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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

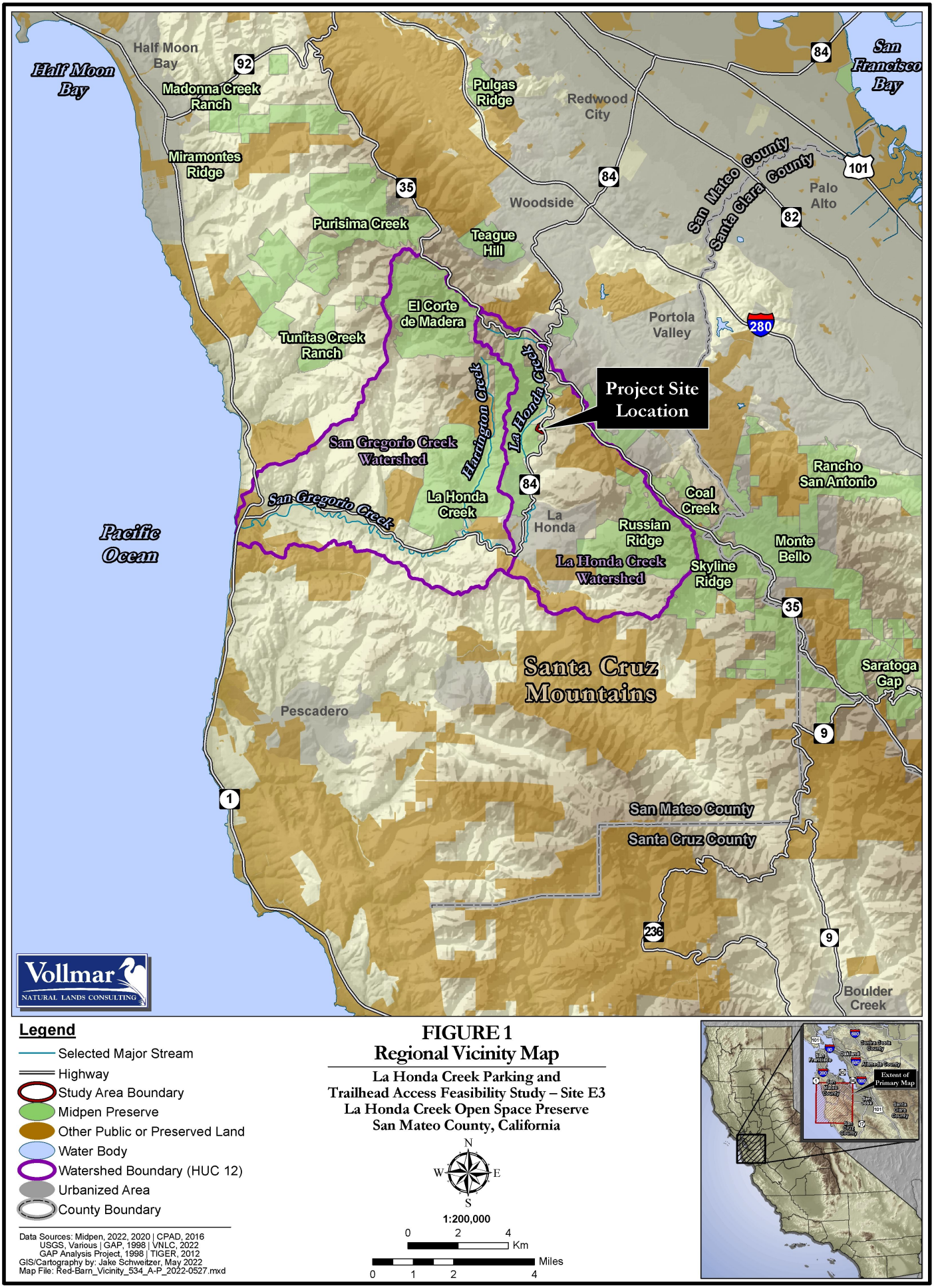
2.1 Extent and Location of Study Area

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.



