June 26, 2019

Stephen Hohman
Hohman & Associates
P.O. Box 733
Haydesville, CA 95547

SUBJECT: Sordal Property Aquatic Resources Delineation Report

Dear Mr. Hohman:

Per your request, I am writing to provide you with the attached June 2019, Sordal Property Aquatic Resources report prepared by Foster Consulting. The study area consists of approximately 96 acres on properties located in the Larabee Valley off State Highway 36 in rural Humboldt County, California.

It is our understanding that the proposed project(s) have the potential to impact waters of the U.S. and/or State. Once approved by the applicable resource agencies this document should act as an environmental baseline to avoid, minimize and assess any impacts to the aquatic environment. Work in any of these resources may require state and/or federal resource permits to comply with applicable clean water act and state fish and wildlife regulations.

Please do not hesitate to contact me if you have any questions or need any additional information by phone at 530/710-4059 or email fostidae@yahoo.com. Thank you for the opportunity to assist you with your project!

Sincerely,

Jonathan Foster
Wetland Ecologist

Cc: Kelsey McDonald, Botanist – Hohman & Associates

Sordal Property

Aquatic Resources Delineation Report

Humboldt County, California

June 2019

Table of Contents

Introduction

This report presents the results of a delineation of aquatic resources for the Sordal Property (property) in the Larabee Valley, adjacent to State Route 36, Humboldt County, California (Appendix A - Figure 1). The approximately 96-acre study area consists of a portion of a single-owner ranch located on multiple parcels.

This delineation was prepared in support of a preliminary jurisdictional determination, meaning that applicants waive or set aside questions regarding the jurisdictional status of wetlands and other waters on a particular site, as described in U.S. Army Corps of Engineers Regulatory Guidance Letter No. 16-01 (U.S. Army Corps of Engineers 2016).

This report describes site characteristics, the methods used to delineate potentially jurisdictional areas, and the characteristics of the potential jurisdictional features. Appendices to the report provide additional detail.

- Appendix A: Aquatic Resources Delineation Drawing & Figures
- Appendix B: Routine Wetland Determination Data Forms
- Appendix C: Plant Species Observed in the Study Area
- Appendix D: Representative Photographs

Contact Information

The contact information for the property owner and the report preparer is provided below.

Property Owner	Report Preparer
4 Wheel Properties LLC	Foster Consulting
Attn: Erik Sordal	Attn: Jonathan Foster, Wetland Ecologist
P.O. Box 202	5427 Valleyridge Drive
Carlotta, CA 95528	Redding, CA 96003
Phone: (707) 599-3691	Phone: (530) 710-4059 | email: fostidae@yahoo.com

Driving Directions

From Arcata/Eureka, take US-101 South, approximately 25 miles to SR-36 East for approximately 33 miles and make a right at 2248 Run Down Acres Road (property entrance). The drive time is approximately 1 hour and 30 minutes. Please note this is a gated ranch and access needs to be arranged prior to a site visit for access permissions and instructions.

Location & Ownership

The study area is located at 2248 Run Down Acres Road off SR-36 in the Larabee Valley Geological Survey (USGS) 7.5-minute quadrangle (Figure 1 – Appendix A) in portions of

Section 23 and 26, Township 11 North, Range 4 East, HB&M Meridian at coordinates 40.441°, -123.689°. The study area is located within a two parcels owned by Erik Sordal, (210-071-001 & -008).

Setting

The study area is within the Outer North Coast Ranges District Subregion of the California Floristic Province (Baldwin 2012). Topography is composed of mostly flat terrain with surrounding foothills at an elevation of approximately 2490 to 2600 feet above mean sea level and is surrounded by rural land uses including forestry, agriculture, and open space in remote Humboldt County. The habitat within the study area is comprised of native and non-native grassland pasture with surroundings of mixed evergreen and sparse hardwood forest.

Climate

The climate in the study area is characterized by warm, dry summers and cool, wet winters. The National Weather Service Cooperative Network weather station closest to the study area was the Bridgeville 4 NNW (CA 041080) that was active from 1954 to 2001. The mean annual precipitation is approximately 68 inches of rain and 20 inches of snow (Western Regional Climate Center 2019).

Hydrology

The study area is within the Little Van Duzen watershed (Hydrologic Unit Code [HUC] 180101050902) a tributary to the Van Duzen River and ultimately the Lower Eel River watershed (HUC 18010105). The site contains numerous unnamed tributaries to the Little Van Duzen River.

Soils

Three soil map units has been mapped in the study area (Natural Resources Conservation Service 2019). See Table 1. below and Appedix A. figures (pages 1-6) for locations.

Table 1. Soil Map Units in the Study Area

Soil Map Unit	Soil Map Unit Name	Dominant Soil Texture	Restrictive Layer	Depth to Restrictive Layer	Drainage Class	Hydric Soil?
1002	Frost Valley-Mulecreek complex (2-9% slopes)	Loam	Bedrock	>80 inches	Moderately well drained	No
4421	Highyork-Elkcamp-Airstrip complex (15-30% slopes)	Silt Loam	Bedrock	>80 inches	Somewhat poorly drained	No
4426	Pasturerock-Coyoterock-Maneze complex (15-50% slopes)	Gravelly Loam	Bedrock	>80 inches	Well drained	No

Vegetation Types

The study area is dominated by both native and nonnative plants mostly within two large pastures that are currently grazed by cattle. The surrounding areas are dominated by shrubs and mixed Douglas fir forest with a band of oak woodlands in the immediate foothills. Upland vegetation types are described below; wetland vegetation types are described in the Results section.

Mixed Douglas Fir Forest / Oak Woodland

Douglas fir (*Pseudotsuga menziesii*), ponderosa pine (*Pinus ponderosa*), bigleaf maple (*Acer macrophyllum*), tanoak (*Notholithocarpus densiflorus*), red alder (*Alnus rubra*), Pacific madrone (*Arbutus menziesii*), Pacific willow (*Salix lasiandra*), Oregon white oak (*Quercus garryana*) and California black oak (*Quercus kellogii*) are scattered across the fringes of the study area. The shrub layer within the study area is dominated by common manzanita (*Arctostaphylos manzanita*) and poison oak (*Toxicodendron diversilobum*).

Annual Grassland/Pasture

Annual grassland with inclusions of both native and non-native grasses is the dominant community within the study area. Species include ripgut brome (*Bromus diandrus*), sweet vernal grass (*Anthozanthum odoratum*), brome fescue (*Festuca bromoides*), Bermuda grass (*Cynodon dactylon*), blue wild rye (*Elymus glaucus*), and orchard grass (*Dactylis glomerata*). Additionally, herbs such as vetch (*Vicia sativa*), dandelion (*Taraxacum officinale*), sheep sorrel (*Rumex acetosella*), cream cups (*Platystemon californicus*), hawkbit (*Leontodon saxatilis*), and lupine (*Lupinus bicolor*) are common throughout the site.

National Wetlands Inventory

The National Wetlands Inventory (NWI) provides maps and information on the status, extent, characteristics, and functions of wetland, riparian, deepwater, and related aquatic habitats. The mapping is provided at a scale of 1:24,000 and uses the U.S. Fish and Wildlife Service's wetland definition, which differs from the USACE definition in that requires the presence of only a single wetland parameter compared to USACE's requirement of positive indicators of all three wetland factors. The NWI shows the extent of wetlands and deepwater habitats that can be determined with remotely sensed data, and originates from 1977 to the present. The NWI mapping can provide useful background information on the broad types of wetland and riparian vegetation communities, but cannot be used to delineate wetlands and other waters of the United States.

There are no wetlands mapped within the study area in the NWI, however, three Riverine (R4SBC) stream features are mapped within the study area that are also mapped and described in this report.

Methods

Fieldwork for the delineation was conducted on May 1st and 2nd, 2019, by wetland ecologist Jonathan Foster of Foster Consulting with assistance by botanist Kelsey McDonald of Hohman & Associates, who also developed the plant list in Appendix C. The surveyors used the routine on-site determination methods described in the U.S. Army Corps of Engineers Wetlands Delineation Manual (1987 Manual) (Environmental Laboratory 1987), and supplemented by the 2010 Western Mountains, Valleys, and Coast Region Supplement (U.S. Army Corps of Engineers 2010).

Streams in the study area were mapped and delineated in the field in accordance with indicators and guidance in U.S. Army Corps of Engineers (USACE) Regulatory Guidance Letter No. 05-05, dated December 7, 2005 (U.S. Army Corps of Engineers 2005) and *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region* (Lichvar and McColley 2008). The lateral extent of non-tidal water bodies (i.e., perennial streams, etc.) were based on the ordinary high water mark (OHWM), which is "the line on the shore established by the fluctuations of water" (USACE 2005). The OHWM was determined based on physical characteristics of the area, including scour, observed flowing water, shelving, changes in the character of soil, and presence of mature vegetation.

In accordance with the 1987 Manual and the 2010 Western Mountains, Valleys, and Coast Region Supplement, data on vegetation, soil, and hydrology characteristics that were used as the basis for wetland boundary determinations were collected and recorded on data forms (Appendix B).

A *Bad Elf GNSS Surveyor* global positioning system (GPS) with capable sub-meter accuracy was used to record the location of jurisdictional boundaries and data points wherever possible. This unit and receiver system collect corrected GNSS data in real time. The data were downloaded and superimposed onto color orthorectified aerial photographs and edited as necessary to

generate the aquatic resources delineation map (Appendix A) in compliance with USACE minimum standards (USACE SPD 2016).

Methods and standards conform to the USACE San Francisco District's Information Required for Verification of Corps Jurisdiction (U.S. Army Corps of Engineers, San Francisco District 2016) and Updated Map and Drawing Standards for the South Pacific Division Regulatory Program (U.S. Army Corps of Engineers, South Pacific Division 2016).

Results

A total of 4.853 acres of potentially jurisdictional aquatic resources was identified in the study area consisting of 14 streams, three (3) ponds and six (6) wetlands.

Appendix A (pages 1-6) depict the study area and wetlands mapped on a 2018 orthorectified true-color aerial photograph at a scale of 1 inch = 200 feet. Wetland delineation data forms documenting the boundaries of the wetlands are located in Appendix B. A list of plant species observed in the project area was compiled, and the scientific name and wetland indicator status of each species are provided following Lichvar et al. (2016) (Appendix C). Photographs were taken to show representative views of the project area and mapped features (Appendix D).

Table 2. Aquatic Resources Identified in the Study Area

Label	Feature Type	Area (Acres)	Average Width (ft)	Length (ft)
Int-1	Intermittent Stream	0.439	12	1530
Int-2	Intermittent Stream	0.641	12	2248
Int-3	Intermittent Stream	0.115	9	574
Int-4	Intermittent Stream	0.025	6	172
Int-5	Intermittent Stream	0.560	14	1803
Int-6	Intermittent Stream	0.063	3	911
Int-7	Intermittent Stream	0.047	9	230
Int-8	Intermittent Stream	0.123	11	497
Eph-1	Ephemeral Stream	0.041	2	887
Eph-2	Ephemeral Stream	0.053	2	1163

Eph-3	Ephemeral Stream	0.009	1	383
Eph-4	Ephemeral Stream	0.017	2	368
Eph-5	Ephemeral Stream	0.003	1	141
Eph-6	Ephemeral Stream	0.011	2	233
W-1	Wetland Swale	0.090	9	427
W-2	Seasonal Wetland	1.055	94	490
W-3	Emergent Wetland	0.147	29	223
W-4	Wetland Swale	0.147	26	249
W-5	Wetland Swale	0.227	23	429
W-6	Seasonal Wetland	0.195	26	46
P-1	Pond	0.009	19	21
P-2	Pond	0.091	39	101
P-3	Pond	0.745	125	259
Totals		**4.853**		**13384**

Wetlands

A total of 1.861 acre of wetlands were identified in the study area, comprising of six mapped wetland areas (Appendix A). Three types of wetlands were identified and mapped in the survey area (W-1 through -6): wetland swales (0.464 acre), emergent wetland (0.147 acre), and seasonal wetland (1.125). Data forms (Appendix C) provide information on these wetlands and photographs in Appendix D show these features.

