FINAL REPORT • JANUARY 2018 Preliminary Delineation of Waters and Wetlands for the Honeydew Ranch Property, Honeydew, California







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1 INTRODUCTION

1.1 Project Description and Proponent

The proposed Honeydew Ranch Property Project (Project) consists of the construction of an approximately 3-million-gallon water storage pond for irrigation use in a property with site address of 665 Old Hindley Ranch Road. The proposed project will be designed and constructed outside of all wetlands and waters in the property with a minimum 100-foot setback from wetlands and small tributaries and 200-foot setback from the Mattole River.

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1.2 Project Location and Survey Area

The property is located in unincorporated Humboldt County in the community of Honeydew, California (Figure 1). The Project is in Section 6 of Township 3 South, Range 1 East of the Honeydew U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle. The property is located at approximately latitude 40.2393° and longitude -124.1165°. The elevation within the property ranges from approximately 219 to 308 feet above mean sea level.

The Project can be accessed by taking the CA-254 exit toward South Fork/Honeydew from US-101, continuing west on Mattole Road, and turning east on Old Hindley Ranch Road. At the fork with Applewood Road, stay right (south) to continue on Old Hindley Ranch Road; the property's gated access road is to the south and descends to 665 Old Hindley Ranch Road (Figure 1). Access to the site requires land owner permission and entry through a private gate.

The wetland delineation was performed across the entire 46-acre property (Survey Area) (Figure 1).

1.3 Purpose of the Wetland Delineation

The purpose of this delineation is to: (1) assess the geographic extent of water and wetland resources in the Survey Area; and (2) delineate any waters of the U.S. that are subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA) and/or Section 10 of the Rivers and Harbors Act of 1899. This report is considered preliminary until verified by the Regulatory Branch of the USACE, San Francisco District.



Figure 1. Project location and waters and wetland delineation Survey Area.

2 METHODS

2.1 Existing Conditions

Prior to the delineation, existing information on vegetation, soils, hydrology, and precipitation was evaluated for the Survey Area. Information on potential jurisdictional waters and wetlands was obtained from the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) online application, *Wetlands Mapper* (USFWS 2017). Available data from the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) Web Soil Survey website were reviewed for the Survey Area and nearby vicinity. Precipitation and climate records from the National Climatic Data Center (NCDC 2018) were reviewed for a nearby weather stations, Honeydew 1 SW and Scotia, California.

2.2 Field Delineation

A delineation of potential jurisdictional waters and wetlands within the Survey Area was conducted on 1 December 2017 by qualified personnel in accordance with the *Corps of Engineers Wetlands Delineation Manual* (1987 Manual, USACE 1987), *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (WMVC Supplement; USACE 2010), USACE *Regulatory Guidance Letter (RGL) No. 05-05* (USACE 2005), and *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States* (OHWM Guide; Mersel and Lichvar 2014). The delineation included any feature that could potentially meet the definition of a water protected under the CWA (and thus be subject to USACE jurisdiction) and the Porter Cologne Act (Regional Water Quality Control Board jurisdiction).

2.2.1 Waters determination

The extent of waters, other waters, and tributaries was delineated by the location of the OHWM. The OHWM is defined as the elevation established on the shore by water fluctuations, and is indicated by physical characteristics such as: (a) a clear, natural line impressed on the bank; (b) shelving; (c) changes in the character of soil; (d) destruction of terrestrial vegetation; (e) the presence of litter and debris; or (f) other appropriate means that consider the characteristics of the surrounding areas. The OHWM was identified in accordance with the USACE RGL 05-05 (USACE 2005) and the OHWM Guide (Mersel and Lichvar 2014).

Prior to the wetland delineation survey, aerial photographs and topographic maps were reviewed to identify limits and connections of potential wetlands to traditional navigable waters (TNW) such as the Mattole River. During the wetland delineation, waters in the Survey Area were further reviewed for their connectivity to a TNW including the review of all existing drainages. The OHWM of potentially jurisdictional waters was delineated in the field. Boundaries were mapped via a sub-meter Global Positioning System (GPS) unit (Trimble Geo 6000) and later post-processed, corrected, and incorporated into Geographic Information Systems (GIS) where maps detailing the delineation results were generated. The delineation team recorded the width of the channel at the OHWM at representative cross-sections along with additional details observed at each transect (e.g., substrate, vegetation) onto USACE OHWM delineation data forms (downloaded from http://www.erdc.usace.army.mil/).

2.2.2 Wetland determination

Wetlands were delineated in accordance with the 1987 Manual (USACE 1987) and WMVC Supplement (USACE 2010). The 1987 Manual and WMVC Supplement provide technical guidelines and methods for the three-parameter approach to determining the location and boundaries of USACE jurisdictional wetlands. This approach requires that an area must support positive indicators of hydrophytic vegetation, hydric soils, and wetland hydrology to be considered a jurisdictional wetland. Connectivity of delineated wetlands to other waters and tributaries was evaluated in accordance with USACE RGL 07-01 (USACE 2007).

A total of nine data points were sampled in potential wetlands in the Survey Area. If a data point met all three wetland parameters, it was considered a USACE wetland; and if a point met two or less wetland parameters, it was considered upland. Potential wetland areas were identified based on information generated from the pre-field review (e.g., the NWI *Wetland Mapper* results) and observations of hydrology and vegetation in the field. If a data point met all three parameters for a wetland, then a paired data point was placed along the preliminary transition zone (the area in which a change from wetland to non-wetland conditions occurs) to determine the wetland/upland boundary. If the data point did not meet any of the three parameters, then the point was considered to be in an upland location and a paired point was not collected. At each data point, a soil pit was dug and the following information was recorded using the USACE (2010) data forms:

- Vegetation: Dominant plant species for each stratum (i.e., tree, sapling/shrub, herb, woody vine) by scientific name (genus and species) following the taxonomy of *The Jepson Manual, Second Edition* (Baldwin et al. 2012). Absolute percent cover and dominance were determined using the 50/20 rule outlined in the *WMVC Supplement*, and the wetland indicator status (OBL [obligate], FACW [facultative-wet], FAC [facultative], FACU [facultative-upland], and UPL [upland]) defined for the WMVC Region in the *National Wetland Plant List: 2016 Wetland Ratings* (Lichvar et al. 2016). Plant species not listed in the *2016 National Wetland Plant List* were considered upland (UPL) species. A dominance test was performed to determine if the data point exhibited hydrophytic vegetation. If the dominance test was not conclusive and wetland hydrology and hydric soils were present, then the prevalence index was calculated.
- 2. **Hydrology**: Presence and depth of surface water, groundwater, and/or soil saturation were recorded. In addition, if primary (e.g., oxidized rhizospheres along living roots) and secondary indicators (e.g., drainage patterns, dry-season water table, saturation visible on aerial imagery, FAC-neutral test) were observed, then they were also recorded at each data point.
- 3. **Soils**: Moistened soil matrix descriptions were recorded for each data point using the following: depth of the sample, color (as defined in Munsell soil color charts [Munsell Color 2000]), and texture. If present, redox features were then described by type (e.g., concentration, depletion, reduced matrix) and location (e.g., pore lining, root channel, or matrix). Hydric soils were determined using the *WMVC Supplement* primary indicators, such as redox dark surface (F6). In addition, mapped soil units (described in Section 3.1.2) were considered and the 2017 National List of Hydric Soils (NRCS 2017a) was consulted.

The location of each data point was recorded and photographs were taken of the representative site characteristics (Appendix B). Coordinates were determined using a Trimble Geo 6000 GPS unit. The wetland boundaries were walked and locations along the perimeter were recorded using the GPS unit. These boundaries along with other GPS collected data were post-processed, corrected, and incorporated into GIS where maps detailing the delineation results were generated. Mapped wetlands were classified according to the *Classification of Wetlands and Deepwater*

Habitats of the United States (Cowardin et al. 1979, FGDC 2013) based on the vegetation composition and structure at the sample points.

3 RESULTS

3.1 Existing Conditions

Vegetation is primarily grassland with a few conifer and hardwood stands throughout. Natural ground slopes range from 5–30%.

3.1.1 Hydrology

The property consists of southwest facing hillslopes adjacent to the Mattole River (Figure 1). The property is located within the North Subbasin of the Mattole River Basin and is within the Mattole River Watershed of the Cape Mendocino Hydrologic Unit (NCRWQCB 2018). Some portions of the property are within the 100-year flood zone of the TNW Mattole River (Figure 2). Mattole River flows into a Marine Protected Area (Punta Gorda State Marine Reserve) in the Pacific Ocean. In the early 1900s, Mattole Lumber Company's wharf, at the mouth of the Mattole River, shipped tanbark to tanneries in San Francisco (i.e., transport of interstate commerce) (JRP Historical Consulting, LLC 2013; Downie et al. 2002).

One seasonally flowing water drainage is located in the northwest region of the property and crosses underneath the primary access road to the property via a 30-inch diameter culvert. This feature eventually drains to a constructed pond and adjacent vegetated seep. Based on available aerial imagery, the pond was constructed prior to 2004 and will not be used by the landowner for agricultural use. These hydrologic features were approximately 600 to 800 feet from the ordinary high-water mark of the Mattole River and were not within the 100-year flood zone (Figure 2). No surface water connections from these features to the Mattole River were observed and the surrounding region was confirmed upland habitat. No additional shallow ground water features were observed on the property.

The NWI *Wetlands Mapper* indicates riverine wetlands associated with the Mattole River in the properties boundaries (Figure 3).

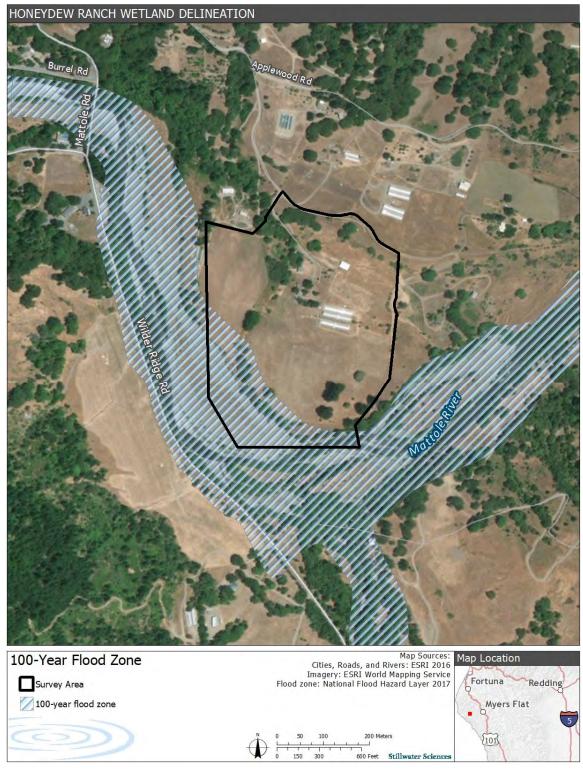


Figure 2. The Mattole River 100-year flood zone boundary in and adjacent to the Survey Area.

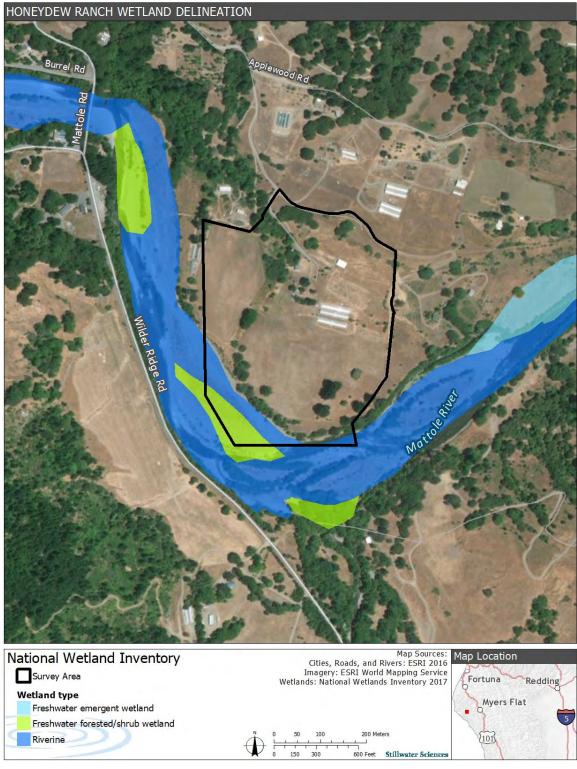


Figure 3. National Wetlands Inventory map of the Survey Area (Source: USFWS 2017).

3.1.2 Soil units

Four soil map units were documented in the USDA NRCS soil resource report for the Project: Crazycoyote-Windynip-Caperidge complex, 15–50% slopes; Conklin, 0–2% slopes; Pepperwood-Shivelyflat complex, 0–2% slopes; and Parkland-Garberville 2–9% slopes (Figure 4) (NRCS 2017b). In addition, the Mattole River and floodplain is mapped as water and fluvents, 0– 2% slopes, which is considered a hydric soil (NRCS 2017b).

Crazycoyote-Windynip-Caperidge complex is typically comprised of 35% Crazycoyote series, 35% Windynip series, 15% Caperidge, and 15% minor components. This complex is found along the shoulder and backslope of mountain slopes with elevations that range from 200 to 3,280 feet above mean sea level and with a mean annual precipitation of 60-100 inches, a mean annual air temperature of 48–57° F, and a frost-free period of 240–300 days (NRCS 2017b). All three soils series have a parent material composed of colluvium derived from sandstone and/or mudstone and/or residuum weathered from sandstone and/or mudstone. The Crazycoyote series typical profile consists of slightly decomposed plant material in the upper 0-1 inch (Oi horizon) with loam from 1–39 inches and very gravelly loam in 39- to 63-inch depths. The Windynip soil series profile is composed of loam from 0-4-inch depth and gravelly or very gravelly clay loam from 4to 79-inch depth. Caperidge soil profile is composed of a 0-2-inch organic layer with very or extremely gravely sandy loam from 2- to 79-inch depth. All three series, Crazycoyote, Windynip, and Caperidge, have a well drained natural drainage class, a depth to water table of more than 80 inches, and do not have a frequency for ponding or flooding. There is no hydric soil rating for Crazycoyote, Windynip, or Caperidge (NRCS 2017a). Minor components of this map unit include the Wirefence (5%), Sproulish (5%), Devilshole (2%), Yorknorth, moist (2%), and Rock outcrop (1%) soil series, none of which have a hydric soil rating on the Humboldt County (Central Part) hydric soils list (NRCS 2017a).

The Conklin series map unit setting is along backslopes of stream terraces. It has a parent material of alluvium derived from mixed sedimentary sources and is located in 60 to 460 feet elevation above mean sea level and have a mean annual precipitation of 49–98 inches, a mean annual air temperature of 54–59° F, and a frost-free period of 240–300 days (NRCS 2017b). The Conklin series typical profile includes 0–63-inch depth composed of loam or sandy clay loam with an extremely gravelly loamy coarse sand at 63–79-inch depth. It has a depth to water table of more than 80 inches, a low run-off class, a well drained natural drainage class, and no frequency for ponding or flooding (NRCS 2017b). The Conklin series does not have a hydric soil rating (NRCS 2017a). Minor components of this map unit include the Johnnyjack (10%), Parkland (3%), and Grannycreek (2%) soil series, the latter listed with a hydric soil rating on the Humboldt County (Central Part) hydric soils list (NRCS 2017a).

The Pepperwood-Shivelyflat complex map unit is located in areas with elevations that range from 50 to 490 feet elevation above mean sea level and have a mean annual precipitation of 40–70 inches, a mean annual air temperature of 54–57° F, and a frost-free period of 300–350 days (NRCS 2017b). The parent material for both Pepperwood and Shivelyflat soil series is an alluvium derived from mixed sedimentary sources along backslopes in flood-plain steps. The typical Pepperwood series profile includes fine sandy loam to very fine sandy loam up to 31 inches in depth and loam or silt loam from 31–79-inch depth. It has a depth to water table of about 20 to 39 inches, a moderately well drained drainage class, a frequent ponding frequency, and a rare flooding frequency (NRCS 2017b). Shivelyflat soil profiles consists of silt loam to 28-inch depth, a very fine sandy loam from 28–63-inch depth, and silt loam from 63–71-inch depth. Shivelyflat soils are somewhat poorly drained with a depth to water table of 10 to 20 inches with frequent ponding and rare flooding frequency. Pepperwood and Shivelyflat do not have a hydric

soil rating. Minor components of this map unit include the Eelriver (5%), Cottoneva (3%), and Weott (2%) soil series, the latter (Weott) is listed on the Humboldt County (Central Part) hydric soils list.

