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Fountain Wind Energy Project

Aquatic Resources Survey Report

December 23, 2019

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Acronyms and Abbreviations

ac	Acre
ºF	degrees Fahrenheit
ft	foot/feet
OHWM	ordinary high water mark
Project	Fountain Wind Project
Stantec	Stantec Consulting Services Inc.
USACE	United States Army Corps of Engineers

Executive Summary

On behalf of Fountain Wind LLC (Fountain Wind), Stantec Consulting Services Inc. (Stantec) conducted a delineation of potential waters of the United States including wetlands occurring in the 6,118.06-acre (ac) Fountain Wind Project survey area near the community of Montgomery Creek in Shasta County, California. The survey area includes the 4,000 ac project area plus appropriate buffers and also includes areas previously proposed for development under and earlier project iteration. The delineation was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual*[1] and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region*[2]. A total of 51.900 acres (ac) of potential waters of the United States were mapped within the survey area and include fresh emergent wetland (0.967 ac, 156 linear feet [ft]), riparian wetland (26.808 ac), seasonal wetland (0.120 ac), vegetated ditch (0.174 ac, 2,432 linear ft), wetland meadow (8.714 ac), wetland seep/spring (1.809 ac), ephemeral stream (0.559 ac, 10,224.323 linear ft), intermittent stream (2.861 ac, 24,900 linear ft), non-vegetated ditch (0.239 ac, 4,975 linear ft), perennial stream (9.468 ac, 30,495.398 linear ft), and pond (0.181 ac).

This delineation documents and describes aquatic features and wetlands occurring within the project survey area that may be waters of the United States. The report provides sufficient information that may be used to support a Preliminary Jurisdictional Determination from the United States Army Corps of Engineers (USACE), which would be subject to verification by USACE, Sacramento District. Stantec advises all parties to treat the information contained herein as preliminary until USACE provides written verification of the boundaries of its jurisdiction.

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[1] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi. Technical Report Y-87-1.
[2] United States Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0).

1.0 INTRODUCTION

Fountain Wind LLC, is proposing to construct and operate the Fountain Wind Project (project), an industrial-scale renewable energy generation facility to be located in Shasta County, California (Figure 1). The project would consist of up to 72 wind turbines and associated facilities, including wind measurement towers, an electrical collection system, access roads, construction staging areas, an operations and maintenance facility, and a transmission interconnection and associated point of interconnection. The project would have a nameplate capacity of up to 216 megawatts.

Wind turbines would be installed on land owned and managed by Shasta Cascade Timberlands, LLC. Proposed turbine locations are situated east of Round Mountain, in Shasta County, California (Figure 1).

Stantec conducted a delineation of aquatic resources to support project permitting. This Aquatic Resources Survey Report summarizes the methods and results of Stantec's survey of potentially jurisdictional waters.

The survey area encompasses a total of 6,118.06 acres (ac) within a project area encompassing approximately 29,500 acres (Figure 1). It includes a 700-foot (ft) radius centered on proposed turbine locations, a 200- to 400-ft corridor centered on project roads, a 300-ft corridor centered on the electrical collection line, a 200-ft buffer around proposed project facilities, and a 100-ft buffer around proposed construction staging areas.

The delineation comprised three surveys efforts: the first in 2017, the second in 2018, and the third in 2019. The initial survey effort was conducted between October and December 2017 and was focused on tower locations, access roads, construction staging areas, and an operations and maintenance facility for a prior project iteration. The second survey effort was conducted in August 2018 and was focused on the electrical collection line, a transmission interconnection and associated point of interconnection, additional staging areas, and expanded buffers around some areas surveyed during 2017. The third survey effort conducted in October 2019 was focused on several modifications to the project site plan and expanded buffers around various project components. The 2017, 2018, and 2019 surveys provide a comprehensive survey of the project site, including the most current site plan and associated survey buffers (Figure 1-3).

2.0 ENVIRONMENTAL SETTING

The survey area is within coniferous forest habitat near the southern end of the Cascade Range, between two volcanoes: Lassen Peak and Mount Shasta. The area's climate is characterized as Mediterranean with moderate winters and hot, dry summers. Based on data collected from the National Oceanic and Atmospheric Administration Western Regional Climate Center Applied Climate Information System Buckhorn station, precipitation occurs as rain and snow within the survey area. The average annual precipitation is approximately 68 inches with an average annual snowfall of 70 inches (Western Regional Climate Center 2019). Air temperatures range between an average January high of 58 degrees Fahrenheit (ºF), and an average July high of 99ºF. The annual average high is

approximately 101ºF (Western Regional Climate Center 2019). The growing season (i.e., 50% probability of air temperature 28ºF or higher) in the study area is approximately 120 days and occurs between May and September.

The project would be built on privately owned and managed lands in rural, unincorporated Shasta County, 3 miles east of Montgomery Creek, 7 miles west of Burney, and 28 miles northeast of Redding. The survey area is accessible from Highway 299 west of Hatchet Peak and is in the quadrangles, townships, ranges, and sections shown in Table 1. The project would be located to the west and south of the existing Hatchet Ridge Wind Farm, along several ridgelines and peaks.

Table 1. Survey Area Locations

Quadrangle(s)	Township	Range	Section(s)
Hatchet Mountain Pass Miller Mountain	33 North	1 East	3
Hatchet Mountain Pass Montgomery Creek	34 North	1 East	1–4, 8, 10–17, 20–28, 33–36
Hatchet Mountain Pass	34 North	2 East	5–8, 18
Chalk Mountain Hatchet Mountain Pass Roaring Creek	35 North	1 East	8–10, 13–15, 21–28, 33–36
Hatchet Mountain Pass	35 North	2 East	29–32

The survey area consists primarily of managed timberlands. Approximately half the survey area is within the boundary of the area burned in the 1992 Fountain Fire. The portion of the survey area that is within the fire boundary is predominantly ponderosa pine (*Pinus ponderosa*) forest, while the remaining survey area is predominantly mixed conifer forest. There are grassland, hardwood, and chaparral inclusions scattered throughout the survey area. In addition to timber production, a few areas are managed for cattle grazing.

2.1 TOPOGRAPHY AND HYDROLOGY

The survey area is in the Sacramento River Basin (Central Valley Region), which covers 17.42 million ac and includes the entire Sacramento River watershed. The Sacramento River Basin is divided into 24 hydrologic units and is further divided into hydrologic areas and hydrologic subareas. The survey area is located within two hydrological units: Whitmore and Pit River (Table 2). Each of the hydrologic units within the survey area ultimately flow west to the Sacramento River. The survey area crosses numerous unnamed drainages and wetlands as well as several named drainages, including Richardson Creek, Little Hatchet Creek, Hatchet Creek, Carberry Creek, Goat Creek, North Fork Montgomery Creek, Indian Spring, South Fork Montgomery Creek, Cedar Creek, North Fork Little Cow Creek, Little Cow Creek, and Mill Creek. Hydrology for these features is provided by sheet flow, snow melt, seeps, springs, and groundwater. Several of the streams provide hydrology that supports adjacent riparian wetlands.

Table 2. Hydrologic Units, Areas, and Subareas within the Survey Area

Hydrological Units	Hydrological Areas	Hydrological Subareas
526.00 Pit River	526.10 Lower Pit River	26.13 Montgomery Creek 26.14 Hatchet Creek
507.00 Whitmore	507.30 Cow Creek	07.33 Little Cow Creek

Source: Water Quality Control Plan for the Central Valley Region (RWQCB 2018)

Topography within the survey area varies widely from gently sloping mountain meadows to steep hillsides and drainages. The survey area occurs between 3,550 and 6,300 ft in elevation. Named topographical features occurring in the survey area include Carberry Flat, Carberry Mountain, Fauries Peak, Fuller Flat, Fuller Mountain, Lookout Mountain, and Sanders Ridge.

2.2 VEGETATION COMMUNITIES

Stantec biologists classified vegetation communities within the survey area during the aquatic resources survey. Vegetation communities are based on descriptions provided in *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer 1988) and are as follows:

Barren. Barren occurs as dirt and paved roads and their associated road shoulders. Vegetation is usually not present, although sparse cover of grasses and forbs or weedy species occasionally occurs on road shoulders or infrequently used roads.

Fresh Emergent Wetland. Fresh emergent wetland occurs in a seasonally inundated pond and within a few low gradient streams in the survey area. Plant species observed in fresh emergent wetlands include common tule (*Schoenoplectus acutus*), Rocky Mountain pond-lily (*Nuphar polysepala*), reed canary grass (*Phalaris arundinacea*), smartweed (*Persicaria* sp.), small fruited bulrush (*Scirpus microcarpus*), and American brooklime (*Veronica americana*).

Lodgepole Pine. Lodgepole pine occurs at higher elevations within the survey area. The lodgepole pine vegetation community is bordered by and interspersed among the wet meadow vegetation community at the headwaters of the North Fork of Montgomery Creek. Lodgepole pine (*Pinus contorta*) is the dominant overstory species, while understory species include cascara (*Frangula purshiana*), western blueberry (*Vaccinium uliginosum*), Douglas spiraea (*Spiraea douglasii*), California oat grass (*Danthonia californica*), tufted hair grass (*Deschampsia cespitosa*), and Bigelow's sneezeweed (*Helenium bigelovii*).

Montane Hardwood. Montane hardwood occurs on a hillside west of Carberry Flat. The dominant overstory species is California black oak (*Quercus kelloggii*). The understory consists of a moderate canopy of deer brush (*Ceanothus integerrimus*) and snowberry (*Symphoricarpos albus*), with a sparse herbaceous layer of Pacific starflower (*Lysimachia latifolia*).

Montane Chaparral. Montane chaparral occurs at a few locations throughout the survey area, including at the highest elevations in the southeastern portion of the survey area. It is composed of a dense shrub layer and borders woodlands or forest. Shrub species present include of Brewer's oak (*Quercus garryana*), green leaf manzanita (*Arctostaphylos patula*), dear brush, and other manzanita (*Arctostaphylos* spp.) and ceanothus (*Ceanothus* spp.) species. The herbaceous layer is poorly developed.

Montane Riparian. The montane riparian community occurs adjacent to streams and ponds and around some seep springs in the survey area. Many of the riparian areas are dominated by shrubs, including arroyo willow (*Salix lasiolepis*), Pacific willow (*Salix lasiandra*), Scouler's willow (*Salix scouleriana*), vine maple (*Acer circinatum*), and mountain alder (*Alnus incana*). Some of the larger streams also support tree species, including white alder (*Alnus rhombifolia*), Oregon ash (*Fraxinus latifolia*), and big-leaf maple (*Acer macrophyllum*). Other shrubs include American

dogwood (*Cornus sericea*), wild rose (*Rosa* sp.), and Himalayan blackberry (*Rubus armeniacus*). Herbaceous species include sedges (*Carex* sp.), western lady fern (*Athyrium filix-femina*), cow parsnip (*Heracleum maximum*), horsetail (*Equisetum* spp.), hedge nettle (*Stachys ajugoides*), creeping wild ginger (*Asarum caudatum*), stream violet (*Viola glabella*), western columbine (*Aquilegia formosa*), California tiger lily (*Lilium pardalinum*), and ridged manna grass (*Glyceria striata*).

Perennial Grassland. Perennial grasslands occur around Carberry Flat. The herbaceous layer is dominant and includes meadow foxtail (*Alopecurus pratensis*), Kentucky blue grass (*Poa pratensis*), blue wild-rye (*Elymus glaucus*), common velvet grass (*Holcus lanatus*), gumweed (*Grindelia* sp.), sticky cinquefoil (*Drymocallis glandulosa*), and common yarrow (*Achillea millefolium*).

Ponderosa Pine. Ponderosa pine occurs in the northern portion of the survey area in plantations established after the Fountain Fire in 1992. These stands are dense, with ponderosa pine dominating the overstory canopy. However, there is some natural regeneration of white fir (*Abies concolor*), Douglas fir (*Pseudotsuga menziesii*), incense cedar (*Calocedrus decurrens*), and California black oak. The understory layer varies from dense shrubs including manzanita (*Arctostaphylos* spp.), ceanothus (*Ceanothus* spp.), mountain dogwood (*Cornus nuttallii*), bush chinquapin (*Chrysolepis sempervirens*), Oregon boxwood (*Paxistima myrsinites*), thimbleberry (*Rubus parviflorus*), and bitter cherry (*Prunus emarginata*) to sparse grasses and forbs including blue wild-rye, Pacific starflower, fireweed (*Chamerion angustifolium*), and bracken fern (*Pteridium aquilinum*).

Riverine. Riverine vegetation occurs in the larger streams and is dominated by run and riffle areas with boulder, cobble, gravel, and sand substrates. Vegetation within the active river channel is sparse with occasional clumps of sedges.

Sierran Mixed Conifer. Sierran mixed conifer occurs throughout the unburned southern portion of the survey area. Dominant conifers include ponderosa pine, Douglas-fir, white fir, incense-cedar, and sugar pine (*Pinus lambertiana*). A few deciduous trees occur irregularly among the conifers, including California black oak and big-leaf maple. The understory varies greatly from dense stands with little understory to more open stands supporting many of the same understory species listed under the ponderosa pine vegetation community

Wet Meadow. Wet meadows occur in gently sloping areas adjacent to lodgepole pine and perennial grassland vegetation communities. They also occur as openings on seepy hillsides surrounded by Sierran mixed conifer or ponderosa pine forest, interspersed with montane riparian vegetation. Herbaceous vegetation dominates wetland meadows, including big-leaf sedge (*Carex amplifolia*), rushes (*Juncus* spp.), spearmint (*Mentha spicata*), tundra aster (*Oreostemma alpigenum*), western mountain aster (*Symphyotrichum spathulatum*), white-flowered bog-orchid (*Platanthera dilatata*), giant checkerbloom (*Sidalcea gigantea*), narrow leaved lotus (*Hosackia oblongifolia*), three petaled bedstraw (*Galium trifidum*), pull-up muhly (*Muhlenbergia filiformis*), seep monkey flower (*Mimulus guttatus*), tufted hair grass, and cultivated timothy (*Phleum pratense*).

2.3 SOIL

Shasta County spans five geologic provinces: the Klamath Range, Coast Range, Great Valley, Cascade Range, and Modoc Plateau. The survey area is in the Cascade Range Province within the Cohasset-Windy-McCarthy soil association. This soil association is composed of gently sloping to steep soils underlain by volcanic rock (Soil Conservation Service and Forest Service 1974). The U.S. Department of Agriculture Natural Resources Conservation

Service has mapped 27 soil map units within the survey area (NRCS 2019) (Table 3, Figure 2). Two of the soil map units are rated as hydric, while the remaining 25 are not hydric and do not have any hydric components.

Table 3. Soil Map Units Within the Survey Area

Map Unit Symbol	Map Unit Name	Hydric Rating Status
Cohasset-McCarthy complex, 0 to 30 percent slopes	CrD	N
Cohasset-McCarthy complex, 30 to 50 percent slopes	CrE	N
Cohasset-McCarthy complex, 50 to 70 percent slopes	CrG	N
Cohasset loam, 0 to 30 percent slopes	ClD	N
Cohasset stony loam, 0 to 30 percent slopes	CmD	N
Cohasset stony loam, 10 to 50 percent slopes	CmE	N
Cohasset very stony loam, moderately deep, 8 to 50 percent slopes	CoE	N
Colluvial land	CsF	N
Gardens-Jacksback complex, 0 to 2 percent slopes	169, 169im	Y
Gasper-Scarface complex, moist, 2 to 15 percent slopes	172, 172im	N
Gasper-Scarface complex, moist, 15 to 30 percent slopes	173, 173im	N
Gasper-Scarface complex, moist, 30 to 50 percent slopes	174, 174im	N
Goulder gravelly sandy loam, 15 to 30 percent slopes	179, 179im	N
Jacksback loam, 2 to 9 percent slopes	190, 190im	Y
Lyonsville-Jiggs complex, deep, 10 to 50 percent slopes	LhE	N
Lyonsville-Jiggs soils, 50 to 70 percent slopes	LkF	N
Nanny gravelly sandy loam, 0 to 8 percent slopes	NaB	N
Nanny stony sandy loam, 0 to 8 percent slopes	NbB	N
Obie-Mounthat complex, 5 to 15 percent slopes	266, 266im	N
Obie-Mounthat complex, 30 to 50 percent slopes	268, 268im	N
Rubbleland	RyF	N
Stukel complex, 15 to 30 percent slopes	316	N
Toomes very rocky loam, 0 to 50 percent slopes	TcE	N
Windy and McCarthy stony sandy loams, 0 to 30 percent slopes	WeD	N
Windy and McCarthy very rocky sandy loams, 8 to 50 percent slopes	WgE	N
Windy and McCarthy very stony sandy loams, 30 to 50 percent slopes	WfE	N
Windy and McCarthy very stony sandy loams, 50 to 75 percent slopes	WfG	N

Source: Natural Resources Conservation Service. 2019. USDA Web Soil Survey. Available: http://websoilsurvey.nrcs.usda.gov. Accessed October 2019.

3.0 METHODS

The delineation reflects three phases of work: desktop review, field assessment, and classification. Each is described below.

3.1 DESKTOP REVIEW

Prior to conducting fieldwork, Stantec biologists reviewed the following resources:

- U.S. Fish and Wildlife Service National Wetland Inventory (USFWS 2019);
- Google Earth aerial imagery dating back to 1984;
- U.S. Geological Survey 7.5-minute topographic maps (USGS 1990a,b,c; 1995a,b); and
- U.S. Geological Survey National Hydrography Dataset (USGS 2019)

These resources were used to identify potential aquatic features based on changes in vegetation, topographic changes, or visible drainage patterns. Prior to field surveys, potential features were digitized into a working field map that was then used as a reference during field surveys.

3.2 AQUATIC RESOURCES FIELD ASSESSMENT

The aquatic resources field survey was conducted between October 10, 2017, and August 30, 2018, by the following Stantec biologists:

- John Holson
- Allison Loveless
- Andrew Sorci
- Gabe Youngblood

The 2019 field survey was conducted between October 14 and 18, 2019, by the following Stantec biologists:

- John Holson
- Sheryl Creer
- Cristian Singer
- Brendan Cohen
- Sara Cortez

The qualifications of these biologists are provided in Appendix E.

3.2.1 Wetlands

Stantec biologists delineated potential wetlands and classified them into different types based on function, hydrological source/regime, topography, plant species composition, and origin (i.e., natural vs. man-made). Stantec conducted an on-site routine delineation of wetlands of the United States based on field observations of positive indicators for wetland vegetation, hydrology, and soils. The routine delineation includes establishing sample points and investigating three parameters at each point to determine and document the wetland-upland boundary. This methodology is consistent with the approach outlined in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation*

Manual: Western Mountains Valleys and Coast (USACE 2010). At least one set of data points was selected to best represent the wetland feature type and the adjacent uplands. Data points were also placed in suspect areas to confirm wetland or upland status.

Wetland boundaries were determined by following a combination of the limits of hydrophytic vegetation, limits of observed wetland hydrology, topographic breaks, and aerial ortho-photo interpretation. Sample pits and wetland boundaries were mapped using a sub-meter-accurate Bad Elf™ Global Positioning Service Unit paired with Collector for ArcGIS™. All spatial data was collected in the World Geodetic System (WGS84) datum. Representative photographs were also taken of sample points and features (Appendix D). All potential wetland areas were evaluated to identify their connection to onsite and offsite hydrologic resources, and all potentially jurisdictional wetland areas were mapped if they met all three USACE-required parameters.

Plant taxonomy follows the Jepson Flora Project (2019). Wetland indicator status for plant species was confirmed with *The National Wetland Plant List* (Lichvar et al. 2016). Soil pits were excavated in representative wetland features to a depth sufficient to document the presence or confirm the absence of hydric soil or wetland hydrology indicators. Positive indicators of hydric soils were observed in the field following the criteria outlined in *Field Indicators of Hydric Soils in the United States* (Vasilas et al. 2017). Soil hue and chroma were determined using a Munsell® soil color chart. The hydric status of each soil map unit occurring in the survey area was reviewed using the Web Soil Survey (NRCS 2019). Stantec biologists used the Cowardin et al. (1979) system, as amended by subsequent updates (Federal Geographic Data Committee 2013) to assign all features a Cowardin type.

3.2.2 Other Waters

Stantec biologists delineated non-wetland features and classified them into different types based on function, hydrological source/regime, and origin (i.e., natural vs. man-made). These features were designated “other waters” of the United States and were delineated based on indicators of an ordinary high water mark (OHWM) and bed and banks. The OHWM was determined using the approach outlined in *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States* (USACE 2014). Other waters are jurisdictional either (1) by rule or (2) because they have a significant nexus to a traditional navigable water (TNW), interstate water, territorial sea, or impoundment of a water of the U.S. Waters jurisdictional by rule are defined as (1) a TNW, interstate water, territorial sea, or impoundment of a water of the U.S. or (2) a tributary to or adjacent to a interstate water, territorial sea, or impoundment of a water of the U.S. (33 CFR 328.4). Delineation and potential jurisdiction of other waters was based guidance in USACE regulations (33 CFR 328.3 and 33 CFR 328.4). Physical characteristics of an OHWM include, but are not limited to, the following conditions: a natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, presence of litter and debris, leaf litter disturbed or washed away, scour, deposition, presence of bed and bank, and water staining. Either a data point was selected to best represent the OHWM of other waters or attributes were averaged along the length of the feature within the survey area.

A custom data dictionary in Collector was used to ensure consistent data collection in the field, and all spatial data was collected in the WGS84 datum. The following attributes were collected or measured for each mapped drainage: average OHWM width and depth, average top-of-bank width and depth, hydrologic regime, OHWM indicators, substrate below OHWM, substrate above OHWM and depth of water (if present). Representative photographs of features were also taken (Appendix D). In some instances, culverts or drainages were obscured by thick brush or inaccessible due to steep terrain. In these cases, full-color aerial imagery and/or topographic maps were used to

assist mapping the jurisdictional features. All potentially jurisdictional drainages with primary or secondary indicators of OHWM and bed and bank were mapped and assumed to have either connectivity in some capacity (subsurface, adjacent, etc.) or a significant nexus with traditionally navigable waters as defined by the Clean Water Rule. Stantec biologists used the Cowardin et al. (1979) system, as amended by subsequent updates (Federal Geographic Data Committee 2013) to assign all features a Cowardin type.

3.2.3 Data Points and Delineation Map

Seventy-eight 3-parameter data points were used to characterize and document each wetland and the adjacent upland or other water feature type. The boundaries of delineated features and the associated data points were mapped using a Trimble Mapping Grade Global Positioning System (GPS) capable of sub-foot accuracy. Where the use of the GPS was not practicable, or satellites were not available, the features were delineated utilizing ortho-rectified color aerial photographs. The GPS and hand-drawn location data were overlaid onto an aerial photograph of the survey area to develop the delineation map.

4.0 RESULTS

Stantec biologists mapped 38.592 ac of wetlands and 13.311 ac (70,595.54 linear ft) of other waters (Appendix A). A summary of the delineated features is presented in Table 4, routine wetland determination data forms are presented in Appendix B, a plant list is provided in Appendix C, and representative photographs of the delineated features and data point locations are presented in Appendix D.

Table 4. Summary of Potentially Jurisdictional Aquatic Resources within the Survey Area

Feature Type	Acres	Linear Feet	Cowardin Code[1]
Wetlands			
Fresh Emergent Wetland	0.967	156[2]	PEM
Riparian Wetland	26.808	N/A	PSS, PFO
Seasonal Wetland	0.120	N/A	PEM
Vegetated Ditch	0.174	2,432	PEM
Wetland Meadow	8.714	N/A	PEM, PSS, PFO
Wetland Seep/Spring	1.809	N/A	PEM, PSS
Subtotal – Wetlands	**38.592**	**2,588**	
Other Waters			
Ephemeral Stream	0.559	10,224	R4SB
Intermittent Stream	2.861	24,900	R4SB
Non-vegetated Ditch	0.239	4,975	R4
Perennial Stream	9.468	30,495	R3UB
Pond	0.181	N/A	PUB
Subtotal – Other waters	**13.311**	**70,595**	
Total Jurisdictional Area	**51.900**	**73,183**	

[1] PEM = palustrine emergent, PSS = palustrine scrub-shrub, PFO = palustrine forested, R4SB = riverine intermittent streambed, R4 = Riverine intermittent, R3UB = riverine upper perennial unconsolidated bottom, PUB = palustrine unconsolidated bottom. Codes based on Cowardin et al. 1979.

[2] Linear distance for stream segments mapped as fresh emergent wetlands.

4.1 WETLANDS

Stantec biologists mapped 206 wetlands and classified them into 1 of 6 wetland types: fresh emergent wetland, riparian wetland, seasonal wetland, vegetated ditch, wetland meadow, and wetland seep/spring. In total, Stantec biologists examined and mapped 5 fresh emergent wetlands, 134 riparian wetlands, 5 seasonal wetlands, 12 vegetated ditches, 17 wetland meadows and 33 wetland seep/springs within the survey area. They also categorized mapped wetlands into 1 of 3 Cowardin classifications: palustrine emergent, palustrine forested, and palustrine scrub-shrub habitats (Figure 3).

4.1.1 Vegetation

Fresh Emergent Wetland

Fresh emergent wetlands occur infrequently throughout the survey area. They are associated with ponded depressions and low gradient vegetated portions of perennial stream channels. Vegetation found in fresh emergent wetlands includes American brooklime (OBL[3]), marsh purslane (*Ludwigia palustris*, OBL), common tule (OBL), Rocky Mountain pond-lily (OBL), and ridged manna grass (OBL).

Riparian Wetland

Riparian wetlands are the most common wetland type in the survey area. They are most often associated with intermittent or perennial drainages. Riparian wetlands in the survey area consist of tree- or shrub-dominated features. Dominant species within the survey area include white alder (FACW), Oregon ash (FACW), mountain alder (FACW), American dogwood (FACW), and Pacific willow (FACW). An herbaceous understory is often present and includes ridged manna grass (OBL), reed canary grass (FACW), hedge nettle (OBL), western lady fern (FAC), horsetail (*Equisetum* spp., FAC-OBL), stream violet (FACW), California tiger lily (FACW), and cow parsnip (FAC).

Seasonal Wetland

Seasonal wetlands occur infrequently in the survey area in a variety of landscape positions from shallow depressions to hillslopes. Seasonal wetlands are typically dominated by herbaceous vegetation that dies back during the dry season. Species present in seasonal wetlands include annual hair grass (*Deschampsia danthonioides*, FACW), Baltic rush (*Juncus balticus*, FACW), needle spikerush (*Eleocharis acicularis*, OBL), white brodiaea (*Triteleia hyacinthine*, FAC), and needleleaf navarretia (*Navarretia intertexta*, FACW).

[3] FAC = facultative. FACU = facultative upland, FACW = facultative wetland, OBL = obligate, UPL = upland. Status based on Lichvar, R. W., D. L. Banks, W. N. Kirchner, and N. C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X.

Vegetated Ditch

Vegetated ditches are man-made ditches that support a hydrologic regime sufficient to support hydrophytic vegetation. Vegetated ditches in the survey area typically convey water from perennial streams to areas outside the survey area for agricultural use. Herbaceous vegetation dominates these features including small fruited bulrush (OBL), western mountain aster (FAC), and big-leaf sedge (OBL).

Wetland Meadow

The wetland meadow classification is used for low gradient features in the survey area. Wetland meadows are dominated by herbaceous vegetation, including lamp rush (*Juncus effusus*, FACW), spearmint (FACW), big-leaf sedge (OBL), southern beaked sedge (*Carex utriculata*, OBL), white-flowered bog-orchid (FACW), Bigelow's sneezeweed (FACW), tufted hair grass (FACW), western mountain aster (FAC), long-stalked clover (FAC), and California oat grass (FAC). Wetland meadows at the headwaters of the North Fork of Montgomery Creek also support trees and shrubs, including lodgepole pine (FAC), Douglas spiraea (FACW), cascara (FAC), and western blueberry (FACW).

Wetland Seep/Spring

Wetland seep/springs occur as large, seepy hillsides or smaller seeps associated with road cuts. Herbaceous vegetation dominates these features, although hillside seeps often have shrubs or trees scattered throughout the wetland. Species observed in seep spring wetlands include white alder, mountain alder, Pacific yew (*Taxus brevifolia*, FAC), vine maple (FAC), Pacific willow (FACW), arroyo willow (FACW), pull-up muhly (FACW), giant checkerbloom (UPL), California tiger lily (FACW), narrow-leaved lotus (OBL), western mountain aster (FAC), seep monkey flower (OBL), Tinker's penny (*Hypericum anagalloides*, OBL), grayswamp whiteheads (*Sphenosciadium capitellatum*, FACW), and feathery false lily of the valley (*Maianthemum racemosum,* FAC).

4.1.2 Soils

Stantec biologists examined soils at wetland and upland data points. Several hydric soil indicators were observed in soil samples, including Histosol (A1), Histic Epipedon (A2), Hydrogen Sulfide (A4), Sandy Mucky Mineral (S1), Sandy Redox (S5), Loamy Mucky Mineral (F1), Loamy Gleyed Matrix (F2), Depleted Matrix (F3), Redox Dark Surface (F6), and Depleted Dark Surface (F7). Stantec documented problematic hydric soils in riparian wetlands, a seasonal wetland, a wetland meadow, and a vegetated ditch. Problematic soils in riparian wetlands were associated with vegetated gravel bars where indicators of hydric soils are often absent due to deposition of new soil material, low iron and manganese levels, and lack of organic content. The only seasonal wetland with problematic hydric soils occurred on a hillslope with shallow soils over bedrock. Soils in the vegetated ditch were inundated at the time of the survey and the feature was dominated by obligate hydrophytic vegetation. The vegetated ditch in question appears to be inundated perennially based on historical imagery. The wetland meadow with problematic hydric soils was inundated at the time of the survey and exhibited a positive reaction to alpha-alpha-Dipyridyl, indicating a presence of ferrous (Fe^{++}) iron. In addition, Stantec observed and documented dominant hydrophytic vegetation and indicators of wetland hydrology at four locations where problematic hydric soils were observed in wetland determinations.