Two seasonal wetlands and an emergent wetland (complex W-2 and W-3) were mapped in the survey area and occurred on shallow soils in the pastureland. These wetlands were dominated by wetland plants and were transitionally located between emergent wetlands and uplands. The seasonal wetlands were dominated by spreading rush (*Juncus patens*), water montia (*Montia fontana*), and popcorn flower (*Plagiobothrys cognatus*). The emergent wetland complex associated with W-2, W-3, and P-2 was dominated by pondweed (*Potamogeton* nodosus), buttercup (*Ranunculus* spp.), bulrush (*Scirpus microcarpus*), and sedges (*Carex* spp.).

The soils in these areas had strong hydric indicators with redoximorphic features and were either inundated with water or saturated to the surface during the site visit.

Streams

Three types of non-wetland waters were identified and mapped in the survey area: intermittent stream (Int-1 through -8 comprising 2.013 acres), ephemeral stream (Eph-1 through 6 comprising 0.134 acre), and ponds (P-1 through -3 comprising 0.845 acre). These features are shown on the maps in the Appendix A. and photographs are in Appendix D.

Intermittent Streams

Intermittent streams (Int-1 through -8) flow for a length of time each year, typically during the wet season, but dry up over the summer months. In addition to rain water, groundwater provides water for stream flow. Eight intermittent streams were mapped in the survey area. Compared with ephemeral streams, the intermittent streams were wider, had larger watersheds and more strongly defined cross-sections, contained varying amounts of hydric vegetation, and had stronger and more continuous OHWM indicators. All of the intermittent streams had flowing water during the May 2019 surveys. None of the intermittent stream segments are named streams and are not mapped as blue line streams on the USGS 7.5-minute quadrangle maps.

Some riparian species are found along some sections of the intermittent streams in the survey area including willows (*Salix* spp.) and red alder (*Alnus rubra*). Additionally, these streams are an important seasonal water source for regional wildlife as aquatic insects, reptiles, and amphibians were observed in these streams.

Ephemeral Streams

Ephemeral streams (Eph-1 through -6) have flowing water during, and for a short time after, rainfall in a typical year. Rain water is the only source of water for stream flow in ephemeral streams. Ground water is not a source of water, and these streams are above the water table year-round in a typical year. Six ephemeral stream segments were identified and mapped in the survey area. These streams were determined to be ephemeral based on the small size of their watersheds, narrow and poorly-defined channels, the absence of water and hydric vegetation during fieldwork, and the presence of few, and often weak, OHWM indicators that were sometimes discontinuous.

Ponds

Ponds (P-1, -2, and -3) had standing water during the site visit and appear to receive both rain, stream collection and ground water sources. These ponds were mapped separately from wetlands and streams since they each contained deep water habitat and were man-made. P-1 and P-2 had associated emergent wetland habitat, especially on the fringes as described in the wetland section

above. P-3 is a man-made recreation and water storage pond that contained several Northwestern pond turtles (*Actinemys marmorata*).

Culverts and off-site streams

Culverts in the survey area convey flows from stream segments underneath ranch roads and SR-36. Culverts are shown on the maps in Appendix A, but their areal extent is not included in Table 1.

One unnamed perennial stream flows to the north at the culvert crossing in the center of the study area. This stream was not evaluated as a part of this report as only the existing road crossing with a culvert is in within the study area. In the future if any modifications to the road, culvert or stream are proposed by the property owner this stream will need to be evaluated further, under a separate cover.

Jurisdictional Status

The streams, ponds and wetlands located within the study area should be considered jurisdictional under all state and federal clean water act laws. The wetlands are all adjacent to streams and during heavy rains will overtop their boundaries and drain to the streams towards the north end of the study area. The streams enter underground culverts of SR-36, and are eventually tributary to the Little Van Duzen River, a tributary to the Van Duzen River, a tributary to the Eel River and ultimately the Pacific Ocean.

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APPENDIX A – Aquatic Resources Delineation Drawings

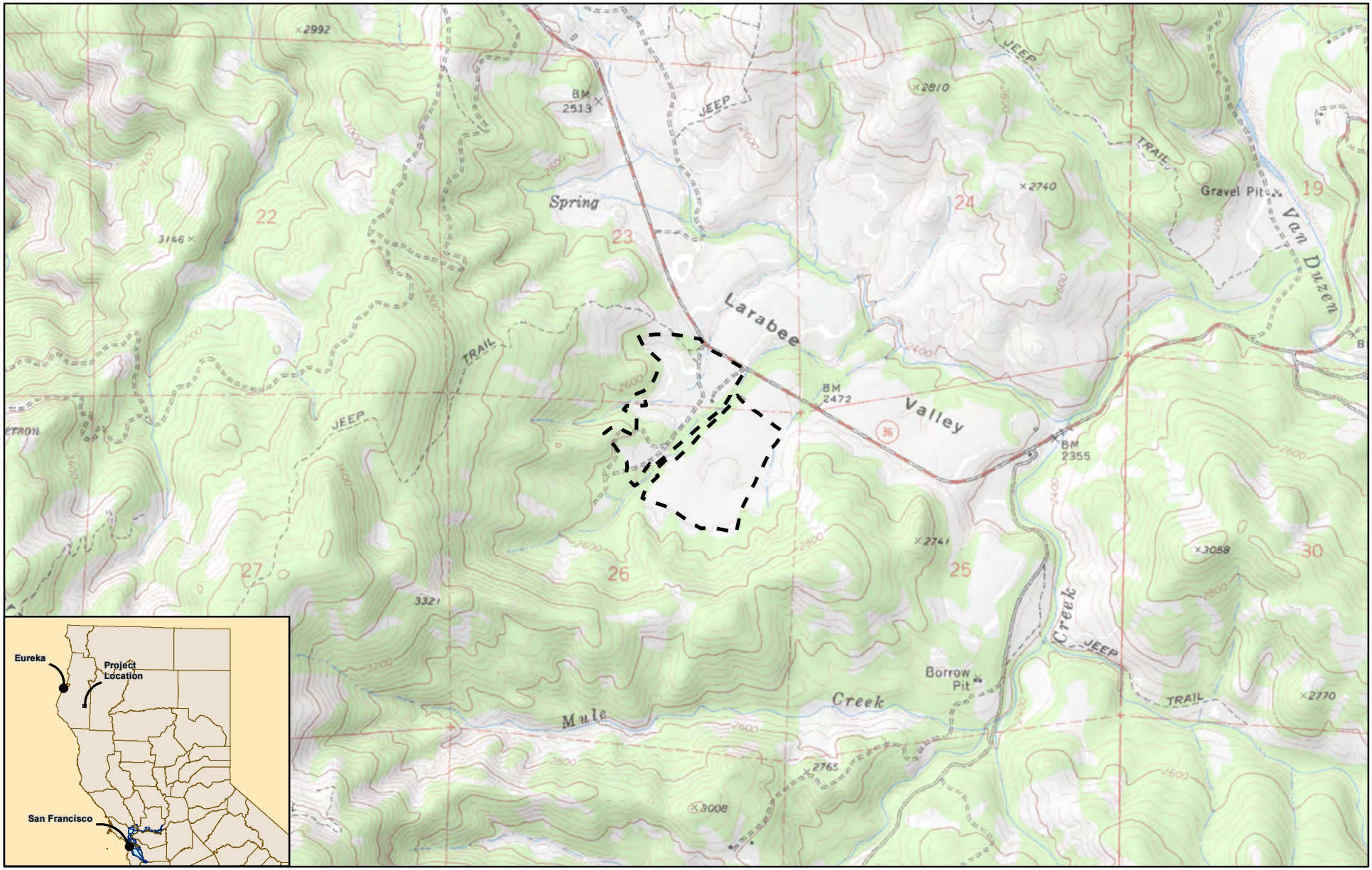
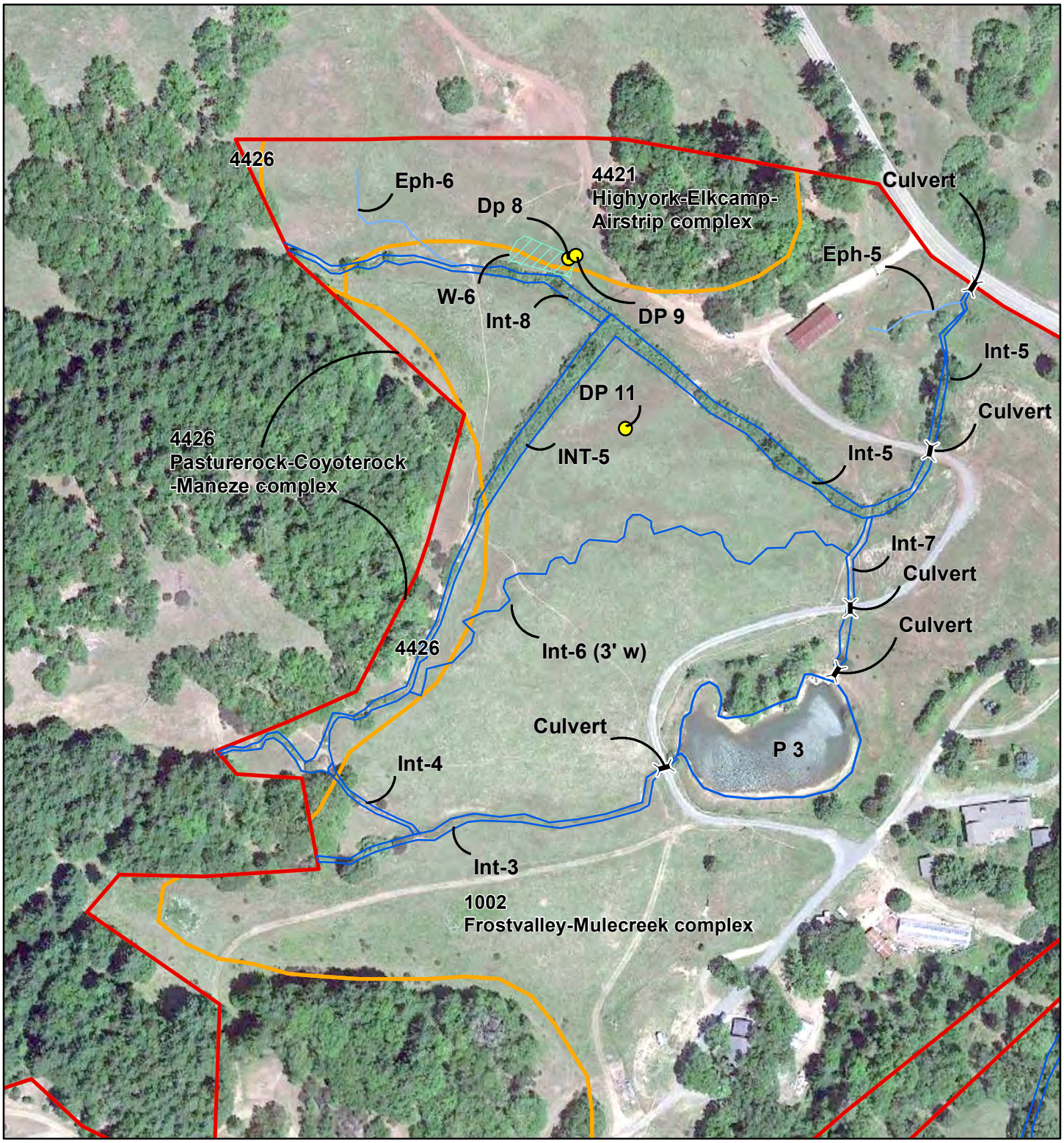


Figure 1: Project Location Map

Sordal Aquatic Resources Map
Larabee Valley 7.5' USGS Quadrangle Portion
of Section 23 & 26, T11N, R4E HB&M
Longitude -123.689, Latitude 40.441

Study Area

1 inch = 2,000 feet



Appendix A. Sordal Aquatic Resources Delineation Drawing (A1)

Project Area
(95.944 total acres)

Seasonal Wetland
(1.125) total acres)

Pond
(0.845 total acres)

Soils

Ephemeral Stream
(0.134 total acres)

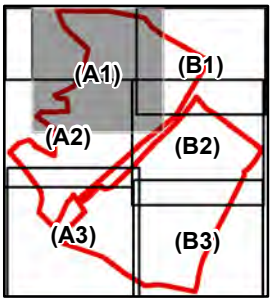
Intermittent Stream
(2.013 total acres)