The Parkland-Garberville complex map unit, if irrigated, is prime farmland located in 60–490 feet elevation above mean sea level with mean annual precipitation of 49–90 inches, a mean annual temperature of 55–59° F, and a frost-free period of 240–280 days (NRCS 2017b). It is comprised of 45% Parkland soils, 40% Garberville soils, and 15% minor components. Both the Parkland and Garberville soils are along the backslope and footslope of alluvial fans and stream terraces and both have a parent material of alluvium derived from mixed sedimentary sources. The typical Parkland series profile includes loam and silt loam to depths of 18 inches with clay loam from 18–79-inch depth. It has a depth to water table of about 20 to 39 inches, a moderately well drained natural drainage class, and has no frequency for ponding or flooding (NRCS 2017b). Garberville soils typical profile is of 79-inch depth that includes gravelly loam, gravelly clay loam, gravelly sand clay loam, and very gravelly sandy loam. It is a well drained series with more than 80 inches to depth of water table and has no frequency for ponding or flooding (NRCS 2017b). Parkland or Garberville are not listed on the hydric soils list (NRCS 2017a). Minor components of this map unit include the Conklin (5%), Granneycreek (5%), Frenchman (3%), and Gschwend (2%) soil series. Granneycreek has a hydric soils rating on the Humboldt County (Central Part) hydric soils list (NRCS 2017a).

Wetland data points collected in the Pepperwood-Shively complex closely resembled the Pepperwood series and the hydric soil Weott series (NRCS 2017a) with matrix color of 10YR 3/2 and redox concentrations of 10YR 5/6 (Appendix A). Soil samples were considered hydric when a positive primary indicator, such as redox dark surface (F6) and/or redox depressions (F8) were identified (data points 3W and 7W in Appendix A).

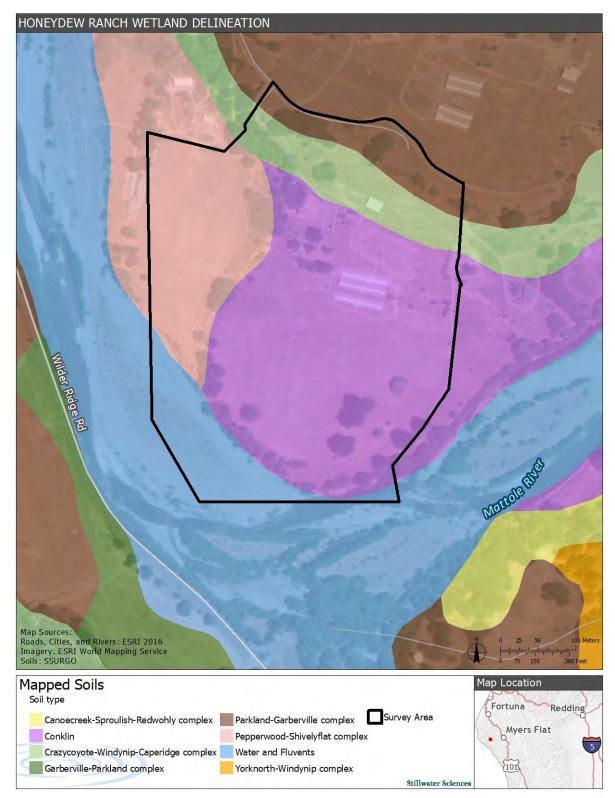


Figure 4. Mapped soil units in the Survey Area.

3.1.3 Precipitation

The Mattole River basin has a Mediterranean climate characterized by cool wet winters and dry warm summers (Downie et al. 2002). According to the Honeydew SW 1 weather station, the average annual rainfall is 69.6 inches with an annual average range from 11.9 to 131.9 inches in years 1960–2017 (omitting years with missing data) (NCDC 2018). Most of the precipitation accumulates during the months of November–March. No temperature data is available from the Honeydew SW 1 weather station; however, the nearby RAWS station's (Eel River Camp, California at elevation 446 feet above sea level) average monthly temperatures for the 2001 to 2017 period of record range from 44.5 to 68.7 °F (WRCC 2018).

Based on the Honeydew SW 1 weather station, the first half of 2017 excluding March and May, was much wetter than normal (from 6 to 20 inches above monthly averages); however, all months from July to December had below average precipitation. In addition, total precipitation for October, November, and December 2017 (1.3, 1.9, 0.7 inches, respectively) was considerably below the average monthly precipitation totals (4.2, 10.4, and 13.8 inches, respectively). Overall, due to the heavy rains early in the year, total precipitation in 2017 (61.2 inches) was only slightly lower than annual average of 69.6 inches (NCDC 2018). At RAWS weather station Eel River Camp, monthly temperatures for majority of the year were slightly warmer (ranging from 0.8° F to 2.7° F above monthly averages) and the overall annual average temperature of 56° F, was 0.4° F above annual average for the period of record. Temperatures ranged from 39–56° F on December 1, 2017 with a daily average of 43.5° F. December's average air temperature is 44.5° F for the region (based on RAWS weather station Eel River Camp period of record) (WRCC 2018).

The dryer and slightly cooler than normal conditions prior to the field surveys is unlikely to have influenced the delineations results; evidence of wetland features was consistent with the landscape position necessary to support wetlands, regardless of precipitation.

3.2 Waters and Wetlands

The Survey Area contains 6.27 acres of waters and 0.92 acre of wetlands adjacent to these waters (Table 1 and Figure 5). Except for the Mattole River, all waters and wetlands in the Survey Area were isolated and had no permanent or seasonal flowing waterways into the Mattole River (Figure 5). These waters and wetlands in the Survey Area are considered to be waters of the State.

| Description | Acreage |
|---|---------|
| Waters | |
| Intermittently flowing drainage (W-1) | 0.04 |
| Mattole River (W-2) | 6.23 |
| Wetlands | |
| Palustrine broad-leaved deciduous scrub- shrub wetlands (PS-1) | 0.46 |
| Semipermanently flooded palustrine emergent wetland (SP-1) | 0.22 |
| Seasonally flooded palustrine emergent wetland (SF-1–SF-2) | 0.24 |

| Table 1. Waters and wetlands in th | e Survey Area. |
|------------------------------------|----------------|
|------------------------------------|----------------|

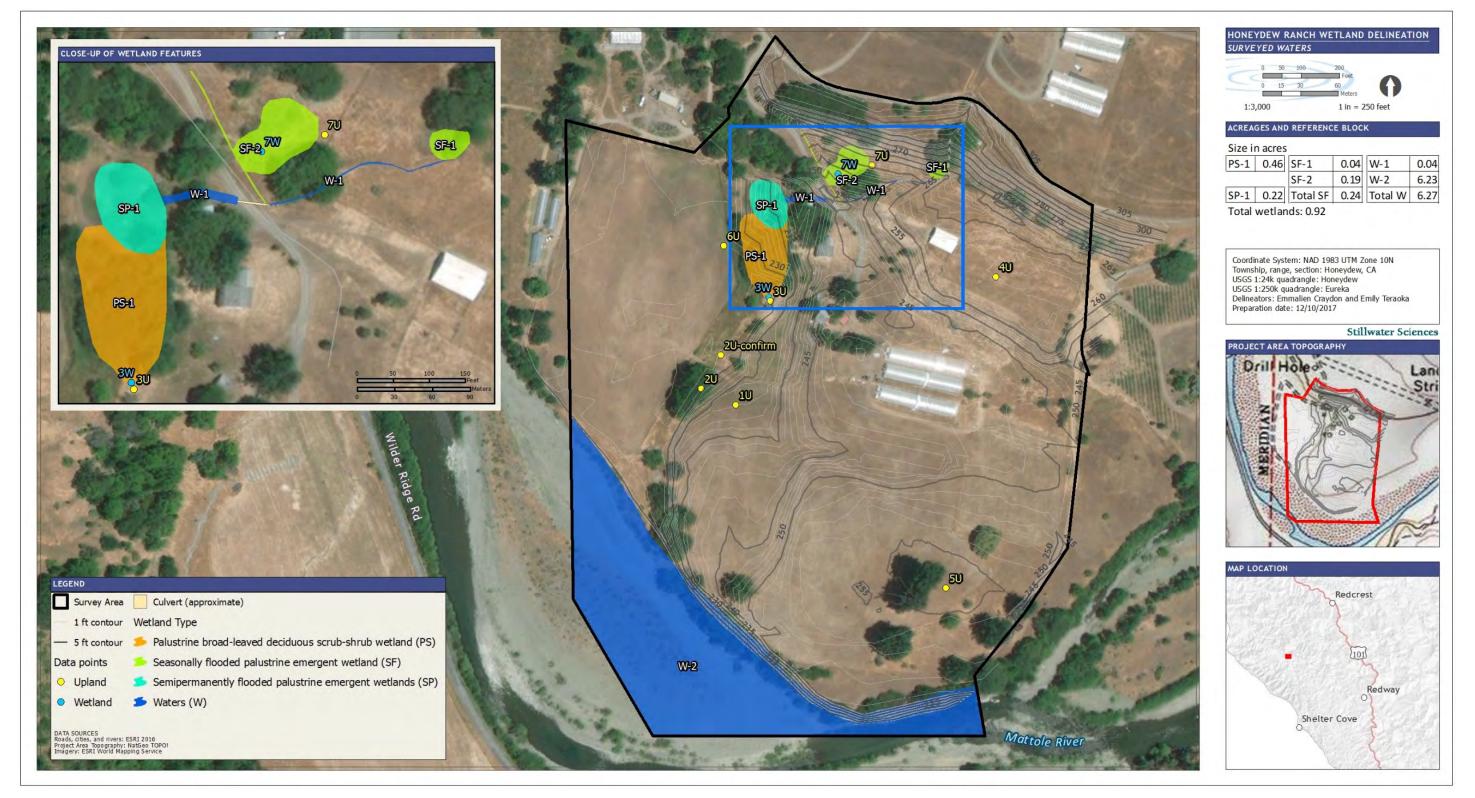


Figure 5. Delineated wetlands and waters in the Survey Area.

3.2.1 Waters

Waters total 6.27 acres in the Survey Area and includes one intermittently flowing drainage with a clear OHWM that at least seasonally conveys surface water into wetlands in the Survey Area and a TNW, the Mattole River (Table 1, W-1–W-2 in Figure 5). One culvert conveying seasonal surface water to nearby wetland features in the Survey Area was identified crossing under the access road to the property (Figure 5).

Measurements were taken from three transects to characterize waters in the Survey Area (Appendix A). Based on data collected from these transects, there are 0.04 acres of seasonally flowing waters and 6.23 acres of the Mattole River in the Survey Area (Table 1). The primary OHWM indicators at the transects included a break in slope, impression on bank, and changes in vegetation. Waters in the Survey Area ranged in width from 10 feet to ~210 feet (based on the horizontal distance between the OHWM on the right and left banks, respectively) with depths greater than 3 feet (based on the vertical distance between the OHWM and channel thalweg).

3.2.2 Wetlands

There is a total of 0.92 acres of palustrine wetlands in the Survey Area (Table 1, Figure 5). Three wetland types occur in the Survey Area: (1) semipermanently flooded palustrine emergent wetlands and (2) seasonally flooded palustrine emergent wetlands, and (3) palustrine broadleaved deciduous scrub-shrub wetlands (hereinafter described as palustrine scrub-shrub wetlands) (Figure 5). FGDC (2013) defines the palustrine system as including all nontidal wetlands dominated by trees, shrubs, persistent emergent plants, emergent mosses or lichens (i.e., nonvascular). Semipermanently flooded conditions occur when surface water persists throughout the growing season in most years, or, when surface water is absent, the water table is usually at or very near the land surface (FGDC 2013) Seasonally flooded conditions are those where surface water is present for extended periods during the growing season (generally for more than a month), but is absent by the end of the season in most years, during which the depth to substrate saturation may vary (FGDC 2013). Emergent wetlands are characterized by erect, rooted herbaceous hydrophytes, excluding mosses and lichens, that are the tallest life form, have at least 30% areal coverage, and are present for most of the growing season in most years (FGDC 2013). Broad-leaved deciduous scrub-shrub wetlands are characterized by woody plants that are less than 20 feet tall and are the dominant life form with at least 30% areal coverage (FGDC 2013).

The wetlands in the Survey Area are located along the northwest portion of the property, forming a complex of semipermanently flooded palustrine emergent wetlands with adjacent palustrine scrub-shrub wetlands and seasonally flooded palustrine emergent wetlands adjacent to a seasonally flowing water drainage (W-1) (Figure 5).

3.2.2.1 Semipermanently flooded palustrine emergent wetlands

One semipermanently flooded emergent wetland was identified in the Survey Area that totaled 0.22 acres (Figure 5, Table 1). This wetland feature, a constructed pond built prior to 2004, is inundated most of the year. Although surface water can be absent during some portion of the year, when that occurs, the water table continues to be at or near the soil surface based on historical imagery and observed vegetation. This wetland feature receives seasonal flow from W-1 (Figure 5). Upland boundaries of this feature were indicated by the constructed berm along the western edge and a compacted gravel access road to the north. To the south and east, this feature abuts palustrine scrub-shrub wetlands, PS-1. The surrounding upland habitat is best illustrated by

data point 6U which had a prevalence of facultative grass species and lacked hydric soils and wetland hydrology (Appendix A).

3.2.2.2 Seasonally flooded palustrine emergent wetlands

There are two seasonally flooded palustrine emergent wetlands in the Survey Area; both are positioned on moderately sloped hillsides adjacent to the seasonally flowing water drainage W-1 (SF-1 and SF-2 in Figure 5). A culvert located along the primary access road to the property connects these wetlands hydrologically to the semipermanently and palustrine scrub-shrub wetlands in the Survey Area; SP-1 and PS-1, respectively (Figure 5). These wetlands total 0.24 acres in the Survey Area (Table 1).

Sampled data point 7W best characterizes the seasonally flooded palustrine emergent wetlands (Appendix A). Dominant hydrophytic vegetation at this location included *Mentha pulegium* (pennyroyal, OBL), *Juncus patens* (spreading rush, FACW), *Phalaris arundinacea* (reed canary grass, FACW), and *Rumex crispus* (curly dock, FAC). Application of the dominance test using the "50/20 rule" confirmed hydrophytic vegetation was present. The soil profile consisted of clay loam that contained prominent redox concentrations (25%) within the upper 16 inches of the soil profile and confirmed the primary hydric soil indicator as redox dark surface (F6). Wetland hydrology was confirmed by the presence of a high-water table (Appendix A). The paired upland data point 7U lacked all three wetland indicators (hydrophytic vegetation, hydrology, and hydric soils; Appendix A). Upland vegetation was composed of primarily nonnative naturalized grasses including *Briza maxima* (rattlesnake grass, UPL), *Hordeum marinum* subsp. *gussoneanum* (Mediterranean barley, FAC), and *Cynosurus echinatus* (bristly dogtail grass, UPL) (Appendix A).

3.2.2.3 Palustrine scrub-shrub wetlands

Palustrine scrub-shrub wetlands were located within a topographically low depression with a shallow ground water table and totaled 0.46 acres in the Survey Area (Table 1, PS-1 in Figure 5). The canopy in the palustrine scrub-shrub wetlands is primarily composed of Salix lasiandra (Pacific willow, FACW), with some cover by Umbellularia californica (California bay, FAC). Established understory species include *Rubus armeniacus* (Himalayan blackberry, FACW). Rumex occidentalis (western dock, FAC), curly dock, pennyroyal, and within more open shrub canopy, reed canary grass. Data point 3W represents the boundary of this wetland type. Dominant vegetation is composed of a Pacific willow canopy with emergent herbaceous species in the understory including curly dock, pennyroyal, and reed canary grass, as well as some Himalayan blackberry in the understory (Appendix A). Hydric soils were determined by the primary indicators redox dark surface (F6) and redox depressions (F8). The presence of a high-water table (1 inch from the surface in the soil pit) and surface water (approximately 1 inch deep adjacent to the soil pit) confirmed wetland hydrology (Appendix A). The paired upland data point 3U lacked all three wetland indicators (Appendix A). Upland vegetation was composed of ruderal herbaceous vegetation including reed canary grass, *Rumex acetosella* (sheep sorrel, FACU), Convolvulus arvensis (bindweed, UPL), Agrostis (capillaris) (colonial bent grass, FAC), and Silybum marianum (blessed milk thistle, UPL) (Appendix A).