4.1.3 Hydrology

Stantec biologists evaluated wetland hydrology at all established data points. Several primary indicators of wetland hydrology were observed within wetlands, including surface water (A1), high water table (A2), saturation (A3), water marks (B1), sediment deposits (B2), drift deposits (B3), algal mat or crust (B4), inundation visible on aerial imagery (B7), water stained leaves (B9), hydrogen sulfide odor (C1), oxidized rhizospheres (C3), and saturation visible on aerial imagery (C9). Stantec biologists also observed secondary indicators of wetland hydrology including drainage patterns (B10), geomorphic position (D2), and FAC-neutral test (D5).

4.2 OTHER WATERS

Stantec biologists mapped a total of 284 features designated “other waters” and classified them into 1 of 5 other waters types: ephemeral stream, intermittent stream, non-vegetated ditch, perennial stream, and pond. In total, Stantec biologists examined and mapped 41 ephemeral streams, 110 intermittent streams, 21 non-vegetated ditches, 109 perennial stream segments, and 3 ponds within the survey area. They also categorized other waters into one of four Cowardin classifications: riverine intermittent streambed, riverine intermittent, riverine upper perennial unconsolidated bottom, and palustrine unconsolidated bottom habitats (Figure 3).

4.2.1 Ephemeral Stream

Ephemeral streams exhibit indicators of scour and deposition, minor drift lines, and sediment deposits, but lack indication of a ground water component. Hydrology is provided by sheet flow during precipitation events. The poorly defined hydrology indicators, proximity to the headwaters, and small sizes of the ephemeral streams indicate short duration flow and lack of a groundwater component. Stantec biologists mapped 41 ephemeral stream segments within the survey area, which range from 1 to 6 ft wide. The streambed is devoid of vegetation and exhibit dominant substrates of soil, rock, and gravel. Drift deposits were the most commonly observed OHWM indicator in ephemeral streams.

4.2.2 Intermittent Stream

Intermittent streams flow seasonally but are fed by a groundwater component in addition to precipitation and sheet flow from adjacent slopes. Stantec biologists mapped 110 intermittent stream segments within the survey area. They are characterized as bed and bank features that exhibit indicators of scour, deposition, watermarks, and drift lines. Intermittent streams range from 1 to 20 ft wide and some support adjacent riparian wetlands. Rock, gravel, and soil are the dominant stream substrates. A few of the intermittent stream segments are named streams, including Richardson Creek and the upper reaches of Little Hatchet Creek.

4.2.3 Perennial Stream

Perennial streams are characterized by year-round surface water. Stantec biologists mapped 109 perennial stream segments within the survey area. They are characterized as features with bed and bank that exhibit indicators of scour, deposition, watermarks, and drift lines. Stream widths vary between 2 and 90 ft, and several of the perennial streams support adjacent riparian wetlands. Cobble, gravel, and sand are the dominant substrates in perennial streams. Several of the perennial stream segments are named streams, including Hatchet Creek, the lower reaches

of Little Hatchet Creek, Carberry Creek, Goat Creek, the North and South Forks of Montgomery Creek, North Fork of Cedar Creek, the North Fork of Little Cow Creek, Little Cow Creek, and Mill Creek.

4.2.4 Non-Vegetated Ditch

Non-vegetated ditches are man-made ditches that do not support hydrophytic vegetation, have OHWM and bed and bank, and are connected to a wetland or other water. There were two types of non-vegetated ditches in the survey area: roadside ditches that convey runoff from adjacent roads to wetlands or other waters, and irrigation ditches that convey water from streams or vegetated ditches. Stantec biologists mapped 21 non-vegetated ditch segments within the survey area, which range from 1 to 8 ft wide. Soil, rock, and gravel are the dominant substrates in non-vegetated ditches.

4.2.5 Pond

Ponds in the survey area are constructed features either with a seasonally high water table or created by pooling water adjacent to natural springs. Stantec biologists mapped three ponds in the survey area. They occur adjacent to fresh emergent wetlands or wetland seep/springs but lack the vegetation component required to qualify as wetlands. Ponds were either fully inundated at the time of the survey or the ordinary high water mark was delineated based on drift deposits and inundation visible on historical imagery.

4.3 NEGATIVE OBSERVATIONS

There were some areas where existing data (i.e., National Wetland Inventory and National Hydrography Dataset) indicated features were present (e.g., headwaters of streams), but no evidence of overland flow or indicators of wetlands were observed during the field examination. No features were mapped at these locations and because there was no physical evidence of any wetland or other waters feature, no data was taken at these locations.

5.0 CONCLUSION

Potential waters of the United States, including wetlands, delineated within the survey area occupy a total of 51.900 ac in the survey area and include fresh emergent wetland (0.967 ac, 156 linear ft), riparian wetland (26.808 ac), seasonal wetland (0.120 ac), vegetated ditch (0.174 ac, 2,432 ft), wetland meadow (8.714 ac), wetland seep/spring (1.809 ac), ephemeral stream (0.559 ac, 10,224 linear ft), intermittent stream (2.784 ac, 24,900 linear ft), non-vegetated ditch (0.239 ac, 4,975 linear ft), perennial stream (9.468 ac, 30,495 linear ft), and pond (0.181 ac).

Determinations of waters of the United States, including wetlands, are based on current conditions, (i.e., normal circumstances) and made in accordance with June 2015t U.S. Environmental Protection Agency and USACE guidance (33 CFR 328). Determinations may be subject to verification by the USACE. Stantec advises all interested parties to treat the information contained herein as preliminary as written verification of jurisdictional boundaries by USACE may be required.

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FIGURES

Figure 1. General Overview Map

Figure 2. Soils Map

Figure 3. Aquatic Resources Survey Results Map

APPENDICES

Appendix A AQUATIC RESOURCE SURVEY RESULTS

Table A-1. Aquatic Resources

Aquatic Resource Name	Type	Aquatic Resource Classification			Acres	Linear Feet
		Cowardin	Location			
			Latitude	Longitude		
Wetlands						
FEW1	fresh emergent	PEM	40.890447	-121.834332	0.017	--
FEW2	fresh emergent	PEM	40.853232	-121.780988	0.007	56
FEW3	fresh emergent	PEM	40.841437	-121.861347	0.882	--
FEW4	fresh emergent	PEM	40.840474	-121.821305	0.042	55
FEW5	fresh emergent	PEM	40.840517	-121.821061	0.019	45
RW1	riparian wetland	PSS	40.891495	-121.835363	0.780	--
RW2	riparian wetland	PSS	40.891599	-121.835343	0.494	--
RW3	riparian wetland	PSS	40.890837	-121.834593	0.166	--
RW4	riparian wetland	PSS	40.890337	-121.834052	0.025	--
RW5	riparian wetland	PSS	40.889439	-121.833081	1.268	--
RW6	riparian wetland	PSS	40.888925	-121.832221	0.447	--
RW7	riparian wetland	PSS	40.887418	-121.830094	0.258	--
RW8	riparian wetland	PSS	40.886252	-121.828624	0.246	--
RW9	riparian wetland	PSS	40.884149	-121.826098	0.268	--
RW10	riparian wetland	PSS	40.883870	-121.825625	0.239	--
RW11	riparian wetland	PFO	40.873218	-121.858120	0.114	--
RW12	riparian wetland	PFO	40.873100	-121.857852	0.060	--
RW13	riparian wetland	PFO	40.873292	-121.857597	0.703	--
RW14	riparian wetland	PFO	40.873670	-121.836937	0.050	--
RW15	riparian wetland	PFO	40.873635	-121.836923	0.051	--
RW16	riparian wetland	PSS	40.880939	-121.821330	0.291	--
RW17	riparian wetland	PSS	40.881021	-121.821352	0.131	--
RW18	riparian wetland	PSS	40.878541	-121.818671	0.481	--
RW19	riparian wetland	PSS	40.877669	-121.818184	0.549	--
RW20	riparian wetland	PSS	40.877059	-121.818055	0.114	--
RW21	riparian wetland	PSS	40.876417	-121.817259	0.057	--
RW22	riparian wetland	PSS	40.875833	-121.816962	0.099	--
RW23	riparian wetland	PSS	40.875776	-121.816837	0.082	--
RW24	riparian wetland	PSS	40.873509	-121.815448	0.290	--
RW25	riparian wetland	PSS	40.873640	-121.815454	0.136	--
RW26	riparian wetland	PSS	40.872656	-121.813937	0.067	--
RW27	riparian wetland	PSS	40.872654	-121.813875	0.090	--
RW28	riparian wetland	PFO	40.860975	-121.837816	0.500	--

Aquatic Resource Name	Type	Aquatic Resource Classification			Acres	Linear Feet
		Cowardin	Location			
			Latitude	Longitude		
RW29	riparian wetland	PFO	40.860524	-121.837613	1.235	--
RW30	riparian wetland	PSS	40.871419	-121.814428	0.191	--
RW31	riparian wetland	PSS	40.871190	-121.814446	0.225	--
RW32	riparian wetland	PSS	40.868878	-121.814728	0.126	--
RW33	riparian wetland	PSS	40.868779	-121.814774	0.115	--
RW34	riparian wetland	PSS	40.865209	-121.818110	0.010	--
RW35	riparian wetland	PSS	40.864723	-121.818203	0.039	--
RW36	riparian wetland	PSS	40.865208	-121.818005	0.006	--
RW37	riparian wetland	PSS	40.864720	-121.818083	0.012	--
RW38	riparian wetland	PSS	40.863026	-121.814215	0.114	--
RW39	riparian wetland	PSS	40.862944	-121.814297	0.102	--
RW40	riparian wetland	PSS	40.852568	-121.844232	0.062	--
RW41	riparian wetland	PSS	40.851808	-121.844058	0.154	--
RW42	riparian wetland	PSS	40.851444	-121.844056	0.077	--
RW43	riparian wetland	PSS	40.854344	-121.783416	0.144	--
RW44	riparian wetland	PSS	40.854555	-121.783674	0.028	--
RW45	riparian wetland	PSS	40.853794	-121.782600	0.207	--
RW46	riparian wetland	PSS	40.853914	-121.782609	0.076	--
RW47	riparian wetland	PSS	40.853190	-121.780694	1.690	--
RW48	riparian wetland	PFO	40.841212	-121.861894	0.471	--
RW49	riparian wetland	PSS	40.845914	-121.831109	0.071	--
RW50	riparian wetland	PSS	40.845931	-121.831647	0.037	--
RW51	riparian wetland	PSS	40.845351	-121.827945	1.649	--
RW52	riparian wetland	PSS	40.844681	-121.825535	0.451	--
RW53	riparian wetland	PSS	40.844679	-121.825674	0.479	--
RW54	riparian wetland	PSS	40.842373	-121.822825	0.338	--
RW55	riparian wetland	PSS	40.841967	-121.822511	0.456	--
RW56	riparian wetland	PSS	40.840733	-121.821993	0.208	--
RW57	riparian wetland	PSS	40.840582	-121.820956	0.065	--
RW58	riparian wetland	PSS	40.840503	-121.820908	0.042	--
RW59	riparian wetland	PSS	40.840597	-121.816460	0.008	--
RW60	riparian wetland	PSS	40.840642	-121.816399	0.016	--
RW61	riparian wetland	PSS	40.834212	-121.817283	0.014	--
RW62	riparian wetland	PSS	40.834188	-121.817289	0.013	--
RW63	riparian wetland	PSS	40.833724	-121.816664	0.015	--
RW64	riparian wetland	PSS	40.833732	-121.816641	0.015	--

Aquatic Resource Name	Type	Aquatic Resource Classification			Acres	Linear Feet
		Cowardin	Location			
			Latitude	Longitude		
RW65	riparian wetland	PFO	40.815172	-121.812451	3.298	--
RW66	riparian wetland	PSS	40.823068	-121.778623	0.071	--
RW67	riparian wetland	PSS	40.822403	-121.777886	0.226	--
RW68	riparian wetland	PSS	40.821951	-121.777227	0.269	--
RW69	riparian wetland	PFO	40.820653	-121.778426	0.119	--
RW70	riparian wetland	PFO	40.820769	-121.778299	0.034	--
RW71	riparian wetland	PFO	40.820366	-121.778372	0.006	--
RW72	riparian wetland	PFO	40.820404	-121.778264	0.015	--
RW73	riparian wetland	PFO	40.820227	-121.778185	0.081	--
RW74	riparian wetland	PFO	40.812569	-121.846053	0.201	--
RW75	riparian wetland	PFO	40.812629	-121.845533	0.014	--
RW76	riparian wetland	PSS	40.814488	-121.820920	0.034	--
RW77	riparian wetland	PSS	40.814419	-121.820983	0.066	--
RW78	riparian wetland	PSS	40.812468	-121.817060	0.027	--
RW79	riparian wetland	PSS	40.812562	-121.817172	0.009	--
RW80	riparian wetland	PSS	40.812526	-121.816962	0.025	--
RW81	riparian wetland	PSS	40.812052	-121.816732	0.105	--
RW82	riparian wetland	PSS	40.812152	-121.816532	0.146	--
RW83	riparian wetland	PFO	40.814566	-121.810205	0.003	--
RW84	riparian wetland	PFO	40.801414	-121.879709	0.287	--
RW85	riparian wetland	PSS	40.796313	-121.810630	0.209	--
RW86	riparian wetland	PSS	40.796408	-121.810553	0.136	--
RW87	riparian wetland	PSS	40.795604	-121.810194	0.072	--
RW88	riparian wetland	PSS	40.795361	-121.810729	0.029	--
RW89	riparian wetland	PSS	40.795248	-121.810832	0.005	--
RW90	riparian wetland	PSS	40.795221	-121.810645	0.033	--
RW91	riparian wetland	PSS	40.795062	-121.810106	0.374	--
RW92	riparian wetland	PSS	40.790117	-121.833817	0.045	--
RW93	riparian wetland	PSS	40.790047	-121.833793	0.069	--
RW94	riparian wetland	PSS	40.790446	-121.832991	0.051	--
RW95	riparian wetland	PSS	40.790362	-121.833069	0.038	--
RW96	riparian wetland	PSS	40.792191	-121.826971	0.301	--
RW97	riparian wetland	PSS	40.792341	-121.827458	0.041	--
RW98	riparian wetland	PSS	40.792227	-121.826803	0.049	--
RW99	riparian wetland	PSS	40.792068	-121.826113	0.008	--
RW100	riparian wetland	PSS	40.791793	-121.825514	0.069	--

Aquatic Resource Name	Type	Aquatic Resource Classification			Acres	Linear Feet
		Cowardin	Location			
			Latitude	Longitude		
RW101	riparian wetland	PSS	40.791591	-121.825292	0.052	--
RW102	riparian wetland	PSS	40.791175	-121.824461	0.149	--
RW103	riparian wetland	PSS	40.791207	-121.824287	0.080	--
RW104	riparian wetland	PSS	40.791193	-121.822844	0.014	--
RW105	riparian wetland	PSS	40.773617	-121.852219	0.011	--
RW106	riparian wetland	PSS	40.773563	-121.852166	0.013	--
RW107	riparian wetland	PSS	40.773601	-121.850887	0.008	--
RW108	riparian wetland	PSS	40.773663	-121.850833	0.011	--
RW109	riparian wetland	PSS	40.773549	-121.850483	0.012	--
RW110	riparian wetland	PSS	40.773623	-121.850581	0.002	--
RW111	riparian wetland	PSS	40.773621	-121.850358	0.008	--
RW112	riparian wetland	PSS	40.773944	-121.849629	0.004	--
RW113	riparian wetland	PSS	40.773861	-121.849497	0.009	--
RW114	riparian wetland	PSS	40.773926	-121.849114	0.008	--
RW115	riparian wetland	PSS	40.773981	-121.848678	0.011	--
RW116	riparian wetland	PSS	40.774095	-121.848464	0.005	--
RW117	riparian wetland	PSS	40.774359	-121.847838	0.008	--
RW118	riparian wetland	PSS	40.774336	-121.847781	0.008	--
RW119	riparian wetland	PSS	40.774418	-121.847670	0.008	--
RW120	riparian	PFO	40.759667	-121.867426	0.045	--
RW121	riparian	PFO	40.759582	-121.867279	0.146	--
RW122	riparian	PFO	40.761524	-121.871080	0.028	--
RW123	riparian	PSS	40.757966	-121.833940	0.033	--
RW124	riparian	PSS	40.757819	-121.834125	0.039	--
SW1	seasonal	PEM	40.855418	-121.796332	0.087	--
SW2	seasonal	PEM	40.830941	-121.848041	0.006	--
SW3	seasonal	PEM	40.830981	-121.847850	0.019	--
SW4	seasonal	PEM	40.832394	-121.847031	0.003	--
SW5	seasonal	PEM	40.815233	-121.804631	0.005	--
VD1	vegetated ditch	PEM	40.864946	-121.821408	0.005	114
VD2	vegetated ditch	PEM	40.864915	-121.821259	0.003	73
VD3	vegetated ditch	PEM	40.864944	-121.821061	0.006	146
VD4	vegetated ditch	PEM	40.865218	-121.820776	0.014	739
VD5	vegetated ditch	PEM	40.836493	-121.820790	0.001	52
VD6	vegetated ditch	PEM	40.816789	-121.789207	0.003	54
VD7	vegetated ditch	PEM	40.812409	-121.845484	0.003	59

Aquatic Resource Name	Type	Aquatic Resource Classification			Acres	Linear Feet
		Cowardin	Location			
			Latitude	Longitude		
VD8	vegetated ditch	PEM	40.806278	-121.880500	0.003	152
VD9	vegetated ditch	PEM	40.805908	-121.880505	0.027	235
VD10	vegetated ditch	PEM	40.803975	-121.879762	0.020	219
VD11	vegetated ditch	PEM	40.802449	-121.879872	0.057	415
VD12	vegetated ditch	PEM	40.801865	-121.879357	0.032	174
WM1	meadow	PEM	40.864720	-121.822380	2.578	--
WM2	meadow	PEM	40.853997	-121.782958	0.095	--
WM3	meadow	PEM	40.853828	-121.782279	0.327	--
WM4	meadow	PEM	40.853931	-121.780587	0.266	--
WM5	meadow	PEM	40.852239	-121.780911	0.046	--
WM6	meadow	PEM	40.851990	-121.780767	0.038	--
WM7	meadow	PEM	40.841956	-121.861564	0.147	--
WM8	meadow	PFO	40.814975	-121.805890	4.614	--
WM9	meadow	PEM	40.818286	-121.794219	0.039	--
WM10	meadow	PEM	40.818246	-121.793875	0.030	--
WM11	meadow	PEM	40.818302	-121.793441	0.133	--
WM12	meadow	PEM	40.824337	-121.780008	0.028	--
WM13	meadow	PEM	40.824205	-121.779653	0.005	--
WM14	meadow	PEM	40.823941	-121.779240	0.028	--
SSW1	seep/spring	PEM	40.880767	-121.821626	0.011	--
SSW2	seep/spring	PEM	40.877874	-121.818932	0.002	--
SSW3	seep/spring	PSS	40.865232	-121.819485	0.414	--
SSW4	seep/spring	PSS	40.853703	-121.783179	0.062	--
SSW5	seep/spring	PEM	40.845116	-121.825675	0.001	--
SSW6	seep/spring	PEM	40.844968	-121.825528	0.023	--
SSW7	seep/spring	PSS	40.843166	-121.822585	0.066	--
SSW8	seep/spring	PEM	40.840315	-121.815487	0.002	--
SSW9	seep/spring	PSS	40.847580	-121.781099	0.185	--
SSW10	seep/spring	PSS	40.836221	-121.820897	0.172	--
SSW11	seep/spring	PSS	40.836672	-121.820496	0.057	--
SSW12	seep/spring	PEM	40.837776	-121.818593	0.114	--
SSW13	seep/spring	PEM	40.834990	-121.816054	0.004	--
SSW14	seep/spring	PEM	40.838192	-121.815089	0.003	--
SSW15	seep/spring	PSS	40.812212	-121.845667	0.067	--
SSW16	seep/spring	PEM	40.791346	-121.825301	0.012	--
SSW17	seep/spring	PEM	40.790844	-121.820400	0.007	--

Aquatic Resource Name	Type	Aquatic Resource Classification			Acres	Linear Feet
		Cowardin	Location			
			Latitude	Longitude		
SSW18	seep/spring	PEM	40.791067	-121.820056	0.003	--
SSW19	seep/spring	PEM	40.791744	-121.819765	0.005	--
SSW20	seep/spring	PEM	40.791531	-121.819862	0.004	--
SSW21	seep/spring	PEM	40.791221	-121.819697	0.005	--
SSW22	seep/spring	PEM	40.791351	-121.819529	0.002	--
SSW23	seep/spring	PEM	40.791289	-121.819441	0.004	--
SSW24	seep/spring	PEM	40.773057	-121.857046	0.010	--
SSW25	seep/spring	PEM	40.773023	-121.856441	0.011	--
SSW26	seep/spring	PSS	40.774072	-121.849235	0.153	--
SSW27	seep/spring	PSS	40.774109	-121.848712	0.051	--
SSW28	seep/spring	PSS	40.775018	-121.847328	0.100	--
SSW29	seep/spring	PEM	40.769698	-121.835837	0.005	--
SSW30	seep/spring	PSS	40.759478	-121.867748	0.004	--
SSW31	seep/spring	PFO	40.758601	-121.867078	0.230	--
1	riparian	PSS	40.83385673	-121.78377	1.020	--
2	meadow	PEM	40.82826307	-121.787843	0.244	--
3	meadow	PSS	40.82781361	-121.787015	0.072	--
4	meadow	PSS	40.82791797	-121.787333	0.024	--
5	riparian	PSS	40.82542795	-121.782464	0.083	--
6	riparian	PSS	40.82508067	-121.781715	0.093	--
8	riparian	PFO	40.790353	-121.832811	0.087	--
9	riparian	PFO	40.79003735	-121.83405	0.067	--
10	seep/spring	PEM	40.7750096	-121.847283	0.002	--
11	seep/spring	PEM	40.77491331	-121.847382	0.016	--
50	riparian	PSS	40.84053307	-121.863502	0.373	--
51	riparian	PSS	40.82953048	-121.845301	0.032	--
53	riparian	PFO	40.78585444	-121.851623	0.634	--
56	riparian	PFO	40.79689706	-121.810473	0.048	--
57	riparian	PFO	40.81279719	-121.846088	0.084	--
Other Waters						
ES1	ephemeral stream	R4SB	40.906356	-121.871535	0.004	160
ES2	ephemeral stream	R4SB	40.895389	-121.847652	0.015	323
ES3	ephemeral stream	R4SB	40.873249	-121.848448	0.027	395
ES4	ephemeral stream	R4SB	40.873446	-121.846996	0.020	428
ES5	ephemeral stream	R4SB	40.877326	-121.819019	0.022	153
ES6	ephemeral stream	R4SB	40.877415	-121.818606	0.005	42

Aquatic Resource Name	Type	Aquatic Resource Classification			Acres	Linear Feet
		Cowardin	Location			
			Latitude	Longitude		
ES7	ephemeral stream	R4SB	40.865603	-121.834594	0.001	54
ES8	ephemeral stream	R4SB	40.864961	-121.832654	0.007	153
ES9	ephemeral stream	R4SB	40.865410	-121.829715	0.001	48
ES10	ephemeral stream	R4SB	40.865286	-121.829737	0.005	43
ES11	ephemeral stream	R4SB	40.864870	-121.829891	0.004	156
ES12	ephemeral stream	R4SB	40.851954	-121.846311	0.003	112
ES13	ephemeral stream	R4SB	40.841939	-121.862610	0.017	139
ES14	ephemeral stream	R4SB	40.839359	-121.862111	0.003	137
ES15	ephemeral stream	R4SB	40.838893	-121.861779	0.019	272
ES16	ephemeral stream	R4SB	40.842927	-121.826460	0.005	114
ES17	ephemeral stream	R4SB	40.843052	-121.826202	0.008	329
ES18	ephemeral stream	R4SB	40.840847	-121.824265	0.006	237
ES19	ephemeral stream	R4SB	40.839643	-121.823468	0.006	262
ES20	ephemeral stream	R4SB	40.839820	-121.822907	0.0003	14
ES21	ephemeral stream	R4SB	40.838333	-121.819333	0.003	112
ES22	ephemeral stream	R4SB	40.838442	-121.861017	0.014	294
ES23	ephemeral stream	R4SB	40.838295	-121.860787	0.004	78
ES24	ephemeral stream	R4SB	40.832081	-121.846274	0.016	686
ES25	ephemeral stream	R4SB	40.830269	-121.841112	0.007	303
ES26	ephemeral stream	R4SB	40.829453	-121.834288	0.047	1,025
ES27	ephemeral stream	R4SB	40.838263	-121.819891	0.009	202
ES28	ephemeral stream	R4SB	40.826878	-121.818557	0.066	956
ES29	ephemeral stream	R4SB	40.824791	-121.781061	0.002	111
ES30	ephemeral stream	R4SB	40.824625	-121.780605	0.008	369
ES31	ephemeral stream	R4SB	40.824258	-121.779830	0.002	78
ES32	ephemeral stream	R4SB	40.791800	-121.822685	0.008	111
ES33	ephemeral stream	R4SB	40.791404	-121.822874	0.017	148
ES34	ephemeral stream	R4SB	40.778938	-121.841781	0.010	109
ES35	ephemeral stream	R4SB	40.778336	-121.842372	0.001	19
ES36	ephemeral stream	R4SB	40.778746	-121.841329	0.049	713
ES37	ephemeral stream	R4SB	40.759364	-121.825149	0.003	145
IS1	intermittent stream	R4SB	40.902292	-121.857570	0.033	173
IS2	intermittent stream	R4SB	40.902230	-121.856919	0.027	147
IS3	intermittent stream	R4SB	40.891986	-121.835677	0.020	285
IS4	intermittent stream	R4SB	40.891287	-121.835221	0.040	292
IS5	intermittent stream	R4SB	40.888301	-121.831137	0.006	62

Aquatic Resource Name	Type	Aquatic Resource Classification			Acres	Linear Feet
		Cowardin	Location			
			Latitude	Longitude		
IS6	intermittent stream	R4SB	40.885150	-121.836824	0.007	148
IS7	intermittent stream	R4SB	40.873832	-121.856003	0.021	154
IS8	intermittent stream	R4SB	40.873543	-121.855497	0.018	152
IS9	intermittent stream	R4SB	40.882989	-121.837240	0.027	592
IS10	intermittent stream	R4SB	40.882074	-121.836977	0.007	97
IS11	intermittent stream	R4SB	40.881399	-121.836616	0.026	374
IS12	intermittent stream	R4SB	40.880431	-121.836389	0.034	365
IS13	intermittent stream	R4SB	40.879618	-121.836687	0.017	88
IS14	intermittent stream	R4SB	40.877990	-121.836783	0.153	1,112
IS15	intermittent stream	R4SB	40.876214	-121.836658	0.039	214
IS16	intermittent stream	R4SB	40.875449	-121.836446	0.051	277
IS17	intermittent stream	R4SB	40.872689	-121.813895	0.049	357
IS18	intermittent stream	R4SB	40.865501	-121.834510	0.005	100
IS19	intermittent stream	R4SB	40.865383	-121.834581	0.001	38
IS20	intermittent stream	R4SB	40.865005	-121.834400	0.008	179
IS21	intermittent stream	R4SB	40.871875	-121.814210	0.034	185
IS22	intermittent stream	R4SB	40.871195	-121.814471	0.096	332
IS23	intermittent stream	R4SB	40.868844	-121.814664	0.084	309
IS24	intermittent stream	R4SB	40.865301	-121.824299	0.002	101
IS25	intermittent stream	R4SB	40.864913	-121.824317	0.002	70
IS26	intermittent stream	R4SB	40.856538	-121.836553	0.020	431
IS27	intermittent stream	R4SB	40.855561	-121.835742	0.012	256
IS28	intermittent stream	R4SB	40.853804	-121.782916	0.001	29
IS29	intermittent stream	R4SB	40.845932	-121.828274	0.013	191
IS30	intermittent stream	R4SB	40.845955	-121.828123	0.004	77
IS31	intermittent stream	R4SB	40.846156	-121.827878	0.011	123
IS32	intermittent stream	R4SB	40.846328	-121.827286	0.019	211
IS33	intermittent stream	R4SB	40.845678	-121.826722	0.005	111
IS34	intermittent stream	R4SB	40.845972	-121.826426	0.002	105
IS35	intermittent stream	R4SB	40.840640	-121.815959	0.113	355
IS36	intermittent stream	R4SB	40.840927	-121.815144	0.031	166
IS37	intermittent stream	R4SB	40.841785	-121.812045	0.032	344
IS38	intermittent stream	R4SB	40.841435	-121.813888	0.023	253
IS39	intermittent stream	R4SB	40.841661	-121.813144	0.029	211
IS40	intermittent stream	R4SB	40.841169	-121.814585	0.026	1,840
IS41	intermittent stream	R4SB	40.841230	-121.814087	0.008	178