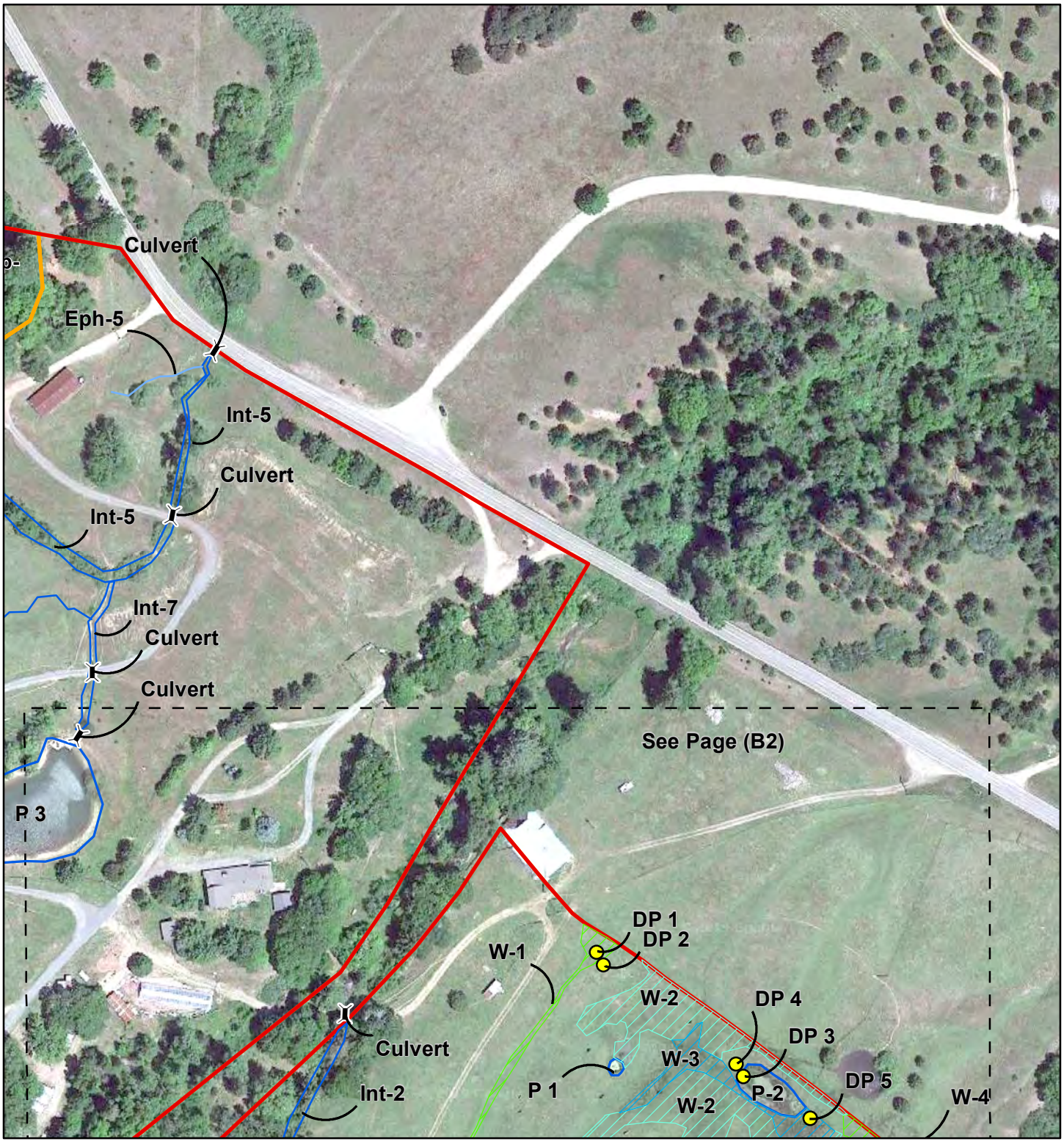
Data Point

Culvert

1 inch = 200 feet

Larabee Valley 7.5' USGS Quadrangle
Portion of Section 23 & 26, T11N, R4E HB&M
Longitude -123.689, Latitude 40.441



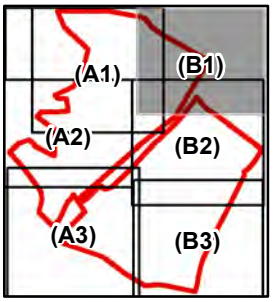


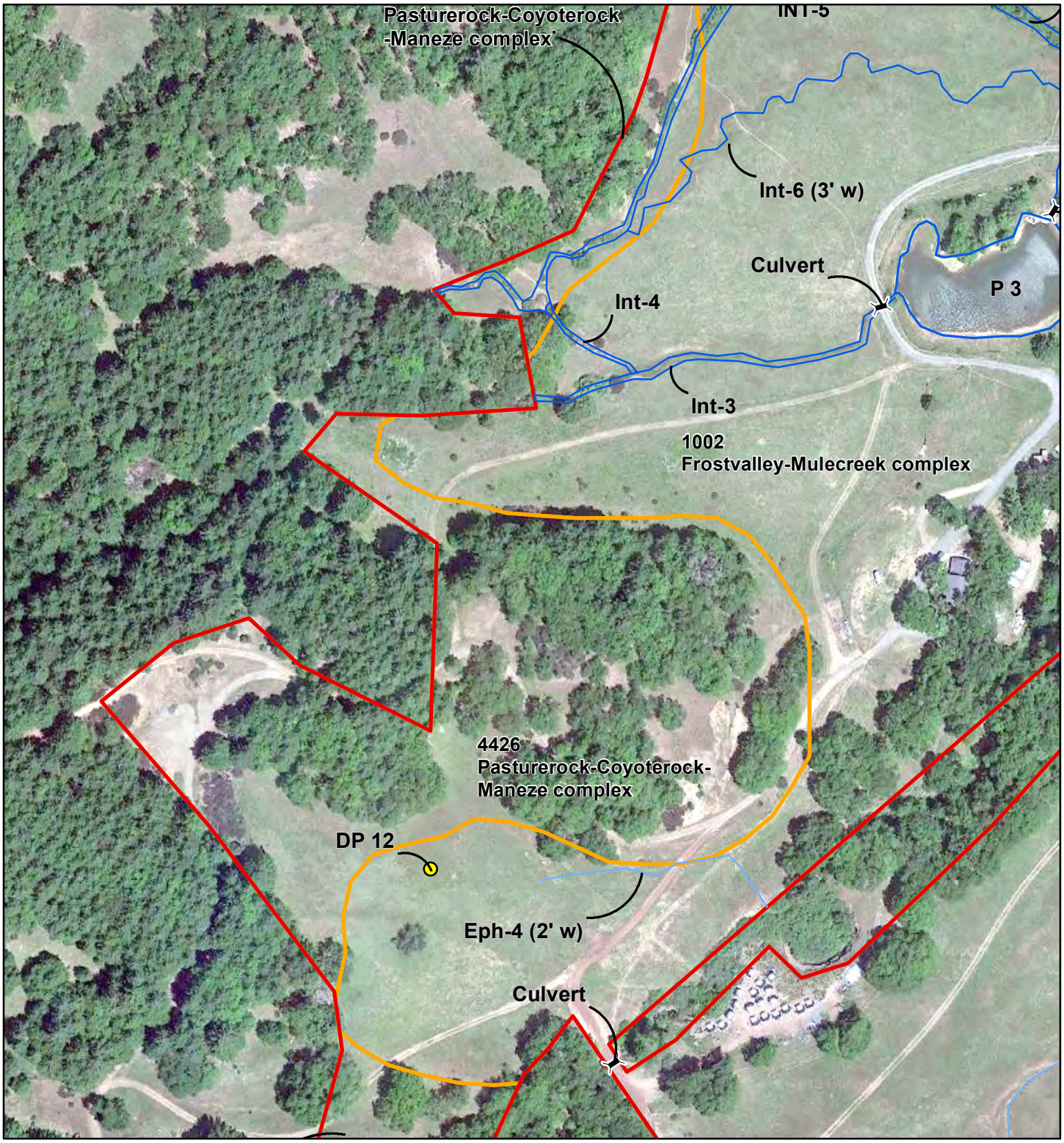
Appendix A. Sordal Aquatic Resources Delineation Drawing (B1)

- Project Area (95.944 total acres)
- Emergent Wetland (0.147 total acres)
- Seasonal Wetland (1.125 total acres)
- Wetland Swale (0.464 total acres)
- Pond (0.845 total acres)
- Soils
- Ephemeral Stream (0.134 total acres)
- Intermittent Stream (2.013 total acres)
- Data Point
- Culvert

1 inch = 200 feet

Larabee Valley 7.5' USGS Quadrangle
Portion of Section 23 & 26, T11N, R4E HB&M
Longitude -123.689, Latitude 40.441





Appendix A. Sordal Aquatic Resources Delineation Drawing (A2)

Project Area
(95.944 total acres)

Pond
(0.845 total acres)

Soils

Ephemeral Stream
(0.134 total acres)

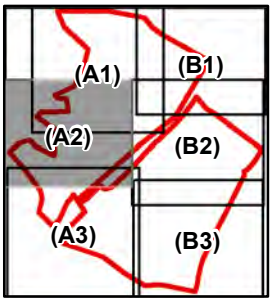
Intermittent Stream
(2.013 total acres)

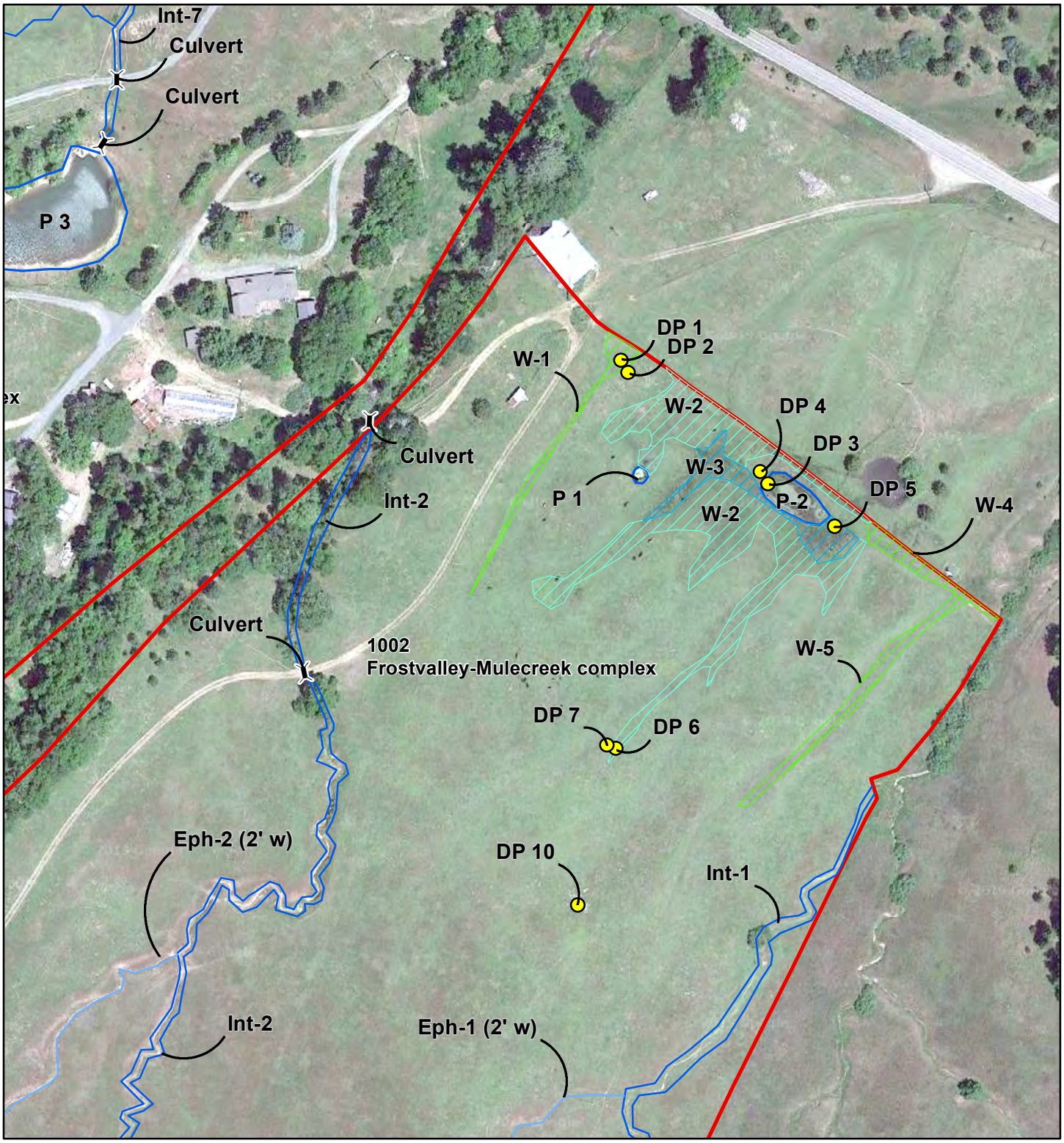
Data Point

Culvert

1 inch = 200 feet

Larabee Valley 7.5' USGS Quadrangle
Portion of Section 23 & 26, T11N, R4E HB&M
Longitude -123.689, Latitude 40.441