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Appendices

Appendix A

Wetland Delineation Datasheets

| Project/Site: Honeydew Ranch | | City/Cou | unty: Honeydew/Hum | boldt | _ Sampling Date | e: 12/1/2017 | |
|---|-----------------------------|--|---|--------------------------|-------------------|----------------------|--|
| Applicant/Owner: HSM | | | | State: CA | _ Sampling Poin | t: 1U | |
| Investigator(s): EPC, EKT | | Section | , Township, Range: <u>.</u> | S6 T35 R1E | | | |
| Landform (hillslope, terrace, etc.): Terr | ace | Local re | elief (concave, conve | x, none): <u>Concave</u> | eish s | Slope (%): <u>10</u> | |
| Subregion (LRR): LLRA | | Lat: 40°14'23.7 | 6"N Long | g: <u>124° 7'6.31"W</u> | Da | atum: WGS 84 | |
| Soil Map Unit Name: Conklin, 0 to 2 pe | rcent slope | | | NWI classif | fication: None | | |
| Are climatic / hydrologic conditions on t | he site typical for this ti | me of year? Yes | s_XNo | (If no, explain in | Remarks.) | | |
| Are Vegetation, Soil, or | Hydrology sigr | nificantly disturbe | ed? Are "Norm | al Circumstances" | present? Yes | X No | |
| Are Vegetation, Soil, or | Hydrology nat | urally problemati | c? (If needed, | explain any answ | vers 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 X | | | s the Sampled Area within a Wetland? | | No X | | |
| Wetland Hydrology Present? | Yes <u>No</u> | <u>× </u> | | 163 | | | |

No wetland parameters at location and sampled area is not within a wetland.

VEGETATION – Use scientific names of plants.

Remarks:

| | Absolute | Dominant | | Dominance Test worksheet: | | |
|---|----------|------------|------|--|-------|--|
| Tree Stratum (Plot size: 5m2) | | Species? | | Number of Dominant Species | | |
| 1 | | | | That Are OBL, FACW, or FAC: (A | ٩) | |
| 2 | | | | Total Number of Dominant | | |
| 3 | | | | Species Across All Strata: (E | 3) | |
| 4 | | | | | , | |
| | 0 | = Total Co | ver | Percent of Dominant Species That Are OBL, FACW, or FAC: (A | \/D) | |
| Sapling/Shrub Stratum (Plot size: 5m2) | | | | , , , (| vв) | |
| 1 | | | | Prevalence Index worksheet: | | |
| 2 | | | | Total % Cover of: Multiply by: | | |
| 3 | | | | OBL species x 1 = | | |
| | | | | FACW species x 2 = | | |
| 4 | | | | FAC species x 3 = | | |
| 5 | | | | FACU species x 4 = | | |
| Herb Stratum (Plot size: 2m2) | 0 | = Total Co | ver | UPL species x 5 = | | |
| 1. Agrostis (capillaris) | 15 | No | FAC | Column Totals: (A) (| (B) | |
| 2. Elymus glaucus | 2 | No | FACU | Dravela era la deve D/A | | |
| 3. Rumex acetosella | 70 | Yes | FACU | Prevalence Index = B/A = Hydrophytic Vegetation Indicators: | | |
| 4. Erodium botrys | 10 | No | FACU | | | |
| 5. Cynosurus echinatus | 15 | No | UPL | 1 - Rapid Test for Hydrophytic Vegetation | | |
| 6. Deschampsia cespitosa subsp. cespitosa | 2 | No | FAC | 2 - Dominance Test is >50% | | |
| 7. Aster sp | 2 | No | 17.0 | 3 - Prevalence Index is ≤3.0 ¹ | | |
| | | | - | 4 - Morphological Adaptations ¹ (Provide suppor | rting | |
| 8. Medicago polymorpha | 10 | No | FACU | data in Remarks or on a separate sheet) | | |
| 9. Aira praecox | 15 | No | UPL | 5 - Wetland Non-Vascular Plants ¹ | | |
| 10 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) | | |
| 11 | | | | ¹ Indicators of hydric soil and wetland hydrology mus | st | |
| | | = Total Co | /er | be present, unless disturbed or problematic. | | |
| Woody Vine Stratum (Plot size:) | | | | | | |
| 1 | | | | Hydrophytic | | |
| 2 | | | | Vegetation | | |
| | | = Total Co | /er | Present? Yes <u>No X</u> | | |
| % Bare Ground in Herb Stratum | | | | | | |
| | | | | | | |
| Remarks: | | | | | | |

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|-------------------------|----------------------------|----------------------|-----------------------|------------------------|------------------------------------|-----------------------|---|
| Depth (inches) | Matrix Color (moist) | % | Color (moist) | <u>x Feature</u> % | s Tvpe ¹ | Loc ² | Texture | Remarks |
| 0-14 | 2.5Y 3/3 | 100 | | | | | See remarks | Texture: Clay loam-sandy clay loam |
| | · | | <u></u> | | . <u> </u> | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | <u> </u> | | | | | | |
| | | | | | | | | |
| ¹ Type: C=C | Concentration, D=Dep | letion, RN | /=Reduced Matrix, C | S=Covere | d or Coate | d Sand Gr | ains. ² Lo | cation: PL=Pore Lining, M=Matrix. |
| Hydric Soil | Indicators: (Applic | able to a | II LRRs, unless othe | rwise not | ed.) | | Indicate | ors for Problematic Hydric Soils ³ : |
| Histoso | l (A1) | | Sandy Redox (| S5) | | | 🔲 2 cr | m Muck (A10) |
| Histic E | pipedon (A2) | | Stripped Matrix | (S6) | | | 🔲 Red | d Parent Material (TF2) |
| 🔲 Black H | listic (A3) | | Loamy Mucky I | Mineral (F | 1) (except | MLRA 1) | 🗌 Ver | y Shallow Dark Surface (TF12) |
| Hydrog | en Sulfide (A4) | | Loamy Gleyed | Matrix (F2 | 2) | | 🔲 Oth | er (Explain in Remarks) |
| Deplete | ed Below Dark Surfac | e (A11) | Depleted Matrix | x (F3) | | | | |
| | ark Surface (A12) | | Redox Dark Su | () | | | | ors of hydrophytic vegetation and |
| = | Mucky Mineral (S1) | Depleted Dark Surface (F7) | | | | wetland hydrology must be present, | | |
| | Gleyed Matrix (S4) | | Redox Depress | sions (F8) | | | unles | ss disturbed or problematic. |
| Restrictive | Layer (if present): | | | | | | | |
| Type: <u>n/</u> | a | | | | | | | |
| Depth (inches): | | | | | | | Hydric Soi | I Present? Yes No $\frac{X}{2}$ |
| Remarks: | | | | | | | | |
| | ia adil indiaata | | ant in adil dit | Some | arit in a | omolo | No rodo | vimerabie features abeenvo |

No hydric soil indicators present in soil pit. Some grit in sample. No redoximorphic features observed at sample location.

HYDROLOGY

| Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required; Surface Water (A1) Water-Stained Leaves (B9) (except) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) |) | | | | | | |
|---|------|--|--|--|--|--|--|
| | | | | | | | |
| Image: Migh Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) | , 2, | | | | | | |
| | | | | | | | |
| Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) | | | | | | | |
| Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) | | | | | | | |
| Sediment Deposits (B2) 🔲 Hydrogen Sulfide Odor (C1) 🗌 Saturation Visible on Aerial Imagery | C9) | | | | | | |
| Drift Deposits (B3) Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (D2) | | | | | | | |
| Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) | | | | | | | |
| Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) | | | | | | | |
| Surface Soil Cracks (B6) | | | | | | | |
| 🔟 Inundation Visible on Aerial Imagery (B7) 🔲 Other (Explain in Remarks) 🔲 Frost-Heave Hummocks (D7) | | | | | | | |
| Sparsely Vegetated Concave Surface (B8) | | | | | | | |
| Field Observations: | | | | | | | |
| Surface Water Present? Yes <u>No X</u> Depth (inches): | | | | | | | |
| Water Table Present? Yes No X Depth (inches): | | | | | | | |
| Saturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No X (includes capillary fringe) | | | | | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | | | | | |
| | | | | | | | |
| Remarks: | | | | | | | |
| Gently sloped alluvial terrace, no primary hydrology indicators observed. | | | | | | | |
| Gently sloped alluvial terrace, no primary hydrology indicators observed. | | | | | | | |

| Project/Site: Honeydew Ranch | City/County: H | oneydew/Humboldt | Sampling Date: 12/1/2017 | |
|--|------------------|-----------------------------------|--------------------------|-------------------|
| Applicant/Owner: HSM | | State: CA | Sampling Point: | 2U |
| Investigator(s): EPC, EKT | Section, Towns | ship, Range: <u>S6 T35 R1E</u> | | |
| Landform (hillslope, terrace, etc.): Toeslope alluvial plain | | oncave, convex, none): Slight con | icave Slo | pe (%): <u>10</u> |
| Subregion (LRR): LLRA Lat: | 40°14'24.17"N | Long: <u>124° 7'7.47"</u> W | Datu | m: WGS 84 |
| Soil Map Unit Name: Pepperwood-Shivelyflat complex, 0 to 2 perce | ent slopes | NWI classific | cation: None | |
| Are climatic / hydrologic conditions on the site typical for this time | of year? Yes X | No (If no, explain in R | emarks.) | |
| Are Vegetation, Soil, or Hydrologysignification | antly disturbed? | Are "Normal Circumstances" p | oresent? Yes X | No |
| Are Vegetation, Soil, or Hydrology natural | y problematic? | (If needed, explain any answe | ers in Remarks.) | |
| SUMMARY OF FINDINGS Attach site man show | ing compling r | acint locational transacto | important fo | aturaa ata |

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

| Hydrophytic Vegetation Present? Hydric Soil Present? | Yes X No Yes No X | Is the Sampled Area within a Wetland? | Yes | No X |
|---|---|---------------------------------------|-----|------|
| Wetland Hydrology Present? Remarks: | Yes <u>×</u> No | | | |

Hydric soils are lacking at this location. No primary indicators of a wetland are present. Hydrology presence concluded from secondary indicators.

VEGETATION – Use scientific names of plants.

| 50 | Absolute | | Indicator | Dominance Test worksheet: | |
|--|----------|------------|-----------|--|---------------------------|
| Tree Stratum (Plot size: 5m2) | | Species? | - | Number of Dominant Species | |
| 1. Juglans hindsii | 100 | Yes | FAC | That Are OBL, FACW, or FAC: 2 | (A) |
| 2 | | | | Tatal Number of Device of | |
| 3 | | | | Total Number of Dominant Species Across All Strata: 2 | (B) |
| | | | | | |
| 4 | | | | Percent of Dominant Species | |
| Sapling/Shrub Stratum (Plot size: 5m2) | 100 | = Total Co | over | That Are OBL, FACW, or FAC: 100 | (A/B) |
| | | | | Prevalence Index worksheet: | |
| 1 | | | | Total % Cover of:Mul | Itiply by: |
| 2 | | | | OBL species x 1 = | |
| 3 | | | | FACW species x 2 = | |
| 4 | | | | | |
| 5 | | | | FAC species x 3 = | |
| | | = Total Co | ver | FACU species x 4 = | |
| Herb Stratum (Plot size: 2m2) | | | | UPL species x 5 = | |
| 1. Mentha puleginum | 15 | No | OBL | Column Totals: (A) | (B) |
| 2. Phalaris arundinacea | 70 | Yes | FACW | | |
| 3. Deschampsia cespitosa subs. cespitosa | 10 | No | FAC | Prevalence Index = B/A = | |
| | | | | Hydrophytic Vegetation Indicators: | |
| 4 | | | | 1 - Rapid Test for Hydrophytic Ve | getation |
| 5 | | | | ✓ 2 - Dominance Test is >50% | |
| 6 | | | | 3 - Prevalence Index is $\leq 3.0^1$ | |
| 7 | | | | 4 - Morphological Adaptations ¹ (P | Provide supporting |
| 8 | | | | data in Remarks or on a separ | rate sheet) |
| 9 | | | | 5 - Wetland Non-Vascular Plants ¹ | I |
| | | | | Problematic Hydrophytic Vegetati | on ¹ (Explain) |
| 10 | | | | ¹ Indicators of hydric soil and wetland h | , |
| 11 | ~ = | | | be present, unless disturbed or proble | |
| Wester (Distance (Distance 2m2)) | 95 | = Total Co | ver | | |
| Woody Vine Stratum (Plot size: 2m2) | | | | | |
| 1 | | | | Hydrophytic | |
| 2 | | | | VegetationPresent?Yes \underline{X} No | |
| 10 | 0 | = Total Co | ver | Present? res <u>~</u> No | , |
| % Bare Ground in Herb Stratum <u>10</u> | | | | | |
| Remarks: | | | | | |
| Dominant vegetation passes for hydror | hytic ve | notation | n via do | minance test | |

| SOIL |
|------|
|------|

| Depth | Matrix | | | x Features | | . 2 | _ | |
|---|---|-------------|---|--|---|------------------|--|---|
| (inches) | Color (moist) | <u>%</u> | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks |
|)-9 | 10YR 3/2 | 100 | | | | | Clay loam | A lot of walnut shells in upper laye |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | oncentration, D=Deple | | | | | ed Sand Gr | | cation: PL=Pore Lining, M=Matrix. |
| - | Indicators: (Applica | ible to all | _ | | ea.) | | _ | ors for Problematic Hydric Soils ³ : |
| Histosol | () | | Sandy Redox (| | | | | m Muck (A10) |
| - | pipedon (A2) istic (A3) | | Stripped Matrix Loamy Mucky I | | | | | d Parent Material (TF2) y Shallow Dark Surface (TF12) |
| - | en Sulfide (A4) | | Loamy Gleyed | | | WILKA I) | | er (Explain in Remarks) |
| | d Below Dark Surface | (A11) | Depleted Matrix | |) | | | |
| | ark Surface (A12) | . (/ (11) | Redox Dark Su | . , | | | ³ Indicate | ors of hydrophytic vegetation and |
| | Aucky Mineral (S1) | | Depleted Dark | . , | 7) | | | and hydrology must be present, |
| | Gleyed Matrix (S4) | | Redox Depress | | , | | | ss disturbed or problematic. |
| | | | | () | | | 1 | • |
| estrictive | Layer (if present): | | | | | | | |
| | | | | | | | | |
| Type: Ro | | | | | | | Hydric Soil | I Present? Yes No X |
| Type: <u>Ro</u> Depth (in | pots | | | | | | Hydric Soil | l Present? Yes No |
| Type: <u>Ro</u> Depth (in emarks: | ches): <u>9</u> | ent in t | he soil sampl | e. | | | Hydric Soil | l Present? Yes <u>No X</u> |
| Type: <u>Ro</u> Depth (in emarks: | pots | ent in t | he soil sampl | e. | | | Hydric Soil | l Present? Yes <u>No X</u> |
| Type: <u>Ro</u> Depth (in emarks: | ches): <u>9</u> | ent in t | he soil sampl | е. | | | Hydric Soil | I Present? Yes <u>No X</u> |
| Type: <u>Ro</u> Depth (in emarks: o redox | ^{ches): 9} k features prese | ent in t | he soil sampl | e. | | | Hydric Soil | l Present? Yes <u>No X</u> |
| Type: <u>Ro</u> Depth (in/ emarks: o redo> | oots ches): <u>9</u> k features prese | ent in t | he soil sampl | e. | | | Hydric Soil | I Present? Yes <u>No X</u> |
| Type: Rd Depth (in emarks: O redox 'DROLO | ^{ches): 9} k features prese | | | | | | | I Present? Yes <u>No X</u> |
| Type: Ro Depth (in/ emarks: O redo> DROLO etland Hy rimary India | oots ches): <u>9</u> K features preso GY drology Indicators: | | | y) | es (B9) (e | xcept | <u>Seco</u> | |
| Type: Ro Depth (in/ emarks: o redo> DROLO etland Hy imary India Surface | oots ches): <u>9</u> & features prese GY drology Indicators: cators (minimum of on | | t; check all that appl | y) | | xcept | <u>Seco</u> | ndary Indicators (2 or more required) |
| Type: Ro Depth (in/ emarks: o redo> DROLO etland Hy rimary India Surface | oots ches): 9 C features pres GY drology Indicators: cators (minimum of on Water (A1) ater Table (A2) | | t; check all that appl | <u>y)</u> ined Leave 1, 2, 4A, a | | xcept | <u>Seco</u> V | ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 |
| Type: Rd Depth (in/ emarks: O redO> /DROLO /etland Hy rimary India] Surface] High Wa] Saturatio | oots ches): 9 C features pres GY drology Indicators: cators (minimum of on Water (A1) ater Table (A2) | | l; check all that app ☐ Water-Sta MLRA | <u>y)</u> ined Leave 1, 2, 4A, a (B11) | nd 4B) | xcept | <u>Seco</u> V C | ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) |
| Type: Rd Depth (in emarks: O redO> /DROLO /etland Hy rimary India] Surface] High Wa Saturation] Water M | A features prese GY drology Indicators: cators (minimum of on Water (A1) ater Table (A2) on (A3) | | I: check all that appl ☐ Water-Sta MLRA ☐ Salt Crust ☐ Aquatic In | y) ined Leave 1, 2, 4A, a (B11) vertebrates | nd 4B) s (B13) | xcept | <u>Seco</u> V C C | ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) |
| Type: Ro Depth (in emarks: O redO> /DROLO /etland Hy rimary India] Surface] High Wa] Saturatia] Water M] Sedimen | A features prese A features (A features prese A features (A features prese) A features (A features prese) A features (A features prese) A features (B f | | I: check all that appl Water-Sta MLRA Salt Crust Aquatic In Hydrogen | y) ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc | nd 4B) s (B13) lor (C1) | - | | ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C |
| Type: Ro Depth (in emarks: O redo> /DROLO /etland Hy rimary India] Surface] High Wa] Saturatii] Water M] Sedimer] Drift Dep | A features prese A features (B feat | | I <u>; check all that app</u> ☐ Water-Sta MLRA ☐ Salt Crust ☐ Aquatic In ☐ Hydrogen ☐ Oxidized F | y) ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc Rhizospher | nd 4B) s (B13) lor (C1) res along | Living Roo | <u>Seco</u> □ V □ □ □ □ □ □ ts (C3) ☑ 0 | ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) |
| Type: Ro Depth (in emarks: O redo> /DROLO /etland Hy rimary India Surface High Wa Saturatia Saturatia Sedimen Drift Dep Algal Ma | A features prese A features (A features prese A features (A features prese) A features (B features | | I: check all that appl Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F | y) ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc Rhizospher of Reduce | nd 4B) s (B13) lor (C1) res along d Iron (C4 | Living Roo 1) | <u>Seco</u> □ V □ □ □ □ ts (C3) □ c □ s | ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) |
| Type: Ro Depth (in: temarks: Io redo> /DROLO /Uetland Hyu Saturatio Saturatio Saturatio Sedimer Sedimer Algal Ma Inon Dep | A features prese A features (B feat | | I: check all that appl Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Ind | y) ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc Rhizospher of Reduce on Reductio | nd 4B) s (B13) lor (C1) res along d Iron (C4 on in Tille | Living Roo | <u>Seco</u> □ V □ □ □ □ 5 ts (C3) ☑ C □ 5 | ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) |