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Legend

- Selected Major Stream
- Highway
- Study Area Boundary
- Midpen Preserve
- Other Public or Preserved Land
- Water Body
- Watershed Boundary (HUC 12)
- Urbanized Area
- County Boundary

Data Sources: Midpen, 2022, 2020 | CPAD, 2016
USGS, Various | GAP, 1998 | VNLC, 2022
GAP Analysis Project, 1998 | TIGER, 2012
GIS/Cartography by: Jake Schweitzer, May 2022
Map File: Red-Barn_Vicinity_534_A-P_2022-0527.mxd

FIGURE 1
Regional Vicinity Map

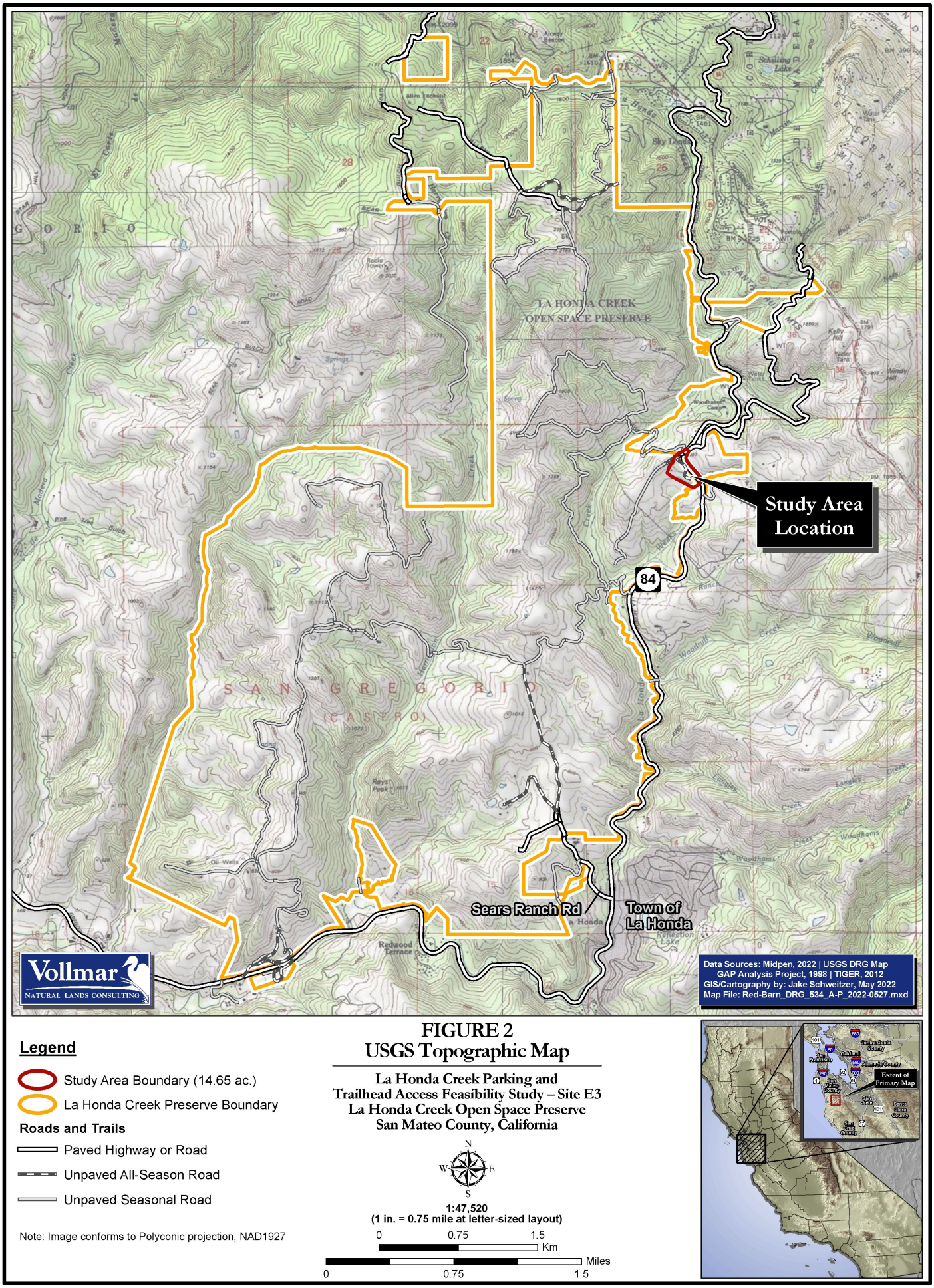
La Honda Creek Parking and Trailhead Access Feasibility Study – Site E3
La Honda Creek Open Space Preserve
San Mateo County, California