Aquatic Resource Name	Type	Aquatic Resource Classification			Acres	Linear Feet
		Cowardin	Location			
			Latitude	Longitude		
IS42	intermittent stream	R4SB	40.841105	-121.813507	0.006	127
IS43	intermittent stream	R4SB	40.841216	-121.813413	0.012	236
IS44	intermittent stream	R4SB	40.839558	-121.806713	0.080	1726
IS45	intermittent stream	R4SB	40.832597	-121.847999	0.017	240
IS46	intermittent stream	R4SB	40.832019	-121.847418	0.005	235
IS47	intermittent stream	R4SB	40.831425	-121.847554	0.009	187
IS48	intermittent stream	R4SB	40.837736	-121.819629	0.011	232
IS49	intermittent stream	R4SB	40.837735	-121.819103	0.005	112
IS50	intermittent stream	R4SB	40.834977	-121.820063	0.007	106
IS51	intermittent stream	R4SB	40.818108	-121.820309	0.085	31
IS52	intermittent stream	R4SB	40.818174	-121.797261	0.011	93
IS53	intermittent stream	R4SB	40.818237	-121.796939	0.032	136
IS54	intermittent stream	R4SB	40.818502	-121.796227	0.115	331
IS55	intermittent stream	R4SB	40.818492	-121.794751	0.022	52
IS56	intermittent stream	R4SB	40.818431	-121.794486	0.026	64
IS57	intermittent stream	R4SB	40.816631	-121.789141	0.011	45
IS58	intermittent stream	R4SB	40.816557	-121.789016	0.006	54
IS59	intermittent stream	R4SB	40.816286	-121.788860	0.012	174
IS60	intermittent stream	R4SB	40.816586	-121.788614	0.012	254
IS61	intermittent stream	R4SB	40.816687	-121.788219	0.003	17
IS62	intermittent stream	R4SB	40.812871	-121.847505	0.038	552
IS63	intermittent stream	R4SB	40.813439	-121.846288	0.002	26
IS64	intermittent stream	R4SB	40.813487	-121.846167	0.009	810
IS65	intermittent stream	R4SB	40.813601	-121.845811	0.008	171
IS66	intermittent stream	R4SB	40.813566	-121.845797	0.014	152
IS67	intermittent stream	R4SB	40.813453	-121.845488	0.003	53
IS68	intermittent stream	R4SB	40.813548	-121.845423	0.005	74
IS69	intermittent stream	R4SB	40.813555	-121.845068	0.004	164
IS70	intermittent stream	R4SB	40.812561	-121.843594	0.002	30
IS71	intermittent stream	R4SB	40.811568	-121.842162	0.160	1,102
IS72	intermittent stream	R4SB	40.812329	-121.843345	0.001	19
IS73	intermittent stream	R4SB	40.812293	-121.843261	0.004	91
IS74	intermittent stream	R4SB	40.812184	-121.843268	0.001	23
IS75	intermittent stream	R4SB	40.812181	-121.843193	0.001	18
IS76	intermittent stream	R4SB	40.812020	-121.843019	0.003	65
IS77	intermittent stream	R4SB	40.811839	-121.842595	0.000	17

Aquatic Resource Name	Type	Aquatic Resource Classification			Acres	Linear Feet
		Cowardin	Location			
			Latitude	Longitude		
IS78	intermittent stream	R4SB	40.811714	-121.842425	0.002	81
IS79	intermittent stream	R4SB	40.810935	-121.841241	0.001	31
IS80	intermittent stream	R4SB	40.810775	-121.841096	0.002	77
IS81	intermittent stream	R4SB	40.810621	-121.840841	0.011	123
IS82	intermittent stream	R4SB	40.810671	-121.840711	0.038	84
IS83	intermittent stream	R4SB	40.810468	-121.840460	0.020	146
IS84	intermittent stream	R4SB	40.810142	-121.840144	0.026	181
IS85	intermittent stream	R4SB	40.810108	-121.839803	0.014	98
IS86	intermittent stream	R4SB	40.783412	-121.837431	0.014	103
IS87	intermittent stream	R4SB	40.783452	-121.837191	0.012	40
IS88	intermittent stream	R4SB	40.783465	-121.836918	0.025	180
IS89	intermittent stream	R4SB	40.783254	-121.836246	0.035	128
IS90	intermittent stream	R4SB	40.783318	-121.836240	0.003	79
IS91	intermittent stream	R4SB	40.778848	-121.842346	0.003	52
IS92	intermittent stream	R4SB	40.778335	-121.842501	0.044	321
NVD1	ditch	R4	40.876514	-121.817529	0.013	175
NVD2	ditch	R4	40.876009	-121.817651	0.009	69
NVD3	ditch	R4	40.865345	-121.832613	0.008	49
NVD4	ditch	R4	40.864771	-121.824826	0.002	90
NVD5	ditch	R4	40.865351	-121.822307	0.028	611
NVD6	ditch	R4	40.871062	-121.814232	0.005	55
NVD7	ditch	R4	40.871095	-121.814017	0.004	438
NVD8	ditch	R4	40.852910	-121.781686	0.008	165
NVD9	ditch	R4	40.841927	-121.862077	0.013	188
NVD10	ditch	R4	40.845502	-121.827824	0.003	109
NVD11	ditch	R4	40.845267	-121.825812	0.002	87
NVD12	ditch	R4	40.839173	-121.822651	0.002	61
NVD13	ditch	R4	40.837795	-121.860348	0.015	327
NVD14	ditch	R4	40.837425	-121.859655	0.004	190
NVD15	ditch	R4	40.832313	-121.847360	0.012	170
NVD16	ditch	R4	40.834850	-121.816129	0.002	80
NVD17	ditch	R4	40.812320	-121.845772	0.003	38
NVD18	ditch	R4	40.806514	-121.880685	0.017	189
NVD19	ditch	R4	40.791069	-121.821182	0.022	477
NVD20	ditch	R4	40.773181	-121.854917	0.058	1,259
NVD21	ditch	R4	40.778783	-121.842090	0.010	148

Aquatic Resource Name	Type	Aquatic Resource Classification			Acres	Linear Feet
		Cowardin	Location			
			Latitude	Longitude		
PS1	perennial stream	R3UB	40.891052	-121.834861	0.004	47
PS2	perennial stream	R3UB	40.890757	-121.834580	0.022	234
PS3	perennial stream	R3UB	40.890288	-121.834029	0.018	162
PS4	perennial stream	R3UB	40.889536	-121.833095	0.027	292
PS5	perennial stream	R3UB	40.888392	-121.831478	0.132	161
PS6	perennial stream	R3UB	40.886975	-121.829703	0.116	515
PS7	perennial stream	R3UB	40.886555	-121.829011	0.004	38
PS8	perennial stream	R3UB	40.884426	-121.826436	0.709	2,570
PS9	perennial stream	R3UB	40.873235	-121.857989	0.101	209
PS10	perennial stream	R3UB	40.873519	-121.857510	0.035	301
PS11	perennial stream	R3UB	40.873715	-121.856838	0.002	19
PS12	perennial stream	R3UB	40.875151	-121.836440	0.002	34
PS13	perennial stream	R3UB	40.873657	-121.836928	0.150	950
PS14	perennial stream	R3UB	40.880994	-121.821371	0.410	1173
PS15	perennial stream	R3UB	40.880154	-121.819299	0.012	33
PS16	perennial stream	R3UB	40.877758	-121.818181	0.663	1608
PS17	perennial stream	R3UB	40.876049	-121.816853	0.019	36
PS18	perennial stream	R3UB	40.875770	-121.816901	0.055	170
PS19	perennial stream	R3UB	40.873544	-121.815365	0.082	299
PS20	perennial stream	R3UB	40.860908	-121.837674	0.408	558
PS21	perennial stream	R3UB	40.865306	-121.821159	0.007	79
PS22	perennial stream	R3UB	40.865207	-121.818055	0.050	306
PS23	perennial stream	R3UB	40.864722	-121.818136	0.097	306
PS24	perennial stream	R3UB	40.862986	-121.814253	0.218	474
PS25	perennial stream	R3UB	40.859710	-121.837571	0.058	313
PS26	perennial stream	R3UB	40.852640	-121.844214	0.026	113
PS27	perennial stream	R3UB	40.852397	-121.844109	0.028	77
PS28	perennial stream	R3UB	40.852198	-121.844210	0.052	88
PS29	perennial stream	R3UB	40.851947	-121.844247	0.036	99
PS30	perennial stream	R3UB	40.851470	-121.844024	0.063	269
PS31	perennial stream	R3UB	40.854543	-121.783690	0.025	184
PS32	perennial stream	R3UB	40.854006	-121.782781	0.009	189
PS33	perennial stream	R3UB	40.853705	-121.782355	0.021	155
PS34	perennial stream	R3UB	40.853338	-121.781588	0.043	312
PS35	perennial stream	R3UB	40.853261	-121.780828	0.007	50
PS36	perennial stream	R3UB	40.853187	-121.780676	0.004	55

Aquatic Resource Name	Type	Aquatic Resource Classification			Acres	Linear Feet
		Cowardin	Location			
			Latitude	Longitude		
PS37	perennial stream	R3UB	40.853129	-121.780515	0.002	47
PS38	perennial stream	R3UB	40.845952	-121.831505	0.221	487
PS39	perennial stream	R3UB	40.845625	-121.829304	0.076	207
PS40	perennial stream	R3UB	40.845697	-121.828495	0.081	251
PS41	perennial stream	R3UB	40.845591	-121.827736	0.026	98
PS42	perennial stream	R3UB	40.845616	-121.827171	0.043	159
PS43	perennial stream	R3UB	40.844984	-121.826160	0.132	582
PS44	perennial stream	R3UB	40.844033	-121.824461	0.111	605
PS45	perennial stream	R3UB	40.843496	-121.823571	0.013	31
PS46	perennial stream	R3UB	40.842321	-121.822743	0.151	812
PS47	perennial stream	R3UB	40.843215	-121.822945	0.003	61
PS48	perennial stream	R3UB	40.841208	-121.822502	0.004	33
PS49	perennial stream	R3UB	40.840861	-121.822138	0.031	342
PS50	perennial stream	R3UB	40.840545	-121.821538	0.011	82
PS51	perennial stream	R3UB	40.840550	-121.820834	0.015	81
PS52	perennial stream	R3UB	40.835693	-121.820022	0.060	435
PS53	perennial stream	R3UB	40.834810	-121.819333	0.040	431
PS54	perennial stream	R3UB	40.834230	-121.817335	0.015	161
PS55	perennial stream	R3UB	40.834062	-121.817060	0.008	35
PS56	perennial stream	R3UB	40.833728	-121.816652	0.020	218
PS57	perennial stream	R3UB	40.820369	-121.778294	0.278	366
PS58	perennial stream	R3UB	40.814458	-121.820970	0.127	301
PS59	perennial stream	R3UB	40.811899	-121.817195	0.058	253
PS60	perennial stream	R3UB	40.812587	-121.817122	0.006	44
PS61	perennial stream	R3UB	40.812299	-121.816822	0.105	396
PS62	perennial stream	R3UB	40.796770	-121.810586	0.024	102
PS63	perennial stream	R3UB	40.796583	-121.810632	0.006	43
PS64	perennial stream	R3UB	40.796577	-121.810592	0.003	42
PS65	perennial stream	R3UB	40.796208	-121.810647	0.071	249
PS66	perennial stream	R3UB	40.795745	-121.810385	0.036	78
PS67	perennial stream	R3UB	40.795237	-121.810537	0.050	89
PS68	perennial stream	R3UB	40.790099	-121.833763	0.033	183
PS69	perennial stream	R3UB	40.790225	-121.833462	0.013	47
PS70	perennial stream	R3UB	40.790348	-121.833266	0.023	122
PS71	perennial stream	R3UB	40.790409	-121.832957	0.021	95
PS72	perennial stream	R3UB	40.792315	-121.827468	0.023	117

Aquatic Resource Name	Type	Aquatic Resource Classification			Acres	Linear Feet
		Cowardin	Location			
			Latitude	Longitude		
PS73	perennial stream	R3UB	40.792203	-121.826799	0.038	201
PS74	perennial stream	R3UB	40.791810	-121.825631	0.113	407
PS75	perennial stream	R3UB	40.791473	-121.824980	0.014	33
PS76	perennial stream	R3UB	40.791205	-121.824384	0.053	288
PS77	perennial stream	R3UB	40.773590	-121.852192	0.123	268
PS78	perennial stream	R3UB	40.773831	-121.849568	0.419	925
PS79	perennial stream	R3UB	40.774359	-121.847796	0.070	152
PS80	perennial stream	R3UB	40.774332	-121.847733	0.005	40
PS81	perennial stream	R3UB	40.775636	-121.846020	0.039	86
PS82	perennial stream	R3UB	40.759626	-121.867440	0.196	426
PS83	perennial stream	R3UB	40.765307	-121.837121	0.090	489
PS84	perennial stream	R3UB	40.758198	-121.867570	0.031	222
PS85	perennial stream	R3UB	40.757982	-121.833624	0.418	338
PS86	perennial stream	R3UB	40.747830	-121.840312	0.039	214
PON1	perennial stream	PUB	40.841583	-121.861610	0.137	--
PON2	perennial stream	PUB	40.812260	-121.845864	0.011	--
PON3	perennial stream	PUB	40.812339	-121.845654	0.033	--
A (Hatchet Creek)	perennial stream	R3UB	40.83388153	-121.783671	0.313	446
A1 (Hatchet Creek)	perennial stream	R3UB	40.82543492	-121.782441	0.314	341
B	intermittent stream	R4SB	40.83330343	-121.782393	0.001	60
C	ephemeral stream	R4SB	40.84286023	-121.807543	0.108	937
C1 (North Fork Cedar Creek)	perennial stream	R3UB	40.79003107	-121.834076	0.022	94
D	perennial stream	R3UB	40.82794635	-121.787638	0.003	40
D1 (North Fork Cedar Creek)	perennial stream	R3UB	40.79027933	-121.832742	0.028	121
E	perennial stream	R3UB	40.82803867	-121.787679	0.001	17
E1	intermittent stream	R4SB	40.78345333	-121.837588	0.008	61
E2	intermittent stream	R4SB	40.78344026	-121.838067	0.017	120
F	perennial stream	R3UB	40.82795794	-121.787653	0.0002	7
F1	intermittent stream	R4SB	40.78337647	-121.838211	0.011	78
G1	intermittent stream	R4SB	40.78341698	-121.83845	0.091	399
G2	intermittent stream	R4SB	40.78322327	-121.841412	0.223	970
H	perennial stream	R3UB	40.8281905	-121.787786	0.004	154
H1	intermittent stream	R4SB	40.78303504	-121.838906	0.003	75
I	perennial stream	R3UB	40.82809804	-121.787192	0.004	93

Aquatic Resource Name	Type	Aquatic Resource Classification			Acres	Linear Feet
		Cowardin	Location			
			Latitude	Longitude		
I1	intermittent stream	R4SB	40.78300564	-121.838841	0.001	46
J	perennial stream	R3UB	40.82804317	-121.786973	0.002	106
J1	intermittent stream	R3UB	40.78125253	-121.831685	0.095	1,037
K	perennial stream	R3UB	40.82803623	-121.786933	0.001	32
K1 (North Fork Little Cow Creek)	perennial stream	R3UB	40.77584467	-121.844045	0.143	519
L	intermittent stream	R4SB	40.82794342	-121.787615	0.001	14
L1	perennial stream	R3UB	40.77483319	-121.844982	0.102	372
M	perennial stream	R4SB	40.82776879	-121.786829	0.020	217
M1 (North Fork Little Cow Creek)	perennial stream	R3UB	40.77455022	-121.847517	0.031	114
N	intermittent stream	R4SB	40.84062839	-121.863574	0.042	307
O (North Fork Montgomery Creek)	perennial stream	R3UB	40.81742637	-121.842789	0.229	664
P1	intermittent stream	R4SB	40.81290446	-121.843947	0.026	192
P2	intermittent stream/culvert	R4SB	40.81312891	-121.844621	0.001	22
P3	intermittent stream	R4SB	40.81313024	-121.844629	0.014	104
Q (South Fork Montgomery Creek)	perennial stream	R3UB	40.80222033	-121.84041	0.405	980
R	perennial stream	R3UB	40.78735153	-121.848454	0.357	2,242
S	perennial stream	R3UB	40.79433757	-121.82953	0.059	321
T1	intermittent stream	R4SB	40.79775118	-121.875107	0.137	597
T2	intermittent stream	R4SB	40.8014536	-121.879136	0.017	75
U	ephemeral stream	R4SB	40.83708622	-121.778328	0.005	105
V	ephemeral stream/culvert	R4SB	40.83708226	-121.778127	0.002	50
W	ephemeral stream	R4SB	40.837079	-121.778076	0.004	102
W1	intermittent stream	R4SB	40.79694424	-121.8105455	0.013	56
X	perennial stream	R3UB	40.77361381	-121.8527186	0.085	309
Y	intermittent stream	R4SB	40.81281922	-121.8484931	0.009	63
Total		--	--	--	**51.900**	**73,183**

Appendix B WETLAND DETERMINATION DATA FORMS

North State Resources, Inc.

Data Point 1
Feature Type Intermittent Stream

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Project/Site: Fountain Wind City/County: Shasta County Date: 10/10/17
Applicant/Owner: Avangrid State: CA
Investigator(s): Gabe Youngblood, John Holford Section, Township, Range Sec. 10, T35N, R1E
Landform (hillslope, terrace, etc.) Drainage Local relief (concave, convex, none) Concave Slope % 5
Subregion (LRR): MLRA 22B Lat: 40.902296° Long: -121.857121° Datum: NAD 83
Soil Map Unit Name: Goulder gravelly sandy loam, 15 to 30 percent slopes NWI Classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐/☒ Hydric soil? ☐/☒ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☐/☒ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank ✓ Scour ✓ Ordinary High Water Mark Mapped ✓ Stream Width 8'
Feature Designation: Perennial _____ Intermittent ✓ Ephemeral _____ Blue-line on USGS Quad _____ Substrate Rock
Natural Drainage ✓ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents OHWM of an intermittent stream.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%=_____ 20%=_____ Total Cover:	0		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

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

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: _____ (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
_____ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

No vegetation scoured channel.

Data Point 1

Soils

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

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? /X

Remarks

No soil pit scoured channel.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

Sediment and drift deposits indicate frequent flooding.

North State Resources, Inc.

Data Point: 2
Feature Type: Fresh Emergent Wetland

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Project/Site: Fountain Wind | City/County: Shasta County | Date: 10/11/17
Applicant/Owner: Avangrid | State: CA
Investigator(s): John Holford | Section, Township, Range: Sec. 14, T35N, R1E
Landform (hillslope, terrace, etc.): depression | Local relief (concave, convex, none): concave | Slope %: 0
Subregion (LRR): MLRA 22B | Lat: 40.890468° | Long: -121.834325° | Datum: NAD 83
Soil Map Unit Name: Obie-Mounthat complex, 5 to 15 percent slopes | NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑/☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____
Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____
Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents a fresh emergent wetland within riparian habitat associated with Little Hatchet Creek.

Vegetation (Use Scientific Names)

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size: 30)			
1. Salix lasiolepis	20	Y	FACW
2. Alnus incana	5	N	FACW
3. Acer circinatum	5	N	FAC
4.			
50%= 15 20%= 6 Total Cover:	30		
Sapling/Shrub Stratum (Plot Size: 15)	% Cover	Species?	Status
1. Salix lasiolepis	5	Y	FACW
2.			
3.			
4.			
50%= 2.5 20%= 1 Total Cover:	5		
Herb Stratum (Plot Size: 5)	% Cover	Species?	Status
1. Ludwigia palustris	75	Y	OBL
2. Unkown grass	5	N	Unk
3. Scirpus microcarpus	5	N	OBL
4. Epilobium ciliatum	1	N	FACW
5.			
6.			
7.			
8.			
50%= 43 20%= 17.2 Total Cover:	86		
Woody/Vine Stratum (Plot Size: 30)	% Cover	Species?	Status
1.			
2.			
50%= 20%= Total Cover:	0		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 3 (A)
Total number of dominant species across all strata: 3 (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 =	0
FACW Species		x 2 =	0
FAC Species		x 3 =	0
FACU Species		x 4 =	0
UPL Species		x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
✓ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominant hydrophytic vegetation is present.

Data Point 2

Soils

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 2.5/3	100					SL	mucky

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? ✓ / N

Remarks

High organic matter, decomposing smell (not hydrogen sulfide). Soils meet the definition of indicator F1.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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) 1 Wetland Hydrology? ✓ / N

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

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

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

Remarks

Approximately 1 inch of standing water provides wetland hydrology.

North State Resources, Inc.

Data Point: 3

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type: Upland

Project/Site: Fountain Wind | City/County: Shasta County | Date: 10/11/17

Applicant/Owner: Avangrid | State: CA

Investigator(s): John Holford | Section, Township, Range: Sec. 14, T35N, R1E

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

Subregion (LRR): MLRA 22B | Lat: 40.890502° | Long: -121.834364° | Datum: NAD83

Soil Map Unit Name: Obie-Mounthat complex, 5 to 15 percent slopes | NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐/☒ Hydric soil? ☐/☒ Wetland hydrology? ☐/☒ Is sampled area a wetland? ☐/☒ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____

Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____

Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

Upland pair to DP2 fresh emergent wetland.

Vegetation (Use Scientific Names)

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size: 30)			
1. Acer circinatum	15	Y	FAC
2. Calocedrus decurrens	10	Y	UPL
3. Pseudotsuga menziesii	10	Y	FACU
4.			
50%= 35 20%= 7 Total Cover:	35		
Sapling/Shrub Stratum (Plot Size: 15)			
1. Ceanothus integerrimus	10	Y	UPL
2. Cornus nuttallii	1	N	FACU
3.			
4.			
50%= 6 20%= 3 Total Cover:	11		
Herb Stratum (Plot Size: 5)			
1. Pteridium aquilinum	10	Y	FACU
2. Carex sp.	3	N	FACU
3. Symphoricarpos albus	1	N	FACU
4.			
5.			
6.			
7.			
8.			
50%= 7 20%= 2 Total Cover:	14		
Woody/Vine Stratum (Plot Size: 30)			
1. Rubus parviflorus	3	Y	FACU
2.			
50%= 20%= Total Cover:	3		

% Bare Ground in Herb Stratum 86 % Cover of Biotic Crust 0

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: 17 (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

_____ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

Carex sp. assumed to be FACU or drier. Dominant hydrophytic vegetation is not present.

Data Point 3

Soils

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
0-4	10YR 2/2	100					SL	charred bio material from fire
4-18	7.5YR 3/4	100					SL	

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? N

Remarks

No indicators of hydric soil.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? Y / N X

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

No indicators of wetland hydrology.

North State Resources, Inc.

Data Point: 4

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type: Riparian Wetland

Project/Site: Fountain Wind | City/County: Shasta County | Date: 10/11/17

Applicant/Owner: Avangrid | State: CA

Investigator(s): John Holford | Section, Township, Range: Sec. 14, T35N, R1E

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

Subregion (LRR): MLRA 22B | Lat: 40.890069° | Long: -121.834209° | Datum: NAD83

Soil Map Unit Name: Obie-Mounthat complex, 5 to 15 percent slopes | NWI Classification: PSSC

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑/☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____

Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____

Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents riparian wetland adjacent to Little Hatchet Creek.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus incana	15	Y	FACW
2. Salix lasiolepis	15	Y	FACW
3. Acer circinatum	5	N	FAC
4.			
50%= 17.5 20%= 7 Total Cover:	35		

Sapling/Shrub Stratum (Plot Size: 15)	% Cover	Species?	Status
1. Salix lasiolepis	5	Y	FACW
2. Acer circinatum	5	Y	FACW
3. Cornus nuttallii	1	N	FACU
4.			
50%= 6.5 20%= 2.2 Total Cover:	11		

Herb Stratum (Plot Size: 5)	% Cover	Species?	Status
1. Carex sp.	65	Y	FACW
2. Platanthera dilatata	1	N	FACW
3.			
4.			
5.			
6.			
7.			
8.			
50%= 66 20%= 13.2 Total Cover:	66		

Woody/Vine Stratum (Plot Size: _____)	% Cover	Species?	Status
1.			
2.			
50%= 20%= Total Cover:	0		

% Bare Ground in Herb Stratum 34 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 5 (A)

Total number of dominant species across all strata: 5 (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 =	0
FACW Species		x 2 =	0
FAC Species		x 3 =	0
FACU Species		x 4 =	0
UPL Species		x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

✓ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Carex sp. assumed to be FAC or wetter. Dominant hydrophytic vegetation is present.

Data Point 4

Soils

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	10YR 2/2	100					SL	mucky

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? ✓ /

Remarks

High in organic matter. Soil meets the requirements of indicator F1 Loamy Mucky Mineral.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes _____ No X Depth (inches) _____

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

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

Remarks

Saturation present throughout entire depth of soil sample. The water table was not observed.

North State Resources, Inc.

Data Point: 5
Feature Type: Upland

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Project/Site: Fountain Wind | City/County: Shasta County | Date: 10/11/17
Applicant/Owner: Avangrid | State: CA
Investigator(s): John Holford | Section, Township, Range: Sec. 14, T35N, R1E
Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): Convex | Slope %: 2
Subregion (LRR): MLRA 22B | Lat: 40.890079° | Long: -121.834289° | Datum: NAD83
Soil Map Unit Name: Obie-Mounthat complex, 5 to 15 percent slopes | NWI Classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐/☒ Hydric soil? ☐/☒ Wetland hydrology? ☐/☒ Is sampled area a wetland? ☐/☒ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____
Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____
Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

Upland pair to DP4 riparian wetland.

Vegetation (Use Scientific Names)

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size: 30)			
1. Pseudotsuga menziesii	25	Y	FACU
2. Calocedrus decurrens	25	Y	UPL
3. Alnus incana	5	N	FACW
4.			
50%= 27.5 20%= 11 Total Cover:	55		
Sapling/Shrub Stratum (Plot Size: 15)	% Cover	Species?	Status
1. Acer circinatum	10	Y	FAC
2. Cornus nuttallii	3	N	FACU
3.			
4.			
50%= 6.5 20%= 2.6 Total Cover:	13		
Herb Stratum (Plot Size: 5)	% Cover	Species?	Status
1. Pteridium aquilinum	5	Y	FACU
2. Trillium albidum	1	N	FACU
3. Elymus glacus	1	N	FACU
4.			
5.			
6.			
7.			
8.			
50%= 3.5 20%= 1.4 Total Cover:	7		
Woody/Vine Stratum (Plot Size: 30)	% Cover	Species?	Status
1.			
2.			
50%= 20%= Total Cover:	0		

% Bare Ground in Herb Stratum 93 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 1 (A)
Total number of dominant species across all strata: 4 (B)
Percent of dominant species that are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
_____ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

Dominant hydrophytic vegetation is not present.

Soils

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	10YR 3/4	100					SL	
12-18	7.5YR 5/6	100					SL	

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
_____ 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 Materials (TF21)
_____ Very Shallow Dark Surface (TF12)
_____ Vegetated Sand/Gravel Bars
_____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? Y / N

Remarks

No indicators of hydric soils.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? Y / N X
Water Table Present? Yes _____ No X Depth (inches) _____
Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

No indicators of wetland hydrology.

North State Resources, Inc.

Data Point 6
Feature Type Perennial Stream

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Project/Site: Fountain Wind City/County: Shasta County Date: 10/11/17
Applicant/Owner: Avangrid State: CA
Investigator(s): John Holford Section, Township, Range Sec. 14, T35N, R1E
Landform (hillslope, terrace, etc.) Drainage Local relief (concave, convex, none) Concave Slope % 10
Subregion (LRR): MLRA 22B Lat: 40.888505° Long: -121.831906° Datum: NAD83
Soil Map Unit Name: Obie-Mounthat complex, 5 to 15 percent slopes NWI Classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐ ☒ Hydric soil? ☐/☒ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☐/☒ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank ✓ Scour ✓ Ordinary High Water Mark Mapped ✓ Stream Width 6'
Feature Designation: Perennial ✓ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad ✓ Substrate Cobble
Natural Drainage ✓ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents OHWM of Little Hatchet Creek.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%=_____ 20%=_____ Total Cover:	0		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust 0

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: _____ (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
_____ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

No veg scoured channel.

Data Point 6

Soils

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

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? /X

Remarks

No soils pit scoured channel.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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) 1 Wetland Hydrology? ✓ / N

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

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

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

Remarks

Surface water provides hydrology.

North State Resources, Inc.

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Data Point: DP7
Feature Type: Wetland Seep/Spring

Project/Site: Fountain Wind | City/County: Shasta County | Date: 10/11/17
Applicant/Owner: Avangrid | State: CA
Investigator(s): John Holford | Section, Township, Range: Sec. 24, T35N, R1E
Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): None | Slope %: 5
Subregion (LRR): MLRA 22B | Lat: 40.880789° | Long: -121.821713° | Datum: NAD83
Soil Map Unit Name: Windy and McCarthy very stony sandy loams, 30 to 50 percent slopes | NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☑/☐ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☐/☒
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑/☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____
Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____
Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

Normal circumstances not present- seep located on gravel logging road. Significant grading and compaction.

Vegetation (Use Scientific Names)

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size: _____)			
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)			
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: 5)			
1. Mimulus guttatus	20	Y	OBL
2. Juncus xiphioides	10	Y	OBL
3. Trifolium repens	10	Y	FAC
4. Juncus bufonius	10	Y	FACW
5. Hypericum perforatum	3	N	FACU
6. Elymus glaucus	1	N	FACU
7. Castilleja campestris	1	N	FACW
8.			
50%=28 20%=11 Total Cover:	55		
Woody/Vine Stratum (Plot Size: _____)			
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum 45 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 4 (A)
Total number of dominant species across all strata: 4 (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 =	0
FACW Species	_____	x 2 =	0
FAC Species	_____	x 3 =	0
FACU Species	_____	x 4 =	0
UPL Species	_____	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
✓ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominant hydrophytic vegetation is present.

Data Point DP7

Soils

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
0-3	10YR 3/2	100					SL	
3-6	10GY 5/1	95	7.5YR 5/8	5	C	M	SL	

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- ✓ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: gravel (road bed) Depth (Inches) 6 Hydric Soil Present? ✓ /

Remarks

Soils meet the requirements of indicator F2 loamy gleyed matrix.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes ✓ No _____ Depth (inches) 0-6 *(includes capillary fringe)*

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

Remarks

Saturation at the soil surface provides wetland hydrology.

North State Resources, Inc.