| Water Table Present? Yes | No X Depth (inches): No X Depth (inches): | |
|--|--|-------------------------------------|
| | | |
| Saturation Present? Yes (includes capillary fringe) | No X Depth (inches): | Wetland Hydrology Present? Yes X No |
| Describe Recorded Data (stream gauge, mo | onitoring well, aerial photos, previous ir | nspections), if available: |

Moist soil/no surface water/water table/substratum observed in pit. Geomorphic position and FAC neutral pass at location so wetland hydrology is present at this location.

| Project/Site: Honeydew Ranch | City/County: Honeydew/ | Humboldt | Sampling Date: 12/1/2017 |
|--|---------------------------|----------------------------------|----------------------------|
| Applicant/Owner: HSM | | State: CA | Sampling Point: <u>3U</u> |
| Investigator(s): EPC, EKT | Section, Township, Rang | _{je:} <u>S6 T35 R1E</u> | |
| Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, co | | Slope (%): <u>0-2</u> |
| Subregion (LRR): LLRA Lat: 40 |)°14'26.45"N | Long: <u>124° 7'5.19"W</u> | Datum: WGS 84 |
| Soil Map Unit Name: Pepperwood-Shivelyflat complex, 0 to 2 percent s | lopes | NWI classific | ation: None |
| Are climatic / hydrologic conditions on the site typical for this time of ye | ear? Yes X No | (If no, explain in R | emarks.) |
| Are Vegetation, Soil, or Hydrology significantly | v disturbed? Are "N | ormal Circumstances" p | resent? Yes X No |
| Are Vegetation, Soil, or Hydrology naturally pr | oblematic? (If nee | ded, explain any answe | rs in Remarks.) |
| SUMMARY OF FINDINGS – Attach site map showing | y sampling point lo | cations, transects | , important features, etc. |

| Hydrophytic Vegetation Present? | Yes | No <u>X</u> | | | |
|---------------------------------|-----|-------------|---------------------|-----|-------------|
| Hydric Soil Present? | Yes | No <u>X</u> | Is the Sampled Area | | X X |
| Wetland Hydrology Present? | Yes | No <u>X</u> | within a Wetland? | Yes | No <u>×</u> |
| Remarks: | | | • | | |

No primary wetland indicators present in sampled location and area is not within a wetland.

VEGETATION – Use scientific names of plants.

| 50 | Absolute | Dominant | | Dominance Test worksheet: |
|---|----------|-------------|---------|---|
| Tree Stratum (Plot size: 5m2) | | Species? | | Number of Dominant Species |
| 1. Prunus sp. | 15 | Yes | UPL | That Are OBL, FACW, or FAC: 1 (A) |
| 2 | | | | |
| | | | | Total Number of Dominant |
| 3 | | | | Species Across All Strata: 2 (B) |
| 4 | | | | Percent of Dominant Species |
| Em2 | 15 | = Total Co | ver | That Are OBL, FACW, or FAC: 50 (A/B) |
| Sapling/Shrub Stratum (Plot size: 5m2) | | | | Prevalence Index worksheet: |
| 1 | | | | Total % Cover of: Multiply by: |
| 2 | | | | |
| 3 | | | | OBL species x 1 = |
| 4 | | | | FACW species x 2 = |
| | | | | FAC species x 3 = |
| 5 | • | | | FACU species x 4 = |
| 1 + 1 + 2 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + | 0 | = Total Co | ver | UPL species x 5 = |
| Herb Stratum (Plot size: 2m2) | 00 | Maria | EA 014/ | |
| 1. Phalaris arundinacea | 60 | Yes | FACW | Column Totals: (A) (B) |
| 2. Rumex acetosella | 2 | No | FACU | Prevalence Index = B/A = |
| 3. Convolvulus arvensis | 5 | No | UPL | Hydrophytic Vegetation Indicators: |
| 4. Rumex crispus | 5 | No | FAC | 1 - Rapid Test for Hydrophytic Vegetation |
| 5. Agrostis (capillaris) | 15 | No | FAC | \square 2 - Dominance Test is >50% |
| 6. Silybum marianum | 5 | No | NL/UPL | 3 - Prevalence Index is $\leq 3.0^{1}$ |
| 7 | | | | 4 - Morphological Adaptations ¹ (Provide supporting |
| | | | | data in Remarks or on a separate sheet) |
| 8 | | | | 5 - Wetland Non-Vascular Plants ¹ |
| 9 | | | | |
| 10 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 11 | | | | ¹ Indicators of hydric soil and wetland hydrology must |
| | 92 | = Total Cov | /er | be present, unless disturbed or problematic. |
| Woody Vine Stratum (Plot size: 2m2) | | | | |
| 1 | | | | Hydrophytic |
| 2 | | | | Vegetation |
| | | = Total Cov | /or | Present? Yes No $\frac{X}{X}$ |
| % Bare Ground in Herb Stratum 5 | | <u> </u> | | |
| Remarks: | | | | 1 |
| Deminence test set sevelusive net suget | | -00/ D. | | |

Dominance test not conclusive, not greater than 50%. Prevalence index test not required since hydric soils/hydrology are lacking.

| Profile Desc | ription: (Describe | to the dep | oth needed to docur | nent the | indicator | or confirr | n the absence of indicat | tors.) |
|---|---------------------|-------------|---------------------|-----------|--|----------------------------------|----------------------------------|--------------------------------------|
| Depth | Matrix | | | x Feature | | | | |
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks |
| 0-10 | 10YR 3/2 | 100 | | | | | Clay loam | |
| 10-15 | 10YR 3/2 | 90 | 10YR 5/8 | 10 | С | PL | Clay loam | |
| | | | | · | | | | |
| · | | | | | | | · | |
| · | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 1 | | | | · | | | | |
| | | | =Reduced Matrix, CS | | | ed Sand G | | =Pore Lining, M=Matrix. |
| - | | able to all | LRRs, unless other | | iea.) | | _ | blematic Hydric Soils ³ : |
| Histosol | . , | | Sandy Redox (| , | | | 2 cm Muck (A | |
| Black His | bipedon (A2) | | Stripped Matrix | . , | $(\mathbf{a} \mathbf{x} \mathbf{c} \mathbf{a} \mathbf{r})$ | | Red Parent Ma | Dark Surface (TF12) |
| | n Sulfide (A4) | | Loamy Gleyed | | , . . | | Other (Explain | . , |
| | d Below Dark Surfac | (۵11) م | Depleted Matrix | | _) | | | lin Kemarks) |
| | ark Surface (A12) | C (ATT) | Redox Dark Su | . , |) | | ³ Indicators of hydro | ophytic vegetation and |
| | () | | | | · | | | gy must be present, |
| Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) | | | | | | unless disturbed or problematic. | | |
| | _ayer (if present): | | | | | | | |
| Type: | | | | | | | | |
| Depth (inc | ches): | | | | | | Hydric Soil Present? | Yes No X |
| Remarks: | | | | | | | , | |
| | 7 | | | | | -) - f | | a a su al a a la su a f |
| | | | | JCation | i (aept | n) or re | dox concentration | ns and color of |
| matrix (d | epleted matrix | k was n | ot present). | | | | | |
| | | | | | | | | |
| HYDROLO | GY | | | | | | | |
| Wetland Hyd | drology Indicators: | | | | | | | |

| Primary Indicators (minimum of one required; ch | Secondary Indicators (2 or more required) | | | | | | | |
|--|---|---------------------------------------|--|--|--|--|--|--|
| Surface Water (A1) | Water-Stained Leaves (B9) (except | Water-Stained Leaves (B9) (MLRA 1, 2, | | | | | | |
| High Water Table (A2) | MLRA 1, 2, 4A, and 4B) | 4A, and 4B) | | | | | | |
| Saturation (A3) | Salt Crust (B11) | Drainage Patterns (B10) | | | | | | |
| U Water Marks (B1) | Dry-Season Water Table (C2) | | | | | | | |
| Sediment Deposits (B2) | Saturation Visible on Aerial Imagery (C9) | | | | | | | |
| Drift Deposits (B3) | Roots (C3) 🗹 Geomorphic Position (D2) | | | | | | | |
| Algal Mat or Crust (B4) | Shallow Aquitard (D3) | | | | | | | |
| ☐ Iron Deposits (B5) | (C6) FAC-Neutral Test (D5) | | | | | | | |
| Surface Soil Cracks (B6) | (LRR A) Raised Ant Mounds (D6) (LRR A) | | | | | | | |
| Inundation Visible on Aerial Imagery (B7) | Frost-Heave Hummocks (D7) | | | | | | | |
| Sparsely Vegetated Concave Surface (B8) | | | | | | | | |
| Field Observations: | | | | | | | | |
| Surface Water Present? Yes No | X Depth (inches): | | | | | | | |
| Water Table Present? Yes No | X Depth (inches): | | | | | | | |
| Saturation Present? Yes <u>No</u> (includes capillary fringe) | etland Hydrology Present? Yes No $\frac{\chi}{2}$ | | | | | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | | | | | | |
| | | | | | | | | |
| Remarks: | | | | | | | | |
| No surface water or water in pit. | Only one secondary indicato | r of wetland hydrology is present, | | | | | | |

therefore wetland hydrology is lacking at this location.

| Project/Site: Honeydew Ranch | City/County: Honeyde | w/Humboldt | Sampling Date: 12/1/2017 |
|--|------------------------|-------------------------------|----------------------------|
| Applicant/Owner: HSM | | State: CA | Sampling Point: 3W |
| Investigator(s): EPC, EKT | Section, Township, Ra | ange: <u>S6 T35 R1E</u> | |
| Landform (hillslope, terrace, etc.): Toeslope/depression | Local relief (concave, | convex, none): <u>concave</u> | Slope (%): <u>0-1</u> |
| Subregion (LRR): LLRA Lat: 40 |)°14'26.55"N | Long: <u>124° 7'5.24</u> "W | Datum: WGS 84 |
| Soil Map Unit Name: Pepperwood-Shivelyflat complex, 0 to 2 percent s | lopes | NWI classific | ation: None |
| Are climatic / hydrologic conditions on the site typical for this time of ye | ear? Yes X No | (If no, explain in R | emarks.) |
| Are Vegetation, Soil, or Hydrology significantly | v disturbed? Are | "Normal Circumstances" p | resent? Yes X No |
| Are Vegetation, Soil, or Hydrology naturally pr | oblematic? (If n | eeded, explain any answei | rs in Remarks.) |
| SUMMARY OF FINDINGS – Attach site map showing | g sampling point | locations, transects | , important features, etc. |

| Hydrophytic Vegetation Present? | Yes X | No | | | |
|---------------------------------|-------|----|---------------------|--------------|----|
| Hydric Soil Present? | Yes X | No | Is the Sampled Area | V | |
| Wetland Hydrology Present? | Yes X | No | within a Wetland? | Yes <u>^</u> | No |
| Remarks: | | | • | | |

All three wetland parameters are present at sampled location and the area is within a wetland.

VEGETATION – Use scientific names of plants.

| 52 | Absolute | Dominant | | Dominance Test worksheet: |
|---|------------|-------------|----------|---|
| Tree Stratum (Plot size: 5m2) | | Species? | | Number of Dominant Species |
| 1. <u>Salix lasiandra</u> | 15 | Yes | FACW | That Are OBL, FACW, or FAC: (A) |
| 2 | | | | Total Number of Dominant |
| 3 | | | | Species Across All Strata: 4 (B) |
| 4 | | | | 、 |
| · · · · · · · · · · · · · · · · · · · | 45 | = Total Co | vor | Percent of Dominant Species |
| Sapling/Shrub Stratum (Plot size: 5m2) | | | ver | |
| | | | | Prevalence Index worksheet: |
| 1 | | | | Total % Cover of: Multiply by: |
| 2 | | | | OBL species x 1 = |
| 3 | | | | FACW species x 2 = |
| 4 | | | | FAC species x 3 = |
| 5 | | | | |
| | 0 | = Total Co | ver | FACU species x 4 = |
| Herb Stratum (Plot size: 2m2) | | | | UPL species x 5 = |
| 1. Phalaris arundinacea | 40 | Yes | FACW | Column Totals: (A) (B) |
| 2. Rumex occidentalis | 35 | No | FAC | Prevalence Index = B/A = |
| 3. Mentha pulegium | 70 | Yes | OBL | Hydrophytic Vegetation Indicators: |
| 4. Rumex crispus | 30 | Yes | FAC | 1 - Rapid Test for Hydrophytic Vegetation |
| 5. Rubus armeniacus | 5 | No | FAC | \checkmark 2 - Dominance Test is >50% |
| 6 | | | | 3 - Prevalence Index is $\leq 3.0^{1}$ |
| | | | | |
| 7 | | | | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 8 | | | | \Box 5 - Wetland Non-Vascular Plants ¹ |
| 9 | | | | |
| 10 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 11 | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 5.0 | 150 | = Total Cov | /er | |
| Woody Vine Stratum (Plot size: 5m2) | | | | |
| 1 | | | | Hydrophytic |
| 2 | | | | Vegetation |
| | 0 | = Total Cov | /er | Present? Yes X No |
| % Bare Ground in Herb Stratum 0 | | | | |
| Remarks: | | | | |
| Dominant vegetation passes dominance | ce test fo | or hydro | phytic v | egetation. |
| | | | | |

