	Loamy Gle Depleted N	-	. ,			Red Pare		` ,	
₫ '	ed Below Dark Surfa Park Surface (A12)	ce (A11)	H	Redox Dar	•				Other (Ex	piain in K	emarks)	
┙	Mucky Mineral (S1)		H	Depleted D		` '		⁴Ind	icators of	hydrophyt	ic vegetati	on and
	Gleyed Matrix (S4)		Н	Redox Der							ust be pre	
,	(,					(- /			ınless dist	urbed or p	oroblemation	
Depth (in emarks:								11,701	ic Soil Pro			
DROLC			ufficient)							ry Indicato	ors (2 or m	ore required
DROLC etland Hy	OGY rdrology Indicators		ufficient)	Water-Sta		` '			Seconda	er-Stained	Leaves (E	•
DROLO etland Hy mary Indi Surface	OGY rdrology Indicators cators (any one indic		ufficient)	(exc. MLF	RA 1, 2, 4	` '			Seconda	-	Leaves (E	•
DROLC etland Hy mary Indi Surface High W	OGY rdrology Indicators cators (any one indic		ufficient)	(exc. MLF Salt Crust	RA 1, 2, 4 (B11)	A/B)			Seconda Wate (RM	er-Stained LRA 1, 2,	Leaves (E	39)
DROLO etland Hy mary Indi] Surface] High W.] Saturati] Water M	ordrology Indicators icators (any one indicators (any one indicators (A1)) ater Table (A2) ion (A3) Marks (B1)		ufficient)	(exc. MLF Salt Crust Aquatic Ir	RA 1, 2, 4 (B11) vertebrat	A/B) es (B13)			Seconda Wate (RM)	er-Stained LRA 1, 2,	Leaves (E 4A/B)	39)
marks: DROLO etland Hy mary Indi Surface High W. Saturati Water M. Sedime	ordrology Indicators cators (any one indicators water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2)		ufficient)	(exc. MLF Salt Crust Aquatic Ir Hydrogen	RA 1, 2, 4 (B11) vertebrat Sulfide 0	A/B) es (B13) odor (C1)	Living Po		Seconda Wate (RM Drain Dry-:	er-Stained LRA 1, 2, nage Patto Season W	I Leaves (E 4A/B) erns (B10) /ater Table	39)
DROLO etland Hy imary Indi] Surface] High W] Saturati] Water M] Sedime] Drift De	ordrology Indicators leators (any one indicators water (A1) later Table (A2) lion (A3) Marks (B1) liont Deposits (B2) liposits (B3)		ufficient)	(exc. MLF Salt Crust Aquatic Ir Hydrogen Oxidized	RA 1, 2, 4 (B11) vertebrat Sulfide C Rhizosph	es (B13) Odor (C1) eres along	-		Seconda Wate (RM Drain Dry-:	er-Stained LRA 1, 2, nage Patto Season W ration Vis	I Leaves (E 4A/B) erns (B10) /ater Table	(C2)
DROLC etland Hy imary Indi] Surface] High W.] Saturati] Water M.] Sedime] Drift De] Algal M.	rdrology Indicators cators (any one indicators (any one indicators) Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) iposits (B3) at or Crust (B4)		ufficient)	(exc. MLF Salt Crust Aquatic Ir Hydrogen Oxidized Presence	RA 1, 2, 4 (B11) vertebrat Sulfide C Rhizosph of Reduc	es (B13) Odor (C1) eres along ed Iron (C4	1)	ots (C3)	Seconda Wate (RM Drain Dry- Satu Geoo	er-Stained LRA 1, 2, nage Patte Season W ration Vis morphic P low Aquita	Leaves (E 4A/B) erns (B10) /ater Table ible on Aer rosition (D2 ard (D3)	(C2)
DROLO etland Hy imary Indi] Surface] High W.] Saturati] Water M.] Sedime] Drift De] Algal M. Iron De	ordrology Indicators cators (any one indicators (any one indicators) water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5)		ufficient)	(exc. MLF Salt Crust Aquatic Ir Hydrogen Oxidized Presence Recent Iro	RA 1, 2, 4 (B11) vertebrat Sulfide C Rhizosph of Reduc	es (B13) Odor (C1) eres along ed Iron (C4	l) d Soils (Ce	ots (C3)	Seconda Wate (RM Drain Dry- Satu Geo Shal	er-Stained LRA 1, 2, nage Patte Season W ration Vis morphic P low Aquita	Leaves (E 4A/B) erns (B10) /ater Table fible on Ael dosition (D2 ard (D3) Fest (D5)	(C2) rial Imagery
DROLC etland Hy imary Indi] Surface] High W.] Saturati] Water M.] Sedime] Drift De] Algal M.] Iron De] Surface	rdrology Indicators cators (any one indice Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)	cator is su		exc. MLF Salt Crust Aquatic Ir Hydrogen Oxidized Presence Recent Ird Stunted o	RA 1, 2, 4 (B11) vertebrat Sulfide C Rhizosph of Reduc on Reduc r Stresse	es (B13) Door (C1) eres along ed Iron (C4) tion in Tille d Plants (D	l) d Soils (Ce	ots (C3)	Seconda Wate (RM Drain Dry- Satu Geo Shal FAC Rais	rer-Stained LRA 1, 2, mage Patto Season W ration Vis morphic P low Aquita -Neutral T ed Ant Mo	Leaves (E4A/B) erns (B10) /ater Table fible on Aer cosition (D2 ard (D3) fest (D5) bunds (D6)	(C2) rial Imagery 2)
DROLC etland Hy mary Indi] Surface] High W] Saturati] Water M] Sedime] Drift De] Algal M] Iron De] Surface] Inundat	ordrology Indicators cators (any one indicators (any one indicators) water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	cator is su	(B7)	(exc. MLF Salt Crust Aquatic Ir Hydrogen Oxidized Presence Recent Iro	RA 1, 2, 4 (B11) vertebrat Sulfide C Rhizosph of Reduc on Reduc r Stresse	es (B13) Door (C1) eres along ed Iron (C4) tion in Tille d Plants (D	l) d Soils (Ce	ots (C3)	Seconda Wate (RM Drain Dry- Satu Geo Shal FAC Rais	rer-Stained LRA 1, 2, mage Patto Season W ration Vis morphic P low Aquita -Neutral T ed Ant Mo	Leaves (E 4A/B) erns (B10) /ater Table fible on Ael dosition (D2 ard (D3) Fest (D5)	(C2) rial Imagery 2)
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