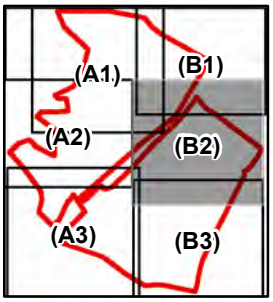


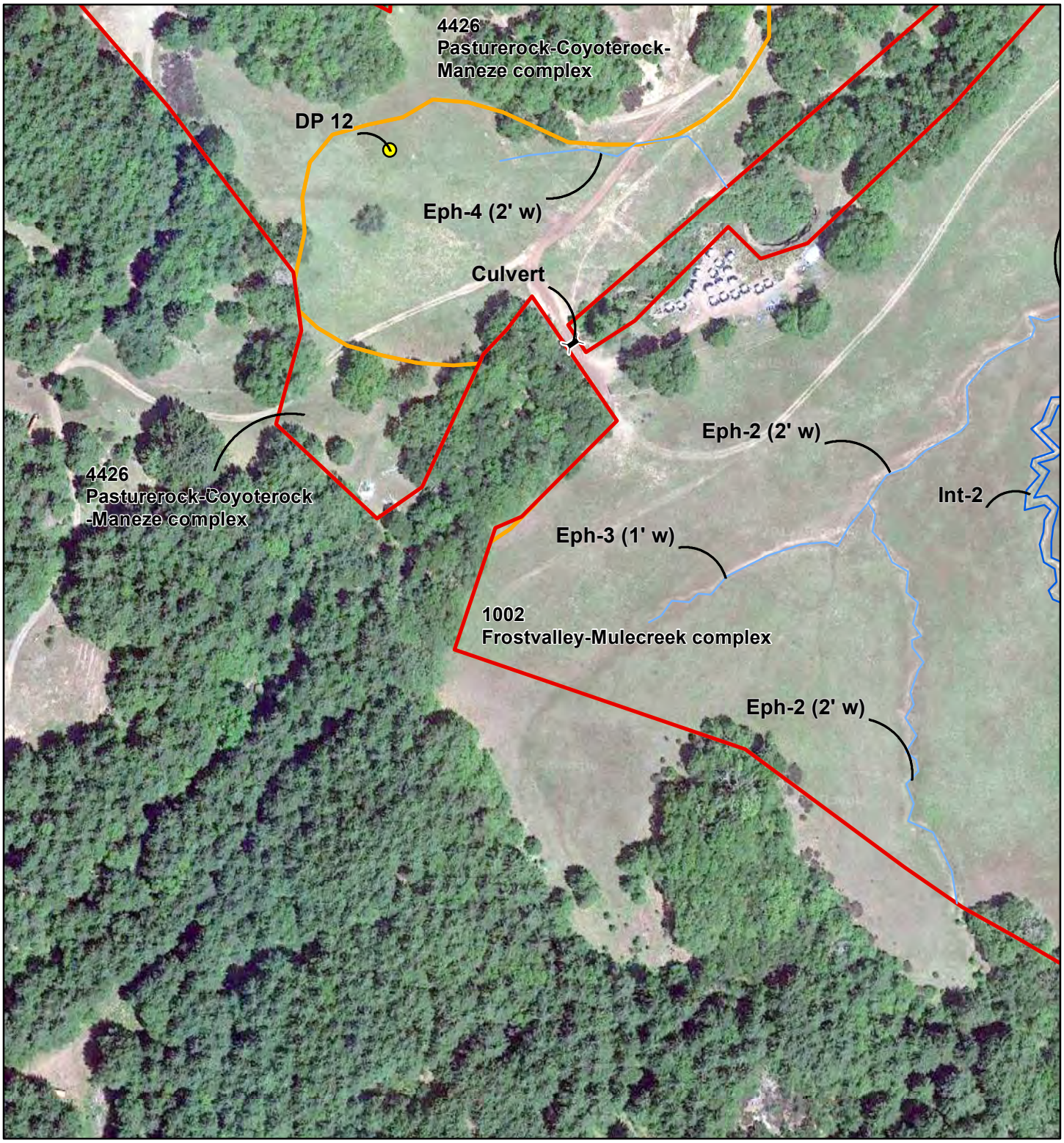
Appendix A. Sordal Aquatic Resources Delineation Drawing (B2)

- Project Area (95.944 total acres)
- Emergent Wetland (0.147 total acres)
- Seasonal Wetland (1.125 total acres)
- Wetland Swale (0.464 total acres)
- Pond (0.845 total acres)
- Soils
- Ephemeral Stream (0.134 total acres)
- Intermittent Stream (2.013 total acres)
- Data Point
- Culvert

1 inch = 200 feet

Larabee Valley 7.5' USGS Quadrangle
Portion of Section 23 & 26, T11N, R4E HB&M
Longitude -123.689, Latitude 40.441





Appendix A. Sordal Aquatic Resources Delineation Drawing (A3)

Project Area
(95.944 total acres)

Soils

Ephemeral Stream
(0.134 total acres)

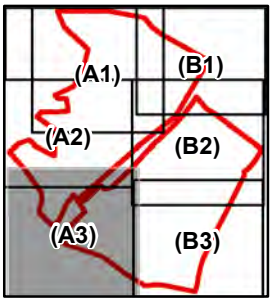
Intermittent Stream
(2.013 total acres)

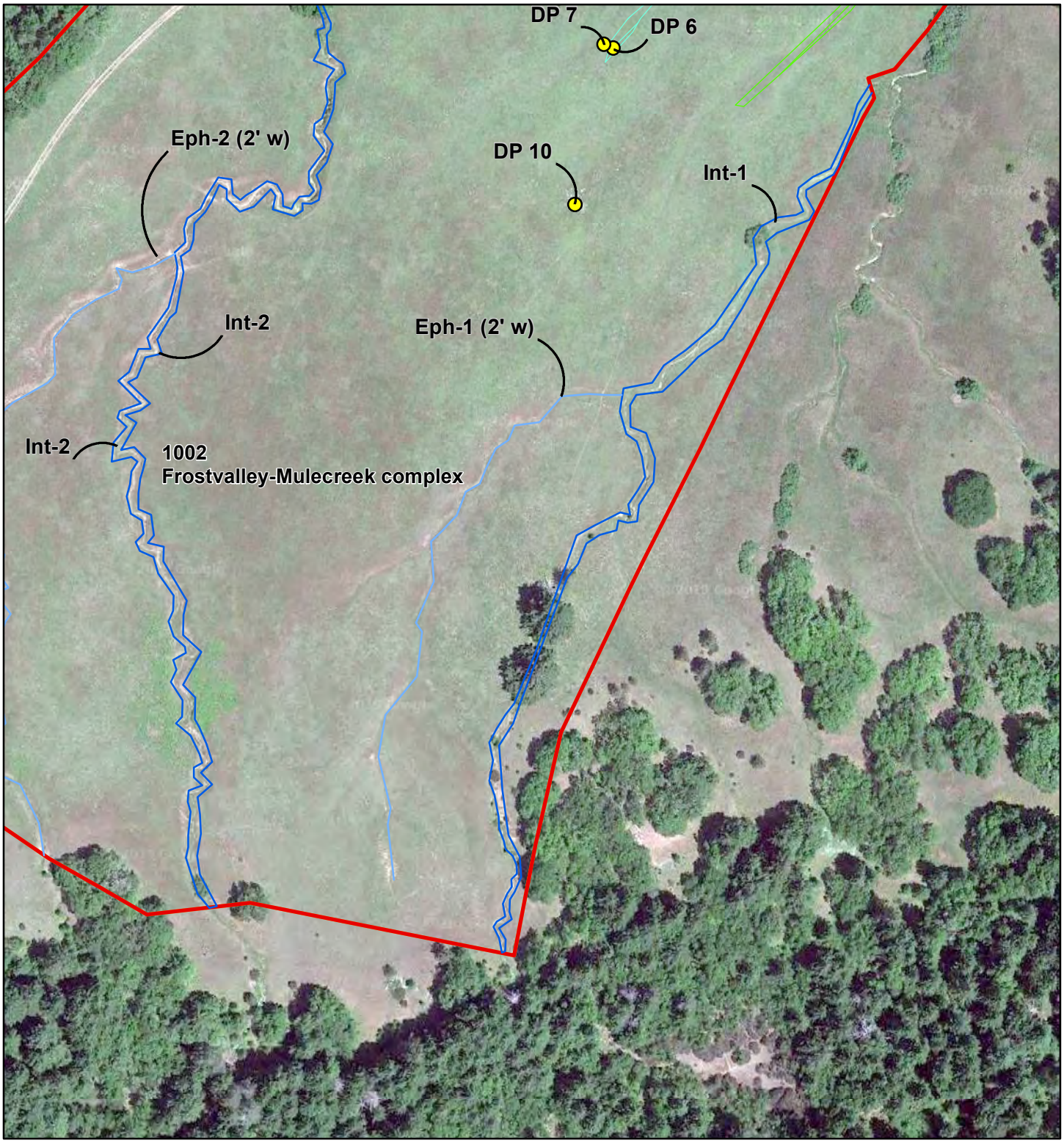
Data Point

Culvert

1 inch = 200 feet

Larabee Valley 7.5' USGS Quadrangle
Portion of Section 23 & 26, T11N, R4E HB&M
Longitude -123.689, Latitude 40.441





Appendix A. Sordal Aquatic Resources Delineation Drawing (B3)

Project Area (95.944 total acres)

Seasonal Wetland (1.125 total acres)

Wetland Swale (0.464 total acres)

Soils

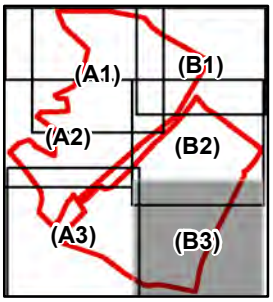
Ephemeral Stream (0.134 total acres)

Intermittent Stream (2.013 total acres)

Data Point

1 inch = 200 feet

Larabee Valley 7.5' USGS Quadrangle
Portion of Section 23 & 26, T11N, R4E HB&M
Longitude -123.689, Latitude 40.441



APPENDIX B – Wetland Delineation Data Sheets

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

Project/Site: Sordal City/County: Hum Sampling Date: 5/1/19
Applicant/Owner: Sordal State: CA Sampling Point: DP-1
Investigator(s): Foster Section, Township, Range: S26, T11N, R4E
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): <1
Subregion (LRR): LRR-A Lat: 40°26'30.44"N Long: 123°41'12.06"W Datum: WGS84
Soil Map Unit Name: 100R NWI classification: PAB3C
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks: DP in W-1

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5²ft.)			
1. Plagiobothrys cognatus	25	Y	FACW
2. Mentha pulegium	25	Y	OBL
3. Juncus patens	15	N	FACW
4. Montia fontana	10	N	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	85 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	85 = Total Cover		

% Bare Ground in Herb Stratum 15

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: ____ (A)
Total Number of Dominant Species Across All Strata: ____ (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
__ 1 - Rapid Test for Hydrophytic Vegetation
__ 2 - Dominance Test is >50%
__ 3 - Prevalence Index is ≤3.0[1]
__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ 5 - Wetland Non-Vascular Plants[1]
__ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

SOIL

Sampling Point: DP 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	7.5YR 3.2	95	7.5 Y/R 6/6	5	RM	PL	Loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ✓ Water Marks (B1)
- ✓ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ✓ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): _____