| SOIL |
|------|
|------|

| Profile Des | cription: (Describe | to the dep | | | | or confirm | the absence o | f indicators.) |
|----------------------------|---|-------------|------------------------|------------------|---------------------|---------------------|------------------------|---|
| Depth | Matrix | % | | x Feature | | Loc ² | Taxtura | Demortro |
| <u>(inches)</u> 0-16 | Color (moist) | | Color (moist) | <u>%</u> | Type ¹ | PL | <u>Texture</u> | Remarks |
| 0-16 | 10yr 3/2 | 50 | 10YR 5/6 | 25 | C | | Clay loam | |
| | | | 10YR 4/1 | 25 | D | Μ | Clay loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | <u> </u> | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: $C = C$ | Concentration, D=Dep | letion RM | -Reduced Matrix C9 | S-Covere | d or Coate | d Sand Gr | ains ² Loca | tion: PL=Pore Lining, M=Matrix. |
| | Indicators: (Applic | | | | | | | s for Problematic Hydric Soils ³ : |
| Histoso | | | Sandy Redox (| | , | | _ | Muck (A10) |
| | pipedon (A2) | | Stripped Matrix | | | | | Parent Material (TF2) |
| | listic (A3) | | Loamy Mucky M | | 1) (excep | t MLRA 1) | | Shallow Dark Surface (TF12) |
| Hydroge | en Sulfide (A4) | | Loamy Gleyed | Matrix (F2 | 2) | | Other | (Explain in Remarks) |
| | ed Below Dark Surfac | e (A11) | Depleted Matrix | . , | | | | |
| | ark Surface (A12) | | Redox Dark Su | | | | | s of hydrophytic vegetation and |
| | Mucky Mineral (S1) | | Depleted Dark | | | | | d hydrology must be present, |
| | Gleyed Matrix (S4) Layer (if present): | | ✓ Redox Depress | sions (F8) | | | uniess | disturbed or problematic. |
| Type: n/a | • • • • | | | | | | | |
| | | | | | | | | |
| | nches): | | | | | | Hydric Soil P | Present? Yes X No |
| Remarks: | | | | | | | | |
| | | | • | | | sent in t | he soil san | nple due to location and |
| presence | e of redox con | centrat | ions and matr | ix colo | r. | | | |
| | | | | | | | | |
| HYDROLO | OGY | | | | | | | |
| Wetland Hy | drology Indicators: | | | | | | | |
| Primary Indi | cators (minimum of c | one require | d; check all that appl | y) | | | Second | lary Indicators (2 or more required) |
| ✓ Surface | Water (A1) | | 🔲 Water-Sta | ined Leav | /es (B9) (e | xcept | 🔲 Wa | ater-Stained Leaves (B9) (MLRA 1, 2, |
| 🗹 High Wa | ater Table (A2) | | MLRA | 1, 2, 4A, | and 4B) | | | 4A, and 4B) |
| Saturati | ion (A3) | | 🔲 Salt Crust | (B11) | | | 🗹 Dra | ainage Patterns (B10) |
| U Water N | /larks (B1) | | 🔲 Aquatic In | vertebrate | es (B13) | | 🔲 Dry | /-Season Water Table (C2) |
| | nt Deposits (B2) | | Hydrogen | Sulfide C | dor (C1) | | □ Sat | turation Visible on Aerial Imagery (C9) |
| Drift De | posits (B3) | | Oxidized F | | - | - | ots (C3) 🗹 Ge | omorphic Position (D2) |
| Algal M | at or Crust (B4) | | Presence | of Reduc | ed Iron (C | 4) | 🛄 Sha | allow Aquitard (D3) |
| | posits (B5) | | | | | d Soils (C6 | · | C-Neutral Test (D5) |
| _ | Soil Cracks (B6) | | _ | | | 1) (LRR A) | | ised Ant Mounds (D6) (LRR A) |
| | ion Visible on Aerial I | | | plain in R | emarks) | | L Fro | ost-Heave Hummocks (D7) |
| - | y Vegetated Concave | e Surface (| B8) | | | | | |
| Field Obser | | v | | 4 | | | | |
| Surface Wat | | | No Depth (in | | | _ | | |
| Water Table | | | No Depth (in | | | _ | | |
| Saturation F | | es X | No Depth (in | ches): <u>n/</u> | а | Wetla | and Hydrology | Present? Yes X No |
| | pillary fringe) | | | | | pections). | | |

Remarks:

Both surface water and a high water table in the soil pit were identified. Several secondary indicators were also observed. Therefore this sampling area is confirmed wetland hydrology.

| Project/Site: Honeydew Ranch | City/County: Ho | City/County: Honeydew/Humboldt Sampling Date: 12/1/20 | | | | |
|--|-----------------------------------|---|-------------------|--|--|--|
| Applicant/Owner: HSM | | State: <u>CA</u> Sampling Point: <u>4U</u> | | | | |
| Investigator(s): EPC, EKT Section, Township, Range: S6 T35 R1E | | | | | | |
| Landform (hillslope, terrace, etc.): Terrace | ncave, convex, none): <u>none</u> | Slope (%): 0 | | | | |
| Subregion (LRR): LLRA | Lat: 40°14'27.14"N | Long: <u>124° 6'57.62</u> "W | Datum: WGS 84 | | | |
| Soil Map Unit Name: Crazycoyote-Windynip-Caperidge com | plex, 15 to 50 percent slope | s NWI classific | cation: None | | | |
| Are climatic / hydrologic conditions on the site typical for thi | s time of year? Yes X | _ No (If no, explain in R | emarks.) | | | |
| Are Vegetation, Soil, or Hydrologys | significantly disturbed? | Are "Normal Circumstances" p | present? Yes X No | | | |
| Are Vegetation, Soil, or Hydrology r | naturally problematic? | (If needed, explain any answe | ers in Remarks.) | | | |
| | | cint locational transacto | | | | |

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

| Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? | Yes <u>×</u> No Yes <u>No</u> Yes <u>No</u> | X Is the Sampled | No <u>×</u> |
|---|---|------------------|-------------|
| Remarks: | | | |

Hydrophytic vegetation (FAC only) passed by the dominance test. However, both hydric soil and wetland hydrology were lacking therefore the sample area is not within a wetland.

VEGETATION – Use scientific names of plants.

| | Absolute | | Indicator | Dominance Test worksheet: | |
|---|----------|------------|-----------|--|------|
| Tree Stratum (Plot size: 5m2) | | Species? | | Number of Dominant Species | |
| 1 | | | | That Are OBL, FACW, or FAC: _1 (A | .) |
| 2 | | | | Total Number of Dominant | |
| 3 | | | | Species Across All Strata: <u>1</u> (B |) |
| 4 | | | | | |
| | 0 | = Total Co | over | Percent of Dominant Species That Are OBL, FACW, or FAC: ¹⁰⁰ (A | /B) |
| Sapling/Shrub Stratum (Plot size: 5m2) | | - | | Prevalence Index worksheet: | , 2) |
| 1 | | | | | |
| 2 | | | | Total % Cover of: Multiply by: | |
| 3. | | | | OBL species x 1 = | |
| 4 | | | | FACW species x 2 = | |
| | | | · | FAC species x 3 = | |
| 5 | 0 | Tatal O | | FACU species x 4 = | |
| Herb Stratum (Plot size: 2m2) | 0 | = Total Co | over | UPL species x 5 = | |
| 1 Agrostis capillaris | 65 | Yes | FAC | Column Totals: (A) (| B) |
| 2. Erodium botrys | 10 | No | FACU | | , |
| 3 Rumex crispus | 2 | No | FAC | Prevalence Index = B/A = | |
| | | | · | Hydrophytic Vegetation Indicators: | |
| 4 | | | · | 1 - Rapid Test for Hydrophytic Vegetation | |
| 5 | | | | 2 - Dominance Test is >50% | |
| 6 | | | · | \square 3 - Prevalence Index is ≤3.0 ¹ | |
| 7 | | | | 4 - Morphological Adaptations ¹ (Provide support | ting |
| 8 | | | | data in Remarks or on a separate sheet) | 0 |
| 9 | | | | 5 - Wetland Non-Vascular Plants ¹ | |
| 10 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 11 | | | · | ¹ Indicators of hydric soil and wetland hydrology mus | t |
| · · · · | 70 | = Total Co | | be present, unless disturbed or problematic. | |
| Woody Vine Stratum (Plot size: 2m2) | <u> </u> | = 10tal Co | ver | | |
| 1, | | | | Lively a short a | |
| | | | · | Hydrophytic Vegetation | |
| 2 | 0 | Tatal Oa | | Present? Yes \times No | |
| % Bare Ground in Herb Stratum 5 | 0 | = Total Co | ver | | |
| Remarks: | | | | | |
| | | | | | |

Although it passes for hydrophytic vegetation, the dominant vegetation was of only FAC status (34-66% occurrence in wetlands). No FACW or OBL plants identified at this location.

| Profile Desc | ription: (Describe | to the dep | th needed to docum | nent the | indicator | or confirm | n the absence | of indicators.) | | |
|---------------|---------------------------|-------------|---------------------|------------|-------------------|------------------|------------------------------------|-----------------------|-------------|----------|
| Depth | Matrix | | Redo | x Feature | es | | | | | |
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | Rem | arks | |
| 0-2 | 10YR 3/2 | 98 | 10YR 5/8 | 1 | С | PL | Clay loam | | | |
| 2-9 | 10YR 3/2 | 100 | | | | | Clay loam | some cobble | | |
| | | · | | | | | | | | |
| <u> </u> | | · | | | | | , | | | |
| | | · | | | | | | | | |
| | | | | | | | | | | |
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| | | · | | | | | | | | |
| <u> </u> | | · | | | | | , | | | |
| | | · | | | | | | | | |
| | , , | , | =Reduced Matrix, CS | | | ed Sand G | | cation: PL=Pore Lir | | |
| Hydric Soil I | Indicators: (Application) | able to all | LRRs, unless other | wise not | ted.) | | Indicato | ors for Problematic | Hydric S | ioils°: |
| Histosol | (A1) | | Sandy Redox (S | , | | | | n Muck (A10) | | |
| Histic Ep | pipedon (A2) | | Stripped Matrix | (S6) | | | | Parent Material (T | , | |
| Black Hi | () | | Loamy Mucky M | | | t MLRA 1) | | y Shallow Dark Surf | , | 2) |
| L Hydroge | n Sulfide (A4) | | Loamy Gleyed I | Matrix (F2 | 2) | | L Oth | er (Explain in Rema | rks) | |
| | d Below Dark Surface | e (A11) | Depleted Matrix | (F3) | | | | | | |
| | ark Surface (A12) | | Redox Dark Su | face (F6) |) | | ³ Indicate | ors of hydrophytic ve | egetation a | and |
| Sandy M | lucky Mineral (S1) | | Depleted Dark S | Surface (I | F7) | | wetland hydrology must be present, | | | it, |
| | Bleyed Matrix (S4) | | Redox Depress | ions (F8) | | | unles | s disturbed or prob | ematic. | |
| Restrictive I | _ayer (if present): | | | | | | | | | |
| Type: roc | :k | | | | | | | | | |
| Depth (ind | ches): <u>9</u> | | | | | | Hydric Soil | Present? Yes | N | 10 X |
| Remarks: | | | | | | | | | | |
| Not locat | ed within a de | pressio | on, therefore (| F8) do | oes not | applv. | Low perce | ent redox con | centra | tions in |
| | | • | ox dark surfac | , | | | | | | |
| upper Z I | | ne reu | SA Gain Sullac | | snora | ppiy. | | | | |

HYDROLOGY

| Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or me | Secondary Indicators (2 or more required) | | |
|--|---|--|--|
| Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B | 89) (MLRA 1, 2 , | | |
| Image: Migh Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) | | | |
| Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) | | | |
| Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table | (C2) | | |
| Sediment Deposits (B2) | ial Imagery (C9) | | |
| Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (D2 | 2) | | |
| Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) | | | |
| Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) | | | |
| Surface Soil Cracks (B6) | (LRR A) | | |
| Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) | (D7) | | |
| Sparsely Vegetated Concave Surface (B8) | | | |
| Field Observations: | | | |
| Surface Water Present? Yes No X Depth (inches): | | | |
| Water Table Present? Yes No X Depth (inches): | | | |
| Saturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes | No | | |
| (includes capillary fringe) | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Monitoring well showed water table at ~5ft from surface. | | | |
| Remarks: | | | |
| No wetland hydrology indicators are present at sampled location. | | | |
| | | | |
| | | | |

| Project/Site: Honeydew Ranch | City/County: H | City/County: Honeydew/Humboldt Sampling Date: | | | | | |
|---|--------------------------|---|----------------------------|--|--|--|--|
| Applicant/Owner: HSM | | State: CA | Sampling Point: 50 | | | | |
| Investigator(s): EPC, EKT | Section, Towns | Section, Township, Range: <u>S6 T35 R1E</u> | | | | | |
| Landform (hillslope, terrace, etc.): Terrace alluvial | Local relief (co | Local relief (concave, convex, none): flat Slop | | | | | |
| Subregion (LRR): LLRA | Lat: 40°14'19.11"N | Long: <u>124° 6'59.16"</u> W | Datum: WGS 84 | | | | |
| Soil Map Unit Name: Conklin, 0 to 2 percent slopes | | NWI classific | cation: None | | | | |
| Are climatic / hydrologic conditions on the site typical for this | time of year? Yes X | _ No (If no, explain in R | emarks.) | | | | |
| Are Vegetation, Soil, or Hydrology sig | gnificantly disturbed? | Are "Normal Circumstances" p | present? Yes X No | | | | |
| Are Vegetation, Soil, or Hydrology na | aturally problematic? | (If needed, explain any answe | ers in Remarks.) | | | | |
| SUMMARY OF FINDINGS – Attach site map s | howing sampling p | point locations, transects | , important features, etc. | | | | |
| Hydrophytic Vegetation Present? Ves No | X | | | | | | |

| Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? | Yes Yes Yes | No <u>X</u> No <u>X</u> No <u>X</u> | Is the Sampled Area within a Wetland? | Yes | No <u>X</u> |
|---|-------------------|---|---------------------------------------|-----|-------------|
| Remarks: | | | | | |

All three wetland indicators were lacking and the sampled area was not within a wetland.

VEGETATION – Use scientific names of plants.

| Emo | Absolute | Dominant | | Dominance Test worksheet: |
|---|----------|-------------|--------|---|
| Tree Stratum (Plot size: 5m2) | | Species? | | Number of Dominant Species |
| 1 | | | | That Are OBL, FACW, or FAC: 1 (A) |
| 2 | | | | Total Number of Dominant |
| 3 | | | | Species Across All Strata: <u>2</u> (B) |
| 4 | | | | |
| | 0 | = Total Co | ver | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B) |
| Sapling/Shrub Stratum (Plot size: 5m2) | | | | Prevalence Index worksheet: |
| 1 | | | | |
| 2 | | | | Total % Cover of: Multiply by: |
| 3 | | | | OBL species x 1 = |
| 4 | | | | FACW species x 2 = |
| | | | | FAC species x 3 = |
| 5 | 0 | = Total Co | | FACU species x 4 = |
| Herb Stratum (Plot size: 2m2) | <u> </u> | = 10tal Co | ver | UPL species x 5 = |
| 1. Cynosurus echinatus | 15 | No | UPL | Column Totals: (A) (B) |
| 2. Rumex acetosella | 65 | Yes | FACU | |
| 3. Geranium (molle) | 35 | Yes | NL/UPL | Prevalence Index = B/A = |
| 4. Claytonia sp. | 20 | No | - | Hydrophytic Vegetation Indicators: |
| 5. Avena sp. | 2 | No | UPL | 1 - Rapid Test for Hydrophytic Vegetation |
| 6. Erodium botrys | 5 | No | FACU | 2 - Dominance Test is >50% |
| | | | | 3 - Prevalence Index is $\leq 3.0^1$ |
| 7 | | | | 4 - Morphological Adaptations ¹ (Provide supporting |
| 8 | | | | data in Remarks or on a separate sheet) |
| 9 | | | | 5 - Wetland Non-Vascular Plants ¹ |
| 10 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 11 | | | | ¹ Indicators of hydric soil and wetland hydrology must |
| | 147 | = Total Cov | /er | be present, unless disturbed or problematic. |
| Woody Vine Stratum (Plot size: 2m2) | | - | | |
| 1 | | | | Hydrophytic |
| 2 | | | | Vegetation |
| | • | = Total Cov | /er | Present? Yes <u>No X</u> |
| % Bare Ground in Herb Stratum 0 | | | | |
| Remarks: | | | | · |
| Development (and the sector sheet) of the Develop | | 1 1 | | Contrations in the second s |

Dominance test is not conclusive. Previous index test not calculated since hydric soils and hydrology are lacking at site.