Data Point 8

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type Upland

Project/Site: Fountain Wind City/County: Shasta County Date: 10/11/17

Applicant/Owner: Avangrid State: CA

Investigator(s): John Holford Section, Township, Range Sec. 24, T35N, R1E

Landform (hillslope, terrace, etc.) Hillslope Local relief (concave, convex, none) None Slope % 50

Subregion (LRR): MLRA 22B Lat: 40.880774° Long: -121.821738° Datum: NAD83

Soil Map Unit Name: Windy and McCarthy very stony sandy loams, 30 to 50 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐/☒ Hydric soil? ☐/☒ Wetland hydrology? ☐/☒ Is sampled area a wetland? ☐/☒ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____

Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____

Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

Upland pair to DP7 wetland seep/spring.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pseudotsuga menziesii	30	Y	FACU
2.			
3.			
4.			
50%= 15 20%= 6 Total Cover:	30		
Sapling/Shrub Stratum (Plot Size: 15)	**% Cover**	**Species?**	**Status**
1. Paxistima myrsinites	20	Y	FACU
2. Notholithocarpus densiflorus	5	N	UPL
3. Calocedrus decurrens	5	N	UPL
4.			
50%= 15 20%= 6 Total Cover:	30		
Herb Stratum (Plot Size: 5)	**% Cover**	**Species?**	**Status**
1. Epilobium sp.	5	Y	FACU
2. Trillium sp.	1	N	FACU
3.			
4.			
5.			
6.			
7.			
8.			
50%= 3 20%= 1.2 Total Cover:	6		
Woody/Vine Stratum (Plot Size: 30)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%= 20%= Total Cover:	0		

% Bare Ground in Herb Stratum 45 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 0 (A)

Total number of dominant species across all strata: 3 (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 =	0
FACW Species		x 2 =	0
FAC Species		x 3 =	0
FACU Species		x 4 =	0
UPL Species		x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

_____ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

Epilobium sp. assumed FACU or drier due to presence of other hydrophytic vegetation. All species of Trillium are FACU. Dominant hydrophytic vegetation is not present.

Soils

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	5YR 5/3	100					SL	

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? N

Remarks

No indicators of hydric soils.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? Y / N X

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

No indicators of wetland hydrology.

North State Resources, Inc.

Data Point 9
Feature Type Ephemeral Stream

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Project/Site: Fountain Wind City/County: Shasta County Date: 10/10/17
Applicant/Owner: Avangrid State: CA
Investigator(s): Gabe Youngblood, John Holford Section, Township, Range Sec. 22, T35N, R1E
Landform (hillslope, terrace, etc.) Drainage Local relief (concave, convex, none) Convex Slope % 5
Subregion (LRR): MLRA 22B Lat: 40.873445° Long: -121.846261° Datum: NAD 83
Soil Map Unit Name: Goulder gravelly sandy loam, 15 to 30 percent slopes NWI Classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐ ☒ Hydric soil? ☐/☒ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☐/☒ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank ✓ Scour ✓ Ordinary High Water Mark Mapped _____ Stream Width 2'
Feature Designation: Perennial _____ Intermittent _____ Ephemeral ✓ Blue-line on USGS Quad _____ Substrate Rock
Natural Drainage ✓ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents the headwaters of an ephemeral stream.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%=_____ 20%=_____ Total Cover:	0		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

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

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: _____ (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
_____ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

No vegetation scoured channel.

Data Point 9

Soils

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

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? /X

Remarks

Scoured channel no soil pit.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

Drift deposits indicate frequent flooding.

North State Resources, Inc.

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Data Point: 10
Feature Type: Fresh Emergent Wetland

Project/Site: Fountain Wind | City/County: Shasta County | Date: 10/24/17
Applicant/Owner: Avangrid | State: CA
Investigator(s): Gabe Youngblood | Section, Township, Range: Sec. 32, T35N, R3E
Landform (hillslope, terrace, etc.): Drainage | Local relief (concave, convex, none): Concave | Slope %: 1
Subregion (LRR): MLRA 22B | Lat: 40.853245° | Long: -121.780950° | Datum: NAD83
Soil Map Unit Name: Gardens-Jacksback complex, 0 to 2 percent slopes | NWI Classification: PEMC1
Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑ ☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank ✓ Scour ✓ Ordinary High Water Mark Mapped ✓ Stream Width 6'
Feature Designation: Perennial ✓ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad ✓ Substrate Soil & Vegetated
Natural Drainage ✓ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents OHWM of a perennial stream with emergent vegetation.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		

Sapling/Shrub Stratum (Plot Size: _____)	% Cover	Species?	Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		

Herb Stratum (Plot Size: 5')	% Cover	Species?	Status
1. Glyceria striata	80	Y	OBL
2. Unknown herb	5	N	UNK
3. Ludwigia palustris	1	N	OBL
4.			
5.			
6.			
7.			
8.			
50%=43 20%=17.2 Total Cover:	86		

Woody/Vine Stratum (Plot Size: _____)	% Cover	Species?	Status
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum 14 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 1 (A)
Total number of dominant species across all strata: 1 (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 =	0
FACW Species	_____	x 2 =	0
FAC Species	_____	x 3 =	0
FACU Species	_____	x 4 =	0
UPL Species	_____	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
_____ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominate hydrophytic vegetation is present.

Soils

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	10YR3/1	90	10YR 4/6	10	C	PL	Loam	Gravelly Sandy

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? ✓ / N

Remarks

Soils meet the requirements for indicator F6 Redox Dark Surface.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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) 6 Wetland Hydrology? ✓ / N

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

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

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

Remarks

Surface water provides wetland hydrology.

North State Resources, Inc.

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Data Point: 11
Feature Type: Riparian Wetland

Project/Site: Fountain Wind | City/County: Shasta County | Date: 10/24/17
Applicant/Owner: Avangrid | State: CA
Investigator(s): John Holson | Section, Township, Range: Sec. 32, T35N, R3E
Landform (hillslope, terrace, etc.): Stream terrace | Local relief (concave, convex, none): None | Slope %: 0
Subregion (LRR): MLRA 22B | Lat: 40.853179° | Long: -121.780916° | Datum: NAD83
Soil Map Unit Name: Gardens-Jacksback complex, 0 to 2 percent slopes | NWI Classification: PEMC1
Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑ ☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____
Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____
Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents riparian wetland associated with Carberry Creek where it flows through a meadow.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1. Salix lasiolepis	40	Y	FACW
2. Alnus Incanca	20	Y	FACW
3.			
4.			
50%=30 20%=12 Total Cover:	60		
Herb Stratum (Plot Size: 5')	**% Cover**	**Species?**	**Status**
1. Juncus effusus	35	Y	FACW
2. Carex sp.	15	Y	FAC
3. Epilobium ciliatum	10	N	FACW
4. Drymocallis glandulosa	2	N	FAC
5. Alopecurus pratensis	2	N	FAC
6. Poa pratensis	1	N	FAC
7.			
8.			
50%=32.5 20%=13 Total Cover:	65		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum 35 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 4 (A)
Total number of dominant species across all strata: 4 (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 =	0
FACW Species	_____	x 2 =	0
FAC Species	_____	x 3 =	0
FACU Species	_____	x 4 =	0
UPL Species	_____	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
_____ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominant hydrophytic vegetation present. Carex sp. assumed FAC or wetter.

Data Point 11

Soils

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
0-3	2.5YR 2.5/1	100					Loam	Clay + roots/organic matter
3-10	2.5YR 2.5/1	90	5YR 4/4	10	C	M	Loam	Clay, some cobble
10-16	7.5YR 2.5/1	100					Loam	Sandy

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? ✓ /

Remarks

Soils meet the requirements for indicator F6 Redox Dark Surface.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes ✓ No _____ Depth (inches) 10 *(includes capillary fringe)*

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

Remarks

Saturation at 10 inches provides wetland hydrology.

North State Resources, Inc.

Data Point: 12
Feature Type: Upland

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Project/Site: Fountain Wind | City/County: Shasta County | Date: 10/24/17
Applicant/Owner: Avangrid | State: CA
Investigator(s): John Holson | Section, Township, Range: Sec. 32, T35N, R3E
Landform (hillslope, terrace, etc.): Stream terrace | Local relief (concave, convex, none): None | Slope %: 0
Subregion (LRR): MLRA 22B | Lat: 40.853133° | Long: -121.780904° | Datum: NAD83
Soil Map Unit Name: Gardens-Jacksback complex, 0 to 2 percent slopes | NWI Classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑/☐ Hydric soil? ☐/☒ Wetland hydrology? ☐/☒ Is sampled area a wetland? ☐/☒ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____
Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____
Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

Upland pair to DP 10 fresh emergent wetland/perennial stream and DP 11 riparian wetland.

Vegetation (Use Scientific Names)

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size: _____)			
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)			
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: 5')			
1. Juncus balticus	40	Y	FACW
2. Carex sp.	40	Y	FAC--
3. Poa pratensis	10	N	FAC
4. Alopecurus pratensis	5	N	FAC
5. Holcus lanatus	5	N	FAC
6. Phalaris sp.	5	N	UNK
7.			
8.			
50%= 52.5 20%= 21 Total Cover:	105		
Woody/Vine Stratum (Plot Size: _____)			
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 2 (A)
Total number of dominant species across all strata: 2 (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 =	0
FACW Species	_____	x 2 =	0
FAC Species	_____	x 3 =	0
FACU Species	_____	x 4 =	0
UPL Species	_____	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
✓ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominant hydrophytic vegetation present. Carex sp. assumed FAC or wetter due to presence of other hydrophytic species.

Data Point 12

Soils

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
0-2	10YR 3/1	100					Loam	Roots/organic matter
2-6	7.5YR 2.5/1	100					Loam	
6-16	7.5YR 2.5/1	100					Loam	Clay

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
_____ 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 Materials (TF21)
_____ Very Shallow Dark Surface (TF12)
_____ Vegetated Sand/Gravel Bars
_____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? Y /X

Remarks

No indicators of hydric soil were observed.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? Y /X
Water Table Present? Yes _____ No X Depth (inches) _____
Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

No indicators of wetland hydrology were observed.

North State Resources, Inc.

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Data Point: 13
Feature Type: Wetland Meadow

Project/Site: Fountain Wind | City/County: Shasta County | Date: 10/24/17
Applicant/Owner: Avangrid | State: CA
Investigator(s): John Holson | Section, Township, Range: Sec. 29, T35N, R3E
Landform (hillslope, terrace, etc.): Stream terrace | Local relief (concave, convex, none): None | Slope %: 0
Subregion (LRR): MLRA 22B | Lat: 40.853651° | Long: -121.782083° | Datum: NAD83
Soil Map Unit Name: Gardens-Jacksback complex, 0 to 2 percent slopes | NWI Classification: PEMC1
Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑/☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____
Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____
Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents wetland meadow adjacent to Carberry Creek.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: 15')	**% Cover**	**Species?**	**Status**
1. Salix lasiolepis	10	Y	FACW
2.			
3.			
4.			
50%= 5 20%= 2 Total Cover:	10		
Herb Stratum (Plot Size: 5')	**% Cover**	**Species?**	**Status**
1. Juncus effusus	75	Y	FACW
2. Mentha spicata	15	Y	FACW
3. Carex sp.	10	N	FAC
4. Holcus lanatus	3	N	FAC
5. Drymocallis glandulosa	2	N	FAC
6. Veronica americana	1	N	OBL
7.			
8.			
50%= 53 20%= 13.2 Total Cover:	106		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 3 (A)
Total number of dominant species across all strata: 3 (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 =	0
FACW Species	_____	x 2 =	0
FAC Species	_____	x 3 =	0
FACU Species	_____	x 4 =	0
UPL Species	_____	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
_____ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominant hydrophytic vegetation present. Carex sp. assumed FAC or wetter.

Data Point 13

Soils

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
0-6	7.5YR 3/2	100					Loam	Clay, some cobble
6-10	7.5YR 2.5/1	100	5YR 4/4	10	C	M	Clay	some cobble

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? ✓ /

Remarks

Soils had a hydrogen sulfide odor and meet the requirements for indicator A4 Hydrogen Sulfide.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes ✓ No _____ Depth (inches) 4

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

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

Remarks

Water table at 4 inches provides wetland hydrology.

North State Resources, Inc.

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Data Point: 14
Feature Type: Upland

Project/Site: Fountain Wind | City/County: Shasta County | Date: 10/24/17
Applicant/Owner: Avangrid | State: CA
Investigator(s): Gabe Youngblood | Section, Township, Range: Sec. 29, T35N, R3E
Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): Convex | Slope %: 2
Subregion (LRR): MLRA 22B | Lat: 40.853612° | Long: -121.782094° | Datum: NAD83
Soil Map Unit Name: Gardens-Jacksback complex, 0 to 2 percent slopes | NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐ ☒ Hydric soil? ☐/☒ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☐/☒ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____
Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____
Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents uplands in previously placed fill associated with a road adjacent to a wet meadow.

Vegetation (Use Scientific Names)

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size: _____)			
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	% Cover	Species?	Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: 5')	% Cover	Species?	Status
1. Holcus lanatus	30	Y	FAC
2. Acmispon americanus	20	Y	FACU
3. Achillea millefolium	20	Y	FACU
4. Alopecurus pratensis	10	N	FAC
5. Poa pratensis	10	N	FAC
6. Rumex acetosella	5	N	FACU
7. Plantago lanceolata	5	N	FACU
8.			
50%=_____ 20%=_____ Total Cover:	100		
Woody/Vine Stratum (Plot Size: _____)	% Cover	Species?	Status
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 1 (A)
Total number of dominant species across all strata: 3 (B)
Percent of dominant species that are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
_____ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

Dominant hydrophytic vegetation is not present.

Data Point 14

Soils

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
0-14	7.5YR 3/4	100					Loam	Gravelly

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? /X

Remarks

No indicators of hydric soils were observed.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes ✓ No _____ Depth (inches) 14

Saturation Present? Yes ✓ No _____ Depth (inches) 6 *(includes capillary fringe)*

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

Remarks

Saturation at 6 inches provides wetland hydrology.

North State Resources, Inc.

Data Point 15
Feature Type Non-vegetated Ditch

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Project/Site: Fountain Wind City/County: Shasta County Date: 10/24/17
Applicant/Owner: Avangrid State: CA
Investigator(s): Gabe Youngblood Section, Township, Range Sec. 32, T35N, R3E
Landform (hillslope, terrace, etc.) Drainage Local relief (concave, convex, none) Concave Slope % 2
Subregion (LRR): MLRA 22B Lat: 40.853041° Long: -121.781886° Datum: NAD83
Soil Map Unit Name: Gardens-Jacksback complex, 0 to 2 percent slopes NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑/☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank ✓ Scour ✓ Ordinary High Water Mark Mapped ✓ Stream Width 1'
Feature Designation: Perennial _____ Intermittent _____ Ephemeral ✓ Blue-line on USGS Quad _____ Substrate Rock
Natural Drainage _____ Artificial Drainage ✓ Navigable Water _____

Remarks

DP documents OHWM of a non-vegetated ditch on the uphill side of a dirt road.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%=_____ 20%=_____ Total Cover:	0		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum 14 % Cover of Biotic Crust 0

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: _____ (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
_____ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

Veg not evaluated other waters feature.

Soils

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

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
_____ 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 Materials (TF21)
_____ Very Shallow Dark Surface (TF12)
_____ Vegetated Sand/Gravel Bars
_____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? /X

Remarks

Soils not evaluated other waters feature.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N
Water Table Present? Yes _____ No X Depth (inches) _____
Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

Drift deposits indicate frequent flooding

North State Resources, Inc.

Data Point 16
Feature Type Ephemeral Stream

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Project/Site: Fountain Wind City/County: Shasta County Date: 10/16/17
Applicant/Owner: Avangrid State: CA
Investigator(s): Gabe Youngblood Section, Township, Range Sec. 33, T35N, R1E
Landform (hillslope, terrace, etc.) Drainage Local relief (concave, convex, none) Concave Slope % 2
Subregion (LRR): MLRA 22B Lat: 40.841929° Long: -121.862647° Datum: NAD83
Soil Map Unit Name: Windy and McCarthy stony sandy loams, 0 to 30 percent slopes NWI Classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐/☒ Hydric soil? ☐/☒ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☐/☒ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank ✓ Scour ✓ Ordinary High Water Mark Mapped ✓ Stream Width 5'
Feature Designation: Perennial _____ Intermittent _____ Ephemeral ✓ Blue-line on USGS Quad _____ Substrate Soil & Rock
Natural Drainage ✓ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents OHWM of an ephemeral stream.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%=_____ 20%=_____ Total Cover:	0		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust 0

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: _____ (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
_____ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

No veg scoured channel.

Data Point 16

Soils

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

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
_____ 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 Materials (TF21)
_____ Very Shallow Dark Surface (TF12)
_____ Vegetated Sand/Gravel Bars
_____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? /X

Remarks

No soils pit scoured channel.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N
Water Table Present? Yes _____ No X Depth (inches) _____
Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

Drift deposits indicate frequent flooding.

North State Resources, Inc.

Data Point 17
Feature Type Non-vegetated ditch

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Project/Site: Fountain Wind City/County: Shasta County Date: 10/16/17
Applicant/Owner: Avangrid State: CA
Investigator(s): Gabe Youngblood Section, Township, Range Sec. 34, T35N, R1E
Landform (hillslope, terrace, etc.) Drainage Local relief (concave, convex, none) Concave Slope % 2
Subregion (LRR): MLRA 22B Lat: 40.841929° Long: -121.862114° Datum: NAD83
Soil Map Unit Name: Windy and McCarthy stony sandy loams, 0 to 30 percent slopes NWI Classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐ ☒ Hydric soil? ☐/☒ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☐/☒ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank ✓ Scour ✓ Ordinary High Water Mark Mapped ✓ Stream Width 3'
Feature Designation: Perennial _____ Intermittent _____ Ephemeral ✓ Blue-line on USGS Quad _____ Substrate Rock
Natural Drainage ✓ Artificial Drainage _____ Navigable Water _____

Remarks DP documents OHWM of a NVD.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%=_____ 20%=_____ Total Cover:	0		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust 0

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: _____ (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
_____ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks No veg scoured channel.

Data Point 17

Soils

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

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? N

Remarks

No soils pit scoured channel.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 N Depth (inches) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes _____ No N Depth (inches) _____

Saturation Present? Yes _____ No N Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

Sediment deposits indicate frequent flooding.

North State Resources, Inc.

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Data Point: 18
Feature Type: Wetland meadow

Project/Site: Fountain Wind | City/County: Shasta County | Date: 10/16/17
Applicant/Owner: Avangrid | State: CA
Investigator(s): Gabe Youngblood | Section, Township, Range: Sec. 34, T35N, R1E
Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): Convex | Slope %: 1
Subregion (LRR): MLRA 22B | Lat: 40.841924° | Long: -121.861772° | Datum: NAD83
Soil Map Unit Name: Windy and McCarthy stony sandy loams, 0 to 30 percent slopes | NWI Classification: PEM1Ch

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑/☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____
Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____
Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents wetland meadow.

Vegetation (Use Scientific Names)

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size: _____)			
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)			
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: 5')			
1. Juncus balticus	45	Y	FACW
2. Carex sp. (NIF)	40	Y	FAC-*
3. Deschampsia danthonioides	3	N	FACW
4. Unkown grass	2	N	UNK
5.			
6.			
7.			
8.			
50%=45 20%=18 Total Cover:	90		
Woody/Vine Stratum (Plot Size: _____)			
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust 10

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 2 (A)
Total number of dominant species across all strata: 2 (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 =	0
FACW Species	_____	x 2 =	0
FAC Species	_____	x 3 =	0
FACU Species	_____	x 4 =	0
UPL Species	_____	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
✓ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

Dominant hydrophytic vegetation present. Carex sp. assumed FAC or wetter.

Data Point 18

Soils

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
0-6	10YR 2/2	100					Loam	Sandy
6-12	10YR 2/2	80	5YR 3/4	20	C	PL	Loam	Sandy

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: N/A Depth (Inches) N/A Hydric Soil Present? ✓ / N

Remarks

Soils meet the requirement for indicator F6 Redox Dark Surface.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

Algal crust indicates long duration saturation. Saturation is visible on Google Earth imagery from 7/8/12.

North State Resources, Inc.

Data Point 19
Feature Type Upland

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Project/Site: Fountain Wind City/County: Shasta County Date: 10/16/17
Applicant/Owner: Avangrid State: CA
Investigator(s): Gabe Youngblood Section, Township, Range Sec. 34, T35N, R1E
Landform (hillslope, terrace, etc.) Hillslope (Nearly Level) Local relief (concave, convex, none) Convex Slope % 0
Subregion (LRR): MLRA 22B Lat: 40.841931° Long: -121.861811° Datum: NAD83
Soil Map Unit Name: Windy and McCarthy stony sandy loams, 0 to 30 percent slopes NWI Classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐/☒ Hydric soil? ☐/☒ Wetland hydrology? ☐/☒ Is sampled area a wetland? ☐/☒ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____
Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____
Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

Upland pair to Data Point 18 wetland meadow.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus kelloggii	40	Y	UPL
2.			
3.			
4.			
50%= 20 20%= 8 Total Cover:	40		

Sapling/Shrub Stratum (Plot Size: 15')	% Cover	Species?	Status
1. Rubus armeniacus	80	Y	FAC
2. Salix scouleriana	5	N	FAC
3.			
4.			
50%= 42.5 20%= 17 Total Cover:	85		

Herb Stratum (Plot Size: 5')	% Cover	Species?	Status
1. Hypericum perforatum	1	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%= .5 20%= .2 Total Cover:	1		

Woody/Vine Stratum (Plot Size: _____)	% Cover	Species?	Status
1.			
2.			
50%= 20%= Total Cover:	0		

% Bare Ground in Herb Stratum 99 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 1 (A)
Total number of dominant species across all strata: 3 (B)
Percent of dominant species that are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
_____ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

Dominate hydrophytic vegetation is not present.

Data Point 19

Soils

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 2.5/3	100					Loam	Sandy

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: N/A Depth (Inches) N/A Hydric Soil Present? N

Remarks

No indicators of hydric soils were observed.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? Y / N X

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

No indicators of wetland hydrology were observed.

North State Resources, Inc.

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Data Point: 20
Feature Type: Fresh Emergent Wetland

Project/Site: Fountain Wind | City/County: Shasta County | Date: 10/16/17
Applicant/Owner: Avangrid | State: CA
Investigator(s): Gabe Youngblood | Section, Township, Range: Sec. 34, T35N, R1E
Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave | Slope %: 1
Subregion (LRR): MLRA 22B | Lat: 40.841448° | Long: -121.861591° | Datum: NAD83
Soil Map Unit Name: Windy and McCarthy stony sandy loams, 0 to 30 percent slopes | NWI Classification: PABFh
Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑/☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____
Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____
Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents fresh emergent wetland in a seasonal pond.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: 5')	**% Cover**	**Species?**	**Status**
1. Glyceria striata	40	Y	OBL
2. Nuphar polysepala	40	Y	OBL
3. Schoenoplectus acutus	5	N	OBL
4. Muhlenbergia filiformis	5	N	FACW
5.			
6.			
7.			
8.			
50%=45 20%=18 Total Cover:	90		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust 10

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 2 (A)
Total number of dominant species across all strata: 2 (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 =	0
FACW Species	_____	x 2 =	0
FAC Species	_____	x 3 =	0
FACU Species	_____	x 4 =	0
UPL Species	_____	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
✓ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominate hydrophytic vegetation present.

Data Point 20

Soils

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
0-16	10YR 2/1	100					Muck	

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: N/A Depth (Inches) N/A Hydric Soil Present? ✓ /

Remarks

Soils meet the requirement for indicator A1 Histosol.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes ✓ No _____ Depth (inches) 6

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

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

Remarks

Saturation and high water table provide wetland hydrology.

North State Resources, Inc.

Data Point 21

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type Pond

Project/Site: Fountain Wind City/County: Shasta County Date: 10/16/17

Applicant/Owner: Avangrid State: CA

Investigator(s): Gabe Youngblood Section, Township, Range Sec. 34, T35N, R1E

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

Subregion (LRR): MLRA 22B Lat: 40.841443° Long: -121.861622° Datum: NAD83

Soil Map Unit Name: Windy and McCarthy stony sandy loams, 0 to 30 percent slopes NWI Classification: PABFh

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐ ☒ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☐/☒ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____

Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____

Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents unvegetated portion of a seasonal pond.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%=_____ 20%=_____ Total Cover:	0		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

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

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: _____ (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

_____ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

Portion of seasonal pond with no vegetation.

Data Point 21

Soils

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
0-6	10YR 3/3	100					Loam	Sandy, very rocky
6-12	10YR 2/1	80	7.5YR 3/4	10	C	PL	Loam	Clay
			10YR 6/1	10	D	M	Loam	Clay

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: N/A Depth (Inches) N/A Hydric Soil Present? ✓ /

Remarks

Soils meet the requirement for indicator F6 Redox Dark Surface and indicator F7 Depleted Dark Surface.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes ✓ No _____ Depth (inches) 6 inches *(includes capillary fringe)*

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

Remarks

Saturation provides wetland hydrology. Inundation visible on Google Earth imagery from 7/8/12

North State Resources, Inc.

Data Point 22
Feature Type Upland

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Project/Site: Fountain Wind City/County: Shasta County Date: 10/16/17
Applicant/Owner: Avangrid State: CA
Investigator(s): Gabe Youngblood Section, Township, Range Sec. 34, T35N, R1E
Landform (hillslope, terrace, etc.) roadbank Local relief (concave, convex, none) Convex Slope % 20
Subregion (LRR): MLRA 22B Lat: 40.841428° Long: -121.861648° Datum: NAD83
Soil Map Unit Name: Windy and McCarthy stony sandy loams, 0 to 30 percent slopes NWI Classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑/☐ Hydric soil? ☐/☒ Wetland hydrology? ☐/☒ Is sampled area a wetland? ☐/☒ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____
Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____
Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

Upland pair to Data Point 20 and 21. Data point is located on the road shoulder. The road acts as a dam causing water to pond seasonally.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%= 20 20%= 8 Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: 15')	**% Cover**	**Species?**	**Status**
1. Rubus armeniacus	80	Y	FAC
2. Quercus Kelloggii	10	N	UPL
3. Calocedrus decurrens	10	N	UPL
4.			
50%= 42.5 20%= 17 Total Cover:	100		
Herb Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%= 20%= Total Cover:	0		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%= 20%= Total Cover:	0		

% Bare Ground in Herb Stratum 100 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 1 (A)
Total number of dominant species across all strata: 1 (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 =	0
FACW Species	x 2 =	0
FAC Species	x 3 =	0
FACU Species	x 4 =	0
UPL Species	x 5 =	0
Column Totals 0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
✓ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominate facultative vegetation is present.

Data Point 22

Soils

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	10YR 3/3	100					Loam	Sandy

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: N/A Depth (Inches) N/A Hydric Soil Present? N

Remarks

No indicators of hydric soils were observed.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? Y / N X

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

No indicators of wetland hydrology were observed.

North State Resources, Inc.

Data Point: 23

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type: Riparian Wetland

Project/Site: Fountain Wind | City/County: Shasta County | Date: 10/16/17

Applicant/Owner: Avangrid | State: CA

Investigator(s): Gabe Youngblood | Section, Township, Range: Sec. 34, T35N, R1E

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

Subregion (LRR): MLRA 22B | Lat: 40.841404° | Long: -121.861956° | Datum: NAD83

Soil Map Unit Name: Windy and McCarthy stony sandy loams, 0 to 30 percent slopes | NWI Classification: PEM1C

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑ ☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____

Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____

Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents a riparian wetland.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus ponderosa	3	Y	FACU
2.			
3.			
4.			
50%= 1.5 20%= 0.6 Total Cover:	3		
Sapling/Shrub Stratum (Plot Size: 15')	**% Cover**	**Species?**	**Status**
1. Rubus armeniacus	70	Y	FAC
2. Salix scouleriana	20	Y	FAC
3. Rosa californica	4	N	FAC
4.			
50%= 47 20%= 18.8 Total Cover:	94		
Herb Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%=_____ 20%=_____ Total Cover:	0		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum 100 % Cover of Biotic Crust _____

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 3 (B)

Percent of dominant species that are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

✓ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominate hydrophytic vegetation present.

Soils

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
0-21	7.5YR 3/1	95	7.5YR3/4	5	C	PL	Loam	Sandy

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: N/A Depth (Inches) N/A Hydric Soil Present? ✓ / I

Remarks

Soils meet the requirements for indicator F6 Redox Dark Surface.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

Oxidized rhizospheres indicate long duration saturation.

North State Resources, Inc.

Data Point 24

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type Upland

Project/Site: Fountain Wind City/County: Shasta County Date: 10/16/17

Applicant/Owner: Avangrid State: CA

Investigator(s): Gabe Youngblood Section, Township, Range Sec. 34, T35N, R1E

Landform (hillslope, terrace, etc.) Hillslope Local relief (concave, convex, none) Convex Slope % 10

Subregion (LRR): MLRA 22B Lat: 40.841477° Long: -121.861999° Datum: NAD83

Soil Map Unit Name: Windy and McCarthy stony sandy loams, 0 to 30 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑ ☐ Hydric soil? ☐/☒ Wetland hydrology? ☐/☒ Is sampled area a wetland? ☐/☒ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____

Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____

Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

Upland pair to Data Point 23 Riparian Wetland.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus ponderosa	10	Y	FACU
2. Salix scouleriana	10	Y	FAC
3. Cornus nuttallii	5	N	FACU
4. Quercus Kelloggii	2	N	UPL
50%= 13.5 20%= 5.4 Total Cover:	27		
Sapling/Shrub Stratum (Plot Size: 15')	**% Cover**	**Species?**	**Status**
1. Rubus armeniacus	70	Y	FAC
2. Ceanothus integerrimus	5	N	UPL
3.			
4.			
50%= 37.5 20%= 15 Total Cover:	75		
Herb Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%=_____ 20%=_____ Total Cover:	0		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum 100 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 3 (B)

Percent of dominant species that are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

✓ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominate facultative vegetation is present.

Data Point 24

Soils

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 3/1	100					Loam	Sandy

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: N/A Depth (Inches) N/A Hydric Soil Present? N

Remarks

No indicators of hydric soils were observed.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? Y / N X

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

No indicators of wetland hydrology were observed.

North State Resources, Inc.