N
W E
S

1:200,000

0 2 4 Km

0 1 2 4 Miles



Legend

- Study Area Boundary (14.65 ac.)
- La Honda Creek Preserve Boundary

Roads and Trails

- Paved Highway or Road
- Unpaved All-Season Road
- Unpaved Seasonal Road

Note: Image conforms to Polyconic projection, NAD1927

FIGURE 2
USGS Topographic Map

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

N
W E
S

1:47,520
(1 in. = 0.75 mile at letter-sized layout)

0 0.75 1.5 Km

0 0.75 1.5 Miles

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

Precipitation Data from the Last 30 Years (1991 - 2021)[1]			Recent Field Conditions Compared to Precipitation Data from the Last 30 Years, and Analysis[1]					
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
[1] Precipitation data is obtained from the Half Moon Bay, CA Weather Station [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 (NORMAL)

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 RWQCB) 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 RWQCB, 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 inter-connected 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 Jurisdictional 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 Habitat				
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 ACREAGE			**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

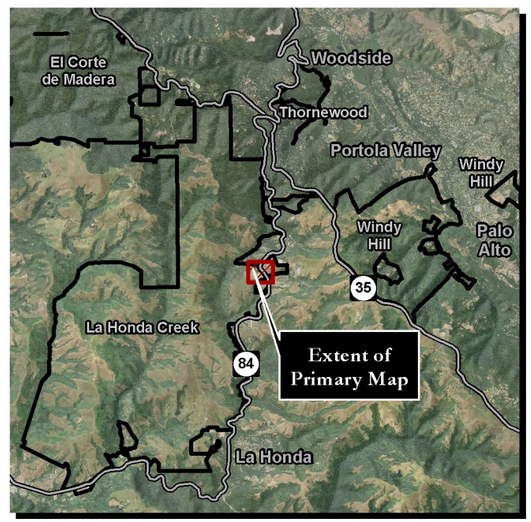
Legend

- 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.



N
W E
S

1:1,800

0 37.5 75 Meters

0 75 150 300 Feet

Vollmar NATURAL LANDS CONSULTING

Data Sources: Midpen, 2021 | USDA NAIP, 2020
VNLC, 2022 | TIGER, 2019 | USGS, various |
Cartography by Jake Schweitzer, 05/2022
Map File: Red-Barn_534_B-L_2022-0527.mxd

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
2. Top 24 inches of soil unit

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.

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 inter-connected 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].

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APPENDIX A:

REPRESENTATIVE PHOTOGRAPHS OF THE STUDY AREA

(Recorded April 26, 2022)

Representative Photographs of the Study Area

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.

Representative Photographs 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.

Representative Photographs of the Study Area

Soils with redox features at Delineation Data Point 01.

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

Representative Photographs of the Study Area

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

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

Representative Photographs of the Study Area

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 Project City/County: San Mateo County Sampling Date: 04/26/2022

Applicant/Owner: Midpeninsula Regional Open Space District State: CA Sampling Point: 01

Investigator(s): Jake Schweitzer, VNLC Section, Township, Range: San Gregorio (Rodriguez) Land Grant

Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): <1

Subregion (LRR): Northwest Forests and Coast Lat: 37.355 Long: -122.265 Datum: NAD83

Soil Map Unit Name: Santa Lucia Loam NWI classification: N/A

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 [X] 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 ( )	No (●)	
Hydric Soil Present?	Yes (●)	No ( )	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes ( )	No (●)	