| Profile Desc | cription: (Describe | to the dep | th needed to docur | nent the in | dicator o | or confirm | the absence | of indicators.) |
|------------------------|--|--------------|----------------------------|--------------|---------------------|---------------------|-----------------------|---|
| Depth | Matrix | | | x Features | | | | |
| (inches) | Color (moist) | <u>%</u> | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks |
| 0-10 | 10YR 3/2 | 100 | | | | | Clay loam | Some gravel |
| | | | | | | | | |
| | | | | | | | | |
| | | | | · · | | | | |
| | | | | | | | | |
| | | · | | | | | | |
| | | | | | <u> </u> | <u> </u> | | |
| | | | | | | | | |
| | | | | <u> </u> | | | | |
| ¹ Type: C=C | oncentration, D=Dep | letion, RM= | Reduced Matrix, CS | S=Covered | or Coate | d Sand Gr | ains. ² Lo | cation: PL=Pore Lining, M=Matrix. |
| | Indicators: (Applic | | | | | | | ors for Problematic Hydric Soils ³ : |
| Histosol | (A1) | | Sandy Redox (| S5) | | | 2 cr | m Muck (A10) |
| | pipedon (A2) | | Stripped Matrix | . , | | | = | Parent Material (TF2) |
| | istic (A3) | | Loamy Mucky N | | (except | MLRA 1) | | y Shallow Dark Surface (TF12) |
| | en Sulfide (A4) d Below Dark Surfac | o (A11) | Loamy Gleyed | . , | | | | er (Explain in Remarks) |
| | ark Surface (A12) | 0 (711) | Redox Dark Su | | | | ³ Indicate | ors of hydrophytic vegetation and |
| | Aucky Mineral (S1) | | Depleted Dark | · · · | ·) | | | and hydrology must be present, |
| Sandy C | Gleyed Matrix (S4) | | Redox Depress | ions (F8) | | | unles | ss disturbed or problematic. |
| | Layer (if present): | | | | | | | |
| Type: <u>n/a</u> | a | | | | | | | |
| Depth (in | ches): | | | | | | Hydric Soil | Present? Yes <u>No X</u> |
| Remarks: | | | | | | | 1 | |
| No wetla | nd hydric soil | indicate | ors are preser | nt. | | | | |
| | , , | | • | | | | | |
| | | | | | | | | |
| HYDROLO | GY | | | | | | | |
| Wetland Hy | drology Indicators: | | | | | | | |
| Primary Indi | cators (minimum of o | ne required | d; check all that apply | y) | | | Seco | ndary Indicators (2 or more required) |
| Surface | Water (A1) | | U Water-Sta | ined Leaves | s (B9) (e x | cept | V | Vater-Stained Leaves (B9) (MLRA 1, 2, |
| 🔲 High Wa | ater Table (A2) | | MLRA | 1, 2, 4A, an | nd 4B) | | | 4A, and 4B) |
| Saturati | on (A3) | | Salt Crust | (B11) | | | <u> </u> | Drainage Patterns (B10) |
| U Water M | larks (B1) | | Aquatic Inv | vertebrates | (B13) | | <u> </u> | Dry-Season Water Table (C2) |
| Sedime | nt Deposits (B2) | | | Sulfide Odd | | | | Saturation Visible on Aerial Imagery (C9) |
| Drift De | posits (B3) | | | Rhizosphere | - | - | ts (C3) 🔲 G | Geomorphic Position (D2) |
| Algal Ma | at or Crust (B4) | | | of Reduced | | | _ | Shallow Aquitard (D3) |
| | posits (B5) | | _ | n Reductior | | | | AC-Neutral Test (D5) |
| | Soil Cracks (B6) | | | Stressed P | | 1) (LRR A) | _ | Raised Ant Mounds (D6) (LRR A) |
| _ | on Visible on Aerial I | | | plain in Rem | narks) | | <u>L</u> F | rost-Heave Hummocks (D7) |
| | y Vegetated Concave | e Surface (I | B8) | | | | | |
| Field Obser | | | . X | | | | | |
| Surface Wat | | | No X Depth (ind | | | | | |
| Water Table | | | No $\frac{X}{X}$ Depth (in | | | | | ~ |
| Saturation P | | es | No X Depth (ind | ches): | | _ Wetla | and Hydrolog | y Present? Yes No $\frac{X}{2}$ |
| Describe Re | pillary fringe) corded Data (stream | gauge, mo | onitoring well, aerial | ohotos, prev | vious insi | pections). | if available: | |

Remarks:

No wetland hydrology indicators are present.

| Project/Site: Honeydew Ranch | City/County: H | loneydew/Humboldt | Sampling Date: 12/1/2017 |
|--|-----------------|------------------------------------|--------------------------|
| Applicant/Owner: HSM | | State: CA | Sampling Point: 6U |
| Investigator(s): EPC, EKT | Section, Town | ship, Range: <u>S6 T35 R1E</u> | |
| Landform (hillslope, terrace, etc.): Floodplain relic alluvial | | oncave, convex, none): <u>none</u> | Slope (%): 0 |
| Subregion (LRR): LLRA Lat: | 40°14'27.85"N | Long: <u>124° 7'6.77</u> "W | Datum: WGS 84 |
| Soil Map Unit Name: Pepperwood-Shivelyflat complec, 0 to 2 percer | nt slopes | NWI classific | ation: None |
| Are climatic / hydrologic conditions on the site typical for this time o | f year? Yes X | No (If no, explain in R | emarks.) |
| Are Vegetation, Soil, or Hydrology significat | ntly disturbed? | Are "Normal Circumstances" p | present? Yes X No |
| Are Vegetation, Soil, or Hydrology naturally | problematic? | (If needed, explain any answe | rs in Remarks.) |
| SUMMARY OF FINDINGS – Attach site map showi | ing sampling | point locations, transects | important features, etc. |

| Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? | Yes <u>X</u> Yes Yes | No No _X No _X | Is the Sampled Area within a Wetland? | Yes | No <u>X</u> |
|---|----------------------------|----------------------|---------------------------------------|-----|-------------|
| Remarks: | | | | | |

Hydrophytic vegetation (FAC only) passed by the dominance test. However, both hydric soil and wetland hydrology are lacking therefore the sample area is not within a wetland.

VEGETATION – Use scientific names of plants.

| | Absolute | | Indicator | Dominance Test worksheet: |
|---|----------|------------|-----------|---|
| Tree Stratum (Plot size: 5m2) | | Species? | | Number of Dominant Species |
| 1 | | | | That Are OBL, FACW, or FAC: 2 (A) |
| 2 | | | | Total Number of Dominant |
| 3 | | | | Species Across All Strata: <u>2</u> (B) |
| 4. | | | | |
| ·· | | = Total Co | | Percent of Dominant Species That Are OBL EACW or EAC: 100 (A/B) |
| Sapling/Shrub Stratum (Plot size: 5m2) | | | | |
| 1 | | | | Prevalence Index worksheet: |
| | | | | Total % Cover of: Multiply by: |
| 2 | | | | OBL species x 1 = |
| 3 | | | | FACW species x 2 = |
| 4 | | | | FAC species x 3 = |
| 5 | | | | FACU species x 4 = |
| 0.0 | 0 | = Total Co | over | |
| Herb Stratum (Plot size: 2m2) | | | | UPL species x 5 = |
| 1. Rumex crispus | 10 | No | FAC | Column Totals: (A) (B) |
| 2. Phalaris arundinacea | 30 | Yes | FACW | Prevalence Index = B/A = |
| 3. Holcus lanatus | 5 | No | FAC | Hydrophytic Vegetation Indicators: |
| 4 Hordeum marinum subsp. gussoneanum | 10 | No | FAC | 1 - Rapid Test for Hydrophytic Vegetation |
| 5. Festuca perennis | 20 | No | UPL | \square 2 - Dominance Test is >50% |
| 6. Agrostis capillaris | 35 | Yes | FAC | 3 - Prevalence Index is $\leq 3.0^{1}$ |
| 7 | | | | |
| | | | | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 8 | | | | 5 - Wetland Non-Vascular Plants ¹ |
| 9 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 10 | | | | |
| 11 | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 2m2 | 110 | = Total Co | ver | |
| Woody Vine Stratum (Plot size: 2m2) | | | | |
| 1 | | | | Hydrophytic |
| 2 | | | | Vegetation |
| | • | = Total Co | ver | Present? Yes X No |
| % Bare Ground in Herb Stratum _0 | | | | |
| Remarks: | | | | |
| Although the second family devides the second | a a | | | |

Although it passes for hydrophytic vegetation, the dominant vegetation was of only FAC status (34-66% occurrence in wetlands). No FACW or OBL plants identified at this location.

| OOIL |
|------|
|------|

| · · · · · · · · · · · · · · · · · · · | Matrix | | Redo | x Features | \$ | | | |
|---|---|--|---|--|--|---|------------|--|
| 0.11 10 | olor (moist) | % | Color (moist) | <u>%</u> | Type ¹ | Loc ² | Texture | Remarks |
| 0-11 101 | ′R 4/3 | 100 | | | | | Sandy loam | |
| | | | | | | | | |
| | | | | | | | | |
| <u> </u> | | · | | · | | | | |
| · | | | | · | | | | · |
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| | | | | | | | | |
| | | | | · | | | | |
| | tration D-Dop | lotion PM | =Reduced Matrix, CS | | Lor Coato | | | cation: PL=Pore Lining, M=Matrix. |
| | | | LRRs, unless other | | | u Sanu Gra | | ors for Problematic Hydric Soils ³ : |
| Histosol (A1) | | | Sandy Redox (| | , | | _ | m Muck (A10) |
| Histic Epipedo | on (A2) | | Stripped Matrix | | | | | d Parent Material (TF2) |
| Black Histic (A | | | Loamy Mucky N | |) (except | MLRA 1) | | ry Shallow Dark Surface (TF12) |
| Hydrogen Sul | . , | | Loamy Gleyed | |) | | 🔲 Otł | ner (Explain in Remarks) |
| | w Dark Surface | e (A11) | Depleted Matrix | . , | | | 2 | |
| Thick Dark Su | · · · | | Redox Dark Su | () | | | | ors of hydrophytic vegetation and |
| Sandy Mucky Sandy Gleyed | | | Depleted Dark | | 7) | | | and hydrology must be present, ss disturbed or problematic. |
| Restrictive Layer | | | | 10115 (170) | | | une | ss disturbed of problematic. |
| Type: n/a | (ii present). | | | | | | | |
| | | | | | | | Hudria Sai | il Present? Yes No $\frac{X}{2}$ |
| Depth (inches): Remarks: | | | <u> </u> | | | | Hyunc Sol | |
| No hvdric so | | | | | | | | |
| | Il Indicator | s are p | present at this | locatio | n. | | | |
| | Il Indicator | s are p | present at this | locatio | n. | | | |
| | Il Indicator | s are p | present at this | locatio | n. | | | |
| YDROLOGY | | s are p | present at this | locatio | n. | | | |
| YDROLOGY Wetland Hydrolog | gy Indicators: | | | | n. | | | ndoru Indiastora (2 ar mara required) |
| YDROLOGY Vetland Hydrolo | gy Indicators: (minimum of o | | d; check all that appl | y) | | | | ondary Indicators (2 or more required) |
| YDROLOGY Vetland Hydrolog Primary Indicators | gy Indicators: (minimum of o r (A1) | | d; check all that appl ☐ Water-Sta | y) ined Leave | es (B9) (e s | kcept | | Water-Stained Leaves (B9) (MLRA 1, 2 |
| YDROLOGY Vetland Hydrolog Primary Indicators Surface Wate High Water Ta | gy Indicators: (minimum of o r (A1) able (A2) | | d; check all that appl Water-Sta MLRA | y) ined Leave 1, 2, 4A, a | es (B9) (e s | kcept | · 🗖 | Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) |
| YDROLOGY Vetland Hydrolog Primary Indicators Surface Wate High Water Ta Saturation (AS) | gy Indicators: (minimum of o r (A1) able (A2) 3) | | d: check all that appl ☐ Water-Sta MLRA _ Salt Crust | y) ined Leave 1, 2, 4A, a (B11) | es (B9) (e : nd 4B) | kcept | | Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) |
| YDROLOGY Vetland Hydrolog Primary Indicators Surface Wate High Water Ta Saturation (A3) Water Marks (A3) | gy Indicators: (minimum of o r (A1) able (A2) 3) B1) | | d; check all that appl Water-Sta MLRA Salt Crust Aquatic Inv | y) ined Leave 1, 2, 4A, a (B11) vertebrate: | es (B9) (e : nd 4B) s (B13) | kcept | | Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) |
| YDROLOGY Vetland Hydrolog Primary Indicators Surface Wate High Water Ta Saturation (A3) Water Marks Water Marks Sediment Dep | gy Indicators: (minimum of o r (A1) able (A2) 3) B1) vosits (B2) | | d: check all that appl Water-Sta MLRA Salt Crust Aquatic Inv Hydrogen | y) ined Leave 1, 2, 4A, a (B11) vertebrate: Sulfide Oc | es (B9) (ez nd 4B) s (B13) dor (C1) | | | Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C |
| YDROLOGY Vetland Hydrolog Primary Indicators Surface Wate High Water Ta Saturation (A3 Water Marks Sediment Dep Drift Deposits | gy Indicators: (minimum of o r (A1) able (A2) 3) B1) posits (B2) (B3) | | d; check all that appl Water-Sta MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F | y) ined Leave 1, 2, 4A, a (B11) vertebrate: Sulfide Oc Rhizospher | es (B9) (e s nd 4B) s (B13) for (C1) res along l | Living Root | | Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3 Geomorphic Position (D2) |
| YDROLOGY Vetland Hydrolog Primary Indicators Surface Wate High Water Ta Saturation (A3) Water Marks Water Marks Drift Deposits Algal Mat or C | gy Indicators: (minimum of o r (A1) able (A2) 3) B1) posits (B2) (B3) grust (B4) | | d; check all that appl Water-Sta MLRA Salt Crust Aquatic Im Hydrogen Oxidized F | y) ined Leave 1, 2, 4A, a (B11) vertebrate: Sulfide Oc Rhizosphei of Reduce | es (B9) (e s nd 4B) s (B13) lor (C1) res along l d Iron (C4 | Living Root | | Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) |
| YDROLOGY Vetland Hydrolog Primary Indicators Surface Wate High Water Ta Saturation (A3 Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits | gy Indicators: (minimum of o r (A1) able (A2) 3) B1) oosits (B2) (B3) crust (B4) (B5) | | d: check all that appl Water-Sta MLRA Salt Crust Aquatic Im Hydrogen Oxidized F Presence Recent Iro | y) ined Leave 1, 2, 4A, a (B11) vertebrate: Sulfide Oc Rhizospher of Reduce n Reductio | es (B9) (e : nd 4B) s (B13) dor (C1) res along l d Iron (C4 on in Tilleo | Living Root) I Soils (C6) | | Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) |
| YDROLOGY Primary Indicators Surface Wate High Water Ta Saturation (A3 Water Marks (A3) Drift Deposits Algal Mat or C Iron Deposits Surface Soil C | gy Indicators: (minimum of o r (A1) able (A2) 3) B1) posits (B2) (B3) crust (B4) (B5) cracks (B6) | ne require | d; check all that appl Water-Sta MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence Recent Iro Stunted or | y) ined Leave 1, 2, 4A, a (B11) vertebrate: Sulfide Oc Rhizospher of Reduce n Reduce Stressed | es (B9) (e: nd 4B) s (B13) for (C1) res along l d Iron (C4 on in Tilleo Plants (D | Living Root) I Soils (C6) | | Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) |
| YDROLOGY Vetland Hydrolog Primary Indicators Surface Wate High Water Ta Saturation (A3) Water Marks (A3) Water Marks (A3) Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis | gy Indicators: (minimum of o r (A1) able (A2) 3) B1) oosits (B2) (B3) crust (B4) (B5) | ne require | d: check all that appl Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence (Recent Iro Stunted or 7) Other (Exp | y) ined Leave 1, 2, 4A, a (B11) vertebrate: Sulfide Oc Rhizospher of Reduce n Reduce Stressed | es (B9) (e: nd 4B) s (B13) for (C1) res along l d Iron (C4 on in Tilleo Plants (D | Living Root) I Soils (C6) | | Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) |
| YDROLOGY Vetland Hydrolog Primary Indicators Surface Wate High Water Ta Saturation (A3 Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege | gy Indicators: (minimum of o r (A1) able (A2) B1) posits (B2) (B3) prust (B4) (B5) pracks (B6) prible on Aerial In etated Concave | ne require | d: check all that appl Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence (Recent Iro Stunted or 7) Other (Exp | y) ined Leave 1, 2, 4A, a (B11) vertebrate: Sulfide Oc Rhizospher of Reduce n Reduce Stressed | es (B9) (e: nd 4B) s (B13) for (C1) res along l d Iron (C4 on in Tilleo Plants (D | Living Root) I Soils (C6) | | Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) |
| YDROLOGY Primary Indicators Primary Indicators Surface Wate High Water Ta Saturation (A3 Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vegation | gy Indicators: (minimum of o r (A1) able (A2) B1) oosits (B2) (B3) crust (B4) (B5) cracks (B6) bible on Aerial In etated Concave is: | ne require magery (B Surface (| d: check all that appl Water-Sta MLRA Salt Crust Aquatic Im Hydrogen Oxidized F Presence Recent Iro Stunted or 7) Other (Exp B8) | y) ined Leave 1, 2, 4A, a (B11) vertebrate: Sulfide Oc Rhizospher of Reduce n Reduction Stressed olain in Re | es (B9) (es nd 4B) s (B13) dor (C1) res along l d Iron (C4 on in Tilleo Plants (D marks) | Living Root) I Soils (C6) 1) (LRR A) | | Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) |
| YDROLOGY Primary Indicators Surface Wate High Water Ta Saturation (A3 Water Marks (A3) Water Marks (A3) Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege Field Observation | gy Indicators: (minimum of o r (A1) able (A2) 3) B1) oosits (B2) (B3) (B3) (B3) (B3) (B5) (B5) crust (B4) (B5) cracks (B6) bible on Aerial li etated Concave is: sent? | ne require magery (B e Surface (| d: check all that appl Water-Sta MLRA Salt Crust Aquatic Im Hydrogen Oxidized F Presence Recent Iro Stunted or 7) Other (Exp B8) | y) ined Leave 1, 2, 4A, a (B11) vertebrate: Sulfide Oc Shizospher of Reduce n Reductio Stressed plain in Re | es (B9) (e : nd 4B) for (C1) res along l d Iron (C4 on in Tilleo Plants (D ⁻ marks) | Living Root) I Soils (C6) 1) (LRR A) | | Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) |
| YDROLOGY Primary Indicators Surface Wate High Water Ta Saturation (A3) Water Marks (A3) Water Marks (A3) Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis | gy Indicators: (minimum of o r (A1) able (A2) 3) B1) posits (B2) (B3) rust (B4) (B5) cracks (B6) bible on Aerial lite tated Concave is: sent? Ye | ne require magery (B e Surface (es | d: check all that appl Water-Sta MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence (Recent Iro Stunted or 7) Other (Exp B8) No X Depth (inv X Depth (inv | y) ined Leave 1, 2, 4A, a (B11) vertebrate: Sulfide Oc Rhizospher of Reduce n Reduction Stressed olain in Re ches): ches): | es (B9) (ex nd 4B) s (B13) dor (C1) res along l d Iron (C4 on in Tilleo Plants (D' marks) | Living Roof) 1 Soils (C6) 1) (LRR A) | | Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) |
| YDROLOGY Vetland Hydrolog Primary Indicators Surface Wate High Water Ta Saturation (A3 Water Marks Kater Table Prese Saturation Presen includes capillary | gy Indicators: (minimum of o r (A1) able (A2) B1) posits (B2) (B3) rrust (B4) (B5) rrust (B4) (B5) cracks (B6) bible on Aerial li etated Concave is: sent? Ye ent? Ye (? Ye fringe) | magery (B Surface (es es | d: check all that appl Water-Sta MLRA Salt Crust Aquatic Im Hydrogen Oxidized F Presence Recent Iro Stunted or 7) Other (Exp B8) | y) ined Leave 1, 2, 4A, a (B11) vertebrate: Sulfide Oc Rhizospher of Reduce n Reduction Stressed olain in Re ches): ches): | es (B9) (e: nd 4B) s (B13) dor (C1) res along l d Iron (C4 on in Tilleo Plants (D' marks) | Living Root) I Soils (C6) 1) (LRR A) | IS (C3) | Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) |