Data Point 25

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type Intermittent Stream

Project/Site: Fountain Wind City/County: Shasta County Date: 10/23/17

Applicant/Owner: Avangrid State: CA

Investigator(s): Gabe Youngblood Section, Township, Range Sec. 36, T35N, R1E

Landform (hillslope, terrace, etc.) Drainage Local relief (concave, convex, none) Concave Slope % 2

Subregion (LRR): MLRA 22B Lat: 40.840698° Long: -121.807661° Datum: NAD83

Soil Map Unit Name: Gasper-Scarface complex, moist, 15 to 30 percent slopes NWI Classification: R4SBC

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐/☒ Hydric soil? ☐/☒ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☐/☒ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank ✓ Scour ✓ Ordinary High Water Mark Mapped ✓ Stream Width 2'

Feature Designation: Perennial _____ Intermittent ✓ Ephemeral _____ Blue-line on USGS Quad ✓ Substrate Soil & Gravel

Natural Drainage ✓ Artificial Drainage _____ Navigable Water _____

Remarks DP documents OHWM of an intermittent stream.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%=_____ 20%=_____ Total Cover:	0		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust 0

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: _____ (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

_____ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks No veg scoured channel.

Data Point 25

Soils

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

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? N

Remarks

No soils pit scoured channel.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 N Depth (inches) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes _____ No N Depth (inches) _____

Saturation Present? Yes _____ No N Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

Drift deposits indicate frequent flooding.

North State Resources, Inc.

Data Point 26

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type Upland

Project/Site: Fountain Wind City/County: Shasta County Date: 10/23/17

Applicant/Owner: Avangrid State: CA

Investigator(s): Gabe Youngblood Section, Township, Range Sec. 1, T34N, R1E

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

Subregion (LRR): MLRA 22B Lat: Long: Datum:

Soil Map Unit Name: Gasper-Scarface complex, moist, 15 to 30 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑/☐ Hydric soil? ☐/☒ Wetland hydrology? ☐/☒ Is sampled area a wetland? ☐/☒ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____

Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____

Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents an upland area dominated by Carex sp.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1. Carex sp. (NIF)	60	Y	FAC
2. Carex sp. (NIF)	20	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
50%=40 20%=16 Total Cover:	80		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (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 =	0
FACW Species	_____	x 2 =	0
FAC Species	_____	x 3 =	0
FACU Species	_____	x 4 =	0
UPL Species	_____	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

✓ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Carex sp. assumed FAC. Dominant facultative vegetation present.

Data Point 26

Soils

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 2.5/2	100					Loam	Gravely

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? N

Remarks

No indicators of hydric soil were observed.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? Y / N X

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

No indicators of wetland hydrology were observed.

North State Resources, Inc.

Data Point 27
Feature Type Sesonal Wetland

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Project/Site: Fountain Wind City/County: Shasta County Date: 10/17/17
Applicant/Owner: Avangrid State: CA
Investigator(s): Gabe Youngblood Section, Township, Range Sec. 3, T34N, R1E
Landform (hillslope, terrace, etc.) Depression Local relief (concave, convex, none) Concave Slope % 1
Subregion (LRR): MLRA 22B Lat: 40.831029° Long: -121.847797° Datum: NAD83
Soil Map Unit Name: Toomes very rocky loam, 0 to 50 percent slopes NWI Classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑ ☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____
Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____
Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents a seasonal wetland.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: 5')	**% Cover**	**Species?**	**Status**
1. Eleocharis acicularis	50	Y	OBL
2. Deschampsia danthonioides	20	Y	FACW
3. Juncus balticus	7	N	FAC
4. Bromus hordeaceus	2	N	FACU
5. Navarretia sp.	1	N	FAC--
6.			
7.			
8.			
50%=40 20%=16 Total Cover:	80		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

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

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 2 (A)
Total number of dominant species across all strata: 2 (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 =	0
FACW Species	_____	x 2 =	0
FAC Species	_____	x 3 =	0
FACU Species	_____	x 4 =	0
UPL Species	_____	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
✓ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominant hydrophytic vegetation is present. Navarretia sp. assumed FAC due to presence of dominant hydrophytic species.

Data Point 27

Soils

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
0-8	10YR 5/1	80	5YR 3/4	20	C	PL	Loam	Clay
8-12	10YR 3/1	100					Loam	Clay

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: N/A Depth (Inches) N/A Hydric Soil Present? ✓ /

Remarks

Soils meet the requirements for indicator F3 Depleted Matrix.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

Algal crust indicates long duration inundation and oxidized rhizospheres indicate long duration saturation.

North State Resources, Inc.

Data Point 28

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type Upland

Project/Site: Fountain Wind City/County: Shasta County Date: 10/17/17

Applicant/Owner: Avangrid State: CA

Investigator(s): Gabe Youngblood Section, Township, Range Sec. 3, T34N, R1E

Landform (hillslope, terrace, etc.) Road cut Local relief (concave, convex, none) Convex Slope % 5

Subregion (LRR): MLRA 22B Lat: 40.831032° Long: -121.847810° Datum: NAD83

Soil Map Unit Name: Toomes very rocky loam, 0 to 50 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐/☒ Hydric soil? ☐/☒ Wetland hydrology? ☐/☒ Is sampled area a wetland? ☐/☒ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____

Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____

Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

Upland pair to DP27 seasonal wetland.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus ponderosa	5	Y	UPL
2.			
3.			
4.			
50%= 2.5 20%= 1 Total Cover:	5		
Sapling/Shrub Stratum (Plot Size: 15')	**% Cover**	**Species?**	**Status**
1. Arctostaphylos patula	25	Y	UPL
2. Quercus garryana	10	Y	FACU
3.			
4.			
50%= 17.5 20%= 7 Total Cover:	35		
Herb Stratum (Plot Size: 5')	**% Cover**	**Species?**	**Status**
1. Elymus caput-medusae	35	Y	UPL
2. Bromus tectorum	5	N	UPL
3. Epilobium sp.	5	N	UNK
4. Unk sp.	5	N	UNK
5.			
6.			
7.			
8.			
50%= 45 20%= 18 Total Cover:	50		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%= 20%= Total Cover:	0		

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 0 (A)

Total number of dominant species across all strata: 4 (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 =	0
FACW Species	x 2 =	0
FAC Species	x 3 =	0
FACU Species	x 4 =	0
UPL Species	x 5 =	0
Column Totals 0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

_____ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

Dominate hydrophytic vegetation is not present.

Data Point 28

Soils

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
0-8	10YR 3/2	100					Loam	Clay

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: bedrock Depth (Inches) 8 Hydric Soil Present? Y / N

Remarks

No indicators of hydric soils were observed. Paralithic bedrock encountered at 8 inches.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? Y / N X

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

No indicators of wetland hydrology were observed.

North State Resources, Inc.

Data Point 29
Feature Type Intermittent Stream

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Project/Site: Fountain Wind City/County: Shasta County Date: 10/17/17
Applicant/Owner: Avangrid State: CA
Investigator(s): Gabe Youngblood Section, Township, Range Sec. 3, T34N, R1E
Landform (hillslope, terrace, etc.) Drainage Local relief (concave, convex, none) Concave Slope % 5
Subregion (LRR): MLRA 22B Lat: 40.831304° Long: -121.847573° Datum: NAD83
Soil Map Unit Name: Windy and McCarthy stony sandy loams, 0 to 30 percent slopes NWI Classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐/☒ Hydric soil? ☐/☒ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☐/☒ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank ✓ Scour ✓ Ordinary High Water Mark Mapped ✓ Stream Width 2'
Feature Designation: Perennial ____ Intermittent ✓ Ephemeral ____ Blue-line on USGS Quad ____ Substrate Soil & Rock
Natural Drainage ✓ Artificial Drainage ____ Navigable Water ____

Remarks

DP documents OHWM of an intermittent stream.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=____ 20%=____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: ____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=____ 20%=____ Total Cover:	0		
Herb Stratum (Plot Size: ____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%=____ 20%=____ Total Cover:	0		
Woody/Vine Stratum (Plot Size: ____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=____ 20%=____ Total Cover:	0		

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust 0

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: ____ (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators

____ Rapid Test for Hydrophytic Vegetation
____ Dominance Test is >50%
____ Prevalence Index is ≤ 3.0[1]
____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
____ Wetland Non-Vascular Plants[1]
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

No veg scoured channel.

Data Point 29

Soils

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

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? /X

Remarks

No soils pit scoured channel.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

Drift deposits indicate frequent flooding.

North State Resources, Inc. now Stantec

Data Point 30

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type Wetland Meadow

Project/Site: Fountain Wind City/County: Shasta County Date: 10/24/17

Applicant/Owner: Avangrid State: California

Investigator(s): Gabe Youngblood Section, Township, Range Sec. 8, T34N, R2E

Landform (hillslope, terrace, etc.) Shallow depression on terrace Local relief (concave, convex, none) Concave Slope % 0

Subregion (LRR): MLRA 22B Lat: 40.824316° Long: -121.779911° Datum: NAD83

Soil Map Unit Name: Gasper-Scarface complex, moist, 30 to 50 percent slopes NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑/☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____

Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____

Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents a wetland meadow in a shallow depression along the stream terrace for Hatchet Creek.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: 5')	**% Cover**	**Species?**	**Status**
1. Carex utriculata	100	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%=_____ 20%=_____ Total Cover:	100		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 50

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 1 (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 =	0
FACW Species	_____	x 2 =	0
FAC Species	_____	x 3 =	0
FACU Species	_____	x 4 =	0
UPL Species	_____	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

_____ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominant hydrophytic vegetation is present. Biotic crust present in sparsely vegetated portions of feature.

Data Point 30

Soils

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
0-6	7.5YR 2.5/2	100					Loam	Sandy
6-12	10YR 4/2	80	5YR4/6	20	C	PL	Loam	Sandy

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? ✓

Remarks

Soils meet the requirements for indicator F3 Depleted Matrix.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes _____ No ✗ Depth (inches) _____

Saturation Present? Yes _____ No ✗ Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

Algal crust indicates long duration inundation. Oxidized rhizospheres indicate long duration saturation.

North State Resources, Inc. now Stantec

Data Point 31

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type Upland

Project/Site: Fountain Wind City/County: Shasta County Date: 10/24/17

Applicant/Owner: Avangrid State: California

Investigator(s): Gabe Youngblood Section, Township, Range Sec. 8, T34N, R2E

Landform (hillslope, terrace, etc.) Stream terrace Local relief (concave, convex, none) Concave Slope % 0

Subregion (LRR): MLRA 22B Lat: 40.824304° Long: -121.779913° Datum: NAD83

Soil Map Unit Name: Gasper-Scarface complex, moist, 30 to 50 percent slopes NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑/☐ Hydric soil? ☐/☒ Wetland hydrology? ☐/☒ Is sampled area a wetland? ☐/☒ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____

Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____

Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

Upland pair to Data Point 30 wet meadow.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		

Sapling/Shrub Stratum (Plot Size: _____)	% Cover	Species?	Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		

Herb Stratum (Plot Size: 5')	% Cover	Species?	Status
1. Juncus sp.	60	Y	FAC-
2. Achillea millefolium	10	N	FACU
3. Drymocallis glandulosa	10	N	FAC
4. Unk grass	10	N	?
5.			
6.			
7.			
8.			
50%=45 20%=18 Total Cover:	90		

Woody/Vine Stratum (Plot Size: _____)	% Cover	Species?	Status
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust _____

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 1 (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 =	0
FACW Species	_____	x 2 =	0
FAC Species	_____	x 3 =	0
FACU Species	_____	x 4 =	0
UPL Species	_____	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

_____ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Juncus sp. assumed FAC or wetter due to species that are documented within the project as being FACW or OBL.

Data Point 31

Soils

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 2.5/2	100					Loam	Sandy

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? N

Remarks

No indicators of hydric soils were observed.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? Y / N X

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

No indicators of wetland hydrology were observed.

North State Resources, Inc. now Stantec

Data Point: 32

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type: Riparian Wetland

Project/Site: Fountain Wind | City/County: Shasta County | Date: 10/25/17

Applicant/Owner: Avangrid | State: California

Investigator(s): Gabe Youngblood | Section, Township, Range: Sec. 8, T34N, R2E

Landform (hillslope, terrace, etc.): Drainage | Local relief (concave, convex, none): Concave | Slope %: 3

Subregion (LRR): MLRA 22B | Lat: 40.820561° | Long: -121.778456° | Datum: NAD83

Soil Map Unit Name: Jacksback loam, 2 to 9 percent slopes | NWI Classification: R3USC

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑ ☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank ✓ Scour ✓ Ordinary High Water Mark Mapped ✓ Stream Width: Variable

Feature Designation: Perennial ✓ Intermittent ____ Ephemeral ____ Blue-line on USGS Quad ✓ Substrate: Bolder, cobbel, gravel, and sand

Natural Drainage ✓ Artificial Drainage ____ Navigable Water ____

Remarks

DP documents riparian wetlands along Hatchet Creek.

Vegetation (Use Scientific Names)

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size: 30')			
1. Pinus contorta	10	Y	FAC
2.			
3.			
4.			
50%= 5 20%= 2 Total Cover:	10		
Sapling/Shrub Stratum (Plot Size: 15')			
1. Alnus incana	60	Y	FACW
2. Abies concolor	10	N	UPL
3. Spiraea douglasii	2	N	FACW
4. Acer circinatum (2%)/Populus tremuloides (2%)	4	N	FAC/FACU
50%= 38 20%= 15.2 Total Cover:	76		
Herb Stratum (Plot Size: 5')			
1. Glyceria striata	10	Y	OBL
2. Stachys ajugoides	2	N	OBL
3. Heracleum maximum	2	N	FAC
4. Galium aparine	2	N	FACU
5. Scirpus microcarpus	2	N	OBL
6.			
7.			
8.			
50%= 9 20%= 3.6 Total Cover:	18		
Woody/Vine Stratum (Plot Size: ____)			
1.			
2.			
50%= 20%= Total Cover:	0		

% Bare Ground in Herb Stratum 82 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 3 (A)

Total number of dominant species across all strata: 3 (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 =	0
FACW Species		x 2 =	0
FAC Species		x 3 =	0
FACU Species		x 4 =	0
UPL Species		x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators

____ Rapid Test for Hydrophytic Vegetation

____ Dominance Test is >50%

____ Prevalence Index is ≤ 3.0[1]

____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

____ Wetland Non-Vascular Plants[1]

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominant hydrophytic vegetation is present.

Data Point 32

Soils

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
0-6	10YR 4/2	100					Sand	Silty
6-12	10YR 4/2	60	7.5YR4/6	40	C	PL	Sand	Silty

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? ✓

Remarks

Soils meet the requirements for indicator S5 Sandy Redox.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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) _____ Wetland Hydrology? ✓ / N

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

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

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

Remarks

Drift deposits indicate frequent flooding. Oxidized rhizospheres indicates long duration saturation.

North State Resources, Inc. now Stantec

Data Point 33

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type Upland

Project/Site: Fountain Wind City/County: Shasta County Date: 10/25/17

Applicant/Owner: Avangrid State: California

Investigator(s): John Holson Section, Township, Range Sec. 8, T34N, R2E

Landform (hillslope, terrace, etc.) Shallow Depression Local relief (concave, convex, none) Concave Slope % 0

Subregion (LRR): MLRA 22B Lat: 40.820556° Long: -121.778522° Datum: NAD83

Soil Map Unit Name: Jacksback loam, 2 to 9 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐/☒ Hydric soil? ☐/☒ Wetland hydrology? ☐/☒ Is sampled area a wetland? ☐/☒ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____

Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____

Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks Upland pair to DP32 riparian wetland.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus tremuloides	30	Y	FACU
2. Abies concolor	20	Y	UPL
3. Pseudotsuga menziesii	20	Y	FACU
4.			
50%= 35 20%= 14 Total Cover:	70		

Sapling/Shrub Stratum (Plot Size: 15')	% Cover	Species?	Status
1. Abies concolor	15	Y	UPL
2. Alnus incana	3	N	FACW
3. Acer circinatum	2	N	FACU
4.			
50%= 10 20%= 4 Total Cover:	20		

Herb Stratum (Plot Size: 5')	% Cover	Species?	Status
1. Elymus glaucus	1	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%= .5 20%= .2 Total Cover:	1		

Woody/Vine Stratum (Plot Size: _____)	% Cover	Species?	Status
1.			
2.			
50%= 20%= Total Cover:	0		

% Bare Ground in Herb Stratum 99 % Cover of Biotic Crust _____

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 0 (A)

Total number of dominant species across all strata: 5 (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 =	0
FACW Species	x 2 =	0
FAC Species	x 3 =	0
FACU Species	x 4 =	0
UPL Species	x 5 =	0
Column Totals 0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

_____ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks Hydrophytic vegetation in not dominant.

Soils

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 2.5/3	100					Loam	Sandy

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? N

Remarks

No indicators of hydric soils were observed.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? Y / N X

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

No indicators of wetland hydrology were observed.

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Data Point 34

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type Seasonal wetland

Project/Site: Fountain Wind City/County: Shasta County Date: 10/25/17

Applicant/Owner: Avangrid State: California

Investigator(s): John Holson Section, Township, Range Sec. 12, T34N, R1E

Landform (hillslope, terrace, etc.) Depresion Local relief (concave, convex, none) Concave Slope % 0

Subregion (LRR): MLRA 22B Lat: 40.815248° Long: -121.804622° Datum: NAD83

Soil Map Unit Name: Windy and McCarthy stony sandy loams, 0 to 30 percent slopes NWI Classification: PEM1C

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑/☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____

Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____

Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents an area in a wet meadow that appears to pond seasonally.

Vegetation (Use Scientific Names)

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size: _____)			
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	% Cover	Species?	Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: 5')	% Cover	Species?	Status
1. Eleocharis bella	40	Y	FACW
2. Eleocharis acicularis	35	Y	OBL
3. Carex utriculata	2	N	OBL
4. Ranunculus flammula	2	N	FACW
5. Rumex crispus	1	N	FAC
6. Uknown grass sp.	1	N	?
7.			
8.			
50%= 40.5 20%= 16.2 Total Cover:	81		
Woody/Vine Stratum (Plot Size: _____)	% Cover	Species?	Status
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum 19 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (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 =	0
FACW Species	_____	x 2 =	0
FAC Species	_____	x 3 =	0
FACU Species	_____	x 4 =	0
UPL Species	_____	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

✓ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominant hydrophytic vegetation is present.

Data Point 34

Soils

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
0-6	5YR 2/1	100					Loam	Clay
6-16	10YR 4/2	60	7.5YR4/6	40	C	PL	Clay	

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? ✓ / N

Remarks

Soils meet the requirements for indicator F3 Depleted Matrix.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

Drift deposits indicate frequent flooding. Oxidized rhizospheres indicates long duration saturation.

North State Resources, Inc.

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Data Point: 35
Feature Type: Wetland Meadow

Project/Site: Fountain Wind | City/County: Shasta County | Date: 8/29/18
Applicant/Owner: Avangrid | State: CA
Investigator(s): Gabe Youngblood, Alison Loveless | Section, Township, Range: Sec. 12, T34N, R1E
Landform (hillslope, terrace, etc.): Valley | Local relief (concave, convex, none): None | Slope %: 0
Subregion (LRR): MLRA 22B | Lat: 40.815335° | Long: -121.804718° | Datum: NAD 83
Soil Map Unit Name: Windy and McCarthy stony sandy loams, 0 to 30 percent slopes | NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☐/☒
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐/☒ Hydric soil? ☐/☒ Wetland hydrology? ☐/☒ Is sampled area a wetland? ☐/☒ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____
Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____
Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks DP documents large wetland meadow at the headwaters of a tributary to the North Fork of Montgomery Creek.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: 10 ft)	**% Cover**	**Species?**	**Status**
1. Helenium bigelovii	17	Y	FACW
2. Muhlenbergia filiformis	15	Y	FACW
3. Platanthera dilatata (10)/Phleum pratense (10)	20	Y	FACW/FAC
4. Prunella vulgaris	10	Y	FACU
5. Poa palustris	8	N	FAC
6. Symphyotrichum spathulatum (5)/Trifolium pratense (5)	10	N/N	FAC/FACU
7. Epilobium ciliatum (3)/Stachys ajugoides (2)	5	N/N	FACW/OBL
8. Danthonia californica (1)/Carex sp. (1)	2	N/N	FAC/FAC
50%=43.5 20%=17.4 Total Cover:	87		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum 96 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 4 (A)
Total number of dominant species across all strata: 5 (B)
Percent of dominant species that are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
✓ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks Dominant hydrophytic vegetation is present. Carex assumed FAC.

Data Point 35

Soils

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
0-10	10YR 4/2	90	7.5YR 3/6	10	C	PL	SL	Sandy loam
10-16	10YR 2/1	10		2	C	PL	LC	Loamy clay

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
_____ 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 Materials (TF21)
_____ Very Shallow Dark Surface (TF12)
_____ Vegetated Sand/Gravel Bars
_____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: Rock Depth (Inches) 10 Hydric Soil Present? ✓ / N

Remarks

Soil meets the requirements for indicator F3 Depleted Matrix.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N
Water Table Present? Yes _____ No X Depth (inches) _____
Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

Oxidized rhizosphers indicate long duration saturation.

North State Resources, Inc.

Data Point 36
Feature Type Upland

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Project/Site: Fountain Wind City/County: Shasta County Date: 8/29/18
Applicant/Owner: Avangrid State: CA
Investigator(s): Gabe Youngblood, Alison Loveless Section, Township, Range Sec. 12, T34N, R1E
Landform (hillslope, terrace, etc.) Valley Local relief (concave, convex, none) None Slope % 0
Subregion (LRR): MLRA 22B Lat: 40.815378° Long: -121.804743° Datum: NAD 83
Soil Map Unit Name: Windy and McCarthy stony sandy loams, 0 to 30 percent slopes NWI Classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☐/☒
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑/☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____
Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____
Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

Upland pair to Data Point 35 wet meadow.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: 10 ft)	**% Cover**	**Species?**	**Status**
1. Plantago lanceolata	10	Y	FACU
2. Cynosurus echinatus	5	Y	UPL
3. Acmispon americanus	5	Y	FACU
4. Trifolium pratense	5	Y	FACU
5. Carex sp.	5	Y	FAC--
6. Symphyotrichum spathulatum	2	N	FAC
7. Poa palustris	1	N	FAC
8. Phleum pratense	1	N	FAC
50%=17 20%=6.8 Total Cover:	34		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum 96 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 1 (A)
Total number of dominant species across all strata: 5 (B)
Percent of dominant species that are OBL, FACW, or FAC: 20 (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
✓ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominant hydrophytic vegetation is not present. Carex assumed FAC.

Soils

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

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
_____ 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 Materials (TF21)
_____ Very Shallow Dark Surface (TF12)
_____ Vegetated Sand/Gravel Bars
_____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? Y / N

Remarks

No soil pit edge of compacted dirt road.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? Y / N X
Water Table Present? Yes _____ No X Depth (inches) _____
Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

No indicators of wetland hydrology were observed.

North State Resources, Inc. now Stantec

Data Point 37
Feature Type Non-vegetated ditch

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Project/Site: Fountain Wind City/County: Shasta County Date: 11/14/17
Applicant/Owner: Avangrid State: California
Investigator(s): Gabe Youngblood Section, Township, Range Sec. 17, T34N, R1E
Landform (hillslope, terrace, etc.) Ditch Local relief (concave, convex, none) Convex Slope % 2
Subregion (LRR): MLRA 22B Lat: 40.806354° Long: -121.880599° Datum: NAD83
Soil Map Unit Name: Cohasset stony loam, 0 to 30 percent slopes NWI Classification: R5UBFx
Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑/☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☐/☒ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank ✓ Scour ✓ Ordinary High Water Mark Mapped ✓ Stream Width 4'
Feature Designation: Perennial ✓ Intermittent ✓ Ephemeral ____ Blue-line on USGS Quad ____ Substrate Rock and soil
Natural Drainage ____ Artificial Drainage ✓ Navigable Water ____

Remarks

DP documents an irrigation ditch that does not support hydrophytic vegetation.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=____ 20%=____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: ____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=____ 20%=____ Total Cover:	0		
Herb Stratum (Plot Size: ____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%=____ 20%=____ Total Cover:	0		
Woody/Vine Stratum (Plot Size: ____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=____ 20%=____ Total Cover:	0		

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust 0

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: ____ (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators

____ Rapid Test for Hydrophytic Vegetation
____ Dominance Test is >50%
____ Prevalence Index is ≤ 3.0[1]
____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
____ Wetland Non-Vascular Plants[1]
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

No veg scoured channel.

Data Point 37

Soils

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

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? N

Remarks

No soils pit scoured channel.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 N Depth (inches) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes _____ No N Depth (inches) _____

Saturation Present? Yes _____ No N Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

Sediment and drift deposits indicate frequent flooding.

North State Resources, Inc. now Stantec

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Data Point: 38
Feature Type: Vegetated ditch

Project/Site: Fountain Wind | City/County: Shasta County | Date: 11/14/17
Applicant/Owner: Avangrid | State: California
Investigator(s): Gabe Youngblood | Section, Township, Range: Sec. 17, T34N, R1E
Landform (hillslope, terrace, etc.): Ditch | Local relief (concave, convex, none): Convex | Slope %: 2
Subregion (LRR): MLRA 22B | Lat: 40.806106° | Long: -121.880605° | Datum: NAD83
Soil Map Unit Name: Cohasset stony loam, 0 to 30 percent slopes | NWI Classification: R5UBFx

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑/☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank ✓ Scour ✓ Ordinary High Water Mark Mapped ✓ Stream Width 5'
Feature Designation: Perennial ____ Intermittent ✓ Ephemeral ____ Blue-line on USGS Quad ✓ Substrate soil and gravel
Natural Drainage ____ Artificial Drainage ✓ Navigable Water ____

Remarks

DP documents an irrigation ditch that supports hydrophytic vegetation.

Vegetation (Use Scientific Names)

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size: ____)			
1.			
2.			
3.			
4.			
50%=____ 20%=____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: ____)			
1.			
2.			
3.			
4.			
50%=____ 20%=____ Total Cover:	0		
Herb Stratum (Plot Size: 5')			
1. Scirpus microcarpus	40	Y	OBL
2. Symphyotrichum spathulatum	10	N	FAC
3. Epilobium ciliatum	5	N	FACW
4. Prunella vulgaris	2	N	FACU
5. Heracleum maximum	2	N	FAC
6. Ludwigia palustris	1	N	OBL
7.			
8.			
50%=30 20%=12 Total Cover:	60		
Woody/Vine Stratum (Plot Size: ____)			
1.			
2.			
50%=____ 20%=____ Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 1 (A)
Total number of dominant species across all strata: 1 (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 =	0
FACW Species	____	x 2 =	0
FAC Species	____	x 3 =	0
FACU Species	____	x 4 =	0
UPL Species	____	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators

____ Rapid Test for Hydrophytic Vegetation
✓ Dominance Test is >50%
____ Prevalence Index is ≤ 3.0[1]
____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
____ Wetland Non-Vascular Plants[1]
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominant hydrophytic vegetation is present.

Data Point 38

Soils

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
0-10	7.5YR 3/2	98	5YR 3/4	2	C	PL	Loam	gravelly

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: bedrock Depth (Inches) 10 Hydric Soil Present? ✓ / N

Remarks

Soil meets the requirements for indicator F6 Redox Dark Surface.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 Wetland Hydrology? ✓ / N

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

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

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

Remarks

Surface water provides wetland hydrology.

North State Resources, Inc. now Stantec

Data Point 39

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type Upland

Project/Site: Fountain Wind City/County: Shasta County Date: 11/14/17

Applicant/Owner: Avangrid State: California

Investigator(s): Gabe Youngblood Section, Township, Range Sec. 17, T34N, R1E

Landform (hillslope, terrace, etc.) Ditch Local relief (concave, convex, none) Convex Slope % 2

Subregion (LRR): MLRA 22B Lat: 40.806105° Long: -121.880566° Datum: NAD83

Soil Map Unit Name: Cohasset stony loam, 0 to 30 percent slopes NWI Classification: R5UBFx

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐/☒ Hydric soil? ☐/☒ Wetland hydrology? ☐/☒ Is sampled area a wetland? ☐/☒ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____

Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____

Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

Upland pair to DP38 vegetated ditch.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus ponderosa	20	Y	FACU
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	20		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1. Salix lasiolepis	5	Y	FACW
2. Ceanothus integerrimus	2	Y	UPL
3.			
4.			
50%= 3.5 20%= 1.4 Total Cover:	7		
Herb Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1. Pteridium aquilinum	5	Y	FACU
2. Elymus glaucus	3	Y	FACU
3. Hypericum perforatum	1	N	FACU
4. Acmispon americanus	1	N	FACU
5.			
6.			
7.			
8.			
50%= 5 20%= 2 Total Cover:	10		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum 90 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 5 (B)

Percent of dominant species that are OBL, FACW, or FAC: 20 (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

_____ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

Dominant hydrophytic vegetation is not present.

Data Point 39

Soils

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
0-16	7.5YR 3/2	100					Loam	sandy

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? /X

Remarks

No indicators of hydric soils were observed.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? Y /X

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

No indicators of wetland hydrology were observed.

North State Resources, Inc. now Stantec

Data Point 40

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type Riparian Wetland

Project/Site: Fountain Wind City/County: Shasta County Date: 11/6/17

Applicant/Owner: Avangrid State: California

Investigator(s): Gabe Youngblood Section, Township, Range Sec. 13, T34N, R1E

Landform (hillslope, terrace, etc.) Hillslope Local relief (concave, convex, none) Convex Slope % 5

Subregion (LRR): MLRA 22B Lat: 40.795593° Long: -121.810125° Datum: NAD83

Soil Map Unit Name: Windy and McCarthy stony sandy loams, 0 to 30 percent slopes NWI Classification: PSSC

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑/☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____

Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____

Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents a riparian wetland on a slope adjacent to the North Fork of Montgomery Creek.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: 15')	**% Cover**	**Species?**	**Status**
1. Alnus incana	40	Y	FACW
2. Spiraea douglasii	5	N	FACW
3. Acer circinatum	5	N	FAC
4. Calocedrus decurrens	5	N	UPL
50%= 22.5 20%= 11 Total Cover:	55		
Herb Stratum (Plot Size: 5')	**% Cover**	**Species?**	**Status**
1. Athyrium filix-femina	8	Y	FAC
2. Carex sp.	5	Y	FAC
3. Senecio triangularis	2	N	FACW
4.			
5.			
6.			
7.			
8.			
50%= 7.5 20%= 3 Total Cover:	15		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum 85 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 3 (A)

Total number of dominant species across all strata: 3 (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 =	0
FACW Species	_____	x 2 =	0
FAC Species	_____	x 3 =	0
FACU Species	_____	x 4 =	0
UPL Species	_____	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

✓ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominant hydrophytic vegetation is present. Carex assumed facultative as it occurs in both wetland and adjacent uplands.