Wetland Hydrology Present? **Yes** ✓ **No** _____

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

Remarks:

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

Project/Site: Sordal City/County: Hum Sampling Date: 5/1/19 ~~DP-2~~

Applicant/Owner: Sordal State: CA Sampling Point: DP-2

Investigator(s): Foster Section, Township, Range: 26, 11N, 4E

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

Subregion (LRR): LRR A Lat: 40° 26' 30.27" Long: 123° 41' 11.92" Datum: WGS84

Soil Map Unit Name: 1002 NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No ✓	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ____	No ✓	

Remarks: Paired upland point for W-1 (DP-1)

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5² ft.)			
1. Triphysaria pusilla	10	N	UPL
2. Rumex acetosella	15	Y	FACU
3. Hypericum perforatum	10	N	FACU
4. Anthoxanthum odoratum	15	Y	FACU
5. Bromus diandrus	30	Y	UPL
6. Taraxacum officinale	5	N	FACU
7. Lupinus bicolor	10	N	FACU
8.			
9.			
10.			
11.			
	= Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	95 = Total Cover		

% Bare Ground in Herb Stratum 5

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

__ 1 - Rapid Test for Hydrophytic Vegetation

__ 2 - Dominance Test is >50%

__ 3 - Prevalence Index is ≤3.0[1]

__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ 5 - Wetland Non-Vascular Plants[1]

__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:

SOIL

Sampling Point: DP-2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	7.5YR 3/3	100					loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

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

Project/Site: Sordal City/County: Humb Co. Sampling Date: 5/1/19

Applicant/Owner: Sordal State: CA Sampling Point: DP-3

Investigator(s): Foster Section, Township, Range: 26, 11N, 4E

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

Subregion (LRR): LRR A Lat: 40°26'28.72" Long: 123°41'9.34" Datum: WGS84

Soil Map Unit Name: 1002 NWI classification: PAB4Kh

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:

DP for P-2 (fringe)

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5²ft.)			
1. Juncus effusus	20	Y	FACW
2. Callitriche	20	Y	OBL
3. Carex spectubilis	10	N	FACW
4. Potamogeton nodosus	20	Y	OBL
5. Ranunculus aquatilis	10	N	OBL
6. Scirpus microcarpus	10	N	OBL
7.			
8.			
9.			
10.			
11.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	90 = Total Cover		

% Bare Ground in Herb Stratum 10 *

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

* open water

Sampling Point: DP-3

SOIL

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	7.5YR 3/1	90	10YR 6/6	10	RM	M	loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ✓ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✓ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ✓ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ✓ No ___ Depth (inches): > 2 ft.

Water Table Present? Yes ___ No ___ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

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

Project/Site: Sordal City/County: Hum Co. Sampling Date: 5/1/19

Applicant/Owner: Sordal State: CA Sampling Point: DP-4

Investigator(s): Foster Section, Township, Range: 26, 11N, 4E

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

Subregion (LRR): LRR A Lat: 40° 26' 28.90" Long: 123° 41' 9.48" Datum: WGS84

Soil Map Unit Name: 1002 NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No ✓	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ____	No ✓	

Remarks: Upland point/pair for DP3 & DP5

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 5^2 ft.)			
1. Rosa rubiginosa	10	Y	UPL
2. Rubus armeniacus	10	Y	FAC
3.			
4.			
5.			
	20 = Total Cover		
Herb Stratum (Plot size: 5^2 ft.)			
1. Triphysaria pusilla	10	Y	UPL
2. Plantago lanceolata	5	N	FACU
3. Rumex acetosella	15	Y	FACU
4. Hypericum perforatum	10	Y	FACU
5. Bromus diandrus	15	Y	UPL
6. Bellis perennis	5	N	UPL
7.			
8.			
9.			
10.			
11.			
	60 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	80 = Total Cover		

% Bare Ground in Herb Stratum 20

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: ~~2~~ 1 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ~~33~~ 16 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 10	x 3 = 30
FACU species 30	x 4 = 120
UPL species 40	x 5 = 200
Column Totals: 80 (A)	350 (B)

Prevalence Index = B/A = 4.375

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:

SOIL

Sampling Point: DP-4

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	7.5 YR 3/3	100					loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** ✓

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

Remarks:

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

Project/Site: Sordal City/County: Hum Co. Sampling Date: 5/1/19

Applicant/Owner: Sordal State: CA Sampling Point: DP-5

Investigator(s): FOSTER Section, Township, Range: 26, 11N, 4E

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

Subregion (LRR): LRR A Lat: 40° 26' 28.14" Long: 123° 41' 8.11" Datum: WGS84

Soil Map Unit Name: 1002 NWI classification: PEMm

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks: DP for W-3

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5² ft)			
1. Ranunculus aquatilis	33	Y	OBL
2. Callitriche	33	Y	OBL
3. Hypericum anagalloides	33	Y	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	100 = Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

SOIL

Sampling Point: DP-5

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	7.5 3/1	90	10YR 6/5	10	RM	M	Loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ✓ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ✓ No ___ Depth (inches): 4 in

Water Table Present? Yes ___ No ___ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): _____

Wetland Hydrology Present? **Yes** ✓ **No** _____

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

Remarks:

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

Project/Site: Sordal City/County: Hum Co. Sampling Date: 5/1/19

Applicant/Owner: Sordal State: CA Sampling Point: DP-6

Investigator(s): Foster Section, Township, Range: 26, 11N, 4E

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

Subregion (LRR): A Lat: 40°26'25.00" Long: 123°41'12.09" Datum: WGS84

Soil Map Unit Name: 1002 NWI classification: PABSE

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

DP for W-2

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5² ft.)			
1. Montia fontana			FACW
2. Juncus patens			FACW
3. Mentha pulegium			OBL
4. Danthonia californica			FAC
5. Holcus lanatus			FAC
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	100 = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

OIL

Sampling Point: DP-6

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	7.5YR 3/2	95	7.5YR 6/6	5	RM	M	Loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ✓ Water Marks (B1)
- ✓ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ✓ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? **Yes** ✓ **No** _____

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

Remarks:

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

Project/Site: Sordal City/County: Hum Co Sampling Date: 5/1/19

Applicant/Owner: Sordal State: CA Sampling Point: DP-7

Investigator(s): Foster Section, Township, Range: 26, 11N, 4E

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

Subregion (LRR): A Lat: 40° 26' 25.05" Long: 123° 41' 12.26" Datum: WGS84

Soil Map Unit Name: 1002 NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?**	**Yes _____ No ✓**
Hydric Soil Present?	Yes _____	No ✓		
Wetland Hydrology Present?	Yes _____	No ✓		

Remarks: Paired point for DP-6 (W-2)

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1. _____			
2. _____			
3. _____			
4. _____			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
	_____ = Total Cover		
Herb Stratum (Plot size: 5²ft.)			
1. Dantonia californica	5	N	FAC
2. Holcus lanatus	5	N	FAC
3. Bromus diandrus	15	Y	UPL
4. Erodium botrys	15	Y	FACU
5. Leontodon saxatilis	15	Y	FACU
6. Vicia sativa	10	N	UPL
7. Elymus glaucus	15	Y	FACU
8. Dichelostemma capitatum	10	N	FACU
9. _____			
10. _____			
11. _____			
	90% = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1. _____			
2. _____			
	90% = Total Cover		
% Bare Ground in Herb Stratum 10			

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: DP-7

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
7.5YR	3/2	100					loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

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

Project/Site: Sordal City/County: Hum Co. Sampling Date: 5/2/19
Applicant/Owner: Sordal State: CA Sampling Point: DP-8
Investigator(s): Foster Section, Township, Range: 23, 11N, 4E
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): <1
Subregion (LRR): A Lat: 40° 26' 39.19" Long: 123° 41' 26.58" Datum: WGS 84
Soil Map Unit Name: NWI classification: PAB3E
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:
DP for W-6

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5²ft.)			
1. Danthonia californica	20	Y	FAC
2. Holcus lanatus	15	Y	FAC
3. Juncus patens	15	Y	FACW
4. Plagiobothrys cognatus	15	Y	FACW
5. Rumex crispus	10	N	FAC
6. Rumex acetosella	5	N	FACU
7. Trifolium subterraneum	10	N	FAC
8.			
9.			
10.			
11.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	90 = Total Cover		

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: ____ (A)
Total Number of Dominant Species Across All Strata: ____ (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
__ 1 - Rapid Test for Hydrophytic Vegetation
__ 2 - Dominance Test is >50%
__ 3 - Prevalence Index is ≤3.0[1]
__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ 5 - Wetland Non-Vascular Plants[1]
__ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

SOIL

Sampling Point: DP-8

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	7.5YR 3/2	95	10YR 6/6	5	RM	M	loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ✓ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ✓ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

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

Project/Site: Sordal City/County: Humb Co. Sampling Date: 5/2/19

Applicant/Owner: Sordal State: CA Sampling Point: DP-9

Investigator(s): Foster Section, Township, Range: 23, 11N, 4E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Convex Slope (%): 1-2

Subregion (LRR): A Lat: 40° 26' 39.24" Long: 123° 41' 26.45" Datum: WGS84

Soil Map Unit Name: 4421 NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Paired point for W-6 (DP-8)

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5²ft.)			
1. Danthonia californica	5	N	FAC
2. Rumex acetosella	10	N	FACU
3. Chlorogalum pomeridianum	10	N	UPL
4. Bromus diandrus	25	Y	UPL
5. Erodium botrys	20	Y	FACU
6. Leontodon saxatilis	15	Y	FACU
7. Lupinus bicolor	5	N	FACU
8. Taraxacum officinale	5	N	FACU
9.			
10.			
11.			
	~~Total~~ 95 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	~~95~~ = Total Cover		
% Bare Ground in Herb Stratum ~~5~~ 5			

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: DP-9

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	7.5YR 3/2	100					loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

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

Project/Site: Sordal City/County: Hum Co Sampling Date: 5/2/19

Applicant/Owner: Sordal State: CA Sampling Point: DP-10

Investigator(s): FASTER Section, Township, Range: 26, 11N, 4E

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

Subregion (LRR): A Lat: 40 26 22.80 Long: 123 41 12.77 Datum: _____

Soil Map Unit Name: 1002 NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Representative upland point for large pasture

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5² ft.)			
1. Platystemon californicus	25	Y	UPL
2. Erodium botrys	25	Y	FACU
3. Lupinus bicolor	10	N	FACU
4. Eschscholzia californica	10	N	UPL
5. Hypochaeris radicata	5	N	FACU
6. Vicia sativa	5	N	UPL
7. Elymus glaucus	20	Y	FACU
8.			
9.			
10.			
11.			
	95 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	95 = Total Cover		

% Bare Ground in Herb Stratum 5

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: DP-10

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	7.5YR 3/3	100					loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

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

Project/Site: Sordal City/County: Hum Sampling Date: 5/2/19

Applicant/Owner: Sordal State: _____ Sampling Point: DP-11

Investigator(s): Foster Section, Township, Range: 23, 11N, 4E

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

Subregion (LRR): A Lat: 40° 26' 36.82" Long: 123° 41' 25.51" Datum: WGS84

Soil Map Unit Name: 1002 NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Upland rep point in pasture

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5² ft.)			
1. Bromus diandrus	25	Y	UPL
2. Chlorogalum pomeridianum	10	N	UPL
3. Dactylis glomerata	15	N	FACU
4. Erodium botrys	25	Y	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	75 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	75 = Total Cover		

% Bare Ground in Herb Stratum 25

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

OIL

Sampling Point: DP-11

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	7.5YR 3/3	100					loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

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

Project/Site: Sordal City/County: Hum Sampling Date: 6/25/19

Applicant/Owner: Sordal State: CA Sampling Point: DP-12

Investigator(s): Foster Section, Township, Range: 26, 11N, 4E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): concave Slope (%): 1-2

Subregion (LRR): A Lat: 40° 26' 24.12" Long: 123° 41' 32.96" Datum: WGS84

Soil Map Unit Name: 1002 NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Upland rep point

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5² ft.)			
1. Vicia sativa	10	Y	UPL
2. Triphysaria pusilla	5	N	UPL
3. Rumex crispus	10	Y	FAC
4. Rumex acetosella	5	N	FACU
5. Taraxacum officinale	5	N	FACU
6. Bromus diandrus	20	Y	UPL
7. Erodium botrys	10	Y	FACU
8. Leontodon saxatilis	10	Y	FACU
9. Lupinus bicolor	10	Y	FACU
10. Matricaria discoidea	5	N	FACU
11.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	90 = Total Cover		