No wetland hydrology indicators are present at this location.

| Project/Site: Honeydew Ranch | City/County: Hon | eydew/Humboldt | Sampling Date: <u>12/1/2017</u> |
|---|-------------------------------|------------------------------------|---------------------------------|
| Applicant/Owner: HSM | | State: CA | Sampling Point: 70 |
| Investigator(s): EPC, EKT | Section, Townshi | p, Range: <u>S6 T35 R1E</u> | |
| Landform (hillslope, terrace, etc.): Hillslope | Local relief (cond | ave, convex, none): <u>Concave</u> | Slope (%): <u>30</u> |
| Subregion (LRR): LLRA | Lat: 40°14'29.98"N | Long: <u>124° 7'1.83</u> "W | Datum: WGS 84 |
| Soil Map Unit Name: Crazycoyote-Windynip-Caperidge comp | blex, 15 to 50 percent slopes | NWI classific | cation: None |
| Are climatic / hydrologic conditions on the site typical for this | time of year? Yes X | No (If no, explain in F | Remarks.) |
| Are Vegetation, Soil, or Hydrologysi | gnificantly disturbed? | Are "Normal Circumstances" | present? Yes X No |
| Are Vegetation, Soil, or Hydrology n | aturally problematic? | (If needed, explain any answe | ers in Remarks.) |
| SUMMARY OF FINDINGS – Attach site map | showing sampling po | int locations, transects | s, important features, etc. |

| Hydrophytic Vegetation Present? | Yes | No X | | | |
|---------------------------------|-----|-------------|---------------------|-----|-------------|
| Hydric Soil Present? | Yes | No X | Is the Sampled Area | | Y |
| Wetland Hydrology Present? | Yes | No <u>X</u> | within a Wetland? | Yes | No <u>*</u> |
| Remarks: | | | • | | |

All three wetland parameters are lacking and the sampled area is not within a wetland.

VEGETATION – Use scientific names of plants.

| 0 | Absolute | Dominant | | Dominance Test worksheet: | |
|---|----------|-------------|------------|---|--------|
| Tree Stratum (Plot size: 2m2) | | Species? | | Number of Dominant Species | |
| 1 | | | | That Are OBL, FACW, or FAC: (| (A) |
| 2 | | | | Total Number of Dominant | |
| 3 | | | | Species Across All Strata: 2 | (B) |
| 4 | | | | Percent of Dominant Species | |
| | • | = Total Co | | That Are OBL, FACW, or FAC: ⁵⁰ | (A/B) |
| Sapling/Shrub Stratum (Plot size: 2m2) | | | | Prevalence Index worksheet: | , |
| 1 | | . <u> </u> | . <u> </u> | Total % Cover of: Multiply by: | |
| 2 | | | | OBL species x 1 = | |
| 3 | | | | | |
| 4 | | | | FACW species x 2 = | |
| 5 | | | | FAC species x 3 = | |
| | 0 | = Total Co | ver | FACU species x 4 = | |
| Herb Stratum (Plot size: 2m2) | | | | UPL species x 5 = | |
| 1. <u>Briza maxima</u> | 30 | Yes | NL/UPL | Column Totals: (A) | (B) |
| 2. Hordeum marinum subsp. gussoneanum | 35 | Yes | FAC | Prevalence Index = B/A = | |
| 3. Phalaris arundinacea | 2 | No | FAC | Hydrophytic Vegetation Indicators: | |
| 4. Elymus glaucus | 5 | No | FACU | 1 - Rapid Test for Hydrophytic Vegetation | |
| 5. Mentha pulegium | 5 | No | OBL | \square 2 - Dominance Test is >50% | |
| 6. Rumex crispus | 2 | No | FAC | 3 - Prevalence Index is $\leq 3.0^{1}$ | |
| 7. Cynosurus echinatus | 5 | No | UPL | \square 4 - Morphological Adaptations ¹ (Provide suppo | orting |
| 8 | | | | data in Remarks or on a separate sheet) | Jung |
| 9 | | | | 5 - Wetland Non-Vascular Plants ¹ | |
| 10 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |) |
| 11 | | | | ¹ Indicators of hydric soil and wetland hydrology mu | ust |
| ···· | 0.4 | = Total Cov | | be present, unless disturbed or problematic. | |
| Woody Vine Stratum (Plot size: 2m2) | | _ 10tai 00 | | | |
| 1 | | | | Hydrophytic | |
| 2 | | | | Vegetation | |
| | 0 | = Total Cov | | Present? Yes No $\frac{X}{X}$ | |
| % Bare Ground in Herb Stratum <u>0</u> | | _ 10tai 00 | | | |
| Remarks: | | | | 1 | |
| | | | | | |

Dominance test not conclusive (50%) and sampling location lacks hydric soils and wetland hydrology therefore prevalence index was not calculated.

| OOIL |
|------|
|------|

| Profile Desc | ription: (Describe | e to the dept | n needed to docum | nent the i | ndicator | or confirm | the absence | e of indicators.) |
|--------------------------------|--------------------------------------|------------------------|------------------------|-------------|----------------------|---------------------|-----------------------|---|
| Depth | Matrix | | | x Feature | 4 | . 2 | - | |
| (inches) | Color (moist) | | Color (moist) | % | Type' | _Loc ² | Texture | Remarks |
| 0-10 | 10YR 3/1 | 100 | | · | | | clay loam | dark |
| | | | | | | | | |
| | | | | | | | | |
| | | | | · | | | - | |
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| · | | | | · | | | | · |
| · | | | | · | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Co | oncentration, D=De | pletion, RM=I | Reduced Matrix, CS | S=Covered | d or Coate | d Sand Gr | ains. ² Lo | cation: PL=Pore Lining, M=Matrix. |
| Hydric Soil | Indicators: (Appli | cable to all L | RRs, unless other | wise not | ed.) | | | ors for Problematic Hydric Soils ³ : |
| Histosol | . , |] | Sandy Redox (| S5) | | | <u> </u> | m Muck (A10) |
| | oipedon (A2) | | Stripped Matrix | . , | | | | d Parent Material (TF2) |
| Black Hi | () | | Loamy Mucky N | | | MLRA 1) | | ry Shallow Dark Surface (TF12) |
| | n Sulfide (A4) d Below Dark Surfa | <u>ال</u> مم (۱۹۱۸) | Loamy Gleyed | |) | | <u> </u> | ner (Explain in Remarks) |
| | ark Surface (A12) | ce (ATT) <u>I</u> | Redox Dark Su | | | | ³ Indicat | ors of hydrophytic vegetation and |
| | lucky Mineral (S1) | | Depleted Dark | • • • | 7) | | | and hydrology must be present, |
| | Bleyed Matrix (S4) | [| Redox Depress | | , | | | ss disturbed or problematic. |
| Restrictive I | _ayer (if present): | | | | | | | |
| Type: <u>n/a</u> | l | | | | | | | |
| Depth (ind | ches): | | | | | | Hydric Soi | I Present? Yes No $\frac{X}{2}$ |
| Remarks: | | | | | | | 1 | |
| No hvdrid | c soil indicate | ors are pr | esent at this | locatio | n. | | | |
| i to ny an | | | | locallo | | | | |
| | | | | | | | | |
| HYDROLO | GY | | | | | | | |
| Wetland Hyd | drology Indicators | : | | | | | | |
| Primary Indic | cators (minimum of | one required; | check all that apply | y) | | | Seco | ondary Indicators (2 or more required) |
| Surface | Water (A1) | | Water-Stai | ned Leav | es (B9) (e : | xcept | Π \ | Water-Stained Leaves (B9) (MLRA 1, 2, |
| 🔲 High Wa | ter Table (A2) | | MLRA | 1, 2, 4A, a | and 4B) | - | | 4A, and 4B) |
| Saturatio | on (A3) | | Salt Crust | (B11) | | | <u> </u> | Drainage Patterns (B10) |
| U Water M | arks (B1) | | Aquatic Inv | vertebrate | s (B13) | | <u> </u> | Dry-Season Water Table (C2) |
| D Sedimer | nt Deposits (B2) | | Hydrogen | Sulfide O | dor (C1) | | | Saturation Visible on Aerial Imagery (C9) |
| | oosits (B3) | | Oxidized F | • | - | - | ts (C3) | Geomorphic Position (D2) |
| | at or Crust (B4) | | Presence | | | , | | Shallow Aquitard (D3) |
| | oosits (B5) | | Recent Iro | | | | · | FAC-Neutral Test (D5) |
| | Soil Cracks (B6) | | Stunted or | | | 1) (LRR A) | | Raised Ant Mounds (D6) (LRR A) |
| | on Visible on Aeria | | | olain in Re | marks) | | | Frost-Heave Hummocks (D7) |
| - | Vegetated Conca | ve Surface (B | 8) | | | | | |
| Field Obser | | | X Death (in | - 1) | | | | |
| Surface Wate | er Present? | Yes N | o X Depth (ind | cnes): | | — | | |
| Water Table | | | o X Depth (ind | | | | | X |
| Saturation Pr (includes cap | | Yes N | o X Depth (ind | ches): | | _ Wetla | and Hydrolog | gy Present? Yes <u>No X</u> |
| | | m gauge, mor | itoring well, aerial p | photos, pr | evious ins | pections), | if available: | |
| | | | - | | | | | |
| Remarks: | | | | | | | | |
| No wetla | nd hydrology | indicato | rs are presen | t at thi | s locat | ion. | | |

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

| Project/Site: Honeydew Ranch | City/County: | Honeydew/Humboldt | Sampling Date: | 12/1/2017 |
|--|----------------------|---|------------------|-------------------|
| Applicant/Owner: HSM | | State: CA | Sampling Point: | 7W |
| Investigator(s): EPC, EKT | Section, Tow | nship, Range: <u>S6 T35 R1E</u> | | |
| Landform (hillslope, terrace, etc.): Hillslope | Local relief (| concave, convex, none): <u>Concave/</u> | sloped Slop | be (%): <u>15</u> |
| Subregion (LRR): LLRA Lat | | Long: <u>124° 7'2.96</u> "W | | m: WGS 84 |
| Soil Map Unit Name: Crazycoyote-Windynip-Caperidge complex, | 15 to 50 percent slo | pes NWI classific | cation: None | |
| Are climatic / hydrologic conditions on the site typical for this time | of year? Yes X | No (If no, explain in R | emarks.) | |
| Are Vegetation, Soil, or Hydrology signific | antly disturbed? | Are "Normal Circumstances" p | oresent? Yes X | No |
| Are Vegetation, Soil, or Hydrology natura | lly problematic? | (If needed, explain any answe | ers in Remarks.) | |
| SUMMARY OF FINDINGS – Attach site map show | wing sampling | point locations, transects | s, important fe | atures, etc. |
| | | | | |

| Hydrophytic Vegetation Present? | Yes X | No | | | |
|---------------------------------|-------|----|---------------------|--------------|----|
| Hydric Soil Present? | Yes X | No | Is the Sampled Area | V | |
| Wetland Hydrology Present? | Yes X | No | within a Wetland? | Yes <u>^</u> | No |
| Remarks: | | | | | |

All three wetland parameters were identified and the location is within a wetland.

VEGETATION – Use scientific names of plants.

| F == 0 | Absolute | Dominant | | Dominance Test worksheet: |
|---|-----------|------------|----------|---|
| Tree Stratum (Plot size: 5m2) | % Cover | Species? | Status | Number of Dominant Species |
| 1 | | | | That Are OBL, FACW, or FAC: 2 (A) |
| 2 | | | | |
| 3 | | | | Total Number of Dominant Species Across All Strata: (B) |
| | | | | |
| 4 | | | | Percent of Dominant Species |
| Sapling/Shrub Stratum (Plot size: 5m2) | 0 | = Total Co | ver | That Are OBL, FACW, or FAC: 100 (A/B) |
| | | | | Prevalence Index worksheet: |
| 1 | | | | Total % Cover of: Multiply by: |
| 2 | | | | OBL species x 1 = |
| 3 | | | | |
| 4 | | | | FACW species x 2 = |
| 5 | | | | FAC species x 3 = |
| ··· | 0 | = Total Co | vor | FACU species x 4 = |
| Herb Stratum (Plot size: ^{5m2}) | | _ 10tal 00 | | UPL species x 5 = |
| 1. Rumex crispus | 30 | Yes | FAC | Column Totals: (A) (B) |
| 2. Phalaris arundinacea | 45 | Yes | FAC | |
| 3. Mentha pulegium | 5 | No | OBL | Prevalence Index = B/A = |
| 4. Cyperus echinatus | 5 | No | UPL | Hydrophytic Vegetation Indicators: |
| 5. Juncus patens | 15 | No | FACW | 1 - Rapid Test for Hydrophytic Vegetation |
| | | | | ✓ 2 - Dominance Test is >50% |
| 6 | | | | 3 - Prevalence Index is ≤3.0 ¹ |
| 7 | | | | 4 - Morphological Adaptations ¹ (Provide supporting |
| 8 | | | | data in Remarks or on a separate sheet) |
| 9 | | | | 5 - Wetland Non-Vascular Plants ¹ |
| 10 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| | | | | ¹ Indicators of hydric soil and wetland hydrology must |
| 11 | 100 | | | be present, unless disturbed or problematic. |
| Woody Vine Stratum (Plot size: 5m2) | 100 | = Total Co | ver | |
| | | | | |
| 1 | | | | Hydrophytic Vegetation |
| 2 | • | | | Present? Yes X No |
| % Para Cround in Llark Stratum | 0 | = Total Co | ver | |
| % Bare Ground in Herb Stratum 0 Remarks: | | | | |
| | | | | |
| Dominant vegetation passes dominance | e test fo | or hydro | phytic v | regetation. |