Remarks:
Non wetland swale near culvert

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum Plot size: 25 feet			
1. *N/A*			
2.			
3.			
4.			
	%		
Sapling/Shrub Stratum Plot size: 15 feet			
1. *N/A*			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum Plot size: 5 feet			
1. *Phalaris aquatica*	75	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	75 %		
Woody Vine Stratum Plot size: 15 feet			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 25 % % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species	75	x 4 =	300
UPL species		x 5 =	0
Column Totals:	75 (A)		300 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

- [ ] Dominance Test is >50%
- [ ] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks:
Upland vegetation

SOIL

Sampling Point: 01

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture[3]	Remarks
0-8	10YR 3/2	90	10YR 5/6	10	C	M	Clay Loam	Gravelly, moist
8-20	10YR 3/2	100					Clay Loam	Gravelley, moist

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2] CS=Covered or Coated Sand Grains. Location: PL=Pore Lining, M=Matrix.
[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present. unless disturbed or problematic

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present? Yes ◉ No ○

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(exc. MLRA 1, 2, 4A/B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D17) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**RMLRA 1, 2, 4A/B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches):

Wetland Hydrology Present? Yes ○ No ◉

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

Remarks:

No water stained vegetation, no flow lines, no sediment deposits, no scouring.

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

Project/Site: Red Barn Public Access Project City/County: San Mateo County Sampling Date: 04/26/2022

Applicant/Owner: Midpeninsula Regional Open Space District State: CA Sampling Point: 02

Investigator(s): Jake Schweitzer, VNLC Section, Township, Range: San Gregorio (Rodriguez) Land Grant

Landform (hillslope, terrace, etc.): flat upland Local relief (concave, convex, none): none Slope (%): <1

Subregion (LRR): Northwest Forests and Coast Lat: 37.355 Long: -122.265 Datum: NAD83

Soil Map Unit Name: Santa Lucia Loam NWI classification: N/A

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 [X] 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 ( )	No (●)	
Hydric Soil Present?	Yes (●)	No ( )	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes ( )	No (●)	

Remarks:

Upland above P-01

VEGETATION - Use scientific names of plants.

Tree Stratum Plot size: 25 feet	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
	%		
Sapling/Shrub Stratum Plot size: 15 feet			
1. *N/A*			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum Plot size: 5 feet			
1. *Phalaris aquatica*	85	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	85 %		
Woody Vine Stratum Plot size: 15 feet			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 15 % % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species	85	x 4 =	340
UPL species		x 5 =	0
Column Totals:	85 (A)		340 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

- (●) Dominance Test is >50%
- (●) Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks:

Upland vegetation

SOIL

Sampling Point: 02

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture[3]	Remarks
0-8	10YR 3/2	90	10YR 5/6	10	C	M	Clay Loam	Gravelly, moist
8-20	10YR 3/2	100					Clay Loam	Gravelly, moist

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2] CS=Covered or Coated Sand Grains. Location: PL=Pore Lining, M=Matrix.
[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present. unless disturbed or problematic

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present? Yes ◉ No ○

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(exc. MLRA 1, 2, 4A/B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D17) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**RMLRA 1, 2, 4A/B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches):

Wetland Hydrology Present? Yes ○ No ◉

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

Remarks:

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

Project/Site: Red Barn Public Access Project City/County: San Mateo County Sampling Date: 04/26/2022

Applicant/Owner: Midpeninsula Regional Open Space District State: CA Sampling Point: 03

Investigator(s): Jake Schweitzer, VNLC Section, Township, Range: San Gregorio (Rodriguez) Land Grant

Landform (hillslope, terrace, etc.): flat grassland Local relief (concave, convex, none): none Slope (%): <1

Subregion (LRR): Northwest Forests and Coast Lat: 37.355 Long: -122.265 Datum: NAD83

Soil Map Unit Name: Santa Lucia Loam NWI classification: N/A

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 [X] 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 ( )	No (●)	
Hydric Soil Present?	Yes (●)	No ( )	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes ( )	No (●)	

Remarks:

Grassy pasture

VEGETATION - Use scientific names of plants.