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 16 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 10	x 3 = 30
FACU species 45	x 4 = 180
UPL species 35	x 5 = 175
Column Totals: 90 (A)	385 (B)

Prevalence Index = B/A = 4.28

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: DP-12

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5YR 3/2	100					loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

APPENDIX C – List of Plants Species Observed

Layer	Scientific Name	Common Name	Family	Native Status	Indicator Status [1]
Trees	Acer macrophyllum	bigleaf maple	Sapindiaceae	Native	FACU
Trees	Alnus rubra	red alder	Betulaceae	Native	FAC
Trees	Arbutus menziesii	Pacific madrone	Ericaceae	Native	UPL
Trees	Notholithocarpus densiflorus	tanoak	Fagaceae	Native	UPL
Trees	Pinus ponderosa	Ponderosa pine	Pinaceae	Native	FACU
Trees	Populus trichocarpa	Black cottonwood	Salicaceae	Native	FAC
Trees	Pseudotsuga menziesii	Douglas fir	Pinaceae	Native	FACU
Trees	Quercus garryana	Oregon white oak	Fagaceae	Native	FACU
Trees	Quercus kelloggii	California black oak	Fagaceae	Native	UPL
Trees	Salix lasiandra	shining Pacific willow	Salicaceae	Native	FACW
Trees	Umbellularia californica	California bay laurel	Lauraceae	Native	FAC
Shrubs	Amelanchier utahensis	Western serviceberry	Rosaceae	Native	UPL
Shrubs	Arctostaphylos manzanita	common manzanita	Ericaceae	Native	UPL
Shrubs	Berberis aquifolium	Oregon grape	Berberidaceae	Native	UPL
Shrubs	Corylus cornuta	California hazel	Betulaceae	Native	FACU
Shrubs	Cytisus scoparius	Scotch broom	Fabaceae	Invasive	UPL
Shrubs	Holodiscus discolor	oceanspray	Rosaceae	Native	FACU
Shrubs	Ribes inerme	White stemmed gooseberry	Grossulariaceae	Native	FAC
Shrubs	Ribes roezlii	Sierra gooseberry	Grossulariaceae	Native	FACU
Shrubs	Ribes sanguineum	Flowering currant	Grossulariacea	Native	FACU
Shrubs	Rosa gymnocarpa	dwarf woodland rose	Rosaceae	Native	FACU
Shrubs	Rosa rubiginosa	sweetbriar	Rosaceae	Non-native	UPL
Shrubs	Rubus armeniacus	Himalayan blackberry	Rosaceae	Invasive	FAC
Shrubs	Rubus leucodermis	whitestem raspberry	Rosaceae	Native	FACU
Shrubs	Rubus parviflorus	Western thimbleberry	Rosaceae	Native	FACU
Shrubs	Salix sitchensis	Sitka willow	Salicaceae	Native	FACW
Shrubs	Sambucus nigra	black elderberry	Adoxaceae	Native	FAC
Shrubs	Symphoricarpos albus	common snowberry	Caprifoliaceae	Native	FACU
Shrubs	Toxicodendron diversilobum	poison oak	Anacardiaceae	Native	FAC
Herbs	Achillea millefolium	common yarrow	Asteraceae	Native	FACU
Herbs	Acmispon americanus	American bird's foot trefoil	Fabaceae	Native	FACU
Herbs	Acmispon brachycarpus	Short podded lotus	Fabaceae	Native	FACU
Herbs	Adenocaulon bicolor	trail plant	Asteraceae	Native	UPL
Herbs	Anisocarpus madioides	woodland madia	Asteraceae	Native	UPL
Herbs	Anthoxanthum odoratum	sweet vernal grass	Poaceae	Invasive	FACU
Herbs	Aquilegia formosa	Western columbine	Ranunculaceae	Native	FAC
Herbs	Bellis perennis	English daisy	Asteraceae	Non-native	UPL
Herbs	Briza minor	little quaking grass	Poaceae	Invasive	FAC
Herbs	Bromus diandrus	ripgut brome	Poaceae	Invasive	UPL
Herbs	Calandrinia menziesii	red maids	Montiaceae	Native	FACU
Herbs	Callitriche sp.	starwort	Plantaginaceae	Native	OBL
Herbs	Calypso bulbosa	fairy slipper	Orchidaceae	Native	FACU
Herbs	Calystegia spp.	morning glory	Convolvulaceae	Native	FAC
Herbs	Cardamine californica	Bitter cress	Brassicaceae	Native	FACW
Herbs	Carduus pycnocephalus	Italian thistle	Asteraceae	Invasive	UPL
Herbs	Carex subfusca	sedge	Cyperaceae	Native	FAC
Herbs	Carex spectabilis	showy sedge	Cyperaceae	Native	FACW
Herbs	Cerastium glomeratum	Large mouse ears	Caryophyllaceae	Non-native	FACU
Herbs	Chlorogalum pomeridianum	purple soaproot	Agavaceae	Native	UPL
Herbs	Circaea alpina	Enchanter's nightshade	Onagraceae	Native	FAC
Herbs	Cirsium vulgare	bull thistle	Asteraceae	Invasive	FACU

Herbs	Claytonia perfoliata	miner's lettuce	Montiaceae	Native	FAC
Herbs	Claytonia rubra	red stemmed spring beauty	Montiaceae	Native	FAC
Herbs	Cynodon dactylon	Bermuda grass	Poaceae	Invasive	FACU
Herbs	Cynoglossum grande	Giant hound's tongue	Boraginaceae	Native	FACU
Herbs	Cynosurus echinatus	hedgehog dogtail grass	Poaceae	Invasive	FACU
Herbs	Dactylis glomerata	orchard grass	Poaceae	Invasive	FACU
Herbs	Danthonia californica	California oatgrass	Poaceae	Native	FAC
Herbs	Daucus pusillus	American carrot	Apiaceae	Native	FACU
Herbs	Delphinium decorum	Larkspur	Ranunculaceae	Native	FACU
Herbs	Dichelostemma capitatum	Blue dicks	Themidaceae	Native	FACU
Herbs	Dipsacus fullonum	teasel	Dipsacaceae	Invasive	FAC
Herbs	Dryopteris arguta	California wood fern	Dryopteridaceae	Native	FACW
Herbs	Elymus glaucus	blue wild rye	Poaceae	Native	FACU
Herbs	Equisetum arvense	Common horsetail	Equisetaceae	Native	FAC
Herbs	Erodium botrys	big heron bill	Geraniaceae	Non-native	FACU
Herbs	Erodium cicutarium	coastal heron's bill	Geraniaceae	Non-native	FACU
Herbs	Erythranthe guttata	yellow monkey flower	Phrymaceae	Native	OBL
Herbs	Erythronium californicum	California fawn lily	Liliaceae	Native	FACU
Herbs	Eschscholzia californica	California poppy	Papaveraceae	Native	UPL
Herbs	Festuca arundinacea	reed fescue	Poaceae	Invasive	UPL
Herbs	Festuca bromoides	brome fescue	Poaceae	Non-native	UPL
Herbs	Fragaria vesca	California strawberry	Rosaceae	Native	FACU
Herbs	Fritillaria affinis	Checker lily	Lilaceae	Native	FAC
Herbs	Galium aparine	common bedstraw	Rubiaceae	Native	FACU
Herbs	Hieracium albiflorum	white hawkweed	Asteraceae	Native	FACU
Herbs	Holcus lanatus	purple velvetgrass	Poaceae	Invasive	FAC
Herbs	Hypericum anagalloides	creeping St. John's wort	Hypericaceae	Native	OBL
Herbs	Hypericum perforatum	Klamathweed	Hypericaceae	Invasive	FACU
Herbs	Hypochaeris radicata	hairy cat's ear	Asteraceae	Invasive	FACU
Herbs	Juncus effusus	common bog rush	Juncaceae	Native	FACW
Herbs	Juncus patens	spreading rush	Juncaceae	Native	FACW
Herbs	Leontodon saxatilis	hawkbit	Asteraceae	Non-native	FACU
Herbs	Lepidium campestre	field peppergrass	Brassicaceae	Non-native	FACU
Herbs	Limnanthes douglasii ssp. nivea	snow white meadowfoam	Limnanthaceae	Native	OBL
Herbs	Linum bienne	pale flax	Linaceae	Non-native	UPL
Herbs	Lithophragma spp.	woodland star	Saxifragaceae		UPL
Herbs	Lomatium utriculatum	Bladder parsnip	Apiaceae	Native	FACU
Herbs	Lupinus bicolor	miniature lupine	Fabaceae	Native	FACU
Herbs	Luzula comosa	common wood rush	Juncaceae	Native	FAC
Herbs	Lysimachia arvensis	Scarlet pimpernel	Myrsinaceae	Non-native	FAC
Herbs	Maianthemum stellatum	Starry false lily of the valley	Ruscaceae	Native	FAC
Herbs	Marah oregana	Coast man-root	Cucurbritacea	Native	UPL
Herbs	Matricaria discoidea	Pineapple weed	Asteraceae	Native	FACU
Herbs	Mentha pulegium	pennyroyal	Lamiaceae	Invasive	OBL
Herbs	Montia fontana	water montia	Montiaceae	Native	FACW
Herbs	Montia linearis	Linear leaved montia	Montiaceae	Native	FAC
Herbs	Montia parvifolia	small leaved miner's lettuce	Montiaceae	Native	FAC
Herbs	Myosotis discolor	yellow and blue forget-me-not	Boraginaceae	Non-native	FAC
Herbs	Nemophila menziesii	Baby blue eyes	Boraginaceae	Native	FAC
Herbs	Nemophila parviflora	small flowered nemophila	Boraginaceae	Native	FAC
Herbs	Osmorhiza berteroi	Sweet cicely	Apiaceae	Native	FACU
Herbs	Oxalis oregana	redwood sorrel	Oxalidaceae	Native	FACU

Herbs	Potentilla gracilis	graceful cinquefoil			FAC
Herbs	Phoradendron leucarpum	American mistletoe	Viscaceae	Native	UPL
Herbs	Plagiobothrys cognatus	Sleeping popcorn flower	Boraginaceae	Native	FACW
Herbs	Plagiobothrys nothofulvus	Rusty haired popcorn flower	Boraginaceae	Native	FAC
Herbs	Plantago lanceolata	English plantain	Plantaginaceae	Invasive	FACU
Herbs	Platystemon californicus	Cream cups	Papaveraceae	Native	UPL
Herbs	Polypodium glycyrrhiza	licorice fern	Polypodiaceae	Native	UPL
Herbs	Polystichum imbricans	rock swordfern	Dryopteridaceae	Native	FACU
Herbs	Polystichum munitum	western swordfern	Dryopteridaceae	Native	FACU
Herbs	Potamogeton nodosus	Long leaved pondweed	Potamogetonaceae	Native	OBL
Herbs	Primula hendersonii	Mosquito bill	Primulaceae	Native	FAC
Herbs	Prunella vulgaris	self-heal	Lamiaceae	Native	FACU
Herbs	Pteridium aquilinum	western bracken fern	Dennstaedtiaceae	Native	FACU
Herbs	Ranunculus aquatilis	aquatic buttercup	Ranunculaceae	Native	OBL
Herbs	Ranunculus hebecarpus	Delicate buttercup	Ranunculaceae	Native	FACW
Herbs	Ranunculus occidentalis	Western buttercup	Ranunculaceae	Native	FACW
Herbs	Ranunculus orthorhynchus	Bloomer's buttercup	Ranunculaceae	Native	FACW
Herbs	Rumex acetosella	sheep sorrel	Polygonaceae	Invasive	FACU
Herbs	Rumex crispus	curly dock	Polygonaceae	Invasive	FAC
Herbs	Sanicula bipinnatifida	Purple sanicle	Apiaceae	Native	FACW
Herbs	Sanicula crassicaulis	Pacific sanicle	Apiaceae	Native	FACW
Herbs	Scirpus microcarpus	small-fruited bulrush	Cyperaceae	Native	OBL
Herbs	Sisyrinchium bellum	Western blue eyed grass	Iridaceae	Native	FACW
Herbs	Sonchus asper	prickly sow thistle	Asteraceae	Non-native	FACU
Herbs	Spergularia rubra	red sandspurry	Caryophyllaceae	Non-native	FAC
Herbs	Stachys rigida	rigid hedgenettle	Lamiaceae	Native	FACW
Herbs	Taraxacum officinale	common dandelion	Asteraceae	Invasive	FACU
Herbs	Tellima grandiflora	fringe cups	Saxifragaceae	Native	FACU
Herbs	Thalictrum fendleri	meadow rue	Ranunculaceae	Native	FAC
Herbs	Torreyochloa pallida var. pauciflora	weak manna grass	Poaceae	Native	OBL
Herbs	Trifolium subterraneum	Subterranean clover	Fabaceae	Non-native	FAC
Herbs	Trillium albidum	Giant white wakerobin	Melanthiaceae	Native	FACU
Herbs	Triphysaria pusilla	little owl's clover	Orobanchaceae	Native	UPL
Herbs	Veronica serpillifolia	thyme-leaved veronica	Plantaginaceae	Native	FAC
Herbs	Vicia sativa	garden vetch	Fabaceae	Non-native	UPL
Herbs	Viola glabella	Pioneer violet	Violaceae	Native	FACW
Herbs	Viola ocellata	two-eyed violet	Violaceae	Native	FAC
Herbs	Viola praemorsa	Astoria violet	Violaceae	Native	FAC
Herbs	Wyethia spp.	compassplant			FACU

[1] OBL – Obligate Wetland; FACW – Facultative Wetland; FAC- Facultative; FACU – Facultative Upland; UPL – Upland

APPENDIX D – Representative Site Photos

Photo 1. Wetland complex of W-2 and W-3 complex.