SOIL

| Depth | Matrix | | | x Feature | 4 | | | |
|--|---|--|--|---|---|---|--------------------|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | |
| 0-10 | 10YR 3/1 | 95 | 10YR 5/8 | 5 | С | PL | clay loan | <u></u> |
| | | | | | | | | |
| | | | | | · | | | |
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| | | · | | | · | | | |
| | | | EReduced Matrix, CS | | | ed Sand Gr | | Location: PL=Pore Lining, M=Matrix. |
| <u> </u> | | able to al | LRRs, unless othe | | ed.) | | _ | ators for Problematic Hydric Soils ³ : |
| Histosol (| · , | | Sandy Redox (| | | | | cm Muck (A10) |
| | ipedon (A2) | | Stripped Matrix | | (a) | | = | Red Parent Material (TF2) |
| Black His | n Sulfide (A4) | | Loamy Mucky I | | , . . | (WILRA 1) | | /ery Shallow Dark Surface (TF12) 0ther (Explain in Remarks) |
| | Below Dark Surfac | ۵ (۵11) | Depleted Matrix | | <u>~</u>) | | | |
| | rk Surface (A12) | S (ATT) | Redox Dark Su | ``` | 1 | | ³ Indic | ators of hydrophytic vegetation and |
| | ucky Mineral (S1) | | Depleted Dark | () | | | | etland hydrology must be present, |
| | leyed Matrix (S4) | | Redox Depress | , | , | | | less disturbed or problematic. |
| Restrictive L | ayer (if present): | | | | | | | |
| Type: n/a | | | | | | | | |
| Type. | | | | | | | | |
| <u> </u> | | | | | | | Hydric S | oil Present? Yes ^X No |
| | hes): | | | | | | Hydric S | oil Present? Yes X No |
| Depth (inc Remarks: | hes): | | edox concentr | ations | and m | atrix co | - | oil Present? Yes $\underline{\times}$ No |
| Depth (inc Remarks: | hes): | | edox concentr | ations | and m | atrix co | - | |
| Depth (inc Remarks: | hes): | | edox concentr | ations | and m | atrix co | - | |
| Depth (inc Remarks: _OCATION | hes): and percenta | | edox concentr | ations | and m | atrix co | - | |
| Depth (inc Remarks: _OCATION = | hes): and percenta | ge of r | edox concentr | ations | and m | atrix co | - | |
| Depth (inc Remarks: LOCATION | hes): and percenta GY Irology Indicators: | ge of r | edox concentr | | and m | atrix co | lor confi | |
| Depth (inc Remarks: OCATION YDROLOG Wetland Hyd Primary Indic | hes): and percenta GY Irology Indicators: | ge of r | | y) | | | lor confi | rm redox dark surface. |
| Depth (inc Remarks: OCATION YDROLOG Wetland Hyd Primary Indica Surface N | hes): and percenta GY Irology Indicators: ators (minimum of c | ge of r | ed; check all that appl | y) | res (B9) (e | | lor confi | rm redox dark surface. |
| Depth (inc Remarks: OCATION YDROLOG Wetland Hyd Primary Indica Surface N | hes): and percenta GY Irology Indicators: ators (minimum of c Water (A1) ter Table (A2) | ge of r | ed; check all that appl | y) ined Leav 1, 2, 4A, a | res (B9) (e | | lor confi | condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, |
| Depth (inc Remarks: OCATION VDROLOC Wetland Hyd Primary Indica Surface N | hes): and percenta GY Irology Indicators: ators (minimum of c Water (A1) ter Table (A2) n (A3) | ge of r | ed; check all that appl Water-Sta MLRA | y) ined Leav 1, 2, 4A , a (B11) | res (B9) (e and 4B) | | lor confi | condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| Depth (inc Remarks: _OCATION = _OCATION = | hes): and percenta GY Irology Indicators: ators (minimum of c Water (A1) ter Table (A2) n (A3) | ge of r | ed; check all that appl Water-Sta MLRA | y) ined Leav 1, 2, 4A , a (B11) vertebrate | res (B9) (e and 4B) es (B13) | | lor confi | condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) |
| Depth (inc Remarks: OCATION = Primary Indica Surface N G High Wat High Wat Saturatio Saturatio Sedimention | hes): and percenta GY Irology Indicators: ators (minimum of c Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) | ge of r | ed; check all that appl Water-Sta MLRA Salt Crust Aquatic In Hydrogen | y) ined Leav 1, 2, 4A , a (B11) vertebrate Sulfide O | res (B9) (e and 4B) es (B13) dor (C1) | xcept | | <pre>condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,</pre> |
| Depth (inc Remarks: _OCATION = | hes): and percenta GY Irology Indicators: ators (minimum of c Water (A1) ter Table (A2) n (A3) arks (B1) | ge of r | ed; check all that appl Water-Sta MLRA Salt Crust Aquatic In Hydrogen | y) ined Leav 1, 2, 4A , a (B11) vertebrate Sulfide O Rhizosphe | res (B9) (e and 4B) es (B13) dor (C1) eres along | xcept | | condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) |
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| Depth (inc Remarks: _OCATION = _OCATION = | hes): and percenta GY Irology Indicators: ators (minimum of c Nater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial I Vegetated Concave rations: er Present? Y | ge of r | ed; check all that appl Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted of Stunted of Stanted of Other (Exp (B8) | y) ined Leav 1, 2, 4A , a (B11) vertebrate Sulfide O Rhizosphe of Reduce on Reducti r Stressed plain in Re | res (B9) (e and 4B) dor (C1) eres along ed Iron (C4 ion in Tille I Plants (D emarks) | xcept Living Roc 4) d Soils (C6 1) (LRR A | lor confi | rm redox dark surface. condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) |
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| Depth (inc Remarks: OCATION YDROLOO Wetland Hyd Primary Indica Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Dept Surface S Inundatic Sparsely Field Observ Surface Water | hes): and percenta GY Irology Indicators: ators (minimum of c Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial I Vegetated Concave rations: er Present? Y Present? Y | magery (E e Surface | ed; check all that appl Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted of Stunted of Stanted of Other (Exp (B8) | (y) ined Leav 1, 2, 4A , a (B11) vertebrate Sulfide O Rhizosphe of Reduce of Reduce on Reducti r Stressed plain in Re ches): <u>nc</u> ches): <u>1</u> | res (B9) (e and 4B) dor (C1) eres along ed Iron (C4 ion in Tille I Plants (D emarks) one | xcept Living Roc 4) d Soils (C6 1) (LRR A | lor confi | rm redox dark surface. condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) |
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Two primary wetland indicators, high water table and saturation, are present and wetland hydrology is confirmed for this sample area.

| OHWM D | Delineation Cover Sheet | Page <u>1</u> of <u>3</u> |
|--|---|--------------------------------|
| Project: Wetland delineation for HSM | Date: <u>12/1/2017</u> | |
| Location: Honeydew Ranch, Honeydew, CA Mattole River | Investigator(s): <u>EPC, EKT</u> | |
| Project Description: | | |
| Wetland delineation required by USACE for pr storage for irrigation. No project construction in | - | onstruction of water |
| Describe the river or stream's condition (disturbanc | es, in-stream structures, etc.): | |
| Dry intermittent channel feeds to constructed | oond feature. | |
| Off-site Information Remotely sensed image(s) acquired? Yes Iocations of transects, OHWM, and any other features of | | |
| Hydrologic/hydraulic information acquired? Ye s below.] Description: | s I No [If yes, attach information | n to datasheet(s) and describe |
| List and describe any other supporting information | received/acquired: | |
| Instructions: Complete one cover sheet and one or more datashe characteristics of the OHWM along some length of a given stread downstream variability in OHWM indicators, stream conditions coordinates noted on the datasheet. | am. Complete enough datasheets to adequa | ately document up- and/or |

Datasheet # 1

OHWM Delineation Datasheet

| Philars/Rumer Huerthe Break in Slope at OHWM: Sharp (> 60°) Moderate (30–60°) Gentle (< 30°) None | | Rub. | WWHO WWW | 10 ft 1.5 ft | Albert | Salix 92 4A | ass/Agvostis/ Boza/Cynnosurus Ochinatus |
|--|--|---------------------------------|-----------------|-----------------|-----------------|---|---|
| <0.05mm | Notes/Description: Sharp on left ba | ank, moderate Estimate perce | on right bank. | Moderate (30- | -60°) [] Gent | tle (< 30°) [| • |
| Below OHWM 15 0 5 0 75 No Notes/Description: * | | | 0.05 – 2mm | 2mm – 1cm | 1 – 10cm | >10cm | Horizons (Y/N) |
| Votes/Description: Vegetation: I Vegetation: Estimate absolute percent cover to describe general vegetation characteristics above and below the OHW Tree (%) Shrub (%) Herb (%) Bare (%) Above OHWM 100 25 40 0 Below OHWM 0 0 85 20 | | 45 | 30 | | | | Yes |
| Above OHWM 100 25 40 0 Below OHWM 0 0 85 20 | | | | | | | |
| Below OHWM 0 0 85 20 | Vegetation: Estin | | | | | the second se | below the OHWN |
| | | Tree (%) | Shrub (%) | Herb (%) | Bare (% | the second se | below the OHWM |
| | Above OHWM | Tree (%) 100 | Shrub (%) 25 | Herb (%) 40 | Bare (%) | the second se | below the OHWN |
| Other Evidence: List/describe any additional field evidence and/or lines of reasoning used to support your delineatio | Above OHWM Below OHWM | Tree (%) 100 0 | Shrub (%) 25 | Herb (%) 40 | Bare (%) | the second se | below the OHWM |

Datasheet # 2

OHWM Delineation Datasheet

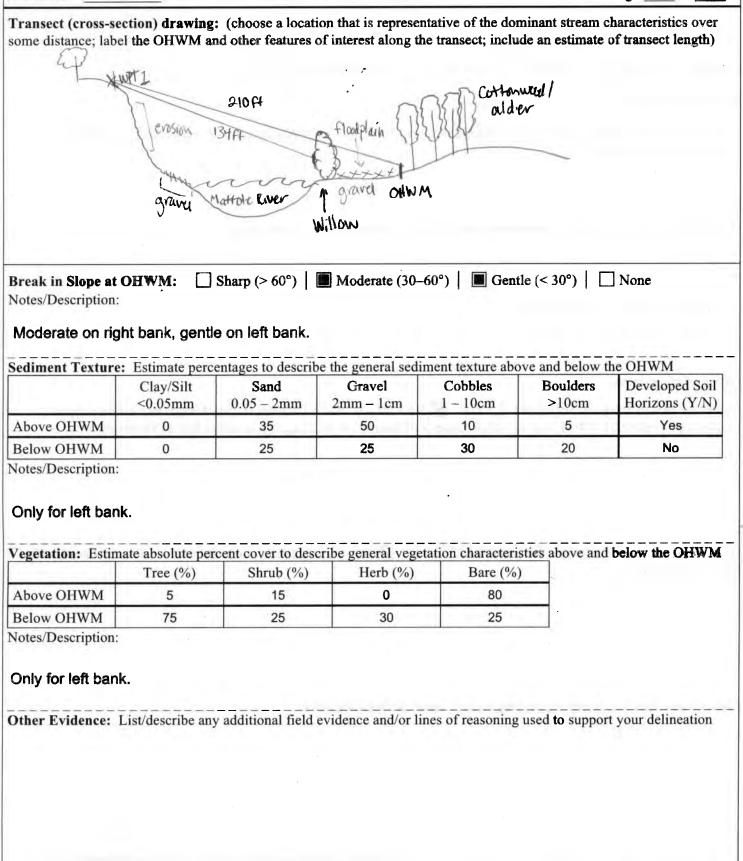
٠

| _unit | DHWM | boulder | S |]374 | J Sal | Road |
|---|-------------------------------|----------------------------------|---|-------------------------------|-------|----------------|
| Break in Slope at Notes/Description: Sediment Texture | | | Moderate (30-4 e the general sedin Gravel | | | Developed Soil |
| | <0.05mm | 0.05 – 2mm | 2mm – 1cm | 1 – 10cm | >10cm | Horizons (Y/N) |
| Above OHWM Below OHWM | 0 | 50 | 0 | 10 | 40 | Yes |
| Vegetation: Estim | nate absolute per Tree (%) | rcent cover to desc Shrub (%) | ribe general veget Herb (%) | ation characteris Bare (%) | | below the OHWM |
| Above OHWM | 30 | 15 | 65 | 0 | | |
| | 0 | 5 | 75 | 20 | | |
| Below OHWM Notes/Description: | | | | | | |

| OHWM I | Delineation Cover Sheet | Page <u>1</u> of <u>2</u> |
|--|---|---------------------------------|
| Project: Wetland delineation for HSM | Date: 12/1/2017 | |
| Location: Honeydew Ranch, Honeydew, CA Mattole River | Investigator(s): EPC, EKT | |
| Project Description: | | |
| Wetland delineation required by USACE for p storage for irrigation . | roject activities associated with | construction of water |
| Describe the river or stream's condition (disturband | :es, in-stream structures, etc.): | |
| - | | |
| | | |
| Fall flow. Erosion on right bank. | | |
| | | |
| Off-site Information | | |
| Remotely sensed image(s) acquired? Yes N locations of transects, OHWM, and any other features of | | |
| | | |
| | | |
| | | |
| Hydrologic/hydraulic information acquired? Ye below.] Description: | s 🔳 No [If yes, attach informatio | on to datasheet(s) and describe |
| | | |
| | | |
| | | |
| | | |
| List and describe any other supporting information | received/acquired: | |
| | | |
| | | |
| | | |
| | | |
| | | |
| Instructions: Complete one cover sheet and one or more datash characteristics of the OHWM along some length of a given strea downstream variability in OHWM indicators, stream conditions coordinates noted on the datasheet. | am. Complete enough datasheets to adequ | ately document up- and/or |

Datasheet

OHWM Delineation Datasheet



Appendix B

Field Delineation Photographs



Figure B-1. Wetland data point 1U.



Figure B-2. Upland data point 2U.



Figure B-3. Upland data point 3U.



Figure B-4. Wetland data point 3W.



Figure B-5. Wetland data point 4U.



Figure B-6. Wetland data point 5U.



Figure B-7. Wetland data point 6U.



Figure B-8. Wetland data point 7U.



Figure B-9. Wetland data point 7W.

Appendix C

Plants Observed During the Wetland Delineation

| Scientific name | Common name | Family | Native status | WMVC Rating (Lichvar et al. 2016) |
|---------------------------------------|-------------------------------------|----------------|--------------------------------------|---|
| Agrostis (capillaris) | Colonial bentgrass | Poaceae | Nonnative | FAC |
| Aira praecox | early hair grass | Poaceae | Nonnative | UPL |
| Avena sp. | Oat | Poaceae | Nonnative | UPL |
| Briza maxima | rattlesnake grass | Poaceae | Nonnative, Cal-IPC Rated Limited | UPL |
| Claytonia sp. | springbeauty | Montiaceae | Native | |
| Convolvulus arvensis | bindweed | Convolvulaceae | Nonnative | UPL |
| Cynosurus echinatus | bristly dogtail grass | Poaceae | Nonnative, Cal-IPC Rated Moderate | UPL |
| Deschampsia cespitosa | tufted hair grass | Poaceae | Native | FACW |
| Elymus glaucus | blue wild rye | Poaceae | Native | FACU |
| Erodium botrys | longbeak stork's bill | Geraniaceae | Nonnative | FACU |
| Festuca perennis | rye grass | Poaceae | Nonnative, Cal-IPC Rated Moderate | FAC |
| Geranium (molle) | dove-footed geranium | Geraniaceae | Nonnative | UPL |
| Holcus lanatus | common velvet grass | Poaceae | Nonnative, Cal-IPC Rated Moderate | FAC |
| Hordeum marinum subsp. gussoneanum | Mediterannean barley | Poaceae | Nonnative, Cal-IPC Rated Moderate | FAC |
| Juglans hindsii | Northern California black walnut | Juglandaceae | Native | FAC |
| Juncus patens | spreading rush | Juncaceae | Native | FACW |
| Medicago polymorpha | California bur clover | Fabaceae | Nonnative, Cal-IPC Rated Limited | FACU |
| Mentha pulegium | pennyroyal | Lamiaceae | Nonnative, Cal-IPC Rated Moderate | OBL |
| Phalaris arundinacea | reed canary grass | Poaceae | Native | FACW |
| Prunus sp. | plum | Rosaceae | nonnative | |
| Rubus armeniacus | Himalayan blackberry | Rosaceae | Nonnative, Cal-IPC Rated High | FAC |
| Rumex acetosella | sheep sorrel | Polygonaceae | Nonnative, Cal-IPC Rated Moderate | FACU |
| Rumex crispus | curly dock | Polygonaceae | Nonnative, Cal-IPC Rated Limited | FAC |
| Rumex occidentalis | western dock | Polygonaceae | Native | FACW |
| Salix lasiandra | Pacific willow | Salicaceae | Native | FACW |
| Silybum marianum | blessed milk thistle | Asteraceae | Nonnative, Cal-IPC Rated Limited | UPL |

 Table C-1. Plant species observed during the wetland delineation survey, 1 December 2017.