Tree Stratum Plot size: 25 feet	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
	%		
Sapling/Shrub Stratum Plot size: 15 feet			
1. *N/A*			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum Plot size: 5 feet			
1. *Phalaris aquatica*	50	Yes	FACU
2. *Juncus mexicanus*	8		FACW
3. *Phalaris californica*	7		FAC
4. *Vicia sativa*	2		UPL
5. *Rumex crispus*	1		FAC
6.			
7.			
8.			
Total Cover:	68 %		
Woody Vine Stratum Plot size: 15 feet			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 32 % % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species	8	x 2 =	16
FAC species	8	x 3 =	24
FACU species	50	x 4 =	200
UPL species	2	x 5 =	10
Column Totals:	68 (A)		250 (B)

Prevalence Index = B/A = 3.68

Hydrophytic Vegetation Indicators:

- [ ] Dominance Test is >50%
- [ ] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks:

Ruderal upland vegetation

SOIL

Sampling Point: 03

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-8	10YR 3/2	95	10YR 5/6	5	C	M	Silty Clay Loam	moist
8-20	10YR 3/2	100					Silty Clay Loam	moist

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2] CS=Covered or Coated Sand Grains. Location: PL=Pore Lining, M=Matrix.
[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present. unless disturbed or problematic

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present? Yes ◉ No ○

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(exc. MLRA 1, 2, 4A/B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D17) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**RMLRA 1, 2, 4A/B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches):

Wetland Hydrology Present? Yes ○ No ◉

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

Remarks:

No indicators of wetland hydrology

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

Project/Site: Red Barn Public Access Project City/County: San Mateo County Sampling Date: 04/26/2022

Applicant/Owner: Midpeninsula Regional Open Space District State: CA Sampling Point: 04

Investigator(s): Jake Schweitzer, VNLC Section, Township, Range: San Gregorio (Rodriguez) Land Grant

Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): none Slope (%): 10-20

Subregion (LRR): Northwest Forests and Coast Lat: 37.355 Long: -122.266 Datum: NAD83

Soil Map Unit Name: Santa Lucia Loam NWI classification: N/A

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 [X] 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 ( )	No (●)	
Hydric Soil Present?	Yes ( )	No (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes ( )	No (●)	

Remarks:

Artificial depression.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum Plot size: 25 feet			
1. *N/A*			
2.			
3.			
4.			
	%		
Sapling/Shrub Stratum Plot size: 15 feet			
1. *N/A*			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum Plot size: 5 feet			
1. *Phalaris aquatica*	80	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	80 %		
Woody Vine Stratum Plot size: 15 feet			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 20 % % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species	80	x 4 =	320
UPL species		x 5 =	0
Column Totals:	80 (A)		320 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

- (●) Dominance Test is >50%
- (●) Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks:

Upland vegetation

SOIL

Sampling Point: 04

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture[3]	Remarks
0-20	10YR 3/2	100					Silty Clay Loam	moist, some gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2] CS=Covered or Coated Sand Grains. Location: PL=Pore Lining, M=Matrix.
[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present. unless disturbed or problematic

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(exc. MLRA 1, 2, 4A/B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D17) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**RMLRA 1, 2, 4A/B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ○	No ◉	Depth (inches):
Water Table Present?	Yes ○	No ◉	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ○	No ◉	Depth (inches):

Wetland Hydrology Present? Yes ○ No ◉

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

Remarks:

No indicators of wetland hydrology

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

Project/Site: Red Barn Public Access Project City/County: San Mateo County Sampling Date: 04/26/2022

Applicant/Owner: Midpeninsula Regional Open Space District State: CA Sampling Point: 05

Investigator(s): Jake Schweitzer, VNLC Section, Township, Range: San Gregorio (Rodriguez) Land Grant

Landform (hillslope, terrace, etc.): Flat grassland Local relief (concave, convex, none): none Slope (%): 1-5

Subregion (LRR): Northwest Forests and Coast Lat: 37.356 Long: -122.267 Datum: NAD83

Soil Map Unit Name: Santa Lucia Loam NWI classification: N/A

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 [X] 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 ( )	No (●)	
Hydric Soil Present?	Yes ( )	No (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes ( )	No (●)	