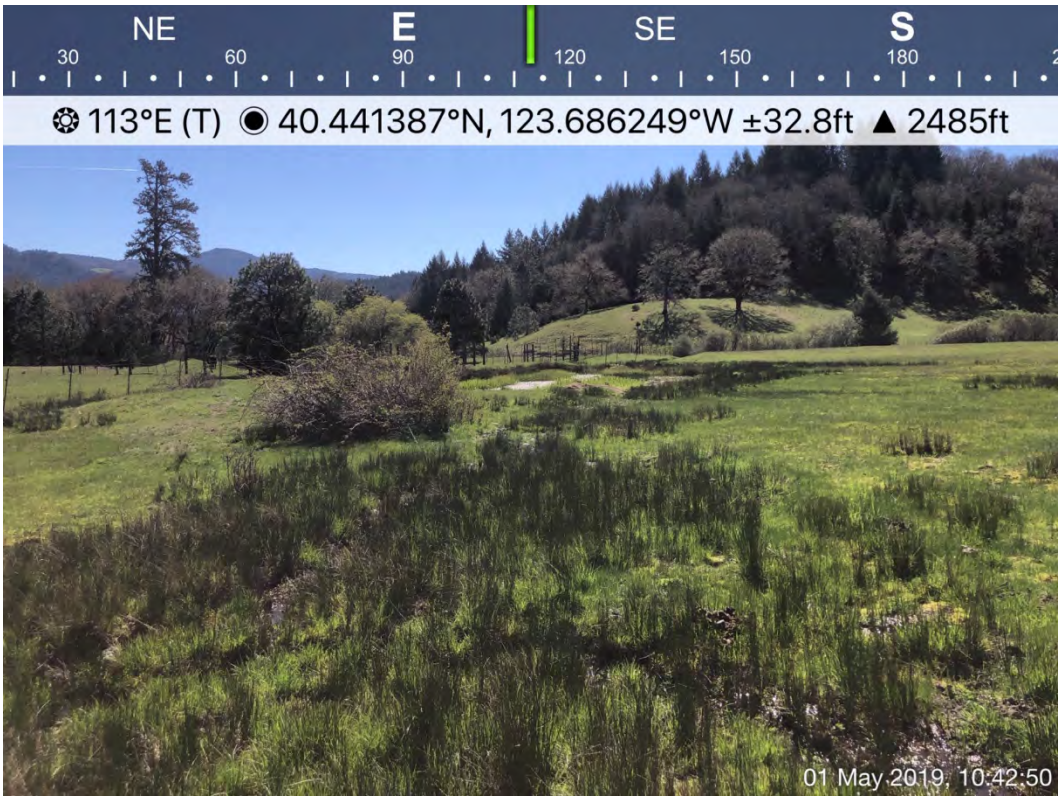


Photo 2. Pond (P-2) with associated emergent wetland (W-3)

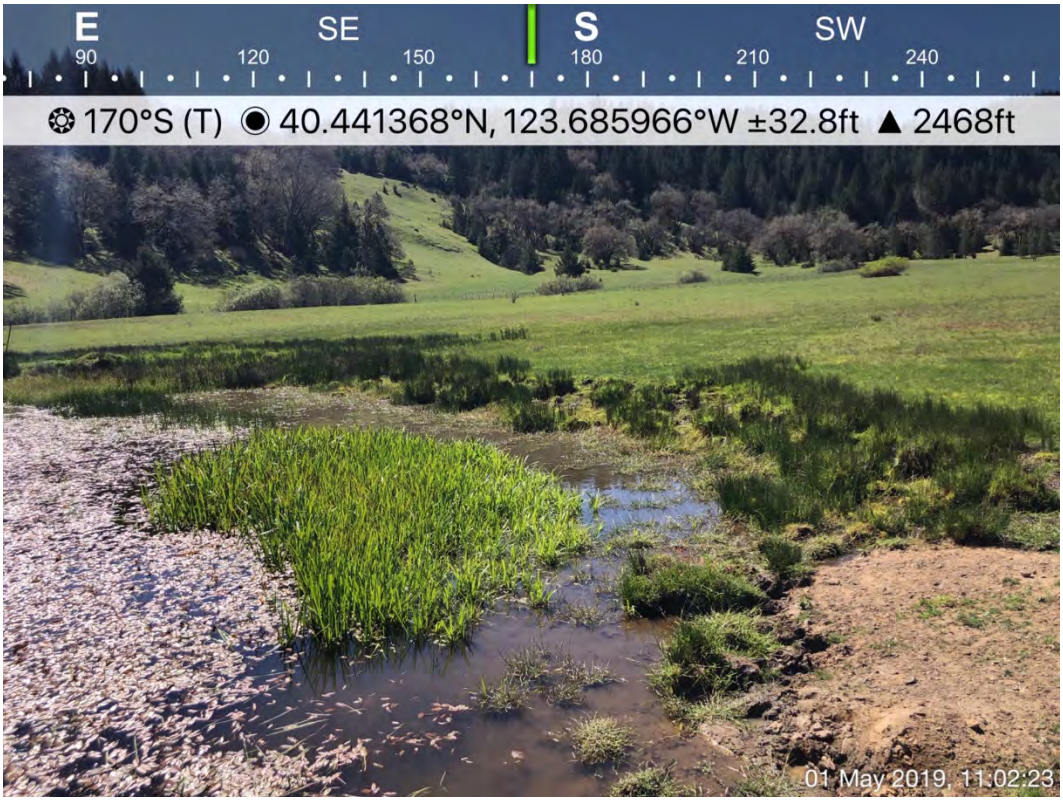


Photo 3. Wetland swale (W-4).

Photo 4. Wetland swale (W-5).

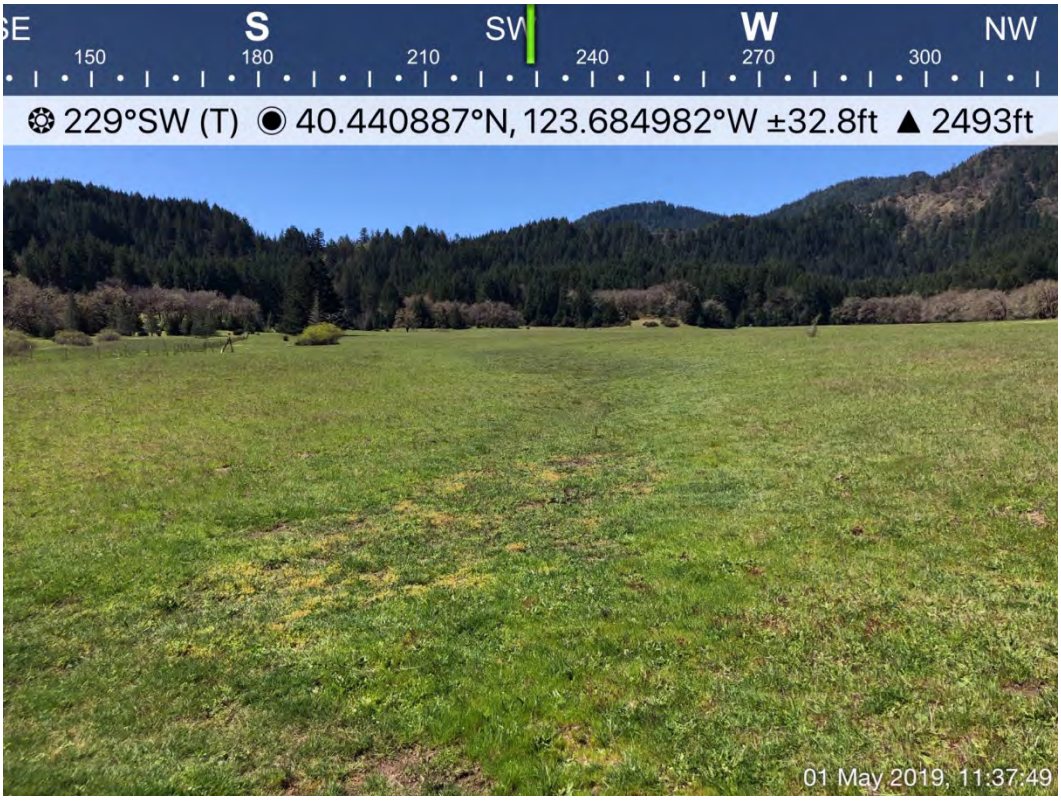


Photo 5. Upland datapoint (DP-2).

Photo 6. Intermittent Stream (Int-1).

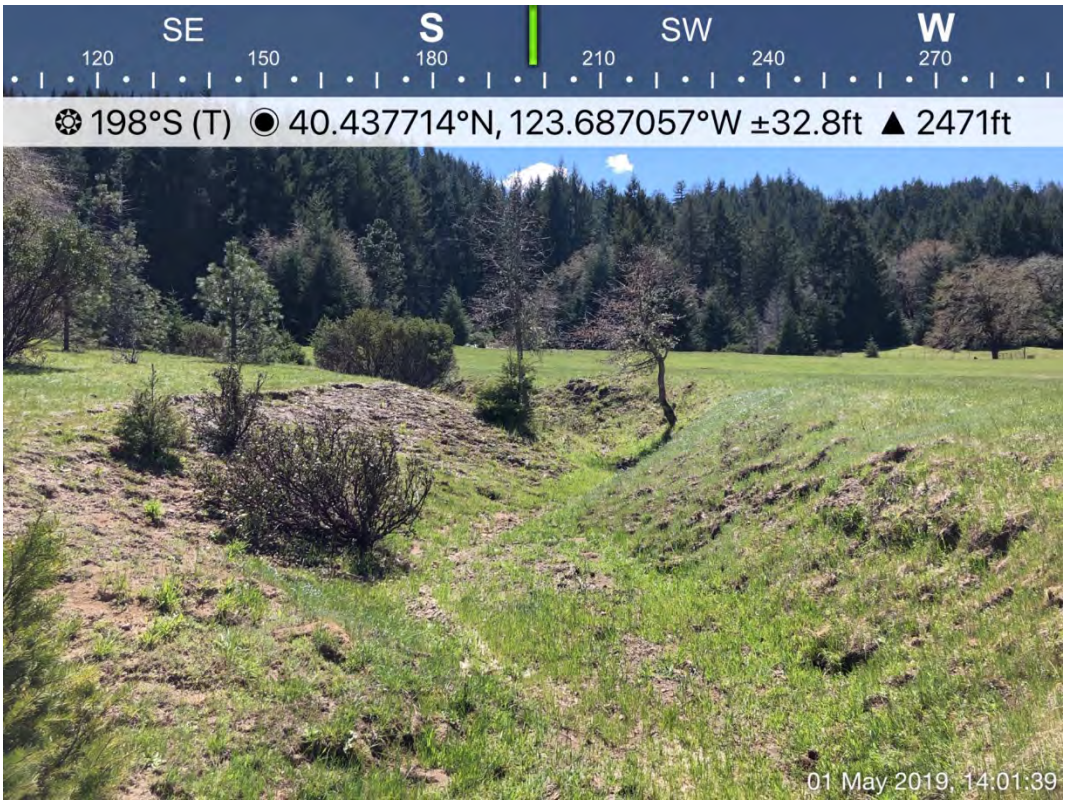


Photo 7. Intermittent Stream (Int-2).