Data Point 40

Soils

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 2.5/2	100					Loam	Muck
								High organic content with greasy
								feel when rubbed between fingers

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: Rock Depth (Inches) 12 Hydric Soil Present? ✓ / N

Remarks

Soils meet the requirements for indicator F1 Loamy Mucky Mineral.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes ✓ No _____ Depth (inches) 8

Saturation Present? Yes ✓ No _____ Depth (inches) 6 *(includes capillary fringe)*

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

Remarks

Saturation and high water table provide wetland hydrology.

North State Resources, Inc. now Stantec

Data Point 41

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type Upland

Project/Site: Fountain Wind City/County: Shasta County Date: 11/6/17

Applicant/Owner: Avangrid State: California

Investigator(s): Gabe Youngblood Section, Township, Range Sec. 13, T34N, R1E

Landform (hillslope, terrace, etc.) Hillslope Local relief (concave, convex, none) Convex Slope % 5

Subregion (LRR): MLRA 22B Lat: 40.795574° Long: -121.810151° Datum: NAD 83

Soil Map Unit Name: Windy and McCarthy stony sandy loams, 0 to 30 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐/☒ Hydric soil? ☐/☒ Wetland hydrology? ☐/☒ Is sampled area a wetland? ☐/☒ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____

Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____

Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

Upland pair to DP40 riparian wetland adjacent to the North Fork of Montgomery Creek.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Pseudotsuga menziesii	40	Y	FACU
2. Abies concolor	30	Y	UPL
3. Calocedrus decurrens	10	N	UPL
4.			
50%= 40 20%= 16 Total Cover:	80		
Sapling/Shrub Stratum (Plot Size: 15')	**% Cover**	**Species?**	**Status**
1. Calocedrus decurrens	10	Y	UPL
2.			
3.			
4.			
50%= 5 20%= 2 Total Cover:	10		
Herb Stratum (Plot Size: 5')	**% Cover**	**Species?**	**Status**
1. Carex sp.	10	Y	FAC
2. Pteridium aquilinum	5	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
50%= 7.5 20%= 3 Total Cover:	15		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%= 20%= Total Cover:	0		

% Bare Ground in Herb Stratum 85 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 5 (B)

Percent of dominant species that are OBL, FACW, or FAC: 20 (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

_____ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

Dominant hydrophytic vegetation is not present. Carex assumed facultative as it occurs in both wetland and adjacent uplands.

Data Point 41

Soils

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
0-16	2.5YR 3/4	100					Loam	Gravelly

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? N

Remarks

No indicators of hydric soils were observed.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? Y / N X

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

No indicators of wetland hydrology were observed.

North State Resources, Inc. now Stantec

Data Point 42

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type Perennial Stream

Project/Site: Fountain Wind City/County: Shasta County Date: 11/7/17

Applicant/Owner: Avangrid State: California

Investigator(s): Gabe Youngblood Section, Township, Range Sec. 23, T34N, R1E

Landform (hillslope, terrace, etc.) Drainage Local relief (concave, convex, none) Convex Slope % 2

Subregion (LRR): MLRA 22B Lat: 40.790275° Long: -121.833337° Datum: NAD83

Soil Map Unit Name: Lyonsville-Jiggs complex, deep, 10 to 50 percent slopes NWI Classification: R5UB

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐/☒ Hydric soil? ☐/☒ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☐/☒ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank ✓ Scour ✓ Ordinary High Water Mark Mapped ✓ Stream Width 8'

Feature Designation: Perennial ✓ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad ✓ Substrate Cobble, gravel, sand

Natural Drainage ✓ Artificial Drainage _____ Navigable Water _____

Remarks DP documents ordinary high water mark of Cedar Creek.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%=_____ 20%=_____ Total Cover:	0		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust 0

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: _____ (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

_____ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks No veg scoured channel.

Data Point 42

Soils

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

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? /X

Remarks

No soils pit scoured channel.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 Wetland Hydrology? ✓ / N

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

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

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

Remarks

Surface water provides wetland hydrology.

North State Resources, Inc.

Data Point: 43

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type: Riparian wetland

Project/Site: Fountain Wind | City/County: Shasta County | Date: 8/28/18

Applicant/Owner: Avangrid | State: CA

Investigator(s): Gabe Youngblood, Alison Loveless | Section, Township, Range: Sec. 23, T34N, R1E

Landform (hillslope, terrace, etc.): Floodplain | Local relief (concave, convex, none): Concave | Slope %: 3

Subregion (LRR): MLRA 22B | Lat: 40.790273° | Long: -121.833322° | Datum: NAD 83

Soil Map Unit Name: Lyonsville-Jiggs complex, deep, 10 to 50 percent slopes | NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☑/☐ soil ☑/☐ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑ ☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank ✓ Scour ____ Ordinary High Water Mark Mapped ✓ Stream Width Variable

Feature Designation: Perennial ✓ Intermittent ____ Ephemeral ____ Blue-line on USGS Quad ____ Substrate Vegetated

Natural Drainage ✓ Artificial Drainage ____ Navigable Water ____

Remarks

DP documents riparian wetland associated with Cedar Creek. Vegetation and soils were disturbed from the recent replacement of the culvert with a bridge.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=____ 20%=____ Total Cover:	0		

Sapling/Shrub Stratum (Plot Size: ____)	% Cover	Species?	Status
1.			
2.			
3.			
4.			
50%=____ 20%=____ Total Cover:	0		

Herb Stratum (Plot Size: 5)	% Cover	Species?	Status
1. Juncus sp. (NIF)	2	Y	FAC+
2. Grass NIF (Glyceria?)	2	Y	FAC+
3.			
4.			
5.			
6.			
7.			
8.			
50%=2 20%=.8 Total Cover:	4		

Woody/Vine Stratum (Plot Size: ____)	% Cover	Species?	Status
1.			
2.			
50%=____ 20%=____ Total Cover:	0		

% Bare Ground in Herb Stratum 96 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 1 (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 =	0
FACW Species	____	x 2 =	0
FAC Species	____	x 3 =	0
FACU Species	____	x 4 =	0
UPL Species	____	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators

____ Rapid Test for Hydrophytic Vegetation

✓ Dominance Test is >50%

____ Prevalence Index is ≤ 3.0[1]

____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

____ Wetland Non-Vascular Plants[1]

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Vegetation was disturbed during recent bridge installation. Sparse re-sprouting species appear to be hydrophytic vegetation.

Data Point 43

Soils

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
0-10	7.5YR 4/1	90	5YR 3/6	10	C	M	LS	Loamy sand
10+	Rock							

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: Rock Depth (Inches) 10 Hydric Soil Present? ✓ / N

Remarks

Soils disturbed during bridge installation, but meet requirements for indicator F3 Depleted Matrix.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes ✓ No _____ Depth (inches) 4 *(includes capillary fringe)*

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

Remarks

Saturation at 4 inches provides wetland hydrology.

North State Resources, Inc.

Data Point: 44

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type: Upland

Project/Site: Fountain Wind | City/County: Shasta County | Date: 8/28/18

Applicant/Owner: Avangrid | State: CA

Investigator(s): Gabe Youngblood, Alison Loveless | Section, Township, Range: Sec. 23, T34N, R1E

Landform (hillslope, terrace, etc.): Floodplain | Local relief (concave, convex, none): Concave | Slope %: 3

Subregion (LRR): MLRA 22B | Lat: 40.790260° | Long: -121.833322° | Datum: NAD 83

Soil Map Unit Name: Lyonsville-Jiggs complex, deep, 10 to 50 percent slopes | NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☑/☐ soil ☑/☐ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☐/☒

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐/☒ Hydric soil? ☐/☒ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☐/☒ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____

Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____

Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

Upland pair to DP43 riparian wetland.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: 5)	**% Cover**	**Species?**	**Status**
1. Pteridium aquilinum	1	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%=.5 20%=.2 Total Cover:	1		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum 96 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 1 (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 =	0
FACW Species	_____	x 2 =	0
FAC Species	_____	x 3 =	0
FACU Species	_____	x 4 =	0
UPL Species	_____	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

_____ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

Vegetation was disturbed during recent bridge installation. Upland point is on a newly installed gravel pad.

Data Point 44

Soils

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

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? N

Remarks

No soil pit. Upland point is on a newly installed gravel pad.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? Y / N X

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

No indicators of wetland hydrology were observed.

North State Resources, Inc. now Stantec

Data Point 45
Feature Type Wetland Seep/Spring

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Project/Site: Fountain Wind City/County: Shasta County Date: 11/7/17
Applicant/Owner: Avangrid State: California
Investigator(s): Gabe Youngblood Section, Township, Range Sec. 23, T34N, R1E
Landform (hillslope, terrace, etc.) depresion Local relief (concave, convex, none) Concave Slope % 2
Subregion (LRR): MLRA 22B Lat: 40.791752° Long: -121.819750° Datum: NAD83
Soil Map Unit Name: Cohasset stony loam, 0 to 30 percent slopes NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑ ☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____
Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____
Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents a wetland seep/spring in a shallow depression along a road cut.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1. Juncus balticus	30	Y	FACW
2. Carex sp.	20	Y	FAC
3. Prunella vulgaris	20	Y	FACU
4. Epilobium ciliatum	10	N	FACW
5. Stachys ajugoides	5	N	OBL
6. Galium triflorum	5	N	FACU
7. Trifolium repens	5	N	FAC
8. Juncus nevadensis(3%)/Sceptridium multifidum(2%)	5	N	FACW/FAC
50%=50 20%=20 Total Cover:	100		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 2 (A)
Total number of dominant species across all strata: 3 (B)
Percent of dominant species that are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
✓ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominant hydrophytic vegetation is present. Carex sp. assumed facultative.

Data Point 45

Soils

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
0-5	10YR 5/2	78	10YR 6/1	20	D	M	Loam	Gravelly
			10YR 3/4	2	C	PL		
5-8	10YR 4/2	98	10 YR 5/6	2	C	PL	Loam	Gravelly

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: Rock Depth (Inches) 8 Hydric Soil Present? ✓ /

Remarks

Soils meet the requirements for indicator F3 Depleted Matrix.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

Hydrology is indicated by geomorphic position, drainage patterns, and veg meeting the FAC-neutral test.

North State Resources, Inc. now Stantec

Data Point 46

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type Upland

Project/Site: Fountain Wind City/County: Shasta County Date: 11/7/17

Applicant/Owner: Avangrid State: California

Investigator(s): Gabe Youngblood Section, Township, Range Sec. 23, T34N, R1E

Landform (hillslope, terrace, etc.) Hillslope Local relief (concave, convex, none) Convex Slope % 5

Subregion (LRR): MLRA 22B Lat: 40.791769° Long: -121.819793° Datum: NAD 83

Soil Map Unit Name: Cohasset stony loam, 0 to 30 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐/☒ Hydric soil? ☐/☒ Wetland hydrology? ☐/☒ Is sampled area a wetland? ☐/☒ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____

Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____

Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

Upland pair to DP45 wetland seep/spring along a road cut.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1. Calocedrus decurrens	5	Y	UPL
2. Abies concolor	5	Y	UPL
3.			
4.			
50%= 5 20%= 2 Total Cover:	10		
Herb Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1. Pteridium aquilinum	5	Y	FACU
2. Lotus sp.	5	Y	FACU
3. Elymus glaucus	2	N	FACU
4.			
5.			
6.			
7.			
8.			
50%= 6 20%= 2.4 Total Cover:	12		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum 85 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 0 (A)

Total number of dominant species across all strata: 4 (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 =	0
FACW Species	_____	x 2 =	0
FAC Species	_____	x 3 =	0
FACU Species	_____	x 4 =	0
UPL Species	_____	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

_____ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

Dominant hydrophytic vegetation is not present. Lotus assumed facultative upland due to presence of other upland species.

Data Point 46

Soils

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	10YR 4/3	100					Loam	Gravelly

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? /X

Remarks

No indicators of hydric soils were observed.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? Y /X

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

No indicators of wetland hydrology were observed.

North State Resources, Inc. now Stantec

Data Point 47

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type Ephemeral stream

Project/Site: Fountain Wind City/County: Shasta County Date: 11/7/17

Applicant/Owner: Avangrid State: California

Investigator(s): Gabe Youngblood Section, Township, Range Sec. 23, T34N, R1E

Landform (hillslope, terrace, etc.) Draianage Local relief (concave, convex, none) Concave Slope % 10

Subregion (LRR): MLRA 22B Lat: 40.791707° Long: -121.822774° Datum: NAD83

Soil Map Unit Name: Cohasset stony loam, 0 to 30 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐/☒ Hydric soil? ☐/☒ Wetland hydrology? ☐/☒ Is sampled area a wetland? ☐/☒ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank ✓ Scour ✓ Ordinary High Water Mark Mapped ✓ Stream Width 3-5'

Feature Designation: Perennial _____ Intermittent _____ Ephemeral ✓ Blue-line on USGS Quad _____ Substrate Rock and Soil

Natural Drainage ✓ Artificial Drainage _____ Navigable Water _____

Remarks

DP document OHWM of an ephemeral stream.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%=_____ 20%=_____ Total Cover:	0		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust 0

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: _____ (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

_____ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

No Veg scoured channel.

Data Point 47

Soils

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

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? /X

Remarks

No soils pit scoured channel.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

Drift deposits indicate frequent flooding.

North State Resources, Inc. now Stantec

Data Point 48

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type Intermittent Stream

Project/Site: Fountain Wind City/County: Shasta County Date: 11/17/17

Applicant/Owner: Avangrid State: California

Investigator(s): Gabe youngblood Section, Township, Range Sec. 27, T34N, R1E

Landform (hillslope, terrace, etc.) Drainage Local relief (concave, convex, none) Concave Slope % 3

Subregion (LRR): MLRA 22B Lat: 40.778821° Long: -121.842353° Datum: NAD83

Soil Map Unit Name: Windy and McCarthy stony sandy loams, 0 to 30 percent slopes NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Note: On this e-form, the checkmark (left choice) means yes, the X (right choice) means no.

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐ ☒ Hydric soil? ☐/☒ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☐/☒ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour ✓ Ordinary High Water Mark Mapped ✓ Stream Width 2'

Feature Designation: Perennial _____ Intermittent ✓ Ephemeral _____ Blue-line on USGS Quad _____ Substrate Gravel & Rock

Natural Drainage ✓ Artificial Drainage _____ Navigable Water _____

Remarks

DP Documents the OHWM of an intermittent stream.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%=_____ 20%=_____ Total Cover:	0		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

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

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: _____ (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

_____ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

No vegetation present scoured channel.

Data Point 48

Soils

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

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? /X

Remarks

No soils pit scoured channel.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 Wetland Hydrology? ✓ / N

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

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

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

Remarks

Surface water from snow melt and ground water provides wetland hydrology.

North State Resources, Inc. now Stantec

Data Point 49

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type Ephemeral Stream

Project/Site: Fountain Wind City/County: Shasta County Date: 11/17/17

Applicant/Owner: Avangrid State: California

Investigator(s): Gabe youngblood Section, Township, Range Sec. 27, T34N, R1E

Landform (hillslope, terrace, etc.) Drainage Local relief (concave, convex, none) Concave Slope % 3

Subregion (LRR): MLRA 22B Lat: 40.778837° Long: -121.841812° Datum: NAD83

Soil Map Unit Name: Windy and McCarthy stony sandy loams, 0 to 30 percent slopes NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Note: On this e-form, the checkmark (left choice) means yes, the X (right choice) means no.

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐ ☒ Hydric soil? ☐/☒ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☐/☒ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour ✓ Ordinary High Water Mark Mapped ✓ Stream Width 4'

Feature Designation: Perennial _____ Intermittent _____ Ephemeral ✓ Blue-line on USGS Quad _____ Substrate Gravel

Natural Drainage ✓ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents the OHWM of an ephemeral stream.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%=_____ 20%=_____ Total Cover:	0		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

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

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: _____ (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

_____ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

No vegetation present scoured channel.

Data Point 49

Soils

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

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? /X

Remarks

No soils pit scoured channel.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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) 1 Wetland Hydrology? ✓ / N

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

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

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

Remarks

Surface water from snow melt provides wetland hydrology.

North State Resources, Inc. now Stantec

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Data Point: 50
Feature Type: Non-Vegetated Ditch

Project/Site: Fountain Wind | City/County: Shasta County | Date: 11/17/17
Applicant/Owner: Avangrid | State: California
Investigator(s): Gabe youngblood | Section, Township, Range: Sec. 27, T34N, R1E
Landform (hillslope, terrace, etc.): Drainage | Local relief (concave, convex, none): Concave | Slope %: 2
Subregion (LRR): MLRA 22B | Lat: 40.778781° | Long: -121.841876° | Datum: NAD83
Soil Map Unit Name: Windy and McCarthy stony sandy loams, 0 to 30 percent slopes | NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Note: On this e-form, the checkmark (left choice) means yes, the X (right choice) means no.

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐ ☒ Hydric soil? ☐/☒ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☐/☒ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour ✓ Ordinary High Water Mark Mapped ✓ Stream Width 3'
Feature Designation: Perennial _____ Intermittent _____ Ephemeral ✓ Blue-line on USGS Quad _____ Substrate Soil and gravel
Natural Drainage _____ Artificial Drainage ✓ Navigable Water _____

Remarks

DP Documents the a non-vegetated ditch which conveys water along the side of a road from the ephemeral stream documented by DP49 to the intermittent stream documented by DP48.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		

Sapling/Shrub Stratum (Plot Size: _____)	% Cover	Species?	Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		

Herb Stratum (Plot Size: _____)	% Cover	Species?	Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%=_____ 20%=_____ Total Cover:	0		

Woody/Vine Stratum (Plot Size: _____)	% Cover	Species?	Status
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

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

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: _____ (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
_____ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

No vegetation present scoured channel.

Data Point 50

Soils

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

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? /X

Remarks

No soils pit scoured channel.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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) 1 Wetland Hydrology? ✓ / N

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

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

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

Remarks

Surface water from snow melt provides wetland hydrology.

North State Resources, Inc. now Stantec

Data Point 51

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type Riparian wetland

Project/Site: Fountain Wind City/County: Shasta County Date: 11/28/17

Applicant/Owner: Avangrid State: California

Investigator(s): Gabe Youngblood Section, Township, Range Sec. 33, T34N, R1E

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

Subregion (LRR): MLRA 22B Lat: 40.761519° Long: -121.870985° Datum: NAD83

Soil Map Unit Name: Cohasset stony loam, 30 to 50 percent slopes NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Note: On this e-form, the checkmark (left choice) means yes, the X (right choice) means no.

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑ ☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____

Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____

Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents a riparian wetland in a slight depression.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus latifolia	40	Y	FACW
2.			
3.			
4.			
50%= 20 20%= 8 Total Cover:	40		
Sapling/Shrub Stratum (Plot Size: 15' radius)	**% Cover**	**Species?**	**Status**
1. Abies concolor	3	Y	UPL
2. Rubus leucodermis	3	Y	FACU
3.			
4.			
50%= 3 20%= 1.2 Total Cover:	6		
Herb Stratum (Plot Size: 5' Radius)	**% Cover**	**Species?**	**Status**
1. Panicum acuminatum	3	Y	FAC
2. Sceptridium multifidum	2	Y	FAC
3. Smilax californica	2	Y	UPL
4.			
5.			
6.			
7.			
8.			
50%= 3.5 20%= 1.4 Total Cover:	7		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%= 20%= Total Cover:	0		

% Bare Ground in Herb Stratum 93 % Cover of Biotic Crust _____

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 3 (A)

Total number of dominant species across all strata: 6 (B)

Percent of dominant species that are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by	
OBL Species		x 1 =	0
FACW Species	40	x 2 =	80
FAC Species	6	x 3 =	18
FACU Species	3	x 4 =	12
UPL Species	5	x 5 =	25
Column Totals	54 (A)		135 (B)

Prevalence Index = B/A = 2.50

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

_____ Dominance Test is >50%

✓ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

Hydrophytic vegetation is present within the feature.

Data Point 51

Soils

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
0-16	7.5YR 4/2	80	7.5YR 4/6	20	C	PL	Loam	Clay

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: None Depth (Inches) _____ Hydric Soil Present? ✓ / N

Remarks

Soils meet the requirements for indicator F3 Depleted Matrix.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

Oxidized rhizospheres indicate long duration saturation.

North State Resources, Inc. now Stantec

Data Point: 52

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type: Upland

Project/Site: Fountain Wind | City/County: Shasta County | Date: 11/28/17

Applicant/Owner: Avangrid | State: California

Investigator(s): Gabe Youngblood | Section, Township, Range: Sec. 33, T34N, R1E

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

Subregion (LRR): MLRA 22B | Lat: 40.761554° | Long: -121.870946° | Datum: NAD83

Soil Map Unit Name: Cohasset stony loam, 30 to 50 percent slopes | NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Note: On this e-form, the checkmark (left choice) means yes, the X (right choice) means no.

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐ ☒ Hydric soil? ☐/☒ Wetland hydrology? ☐/☒ Is sampled area a wetland? ☐/☒ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____

Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____

Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

Upland pair to DP 51 riparian wetland.

Vegetation (Use Scientific Names)

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size: 30')			
1. Calocedrus decurrens	30	Y	UPL
2. Pinus ponderosa	5	N	FACU
3. Acer macrophyllum	5	N	FACU
4.			
50%= 20 20%= 8 Total Cover:	40		
Sapling/Shrub Stratum (Plot Size: 15')	% Cover	Species?	Status
1. Acer macrophyllum	40	Y	UPL
2. Abies concolor	15	Y	FACU
3. Rubus leucodermis	10	N	FACU
4. Calocedrus decurrens	2	N	UPL
50%= 33.5 20%= 13.4 Total Cover:	67		
Herb Stratum (Plot Size: 5')	% Cover	Species?	Status
1. Sceptridium multifidum	5	Y	FAC
2. Smilax californica	3	Y	UPL
3. Carex brainerdii	2	Y	UPL
4.			
5.			
6.			
7.			
8.			
50%= 5 20%= 2 Total Cover:	10		
Woody/Vine Stratum (Plot Size: _____)	% Cover	Species?	Status
1.			
2.			
50%= _____ 20%= _____ Total Cover:	0		

% Bare Ground in Herb Stratum 90 % Cover of Biotic Crust _____

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: 17 (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

_____ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

Dominate hydrophytic vegetation is not present.

Data Point 52

Soils

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
0-16	7.5YR 2.5/2	100					Loam	

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: None Depth (Inches) _____ Hydric Soil Present? N

Remarks

No indicators of hydric soil were observed.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 N Depth (inches) _____ Wetland Hydrology? Y / N

Water Table Present? Yes _____ No N Depth (inches) _____

Saturation Present? Yes _____ No N Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

No indicators of wetland hydrology were observed.

North State Resources, Inc. now Stantec

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Data Point: 53
Feature Type: Wetland Seep/Spring

Project/Site: Fountain Wind | City/County: Shasta County | Date: 11/28/17
Applicant/Owner: Avangrid | State: California
Investigator(s): Gabe Youngblood | Section, Township, Range: Sec. 33, T34N, R1E
Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): Convex | Slope %: 30
Subregion (LRR): MLRA 22B | Lat: 40.758415° | Long: -121.867163° | Datum: NAD83
Soil Map Unit Name: Lyonsville-Jiggs soils, 50 to 70 percent slopes | NWI Classification: PSSC

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Note: On this e-form, the checkmark (left choice) means yes, the X (right choice) means no.

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑ ☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____
Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____
Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents a wetland seep spring near the toe of a hillslope.

Vegetation (Use Scientific Names)

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size: 30' radius)			
1. Alnus rhombifolia	35	Y	FACW
2. Taxus brevifolia	20	Y	FACU
3.			
4.			
50%= 22.5 20%= 11 Total Cover:	55		
Sapling/Shrub Stratum (Plot Size: 15' radius)	% Cover	Species?	Status
1. Acer circinatum	30	Y	FAC
2.			
3.			
4.			
50%= 15 20%= 6 Total Cover:	30		
Herb Stratum (Plot Size: 5' Radius)	% Cover	Species?	Status
1. Maianthemum racemosum	30	Y	FAC
2. Athyrium filix-femina	5	N	FAC
3.			
4.			
5.			
6.			
7.			
8.			
50%= 17.5 20%= 7 Total Cover:	35		
Woody/Vine Stratum (Plot Size: _____)	% Cover	Species?	Status
1.			
2.			
50%= _____ 20%= _____ Total Cover:	0		

% Bare Ground in Herb Stratum 65 % Cover of Biotic Crust _____

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 3 (A)
Total number of dominant species across all strata: 4 (B)
Percent of dominant species that are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
✓ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominant hydrophytic vegetation is present.

Soils

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
0-8	10YR 2/1	100					Muck	Loamy

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: 8 Depth (Inches) rock Hydric Soil Present? ✓ /

Remarks

Soils meet the requirements for indicator F1 Loamy Mucky Mineral.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes ✓ No _____ Depth (inches) 8

Saturation Present? Yes ✓ No _____ Depth (inches) 4 *(includes capillary fringe)*

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

Remarks

Saturation at 4 inches and a water table at 8 inches provides hydrology.

North State Resources, Inc. now Stantec

Data Point: 54

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type: Upland

Project/Site: Fountain Wind | City/County: Shasta County | Date: 11/28/17

Applicant/Owner: Avangrid | State: California

Investigator(s): Gabe Youngblood | Section, Township, Range: Sec. 33, T34N, R1E

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

Subregion (LRR): MLRA 22B | Lat: 40.758391° | Long: -121.867118° | Datum: NAD83

Soil Map Unit Name: Cohasset stony loam, 30 to 50 percent slopes | NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Note: On this e-form, the checkmark (left choice) means yes, the X (right choice) means no.

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑ ☐ Hydric soil? ☐/☒ Wetland hydrology? ☐/☒ Is sampled area a wetland? ☐/☒ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____

Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____

Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

Upland pair to DP 53 wetland seep/spring.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rhombifolia	15	Y	FACW
2. Calocedrus decurrens	15	Y	UPL
3. Taxus brevifolia	5	N	FACU
4.			
50%= 17.5 20%= 7 Total Cover:	35		

Sapling/Shrub Stratum (Plot Size: 15')	% Cover	Species?	Status
1.			
2.			
3.			
4.			
50%= 33.5 20%= 13.4 Total Cover:	0		

Herb Stratum (Plot Size: 5')	% Cover	Species?	Status
1. Maianthemum racemosum	30	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%= 15 20%= 6 Total Cover:	30		

Woody/Vine Stratum (Plot Size: _____)	% Cover	Species?	Status
1.			
2.			
50%= 20%= Total Cover:	0		

% Bare Ground in Herb Stratum 70 % Cover of Biotic Crust _____

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 3 (B)

Percent of dominant species that are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

_____ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominate hydrophytic vegetation is present.

Data Point 54

Soils

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
0-6	10YR 2/1	100					Peat	Corse organic
6-16	10 YR 2/2	100					Loam	Sandy gravely

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: None Depth (Inches) _____ Hydric Soil Present? N

Remarks

No indicators of hydric soil were observed.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? Y / N X

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

No indicators of wetland hydrology were observed.

North State Resources, Inc. now Stantec

Data Point: 55
Feature Type: Riparian wetland

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Project/Site: Fountain Wind | City/County: Shasta County | Date: 11/28/17
Applicant/Owner: Avangrid | State: California
Investigator(s): Gabe Youngblood | Section, Township, Range: Sec. 33, T34N, R1E
Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave | Slope %: 1
Subregion (LRR): MLRA 22B | Lat: 40.759497° | Long: 40.759497° | Datum: NAD83
Soil Map Unit Name: Cohasset stony loam, 30 to 50 percent slopes | NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Note: On this e-form, the checkmark (left choice) means yes, the X (right choice) means no.

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑ ☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank ✓ Scour ✓ Ordinary High Water Mark Mapped ✓ Stream Width _____
Feature Designation: Perennial ✓ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad ✓ Substrate cobble, gravel, sand
Natural Drainage ✓ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents a riparian wetland within the OHWM of Little Cow Creek.

Vegetation (Use Scientific Names)

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size: 30')			
1. Acer macrophyllum	20	Y	FACU
2. Alnus rhombifolia	5	Y	FACW
3.			
4.			
50%= 12.5 20%= 5 Total Cover:	25		
Sapling/Shrub Stratum (Plot Size: 15')	% Cover	Species?	Status
1. Acer macrophyllum	25	Y	FACU
2. Alnus rhombifolia	10	Y	FACW
3. Acer circinatum	10	Y	FAC
4. Abies concolor (3)/Pseudotsuga menziesii (2)	5	N	UPL/FACU
50%= 25 20%= 10 Total Cover:	50		
Herb Stratum (Plot Size: 5')	% Cover	Species?	Status
1. Heracleum maximum	1	Y	FAC
2. UNK grass	1	Y	?
3.			
4.			
5.			
6.			
7.			
8.			
50%= 1 20%= .4 Total Cover:	2		
Woody/Vine Stratum (Plot Size: _____)	% Cover	Species?	Status
1.			
2.			
50%= _____ 20%= _____ Total Cover:	0		

% Bare Ground in Herb Stratum 98 % Cover of Biotic Crust _____

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 4 (A)
Total number of dominant species across all strata: 7 (B)
Percent of dominant species that are OBL, FACW, or FAC: 57 (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
✓ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominant hydrophytic vegetation is present within the floodplain of Little Cow Creek. Main channel is scoured with no vegetation.

Soils

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

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- ✓ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? ✓

Remarks

No soil pit vegetated sand/gravel bar.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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) _____ Wetland Hydrology? ✓ / N

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

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

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

Remarks

Drift deposits indicate frequent flooding. Water was present in the scoured channel but not on the vegetated floodplain.