Remarks:

Grassland pasture with some hydrophytic plant species.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum Plot size: 25 feet			
1. *N/A*			
2.			
3.			
4.			
	%		
Sapling/Shrub Stratum Plot size: 15 feet			
1. *N/A*			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum Plot size: 5 feet			
1. *Festuca perennis*	20	Yes	FACU
2. *Bromus hordeaceus*	15	Yes	FACU
3. *Convolvulus arvensis*	5	No	Not Listed
4. *Geranium dissectum*	10	No	Not Listed
5. *Phalaris aquatica*	5	No	FACU
6. *Carduus pycnocephalus*	2	No	Not Listed
7. *Bromus diandrus*	1	No	Not Listed
8. *Hordeum marinum*	1	No	FAC
Total Cover:	59 %		
Woody Vine Stratum Plot size: 15 feet			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 41 % % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species	1	x 3 =	3
FACU species	40	x 4 =	160
UPL species		x 5 =	0
Column Totals:	41 (A)		163 (B)

Prevalence Index = B/A = 3.98

Hydrophytic Vegetation Indicators:

- (●) Dominance Test is >50%
- (●) Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks:

SOIL

Sampling Point: 05

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture[3]	Remarks
0-20	10YR 3/2	100					Clay loam	Dry, crumbly

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2] CS=Covered or Coated Sand Grains. Location: PL=Pore Lining, M=Matrix.
[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present. unless disturbed or problematic

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks:

High bioturbation from rodents

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(exc. MLRA 1, 2, 4A/B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D17) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**RMLRA 1, 2, 4A/B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches):

Wetland Hydrology Present? Yes ○ No ◉

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

Remarks:

No indicators

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

Project/Site: Red Barn Public Access Project City/County: San Mateo County Sampling Date: 04/26/2022

Applicant/Owner: Midpeninsula Regional Open Space District State: CA Sampling Point: 06

Investigator(s): Jake Schweitzer Section, Township, Range: San Gregorio (Rodriguez) Land Grant

Landform (hillslope, terrace, etc.): Road ditch Local relief (concave, convex, none): none Slope (%): 1-5

Subregion (LRR): Northwest Forests and Coast Lat: 37.356 Long: -122.266 Datum: NAD83

Soil Map Unit Name: Santa Lucia Loam NWI classification: N/A

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 [X] 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 ( )	No (●)	
Hydric Soil Present?	Yes ( )	No (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes ( )	No (●)	

Remarks:

Roadside drainage swale.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum Plot size: 25 feet			
1. *N/A*			
2.			
3.			
4.			
	%		
Sapling/Shrub Stratum Plot size: 15 feet			
1. *Baccharis pilularis*	5	No	Not Listed
2.			
3.			
4.			
5.			
Total Cover:	5 %		
Herb Stratum Plot size: 5 feet			
1. *Phalaris aquatica*	20	Yes	FACU
2. *Vicia villosa*	5	No	Not Listed
3. *Carduus pycnocephalus*	3	No	Not Listed
4. *Helminthotheca echioides*	2	No	FAC
5. *Kickxia elatine*	1	No	FAC
6.			
7.			
8.			
Total Cover:	31 %		
Woody Vine Stratum Plot size: 15 feet			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 69 % % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species	3	x 3 =	9
FACU species	20	x 4 =	80
UPL species		x 5 =	0
Column Totals:	23 (A)		89 (B)

Prevalence Index = B/A = 3.87

Hydrophytic Vegetation Indicators:

- (●) Dominance Test is >50%
- (●) Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks:

Ruderal upland vegetation.

SOIL

Sampling Point: 06

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture[3]	Remarks
0-20	10YR 2/2	100					Clay Loam	gravelly

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2] CS=Covered or Coated Sand Grains. Location: PL=Pore Lining, M=Matrix.
[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present. unless disturbed or problematic

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(exc. MLRA 1, 2, 4A/B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D17) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**RMLRA 1, 2, 4A/B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches):

Wetland Hydrology Present? Yes ○ No ◉

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

Remarks:

No indicators of wetland hydrology.