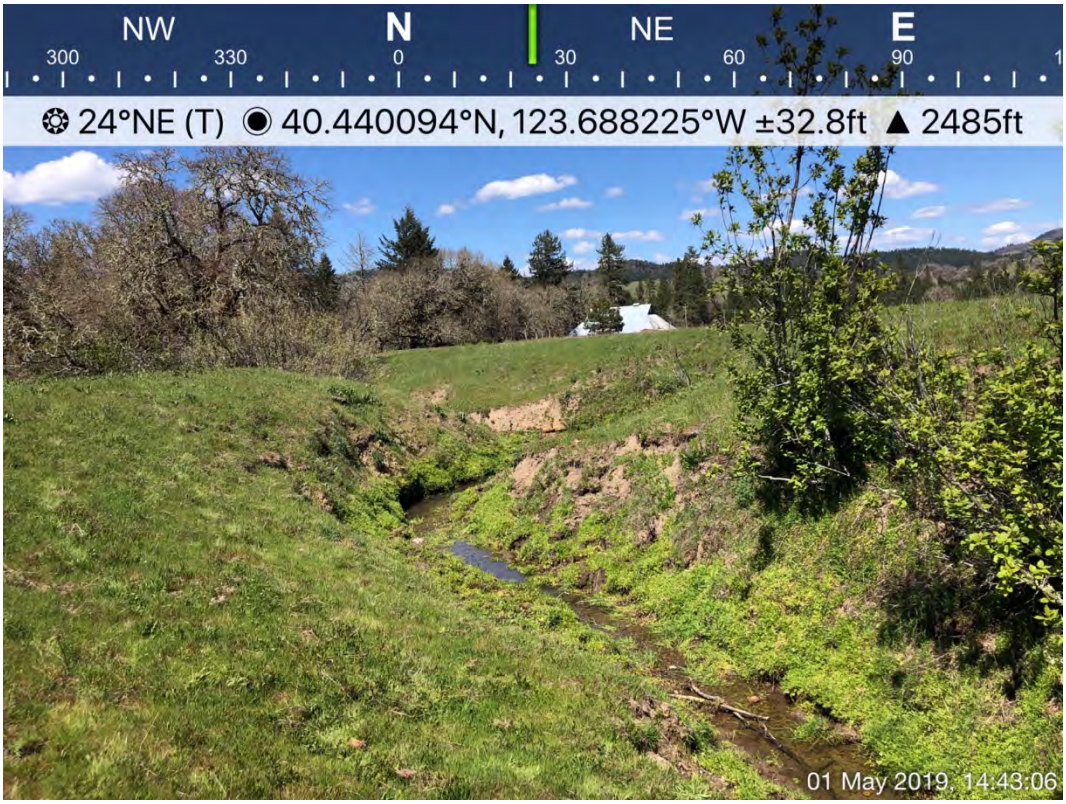


Photo 8. Pond (P-3)

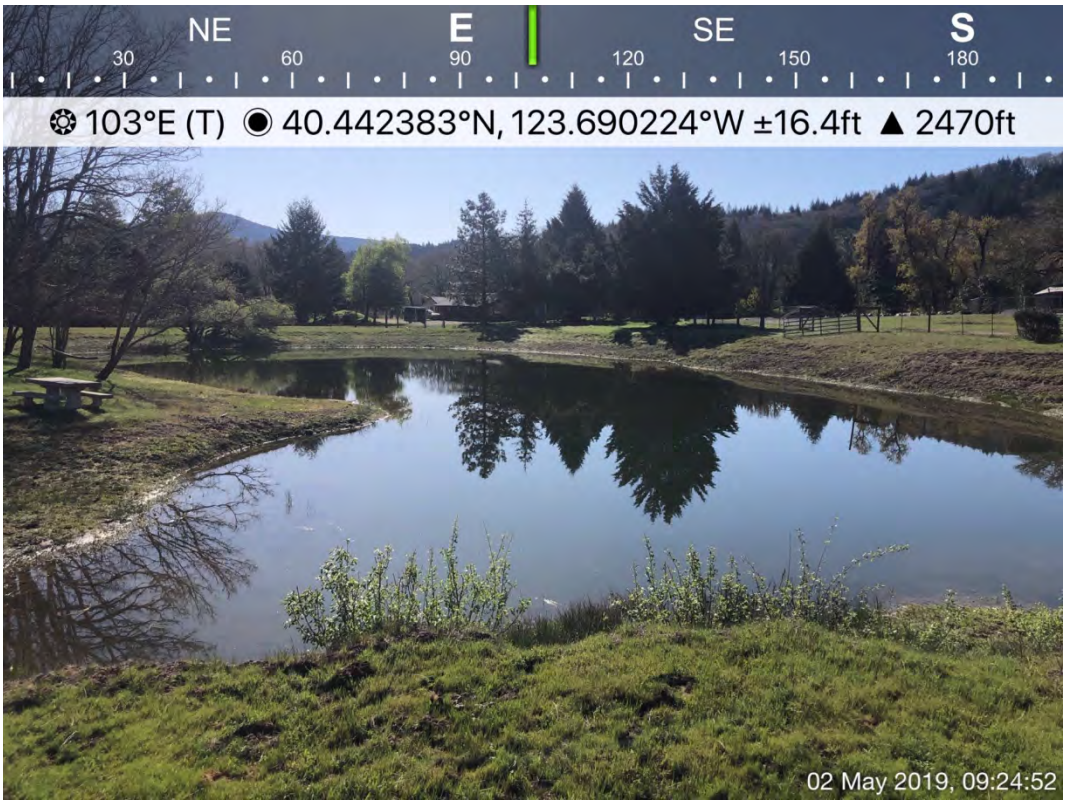


Photo 9. Intermittent Stream (Int-5)

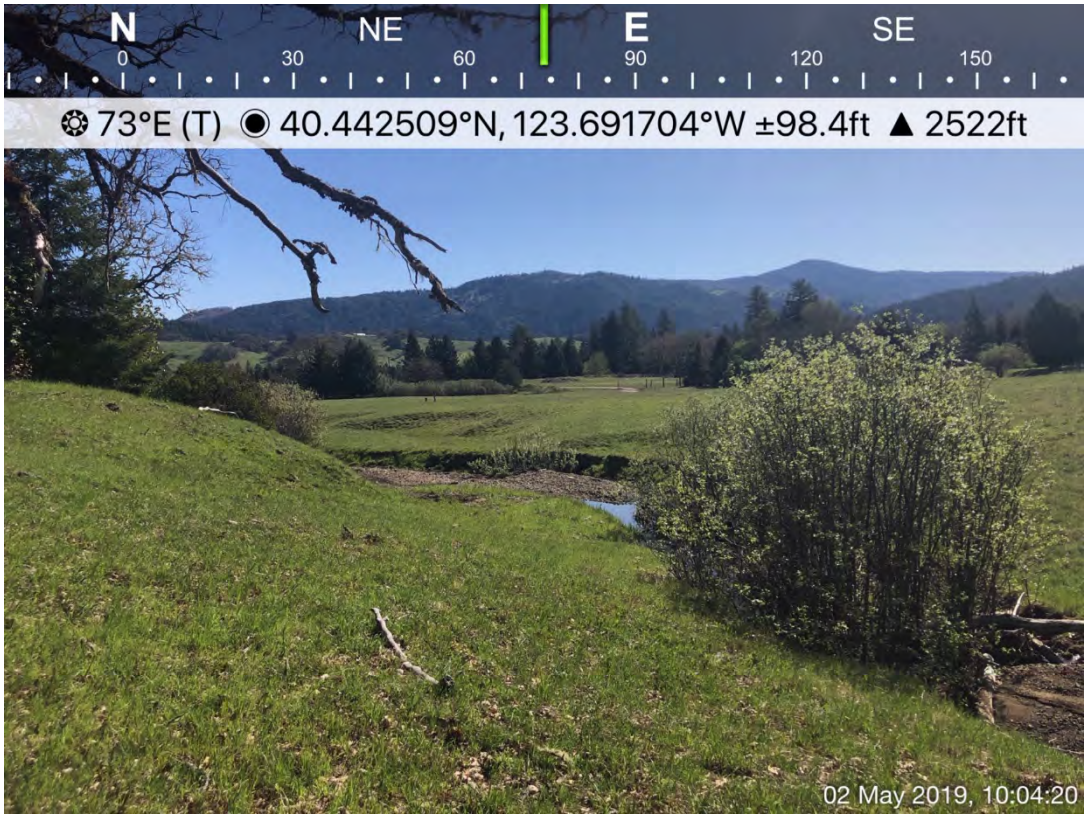


Photo 10. Intermittent stream (Int-5)

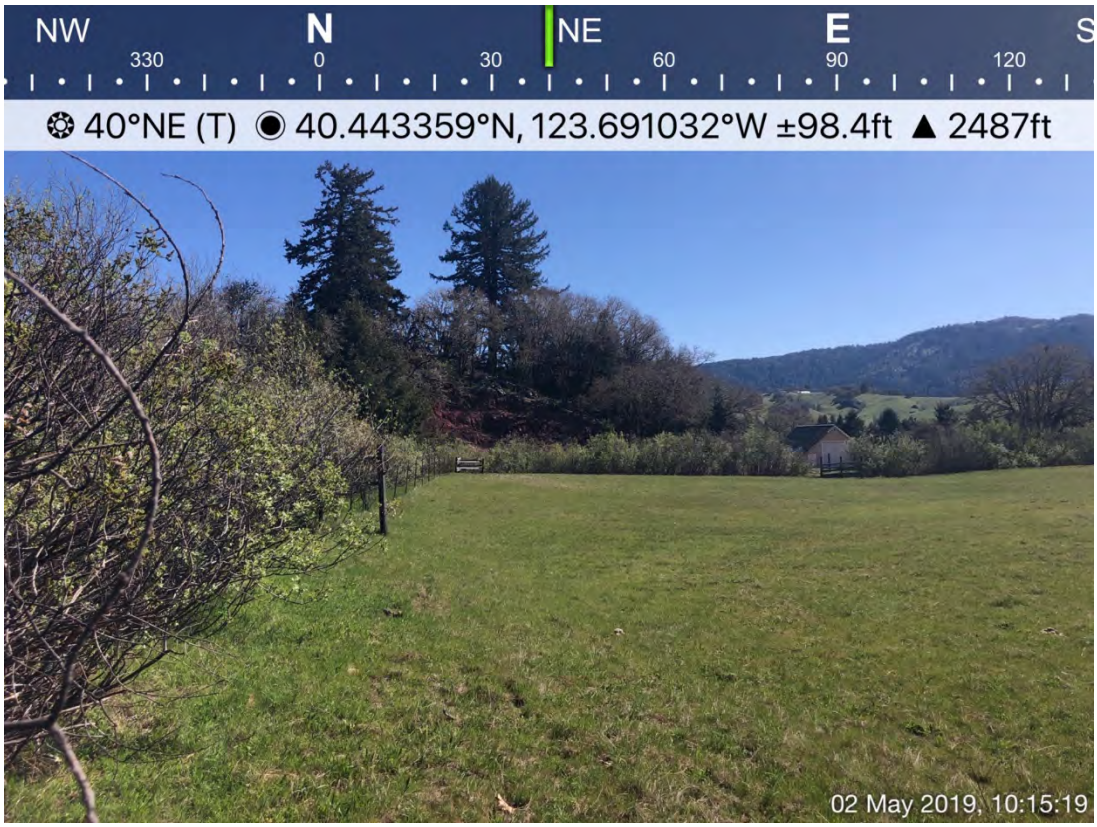


Photo 11. Intermittent Stream (Int-7)

Photo 12. Seasonal wetland (W-6)