North State Resources, Inc. now Stantec

Data Point: 56

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type: Upland

Project/Site: Fountain Wind | City/County: Shasta County | Date: 11/28/17

Applicant/Owner: Avangrid | State: California

Investigator(s): Gabe Youngblood | Section, Township, Range: Sec. 33, T34N, R1E

Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): convex | Slope %: 20

Subregion (LRR): MLRA 22B | Lat: 40.759456° | Long: -121.867278° | Datum: NAD83

Soil Map Unit Name: Lyonsville-Jiggs soils, 50 to 70 percent slopes | NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Note: On this e-form, the checkmark (left choice) means yes, the X (right choice) means no.

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑ ☐ Hydric soil? ☐/☒ Wetland hydrology? ☐/☒ Is sampled area a wetland? ☐/☒ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____

Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____

Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

Upland pair to DP 55 wetland seep/spring.

Vegetation (Use Scientific Names)

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size: _____)			
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: 15')	**% Cover**	**Species?**	**Status**
1. Corylus cornuta	15	Y	FACU
2. Acer macrophyllum	5	N	FACU
3. Acer circinatum	5	N	FAC
4. Pseudotsuga menziesii (3)/Abies concolor (2)	5	N	FACU/FAC
50%=15 20%=6 Total Cover:	30		
Herb Stratum (Plot Size: 5')	**% Cover**	**Species?**	**Status**
1. Rubus parviflorus	20	Y	FACU
2. Agrostis pallens	10	Y	UPL
3. Galium triflorum	1	N	FACU
4.			
5.			
6.			
7.			
8.			
50%=15.5 20%=6.2 Total Cover:	31		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

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

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 0 (A)

Total number of dominant species across all strata: 3 (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 =	0
FACW Species	_____	x 2 =	0
FAC Species	_____	x 3 =	0
FACU Species	_____	x 4 =	0
UPL Species	_____	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

_____ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

Dominate hydrophytic vegetation is not present.

Data Point 56

Soils

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
0-16	10YR 3/2	100					Loam	Gravelly

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: None Depth (Inches) _____ Hydric Soil Present? N

Remarks

No indicators of hydric soil were observed.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? Y / N X

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

No indicators of wetland hydrology were observed.

North State Resources, Inc.

Data Point 57

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type Riparian Wetland

Project/Site: Fountain Wind City/County: Shasta County Date: 8/13/18

Applicant/Owner: Avangrid State: CA

Investigator(s): Gabe Youngblood, Alison Loveless Section, Township, Range Sec. 1, T34N, R1E

Landform (hillslope, terrace, etc.) Drainage Local relief (concave, convex, none) Convex Slope % 5

Subregion (LRR): MLRA 22B Lat: -121.816888° Long: 40.833953° Datum: NAD 83

Soil Map Unit Name: Gasper-Scarface complex, moist, 15 to 30 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☑/☐ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑ ☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank ✓ Scour ✓ Ordinary High Water Mark Mapped ✓ Stream Width 10'

Feature Designation: Perennial ✓ Intermittent ____ Ephemeral ____ Blue-line on USGS Quad ____ Substrate Vegetated

Natural Drainage ✓ Artificial Drainage ____ Navigable Water ____

Remarks

DP documents riparian wetlands within a perennial stream.

Vegetation (Use Scientific Names)

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size: ____)			
1.			
2.			
3.			
4.			
50%=____ 20%=____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: 15)			
1. Salix scouleriana	40	Y	FAC
2. Salix lasiandra	40	Y	FACW
3. Alnus incana	10	N	FACW
4. Cornus sericea	5	N	FACW
50%= 47.5 20%= 19 Total Cover:	95		
Herb Stratum (Plot Size: 5)			
1. Glyceria striata	3	Y	OBL
2. Viola glabella	2	Y	FACW
3. Symphyotrichum spathulatum	2	Y	FAC
4. Lilium pardalinum	2	Y	FACW
5. Galium aparine	1	N	FACU
6.			
7.			
8.			
50%= 5 20%= 2 Total Cover:	10		
Woody/Vine Stratum (Plot Size: ____)			
1.			
2.			
50%=____ 20%=____ Total Cover:	0		

% Bare Ground in Herb Stratum 90 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 6 (A)

Total number of dominant species across all strata: 6 (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 =	0
FACW Species	____	x 2 =	0
FAC Species	____	x 3 =	0
FACU Species	____	x 4 =	0
UPL Species	____	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators

____ Rapid Test for Hydrophytic Vegetation

✓ Dominance Test is >50%

____ Prevalence Index is ≤ 3.0[1]

____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

____ Wetland Non-Vascular Plants[1]

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominant hydrophytic vegetation is present.

Soils

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

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- ✓ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? ✓ /

Remarks

Scoured channel no soil pit, vegetated sand gravel bar.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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) 1 Wetland Hydrology? ✓ / N

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

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

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

Remarks

Water present in channel. Drift deposits at data point indicate frequent flooding.

North State Resources, Inc.

Data Point 58

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type Upland

Project/Site: Fountain Wind City/County: Shasta County Date: 8/13/18

Applicant/Owner: Avangrid State: CA

Investigator(s): Gabe Youngblood, Alison Loveless Section, Township, Range Sec. 1, T34N, R1E

Landform (hillslope, terrace, etc.) Drainage Local relief (concave, convex, none) Convex Slope % 5

Subregion (LRR): MLRA 22B Lat: 40.833976° Long: -121.816855° Datum: NAD 83

Soil Map Unit Name: Gasper-Scarface complex, moist, 15 to 30 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☑/☐ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑/☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank ✓ Scour ✓ Ordinary High Water Mark Mapped ✓ Stream Width 10'

Feature Designation: Perennial ✓ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate Vegetated

Natural Drainage ✓ Artificial Drainage _____ Navigable Water _____

Remarks

Upland pair point.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Calocedrus decurrens	30	Y	UPL
2. Salix scouleriana	30	Y	FAC
3. Salix lasiandra	10	N	FACW
4.			
50%= 35 20%= 14 Total Cover:	70		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1. Ribes roezlii	5	Y	UPL
2.			
3.			
4.			
50%= 2.5 20%= 1 Total Cover:	5		
Herb Stratum (Plot Size: 5)	**% Cover**	**Species?**	**Status**
1. Pteridium aquilinum	15	Y	FACU
2. Lysimachia latifolia	10	Y	FACU
3. Galium aparine	2	N	FACU
4.			
5.			
6.			
7.			
8.			
50%= 13.5 20%= 5.4 Total Cover:	27		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%= _____ 20%= _____ Total Cover:	0		

% Bare Ground in Herb Stratum 73 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 5 (B)

Percent of dominant species that are OBL, FACW, or FAC: 20 (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

_____ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominant hydrophytic vegetation is not present.

Soils

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
0-2							O	Leaf litter/roots
7-12	7.5YR 2.5/3	100					SL	Sandy loam

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- ✓ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: n/a Depth (Inches) _____ Hydric Soil Present? ✓ /

Remarks

No indicators of hydric soil were observed.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N

Water Table Present? Yes _____ No X Depth (inches) _____

Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

No indicators of wetland hydrology were observed.

North State Resources, Inc.

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Data Point: 59
Feature Type: Wetland Seep/Spring

Project/Site: Fountain Wind | City/County: Shasta County | Date: 8/13/18
Applicant/Owner: Avangrid | State: CA
Investigator(s): Gabe Youngblood, Alison Loveless | Section, Township, Range: Sec. 1, T34N, R1E
Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): Convex | Slope %: 5
Subregion (LRR): MLRA 22B | Lat: 40.837787° | Long: -121.818807° | Datum: NAD 83
Soil Map Unit Name: Gasper-Scarface complex, moist, 30 to 50 percent slopes | NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑ ☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____
Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____
Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

DP documents riparian wetlands within a perennial stream.

Vegetation (Use Scientific Names)

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size: _____)			
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)			
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Herb Stratum (Plot Size: 5)			
1. Muhlenbergia filiformis	20	Y	FACW
2. Carex sp.	10	Y	FAC
3. Leucanthemum vulgare	2	N	FACU
4. Holcus lanatus	2	N	FAC
5. Equisetum arvense	2	N	FAC
6. Prunella vulgaris	2	N	FACU
7. Epilobium sp.	1	N	FAC
8. Verbena lasiostachys	1	N	FAC
50%=20 20%=8 Total Cover:	40		
Woody/Vine Stratum (Plot Size: _____)			
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 2 (A)
Total number of dominant species across all strata: 2 (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 =	0
FACW Species	_____	x 2 =	0
FAC Species	_____	x 3 =	0
FACU Species	_____	x 4 =	0
UPL Species	_____	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
✓ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominant hydrophytic vegetation is present. Carex sp. and Epilobium sp. are assumed FAC due to presence of other hydrophytic vegetation..

Soils

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
0-2	7.5YR 2.5/2	100					SL	Sandy Loam high organic
2-8	10YR 2/1	80	7.5YR 3/3	20	C	M	C	Clay
8-12	10YR 3/1	70	10YR 5/4	30	C	M	C	Clay

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
_____ 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 Materials (TF21)
_____ Very Shallow Dark Surface (TF12)
_____ Vegetated Sand/Gravel Bars
_____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? ✓ /

Remarks

Soils meet the requirements of indicator F6 Redox Dark Surface.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N
Water Table Present? Yes _____ No X Depth (inches) _____
Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

Oxidized rhizospheres indicate long duration saturation.

North State Resources, Inc.

Data Point: 60

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type: Upland

Project/Site: Fountain Wind | City/County: Shasta County | Date: 8/13/18

Applicant/Owner: Avangrid | State: CA

Investigator(s): Gabe Youngblood, Alison Loveless | Section, Township, Range: Sec. 1, T34N, R1E

Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): Convex | Slope %: 5

Subregion (LRR): MLRA 22B | Lat: 40.837806° | Long: -121.818803° | Datum: NAD 83

Soil Map Unit Name: Gasper-Scarface complex, moist, 30 to 50 percent slopes | NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐ ☒ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☐/☒ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____

Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____

Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

Data point documents upland condition on the edge of a meadow.

Vegetation (Use Scientific Names)

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size: 30)			
1. Pseudotsuga menziesii	5	Y	FACU
2. Pinus ponderosa	5	Y	FACU
3.			
4.			
50%= 5 20%= 2 Total Cover:	10		
Sapling/Shrub Stratum (Plot Size: 15)	% Cover	Species?	Status
1. Arctostaphylos patula	5	Y	UPL
2. Salix scouleriana	2	Y	FAC
3. Ceanothus integerrimus	2	Y	UPL
4. Rubus armeniacus	1	N	FAC
50%= 5 20%= 2 Total Cover:	10		
Herb Stratum (Plot Size: 5)	% Cover	Species?	Status
1. Leucanthemum vulgare	15	Y	FACU
2. Symphyotrichum spathulatum	5	Y	FAC
3. Sidalcea gigantea	5	Y	UPL
4. Prunella vulgaris	4	N	FACU
5. Holcus lanatus	2	N	FAC
6. Hypericum perforatum	2	N	FACU
7. Carex sp.	1	N	FAC
8. Elymus glaucus	1	N	FACU
50%= 17.5 20%= 7 Total Cover:	35		
Woody/Vine Stratum (Plot Size: _____)	% Cover	Species?	Status
1.			
2.			
50%= 20%= Total Cover:	0		

% Bare Ground in Herb Stratum 65 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 8 (B)

Percent of dominant species that are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

_____ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominant hydrophytic vegetation is not present. Carex sp. assumed to be FAC due to presence of other FAC species.

Data Point 60

Soils

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
0-4	10YR 3/2	100					SL	Sandy loam
4-6	7.5YR 3/2	80	10YR 3/4	20	C	PL	SL	Sandy loam
6-7	10YR 2/1	100					L	Loam
7-12	7.5YR 3/1	95	10YR 3/4	5	C	PL	CL	Clay loam

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
_____ 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 Materials (TF21)
_____ Very Shallow Dark Surface (TF12)
_____ Vegetated Sand/Gravel Bars
_____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: n/a Depth (Inches) _____ Hydric Soil Present? ✓ /

Remarks

Soils meet the requirements of indicator F6 Redox Dark Surface.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N
Water Table Present? Yes _____ No X Depth (inches) _____
Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

Oxidized rhizospheres begin at 4 inches and indicate long duration saturation.

North State Resources, Inc.

Data Point 61
Feature Type Fresh emergent wetland

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Project/Site: Fountain Wind City/County: Shasta County Date: 8/15/18
Applicant/Owner: Avangrid State: CA
Investigator(s): Gabe Youngblood, Alison Loveless Section, Township, Range Sec. 36, T35N, R1E
Landform (hillslope, terrace, etc.) Drainage Local relief (concave, convex, none) Concave Slope % 1
Subregion (LRR): MLRA 22B Lat: 40.840497° Long: -121.821042° Datum: NAD 83
Soil Map Unit Name: Gasper-Scarface complex, moist, 15 to 30 percent slopes NWI Classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑/☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank ✓ Scour ____ Ordinary High Water Mark Mapped ✓ Stream Width Variable
Feature Designation: Perennial ✓ Intermittent ____ Ephemeral ____ Blue-line on USGS Quad ____ Substrate Vegetated
Natural Drainage ✓ Artificial Drainage ____ Navigable Water ____

Remarks

Data point documents a perennial stream with wetland vegetation throughout the channel.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=____ 20%=____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: ____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=____ 20%=____ Total Cover:	0		
Herb Stratum (Plot Size: 5)	**% Cover**	**Species?**	**Status**
1. Veronica americana	20	Y	OBL
2. Equisetum arvense	5	N	FAC
3. Scirpus microcarpus	5	N	OBL
4.			
5.			
6.			
7.			
8.			
50%=15 20%=6 Total Cover:	30		
Woody/Vine Stratum (Plot Size: ____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=____ 20%=____ Total Cover:	0		

% Bare Ground in Herb Stratum 70 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 1 (A)
Total number of dominant species across all strata: 1 (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 =	0
FACW Species	____	x 2 =	0
FAC Species	____	x 3 =	0
FACU Species	____	x 4 =	0
UPL Species	____	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators

____ Rapid Test for Hydrophytic Vegetation
✓ Dominance Test is >50%
____ Prevalence Index is ≤ 3.0[1]
____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
____ Wetland Non-Vascular Plants[1]
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominant hydrophytic vegetation is present.

Data Point 61

Soils

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
0-2	10YR 2/1	100					MS	Mucky sand

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: Rock Depth (Inches) 2 Hydric Soil Present? ✓ / N

Remarks

Soil consists of root mat with fine organic (muck) and sand. Meets indicator S1 Sandy Mucky Mineral.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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) 1 Wetland Hydrology? ✓ / N

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

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

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

Remarks

Surface water provides wetland hydrology.

North State Resources, Inc.

Data Point 62

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type Riparian Wetland

Project/Site: Fountain Wind City/County: Shasta County Date: 8/15/18

Applicant/Owner: Avangrid State: CA

Investigator(s): Gabe Youngblood, Alison Loveless Section, Township, Range Sec. 36, T35N, R1E

Landform (hillslope, terrace, etc.) Terrace Local relief (concave, convex, none) Concave Slope % 3

Subregion (LRR): MLRA 22B Lat: 40.840466° Long: -121.821029° Datum: NAD 83

Soil Map Unit Name: Gasper-Scarface complex, moist, 15 to 30 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑ ☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____

Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____

Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

Data point documents riparian wetland adjacent to a perennial stream.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: 15 ft)	**% Cover**	**Species?**	**Status**
1. Salix lasiandra	20	Y	FACW
2. Salix scouleriana	20	Y	FAC
3. Alnus incana	15	Y	FACW
4.			
50%= 27.5 20%= 11 Total Cover:	55		
Herb Stratum (Plot Size: 5 ft)	**% Cover**	**Species?**	**Status**
1. Viola glabella	10	Y	FACW
2. Stachys ajugoides	10	Y	OBL
3. Equisetum arvense	5	N	FAC
4. Achillea millefolium	5	N	FACU
5. Scirpus microcarpus	2	N	OBL
6.			
7.			
8.			
50%= 15.5 20%= 6.4 Total Cover:	32		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum 68 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 5 (A)

Total number of dominant species across all strata: 5 (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 =	0
FACW Species	_____	x 2 =	0
FAC Species	_____	x 3 =	0
FACU Species	_____	x 4 =	0
UPL Species	_____	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

✓ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominant hydrophytic vegetation is present.

Data Point 62

Soils

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
1-4	10YR 2/1	100					P	Peat
4-12	7.5YR 2.5/3	58	7.5YR 3/4	30	C	M	SL	Sandy loam
			7.5YR 5/8	10	C	PL		
			10YR 6/2	2	D	M		

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: Rock Depth (Inches) 2 Hydric Soil Present? ✓ / I

Remarks

Four inch layer of coarsely decomposed organic layer over mineral soil. Oxidized rhizoshpheres indicate aquic conditions

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) n/a

Water Table Present? Yes _____ No X Depth (inches) n/a

Saturation Present? Yes _____ No X Depth (inches) n/a *(includes capillary fringe)*

Wetland Hydrology? ✓ / N

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

Remarks

Oxidized rhizospheres indicate long duration saturation.

North State Resources, Inc.

Data Point 63

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type Upland

Project/Site: Fountain Wind City/County: Shasta County Date: 8/15/18

Applicant/Owner: Avangrid State: CA

Investigator(s): Gabe Youngblood, Alison Loveless Section, Township, Range Sec. 36, T35N, R1E

Landform (hillslope, terrace, etc.) Hillslope Local relief (concave, convex, none) Convex Slope % 5

Subregion (LRR): MLRA 22B Lat: 40.840437° Long: -121.821010° Datum: NAD 83

Soil Map Unit Name: Gasper-Scarface complex, moist, 15 to 30 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐/☒ Hydric soil? ☐/☒ Wetland hydrology? ☐/☒ Is sampled area a wetland? ☐/☒ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____

Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____

Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks Data point documents uplands adjacent to riparian wetland.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix scouleriana	10	Y	FAC
2. Pinus ponderosa	10	Y	FACU
3.			
4.			
50%= _____ 20%= _____ Total Cover:	20		
Sapling/Shrub Stratum (Plot Size: 15)	**% Cover**	**Species?**	**Status**
1. Salix scouleriana	40	Y	FAC
2. Alnus incana	10	N	FACW
3. Ribes roezlii (2)/ Ribes nevadense (2)	4	N	UPL/FAC
4. Ceanothus integerrimus (2)/ Pseudotsuga menziesii(2)	4	N	UPL/FACU
50%= 27 20%= 11.6 Total Cover:	58		
Herb Stratum (Plot Size: 5)	**% Cover**	**Species?**	**Status**
1. Lysimachia latifolia	8	Y	FACW
2. Equisetum arvense	5	Y	FAC
3. Juncus balticus	2	N	FACW
4. Cynoglossum occidentale	2	N	UPL
5. Stachys ajugoides	1	N	OBL
6. Achillea millefolium	1	N	FACU
7. Leucanthemum vulgare	1	N	FACU
8.			
50%= 10 20%= 4 Total Cover:	20		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%= _____ 20%= _____ Total Cover:	0		

% Bare Ground in Herb Stratum 80 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 4 (A)

Total number of dominant species across all strata: 5 (B)

Percent of dominant species that are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation

✓ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

_____ Wetland Non-Vascular Plants[1]

_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks Dominant hydrophytic vegetation is present.

Data Point 63

Soils

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
0-1	10YR 2/1	100					P	Peat
1-12	7.5YR 3/4	100					GL	Gravelly loam
12-16	7.5YR 3/3	70	7.5YR 4/6	30	C	M	GCL	Gravelly clay loam

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
_____ 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 Materials (TF21)
_____ Very Shallow Dark Surface (TF12)
_____ Vegetated Sand/Gravel Bars
_____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? Y /X

Remarks

No indicators of hydric soils were observed.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) n/a Wetland Hydrology? Y /X
Water Table Present? Yes _____ No X Depth (inches) n/a
Saturation Present? Yes _____ No X Depth (inches) n/a *(includes capillary fringe)*

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

Remarks

No indicators of wetland hydrology were observed.

North State Resources, Inc.

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Data Point: 64
Feature Type: Vegetated ditch

Project/Site: Fountain Wind | City/County: Shasta County | Date: 8/30/18
Applicant/Owner: Avangrid | State: CA
Investigator(s): Gabe Youngblood, Alison Loveless | Section, Township, Range: Sec. 25, T35N, R1E
Landform (hillslope, terrace, etc.): Drainage ditch | Local relief (concave, convex, none): Concave | Slope %: 2
Subregion (LRR): MLRA 22B | Lat: 40.865026° | Long: -121.821162° | Datum: NAD 83
Soil Map Unit Name: Goulder gravelly sandy loam, 15 to 30 percent slopes | NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☑/☐ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑ ☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank ✓ Scour ____ Ordinary High Water Mark Mapped ✓ Stream Width 2
Feature Designation: Perennial ✓ Intermittent ____ Ephemeral ____ Blue-line on USGS Quad ____ Substrate vegetated
Natural Drainage ____ Artificial Drainage ✓ Navigable Water ____

Remarks

Data point documents a vegetated ditch.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=____ 20%=____ Total Cover:	0		

Sapling/Shrub Stratum (Plot Size: ____)	% Cover	Species?	Status
1.			
2.			
3.			
4.			
50%=____ 20%=____ Total Cover:	0		

Herb Stratum (Plot Size: 5 ft)	% Cover	Species?	Status
1. Carex amplifolia	60	Y	OBL
2. Carex sp.	5	N	FAC--
3. Holcus lanatus	5	N	FAC
4. Deschampsia cespitosa	5	N	FACW
5. Rumex occidentalis	3	N	OBL
6. Galium trifidum	1	N	FACW
7. Veronica americana	1	N	OBL
8.			
50%=40 20%=16 Total Cover:	80		

Woody/Vine Stratum (Plot Size: ____)	% Cover	Species?	Status
1.			
2.			
50%=____ 20%=____ Total Cover:	0		

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 5 (A)
Total number of dominant species across all strata: 5 (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 =	0
FACW Species	____	x 2 =	0
FAC Species	____	x 3 =	0
FACU Species	____	x 4 =	0
UPL Species	____	x 5 =	0
Column Totals	0 (A)		____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators

____ Rapid Test for Hydrophytic Vegetation
✓ Dominance Test is >50%
____ Prevalence Index is ≤ 3.0[1]
____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
____ Wetland Non-Vascular Plants[1]
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominant hydrophytic vegetation is present. Carex sp. assumed to be FAC due to presence of other hydrophytic vegetation.

Data Point 64

Soils

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 2.5/2	100					GCL	Gravely clay loam

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- ✓ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? /

Remarks

Soils were inundated during survey. Considered Hydric as they support dominate obligate plants and wetland hydrology.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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) 1 Wetland Hydrology? ✓ / N

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

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

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

Remarks

Surface water provides wetland hydrology.

North State Resources, Inc.

Data Point: 65
Feature Type: Upland

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Project/Site: Fountain Wind | City/County: Shasta County | Date: 8/30/18
Applicant/Owner: Avangrid | State: CA
Investigator(s): Gabe Youngblood, Alison Loveless | Section, Township, Range: Sec. 25, T35N, R1E
Landform (hillslope, terrace, etc.): Drainage | Local relief (concave, convex, none): Convex | Slope %: 5
Subregion (LRR): MLRA 22B | Lat: 40.865027° | Long: -121.821220° | Datum: NAD 83
Soil Map Unit Name: Goulder gravelly sandy loam, 15 to 30 percent slopes | NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☑/☐ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☑ ☐ Hydric soil? ☑/☐ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☑/☐ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank ✓ Scour ✓ Ordinary High Water Mark Mapped ✓ Stream Width _____
Feature Designation: Perennial _____ Intermittent ✓ Ephemeral _____ Blue-line on USGS Quad _____ Substrate Vegetated
Natural Drainage _____ Artificial Drainage ✓ Navigable Water _____

Remarks

Upland pair to DP64 which documents a vegetated ditch.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		

Sapling/Shrub Stratum (Plot Size: _____)	% Cover	Species?	Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		

Herb Stratum (Plot Size: 5)	% Cover	Species?	Status
1. Festuca arundinacea	60	Y	FAC
2. Poa pratensis	5	N	FAC
3. Juncus sp.	5	N	FAC-
4.		N	
5.		N	
6.		N	
7.		N	
8.			
50%=40 20%=16 Total Cover:	70		

Woody/Vine Stratum (Plot Size: _____)	% Cover	Species?	Status
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum 30 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 1 (A)
Total number of dominant species across all strata: 1 (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 =	0
FACW Species	_____	x 2 =	0
FAC Species	_____	x 3 =	0
FACU Species	_____	x 4 =	0
UPL Species	_____	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
✓ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominant hydrophytic vegetation is present. Juncus sp. assumed FAC or wetter due to species that are documented within the project as being FACW or OBL.

Soils

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 2.5/3	100					GCL	Gravelly clay loam

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? ✓ /

Remarks

No indicators of hydric soil were observed.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) n/a Wetland Hydrology? Y / N

Water Table Present? Yes _____ No X Depth (inches) n/a

Saturation Present? Yes _____ No X Depth (inches) n/a *(includes capillary fringe)*

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

Remarks

No indicators of wetland hydrology were observed.

North State Resources, Inc.

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Data Point: 66
Feature Type: Seasonal wetland

Project/Site: Fountain Wind | City/County: Shasta County | Date: 8/30/18
Applicant/Owner: Avangrid | State: CA
Investigator(s): Gabe Youngblood, Alison Loveless | Section, Township, Range: Sec. 30, T35N, R2E
Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): Convex | Slope %: 15
Subregion (LRR): MLRA 22B | Lat: 40.855492° | Long: -121.796321° | Datum: NAD 83
Soil Map Unit Name: Stukel complex, 15 to 30 percent slopes | NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐/☒ Hydric soil? ☐/☒ Wetland hydrology? ☐/☒ Is sampled area a wetland? ☐/☒ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank ✓ Scour ____ Ordinary High Water Mark Mapped ✓ Stream Width: Variable
Feature Designation: Perennial ✓ Intermittent ____ Ephemeral ____ Blue-line on USGS Quad ____ Substrate: Vegetated
Natural Drainage ✓ Artificial Drainage ____ Navigable Water ____

Remarks

Data point documents a seasonal wetland on a hillslope with shallow soils over bedrock.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=____ 20%=____ Total Cover:	0		

Sapling/Shrub Stratum (Plot Size: ____)	% Cover	Species?	Status
1.			
2.			
3.			
4.			
50%=____ 20%=____ Total Cover:	0		

Herb Stratum (Plot Size: 5)	% Cover	Species?	Status
1. Triteleia hyacinthina	20	Y	FAC
2. Navarretia intertexta	18	Y	FACW
3. Mimulus guttatus	5	N	OBL
4. Perideridia sp.	3	N	UNK
5. Brodiaea sp.	2	N	UNK
6. Juncus sp. (dwarf sp.)	2	N	UNK
7. Epilobium campestre	1	N	OBL
8.			
50%=15 20%=6 Total Cover:	51		

Woody/Vine Stratum (Plot Size: ____)	% Cover	Species?	Status
1.			
2.			
50%=____ 20%=____ Total Cover:	0		

% Bare Ground in Herb Stratum 49 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 2 (A)
Total number of dominant species across all strata: 2 (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 =	0
FACW Species ____	x 2 =	0
FAC Species ____	x 3 =	0
FACU Species ____	x 4 =	0
UPL Species ____	x 5 =	0
Column Totals 0 (A)		0 (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators

____ Rapid Test for Hydrophytic Vegetation
✓ Dominance Test is >50%
____ Prevalence Index is ≤ 3.0[1]
____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
____ Wetland Non-Vascular Plants[1]
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☑/☐

Remarks

Dominant hydrophytic vegetation is present.

Data Point 66

Soils

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
0-4	10YR 2/1	100					MS	Mucky sand

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- ✓ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: Bedrock Depth (Inches) 4 Hydric Soil Present? ✓ / N

Remarks

Problematic shallow soil over bedrock is seasonally saturated and supports hydrophytic plants.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) n/a Wetland Hydrology? ✓ / N

Water Table Present? Yes _____ No X Depth (inches) n/a

Saturation Present? Yes _____ No X Depth (inches) n/a *(includes capillary fringe)*

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

Saturation visible on some Google Earth imagery.

Remarks

Salt (white) staining on rocks and soil surface indicate saturation and seepage.

North State Resources, Inc.

Data Point 67
Feature Type Upland

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Project/Site: Fountain Wind City/County: Shasta County Date: 8/30/18
Applicant/Owner: Avangrid State: CA
Investigator(s): Gabe Youngblood, Alison Loveless Section, Township, Range Sec. 30, T35N, R2E
Landform (hillslope, terrace, etc.) Hillslope Local relief (concave, convex, none) Convex Slope % 15
Subregion (LRR): MLRA 22B Lat: 40.855504° Long: -121.796347° Datum: NAD 83
Soil Map Unit Name: Stukel complex, 15 to 30 percent slopes NWI Classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☑/☐ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐/☒ Hydric soil? ☐/☒ Wetland hydrology? ☐/☒ Is sampled area a wetland? ☐/☒ Other waters? ☐/☒

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank _____ Scour _____ Ordinary High Water Mark Mapped _____ Stream Width _____
Feature Designation: Perennial _____ Intermittent _____ Ephemeral _____ Blue-line on USGS Quad _____ Substrate _____
Natural Drainage _____ Artificial Drainage _____ Navigable Water _____

Remarks

Upland pair to DP66 which documents a seasonal wetland.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=_____ 20%=_____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1. Arctostaphylos patula	45	Y	UPL
2. Quercus garryana	40	Y	FACU
3. Ceanothus integarmus	5	N	UPL
4.			
50%=45 20%=18 Total Cover:	90		
Herb Stratum (Plot Size: 5)	**% Cover**	**Species?**	**Status**
1. Galium aparine	2	2	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%=1 20%=.4 Total Cover:	2		
Woody/Vine Stratum (Plot Size: _____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=_____ 20%=_____ Total Cover:	0		

% Bare Ground in Herb Stratum 98 % Cover of Biotic Crust 0

Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 0 (A)
Total number of dominant species across all strata: 3 (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 =	0
FACW Species	_____	x 2 =	0
FAC Species	_____	x 3 =	0
FACU Species	_____	x 4 =	0
UPL Species	_____	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

_____ Rapid Test for Hydrophytic Vegetation
_____ Dominance Test is >50%
_____ Prevalence Index is ≤ 3.0[1]
_____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
_____ Wetland Non-Vascular Plants[1]
_____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☒

Remarks

Dominant hydrophytic vegetation is not present.

Data Point 67

Soils

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
0-8	10YR 2/2	100					L	Loam

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
- _____ 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 Materials (TF21)
- _____ Very Shallow Dark Surface (TF12)
- _____ Vegetated Sand/Gravel Bars
- _____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: Bedrock Depth (Inches) 8 Hydric Soil Present? Y / N X

Remarks

No indicators of hydric soil were observed.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) n/a Wetland Hydrology? Y / N X

Water Table Present? Yes _____ No X Depth (inches) n/a

Saturation Present? Yes _____ No X Depth (inches) n/a *(includes capillary fringe)*

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

Remarks

No indicators of wetland hydrology were observed.

North State Resources, Inc. now Stantec

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Data Point: 68
Feature Type: Intermittent Stream

Project/Site: Fountain Wind | City/County: Shasta County | Date: 8/15/18
Applicant/Owner: Avangrid | State: CA
Investigator(s): Gabe Youngblood, Alison Loveless | Section, Township, Range: Sec. 26, T35N, R1E
Landform (hillslope, terrace, etc.): Drainage | Local relief (concave, convex, none): Concave | Slope %: 5
Subregion (LRR): MLRA 22B | Lat: 40.856761° | Long: -121.836736° | Datum: NAD 83
Soil Map Unit Name: Windy and McCarthy stony sandy loams, 0 to 30 percent slopes | NWI Classification: R4SBC

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐
Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Note: On this e-form, the checkmark (left choice) means yes, the X (right choice) means no.

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐ ☒ Hydric soil? ☐/☒ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☐/☒ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank ✓ Scour ✓ Ordinary High Water Mark Mapped ✓ Stream Width 2
Feature Designation: Perennial ____ Intermittent ✓ Ephemeral ____ Blue-line on USGS Quad ____ Substrate soil
Natural Drainage ✓ Artificial Drainage ____ Navigable Water ____

Remarks

DP documents a small intermittent stream.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=____ 20%=____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: ____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=____ 20%=____ Total Cover:	0		
Herb Stratum (Plot Size: ____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%=____ 20%=____ Total Cover:	0		
Woody/Vine Stratum (Plot Size: ____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=____ 20%=____ Total Cover:	0		

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

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: ____ (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators

____ Rapid Test for Hydrophytic Vegetation
____ Dominance Test is >50%
____ Prevalence Index is ≤ 3.0[1]
____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
____ Wetland Non-Vascular Plants[1]
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☐

Remarks

No veg scoured channel

Data Point 68

Soils

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

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
_____ 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 Materials (TF21)
_____ Very Shallow Dark Surface (TF12)
_____ Vegetated Sand/Gravel Bars
_____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? /

Remarks

No soils pit scoured channel

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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 X Depth (inches) _____ Wetland Hydrology? ✓ / N
Water Table Present? Yes _____ No X Depth (inches) _____
Saturation Present? Yes _____ No X Depth (inches) _____ *(includes capillary fringe)*

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

Remarks

Drift deposits indicate frequent flooding.

North State Resources, Inc. now Stantec

Data Point 69

Wetland Determination Data Form–Western Mountains, Valleys, & Coast Region

Feature Type Perennial Stream

Project/Site: Fountain Wind City/County: Shasta County Date: 8/30/18

Applicant/Owner: Avangrid State: CA

Investigator(s): Gabe Youngblood, Alison Loveless Section, Township, Range Sec. 26, T35N, R1E

Landform (hillslope, terrace, etc.) Drainage Local relief (concave, convex, none) Concave Slope % 5

Subregion (LRR): MLRA 22B Lat: 40.861379° Long: -121.837220° Datum: NAD 83

Soil Map Unit Name: Nanny gravelly sandy loam, 0 to 8 percent slopes NWI Classification: R3UBH

Are climatic/hydrologic conditions on the site typical for this time of year? ☑/☐ *(If no, explain in Remarks.)*

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ significantly disturbed? Are normal circumstances present? ☑/☐

Are vegetation ☐/☒ soil ☐/☒ or hydrology ☐/☒ naturally problematic? *(If needed, explain in Remarks.)*

Note: On this e-form, the checkmark (left choice) means yes, the X (right choice) means no.

Summary of Findings (Attach site map showing sampling point locations, transects, important features, etc.)

Hydrophytic vegetation? ☐ ☒ Hydric soil? ☐/☒ Wetland hydrology? ☑/☐ Is sampled area a wetland? ☐/☒ Other waters? ☑/☐

Evaluation of features designated "Other Waters of the United States"

Indicators: Defined bed and bank ✓ Scour ✓ Ordinary High Water Mark Mapped ✓ Stream Width Variable

Feature Designation: Perennial ✓ Intermittent ____ Ephemeral ____ Blue-line on USGS Quad ____ Substrate Cobble

Natural Drainage ✓ Artificial Drainage ____ Navigable Water ____

Remarks

DP documents Hatchet Creek.

Vegetation (Use Scientific Names)

Tree Stratum (Plot Size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50%=____ 20%=____ Total Cover:	0		
Sapling/Shrub Stratum (Plot Size: ____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
50%=____ 20%=____ Total Cover:	0		
Herb Stratum (Plot Size: ____)	**% Cover**	**Species?**	**Status**
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
50%=____ 20%=____ Total Cover:	0		
Woody/Vine Stratum (Plot Size: ____)	**% Cover**	**Species?**	**Status**
1.			
2.			
50%=____ 20%=____ Total Cover:	0		

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

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: ____ (A/B)

Prevalence Index Worksheet

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators

____ Rapid Test for Hydrophytic Vegetation

____ Dominance Test is >50%

____ Prevalence Index is ≤ 3.0[1]

____ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

____ Wetland Non-Vascular Plants[1]

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? ☐/☐

Remarks

No veg scoured channel

Data Point 69

Soils

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

[1]Types: C = Concentration D = Depletion RM = Reduced Matrix [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 (except MLRA 1) (F1)
_____ 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 Materials (TF21)
_____ Very Shallow Dark Surface (TF12)
_____ Vegetated Sand/Gravel Bars
_____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (Inches) _____ Hydric Soil Present? /

Remarks

No soils pit scoured channel.

Hydrology

Wetland Indicators

Primary Indicators (Minimum of one is 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 (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) except 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) 12 Wetland Hydrology? ✓ / N
Water Table Present? Yes ✓ No _____ Depth (inches) Surface
Saturation Present? Yes ✓ No _____ Depth (inches) Surface *(includes capillary fringe)*

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

Remarks

Surface water provides wetland hydrology.

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, & Coast

Project/Site: Fountain Wind Project | City/County: Burney/Shasta | Sampling Date: 10/14/2019
Applicant/Owner: Fountain Wind, LLC | State: California | Sampling Point: 001 up
Investigator(s): S. Creer|&|S. Cortez|&|B. Cohen | Section, Township, Range: CA21 T34N R2E SN5
Landform (hillslope, terrace, etc): Terrace | Local relief (concave, convex, none): concave | Slope (%): 3
Subregion (LRR): MLRA 22B | Lat: 40.83333943 | Long: 121.782373 | Datum: WGS84
Soil Map Unit Name: Gasper-Scarface complex, moist, 30 to 50 percent slopes | NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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	X	
Hydric Soil Present?	Yes		No	X	**Is the Sampled Area**
Wetland Hydrology Present?	Yes		No	X	**within a Wetland?** Yes ____ No X

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus ponderosa* / Yellow pine, Ponderosa pine, Western yel	10	Yes	FACU
2. *Pseudotsuga menziesii* / Douglas fir	10	Yes	FACU
3.			
4.			
	20	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15ft)			
1. *Alnus incana* / Gray alder	40	Yes	FACW
2. *Salix scouleriana* / Scouler willow, Scouler's willow	35	Yes	FAC
3. *Acer macrophyllum* / Bigleaf maple, Big-leaf maple	30	Yes	FACU
4. *Symphoricarpos albus* / Common snowberry	15	No	FACU
5.			
	120	= Total Cover	
Herb Stratum (Plot size: 6 foot radius)			
1. *Elymus glaucus* / Blue wildrye, Blue or western wild-rye	65	Yes	FACU
2. *Equisetum hyemale* / Scouringrush horsetail	13	No	FACW
3. *Woodwardia fimbriata* / Western chain fern, Giant chain fern	7	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	85	= Total Cover	
Woody Vine Stratum (Plot size: N/A)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Statum 5

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 6 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	60	x 2 =	120
FAC species	35	x 3 =	105
FACU species	130	x 4 =	520
UPL species	0	x 5 =	0
Column Totals:	225 (A)		745 (B)

Prevalence Index = B/A = 3.31

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ 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 X

Remarks:

SOIL

Sampling Point: 001 up

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	5 YR 3/2	100					Sandy loam	Shovel refusal rocks at 8

[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 X

Remarks:

Large rocks present throughout

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 (minimum of two 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)
- X 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 X Depth (inches): _____

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

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

Wetland Hydrology Present? Yes ___ No X

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

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, & Coast

Project/Site: Fountain Wind Project | City/County: Burney/Shasta | Sampling Date: 10/14/2019
Applicant/Owner: Fountain Wind, LLC | State: California | Sampling Point: 001 wet
Investigator(s): S. Cortez|&|B. Cohen | Section, Township, Range: CA21 T34N R2E SN5
Landform (hillslope, terrace, etc): terrace | Local relief (concave, convex, none): concave | Slope (%): 3
Subregion (LRR): MLRA 22B | Lat: 40.83333298 | Long: -121.782401 | Datum: WGS84
Soil Map Unit Name: Gasper-Scarface complex, moist, 30 to 50 percent slopes | NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: N/A)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 foot radius)			
1. *Acer circinatum* / Vine maple	30	Yes	FAC
2. *Salix scouleriana* / Scouler willow, Scouler's willow	20	Yes	FAC
3. *Alnus incana* / Gray alder	20	Yes	FACW
4.			
5.			
	70	= Total Cover	
Herb Stratum (Plot size: 6 foot radius)			
1. *Carex utriculata* / Beaked sedge, Southern beaked sedge	70	Yes	OBL
2. *Elymus glaucus* / Blue wildrye, Blue or western wild-rye	20	Yes	FACU
3. *Scirpus microcarpus* / Mountain bog bulrush	5	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	95	= Total Cover	
Woody Vine Stratum (Plot size: N/A)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Statum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 80.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	75	x 1 =	75
FACW species	20	x 2 =	40
FAC species	50	x 3 =	150
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals:	165 (A)		345 (B)

Prevalence Index = B/A = 2.09

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ 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 X No ____

Remarks:

SOIL

Sampling Point: 001 wet

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5 YR 4/1	90	5 YR 4/6	10	C	M	sandy 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)
- X 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 X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X 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 (minimum of two 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 X No ___ Depth (inches): .5

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

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? Yes X No ___

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

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, & Coast

Project/Site: Fountain Wind Project | City/County: Burney/Shasta | Sampling Date: 10/15/2019
Applicant/Owner: Fountain Wind, LLC | State: California | Sampling Point: 002 up
Investigator(s): S. Creer|&|S. Cortez | Section, Township, Range: CA21 T34N R2E SN6
Landform (hillslope, terrace, etc): Flattened area on hill slope | Local relief (concave, convex, none): concave | Slope (%): 3
Subregion (LRR): MLRA 22B | Lat: 40.828088 | Long: -121.787942 | Datum: WGS84
Soil Map Unit Name: Nanny stony sandy loam, 0 to 8 percent slopes (NbB) | NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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	X	
Hydric Soil Present?	Yes	____	No	X	**Is the Sampled Area**
Wetland Hydrology Present?	Yes	____	No	X	**within a Wetland?** Yes ____ No X

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: N/a)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: N/a)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 6 feet radius)			
1. *Hypericum perforatum* / Klamathweed	25	Yes	FACU
2. *Plantago lanceolata* / Ribwort, English plantain	15	Yes	FACU
3. *Achillea millefolium* / Yarrow	10	No	FACU
4. *Anthoxanthum odoratum* / Sweet vernal grass	10	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	60	= Total Cover	
Woody Vine Stratum (Plot size: N/a)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Statum 45

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	60	x 4 =	240
UPL species	0	x 5 =	0
Column Totals:	60 (A)		240 (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ 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 X

Remarks:

SOIL

Sampling Point: 002 up

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10 YR 3/2	100					loam	
6-12	10 YR 5/2	70					Loam	
6-12	10 YR 4/2	30					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 X

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 (minimum of two 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 X Depth (inches): .1

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

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): 12

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, & Coast

Project/Site: Fountain Wind Project | City/County: Burney/Shasta | Sampling Date: 10/15/2019
Applicant/Owner: Fountain Wind, LLC | State: California | Sampling Point: 002 wet
Investigator(s): S. Creer|&|S. Cortez | Section, Township, Range: CA21 T34N R2E SN6
Landform (hillslope, terrace, etc): Flattened area on hill slope | Local relief (concave, convex, none): concave | Slope (%): 3
Subregion (LRR): MLRA 22B | Lat: 40.8280169 | Long: -121.787656 | Datum: WGS84
Soil Map Unit Name: Nanny stony sandy loam, 0 to 8 percent slopes (NbB) | NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil X, 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 X	No ____	
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: N/a)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: N/a)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 6 feet radius)			
1. *Carex utriculata* / Beaked sedge, Southern beaked sedge	80	Yes	OBL
2. *Juncus effusus* / Common bog rush, Soft or lamp rush	15	No	FACW
3. *Anthoxanthum odoratum* / Sweet vernal grass	10	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	105	= Total Cover	
Woody Vine Stratum (Plot size: N/a)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Statum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	80	x 1 =	80
FACW species	15	x 2 =	30
FAC species	0	x 3 =	0
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	105 (A)		150 (B)

Prevalence Index = B/A = 1.43

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ 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 X No ____

Remarks:

SOIL

Sampling Point: 002 wet

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	7.5 YR 3/3	100					Silty clay loam	
5-12	10 YR 4/1	58	5 YR 5/8	2	C	M	Silty clay loam	
5-12	10 YR 5/2	40					Silty clay loam	Soft manganese masses at 3%

[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)
- X 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 X No ___

Remarks:

Problematic soil; as per chapter 5 of supplement: item #6 seasonally ponded soils. Positive for alpha-alpha Dipyridyl test. Assume Hydric soils due to presence of hydrology and hydrophytic veg.

HYDROLOGY

Wetland Hydrology Indicators:

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

- X Surface Water (A1)
- ___ High Water Table (A2)
- X 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)
- X Oxidized Rhizospheres along Living Roots (C3)
- X 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 (minimum of two required)

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

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): .1

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

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 12

Wetland Hydrology Present? Yes X No ___

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

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, & Coast

Project/Site: Fountain Wind Project | City/County: Burney/Shasta | Sampling Date: 10/15/2019
Applicant/Owner: Fountain Wind, LLC | State: California | Sampling Point: 052 up
Investigator(s): JI Holson|&|B. Cohen | Section, Township, Range: CA21 T34N R1E SN10
Landform (hillslope, terrace, etc): Floodplain | Local relief (concave, convex, none): concave | Slope (%): 1
Subregion (LRR): MLRA 22B | Lat: 40.817215 | Long: -121.841597 | Datum: WGS84
Soil Map Unit Name: Windy and McCarthy very stony sandy loams, 30 to 50 percent slopes | NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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	X	
Hydric Soil Present?	Yes	____	No	X	**Is the Sampled Area**
Wetland Hydrology Present?	Yes	____	No	X	**within a Wetland?** Yes ____ No X

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pseudotsuga menziesii* / Douglas fir	50	Yes	FACU
2. *Populus tremuloides* / Quaking aspen	40	Yes	FACU
3.			
4.			
	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 foot radius)			
1. *Cornus nuttallii* / Mountain dogwood	25	Yes	FACU
2. *Acer circinatum* / Vine maple	15	Yes	FAC
3. *Rubus parviflorus* / Thimbleberry	10	Yes	FACU
4.			
5.			
	50	= Total Cover	
Herb Stratum (Plot size: 6 foot radius)			
1. *Lathyrus latifolius* / Sweet pea, Perennial sweet pea	2	Yes	
2. *Bromus carinatus* / California bromegrass	1	Yes	
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	3	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Statum 95

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 7 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 14.3 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	15	x 3 =	45
FACU species	125	x 4 =	500
UPL species	0	x 5 =	0
Column Totals:	140 (A)		545 (B)

Prevalence Index = B/A = 3.89

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ 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 X

Remarks:

SOIL

Sampling Point: 052 up

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	5 YR 3/1	100					Loamy sand	
4-16	5 YR 3/3	100					Sand	Small gravel throughout.

[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 X

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 (minimum of two 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)
- X 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 X Depth (inches): _____

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

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

Wetland Hydrology Present? Yes ___ No X

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

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, & Coast

Project/Site: Fountain Wind Project | City/County: Burney/Shasta | Sampling Date: 10/16/2019
Applicant/Owner: Fountain Wind, LLC | State: California | Sampling Point: 053 up
Investigator(s): JI Holson|&|B. Cohen | Section, Township, Range: CA21 T34N R1E SN22
Landform (hillslope, terrace, etc): Hillslope | Local relief (concave, convex, none): convex | Slope (%): 30
Subregion (LRR): MLRA 22B | Lat: 40.78578697 | Long: -121.851966 | Datum: WGS84
Soil Map Unit Name: Windy and McCarthy very stony sandy loams, 30 to 50 percent slopes | NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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	X	
Hydric Soil Present?	Yes	____	No	X	**Is the Sampled Area**
Wetland Hydrology Present?	Yes	____	No	X	**within a Wetland?** Yes ____ No X

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pseudotsuga menziesii* / Douglas fir	45	Yes	FACU
2. *Calocedrus decurrens* / Incense cedar	15	Yes	
3. *Cornus nuttallii* / Mountain dogwood	5	No	FACU
4.			
	65	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 foot radius)			
1. *Acer circinatum* / Vine maple	20	Yes	FAC
2. *Cornus nuttallii* / Mountain dogwood	20	Yes	FACU
3.			
4.			
5.			
	40	= Total Cover	
Herb Stratum (Plot size: N/A)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	0	= Total Cover	
Woody Vine Stratum (Plot size: N/A)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Statum 100

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	20	x 3 =	60
FACU species	70	x 4 =	280
UPL species	0	x 5 =	0
Column Totals:	90 (A)		340 (B)

Prevalence Index = B/A = 3.78

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ 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 X

Remarks:

SOIL

Sampling Point: 053 up

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	7.5 YR 3/3	100					Loam	Cobbles present

[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 X

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 (minimum of two 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 X Depth (inches): _____

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

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, & Coast

Project/Site: Fountain Wind Project | City/County: Burney/Shasta | Sampling Date: 10/16/2019
Applicant/Owner: Fountain Wind, LLC | State: California | Sampling Point: 053 wet
Investigator(s): JI Holson|&|B. Cohen | Section, Township, Range: CA21 T34N R1E SN22
Landform (hillslope, terrace, etc): Floodplain | Local relief (concave, convex, none): concave | Slope (%): 1
Subregion (LRR): MLRA 22B | Lat: 40.785926 | Long: -121.851976 | Datum: WGS84
Soil Map Unit Name: Windy and McCarthy very stony sandy loams, 30 to 50 percent slopes | NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil X, 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 X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? Yes X No ____

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 foot radius)			
1. *Alnus rhombifolia* / White alder	40	Yes	FACW
2. *Acer circinatum* / Vine maple	20	Yes	FAC
3. *Salix scouleriana* / Scouler willow, Scouler's willow	10	No	FAC
4.			
5.			
	70	= Total Cover	
Herb Stratum (Plot size: 6 foot radius)			
1. *Carex* / Sedge	75	Yes	FAC
2. *Stachys ajugoides* / Hedge nettle	8	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	83	= Total Cover	
Woody Vine Stratum (Plot size: N/A)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Statum 10

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	8	x 1 =	8
FACW species	40	x 2 =	80
FAC species	105	x 3 =	315
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	153 (A)		403 (B)

Prevalence Index = B/A = 2.63

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ 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 X No ____

Remarks:
Carex is not identifiable to species at this time but is assumed to be FAC due to presence of other hydrophytic species.

SOIL

Sampling Point: 053 wet

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10 YR 3/2	100					Loamy sand	Higher levels of loam in upper layers above

[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 X No ___

Remarks:

Soils are problematic and assumed hydric. Sampled area is in vegetated sand and gravel bar within top of bank and redox features may be washed out by Drainage patterns and are oxygenated.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X 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 (minimum of two required)

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

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 11

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Area is adjacent to ohwm or drainage and within top of bank. Drainage patterns and saturation present.

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, & Coast

Project/Site: Fountain Wind Project | City/County: Burney/Shasta | Sampling Date: 10/16/2019
Applicant/Owner: Fountain Wind, LLC | State: California | Sampling Point: 054 up
Investigator(s): C. Singer|&|B. Cohen | Section, Township, Range: CA21 T34N R1E SN23
Landform (hillslope, terrace, etc): Terrace | Local relief (concave, convex, none): concave | Slope (%): 1
Subregion (LRR): MLRA 22B | Lat: 40.792924 | Long: -121.828157 | Datum: WGS84
Soil Map Unit Name: Windy and McCarthy stony sandy loams, 0 to 30 percent slopes | NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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	X	No		
Hydric Soil Present?	Yes		No	X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Wetland Hydrology Present?	Yes		No	X	

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Calocedrus decurrens* / Incense cedar	15	Yes	UPL
2. *Abies* / Fir	5	Yes	UPL
3.			
4.			
	20	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 foot radius)			
1. *Alnus rhombifolia* / White alder	30	Yes	FACW
2. *Acer circinatum* / Vine maple	30	Yes	FAC
3.			
4.			
5.			
	60	= Total Cover	
Herb Stratum (Plot size: 6 foot radius)			
1. *Maianthemum racemosum* / Feathery false lily of the valley	2	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	2	= Total Cover	
Woody Vine Stratum (Plot size: N/A)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Statum 98

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 60.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	32	x 3 =	96
FACU species	0	x 4 =	0
UPL species	20	x 5 =	100
Column Totals:	82 (A)		256 (B)

Prevalence Index = B/A = 3.12

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ 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 X No ____

Remarks:
Abies concolor

SOIL

Sampling Point: 054 up

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	7.5 YR 2.5/3	100					Silty loam	Gravel present, more as you go deeper

[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 X

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 (minimum of two 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 X Depth (inches): _____

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

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, & Coast

Project/Site: Fountain Wind Project | City/County: Burney/Shasta | Sampling Date: 10/17/2019
Applicant/Owner: Fountain Wind, LLC | State: California | Sampling Point: 055 up
Investigator(s): C. Singer|&|B. Cohen | Section, Township, Range: CA21 T34N R1E SN17
Landform (hillslope, terrace, etc): Terrace | Local relief (concave, convex, none): none | Slope (%): 1
Subregion (LRR): MLRA 22B | Lat: 40.79850965 | Long: -121.876521 | Datum: WGS84
Soil Map Unit Name: Cohasset stony loam, 0 to 30 percent slopes | NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Hydric Soil Present?	Yes ____	No X		
Wetland Hydrology Present?	Yes ____	No X		

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer macrophyllum* / Bigleaf maple, Big-leaf maple	65	Yes	FACU
2. *Salix scouleriana* / Scouler willow, Scouler's willow	15	No	FAC
3.			
4.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 foot radius)			
1. *Rubus armeniacus* / Himalayan blackberry	15	Yes	FAC
2. *Rubus parviflorus* / Thimbleberry	10	Yes	FACU
3. *Ribes malvaceum* / Chaparral currant	10	Yes	UPL
4.			
5.			
	35	= Total Cover	
Herb Stratum (Plot size: 6 foot radius)			
1. *Pteridium aquilinum* / Western brackenfern	7	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	7	= Total Cover	
Woody Vine Stratum (Plot size: N/A)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Statum 90

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 20.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	30	x 3 =	90
FACU species	82	x 4 =	328
UPL species	10	x 5 =	50
Column Totals:	122 (A)		468 (B)

Prevalence Index = B/A = 3.84

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ 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 X

Remarks:

SOIL

Sampling Point: 055 up

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	7.5 YR 2.5/2	100					Silty loam	Small gravel present

[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 X

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 (minimum of two 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 X Depth (inches): _____

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

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

Appendix C PLANT SPECIES OBSERVED

Table C-1. Plant Species Observed

Scientific Name[1]	Common Name	Wetland Indicator Status[2]	Origin
Adoxaceae (Muskroot Family)			
Sambucus nigra ssp. *caerulea*	blue elderberry	FAC	Native
Apiaceae (Umbelliferae) (Carrot Family)			
Angelica californica	California angelica	-	Native
Angelica capitellata	grayswamp whiteheads	FACW	Native
Heracleum maximum	common cow parsnip	FAC	Native
Apocynaceae (Dogbane Family)			
Apocynum androsaemifolium	bitter dogbane	FACU	Native
Aristolochiaceae (Pipevine Family)			
Asarum caudatum	long-tail wild ginger	FACU	Native
Asarum hartwegii	Hartweg's wild ginger	-	Native
Asteraceae (Compositae) (Sunflower Family)			
Achillea millefolium	yarrow	FACU	Native
Artemisia douglasiana	California mugwort	FACW	Native
Cirsium vulgare	bullthistle	FACU	non-native (invasive)
Ericameria nauseosa	rubber rabbitbrush	-	Native
Erigeron annus	annual fleabane	FACU	non-native
Helenium bigelovii	Bigelow's sneezeweed	FACW	Native
Leucanthemum vulgare	ox-eye daisy	FACU	non-native (invasive)
Oreostemma alpigenum	tundra aster	FAC	Native
Senecio triangularis	arrowleaf ragwort	FACW	Native
Sonchus oleraceus	sow thistle	UPL	non-native
Symphyotrichum spathulatum	western mountain aster	FAC	Native
Taraxacum officinale	common dandelion	FACU	Non-native
Uropappus lindleyi	silver puffs	UPL	Native
Athyriaceae (Lady Fern Family)			
Athyrium filix-femina var. cyclosorum	western lady fern	FAC	Native
Berberidaceae (Barberry Family)			
Berberis aquifolium	mountain grape	FACU	Native
Betulaceae (Birch Family)			
Alnus incana ssp. *tenuifolia*	creek alder	FACW	Native
Alnus rhombifolia	white alder	FACW	Native
Corylus cornuta ssp. *californica*	beaked hazelnut	FACU	Native
Blechnaceae (Deer Fern Family)			
Woodwardia fimbriata	western chain fern	-	Native
Boraginaceae (Borage Family)			
Cynoglossum grande	grand hound's tongue	UPL	Native
Cynoglossum occidentale	hound's tongue	-	Native
Eriodictyon californicum	California yerba santa	UPL	Native
Caprifoliaceae (Honeysuckle Family)			
Lonicera conjugialis	purpleflower honeysuckle	FAC	Native
Lonicera hispidula	pink honeysuckle	FACU	Native
Symphoricarpos albus var. laevigatus	snowberry	FACU	Native

Scientific Name[1]	Common Name	Wetland Indicator Status[2]	Origin
Celastraceae (Staff-Tree Family)			
Paxistima myrsinites	Oregon boxwood	FACU	Native
Cornaceae (Dogwood Family)			
Cornus nuttallii	mountain dogwood	FACU	Native
Cornus sericea	American dogwood	FACW	Native
Cupressaceae (Cypress Family)			
Calocedrus decurrens	incense cedar	-	Native
Cyperaceae (Sedge Family)			
Carex amplifolia	ample leaved sedge	OBL	Native
Carex brainerdii	Brainerd's sedge	UPL	Native
Carex utriculata	beaked sedge	OBL	Native
Schoenoplectus acutus	common tule	OBL	Native
Scirpus microcarpus	mountain bog bulrush	OBL	Native
Dennstaedtiaceae (Bracken Family)			
Pteridium aquilinum var. pubescens	western bracken fern	FACU	Native
Equisetaceae (Horsetail Family)			
Equisetum hyemale	common scouring rush	FACW	Native
Ericaceae (Heath Family)			
Arctostaphylos nevadensis	pine mat manzanita	-	Native
Arctostaphylos patula	green leaf manzanita	-	Native
Arctostaphylos viscida	whiteleaf manzanita	-	Native
Rhododendron occidentale	western azalea	FAC	Native
Vaccinium uliginosum ssp. *occidentale*	western blueberry	FACW	Native
Fabaceae (Leguminosae) (Legume Family)			
Acmispon wrangelianus	Chilean trefoil	UPL	Native
Cercis occidentalis	western redbud	UPL	Native
Genista monspessulana	French broom	UPL	non-native (invasive)
Hosackia oblongifolia	narrow leaved lotus	OBL	Native
Lathyrus latifolius	sweet pea	-	non-native
Trifolium dubium	little hop clover	FACU	non-native
Trifolium longipes	long-stalked clover	FAC	Native
Trifolium pratense	red clover	FACU	non-native
Trifolium repens	white clover	FAC	non-native
Fagaceae (Oak Family)			
Chrysolepis sempervirens	Sierra chinquapin	-	Native
Notholithocarpus densiflorus var. echinoides	tanoak shrub	-	Native
Quercus garryana	Oregon oak	FACU	Native
Quercus vacciniifolia	huckleberry oak	UPL	Native
Garryaceae (Silk Tassel Family)			
Garrya fremontii	Fremont's silk tassel	UPL	Native
Grossulariaceae (Goosefoot Family)			
Ribes malvaceum	chaparral currant	-	Native
Ribes nevadense	mountain pink currant	FAC	Native
Ribes roezlii	Sierra gooseberry	-	Native
Ribes sanguineum	flowering currant	FACU	Native

Appendix C Plant Species Observed

Scientific Name[1]	Common Name	Wetland Indicator Status[2]	Origin
Hypericaceae (St. John's Wort Family)			
Hypericum anagalloides	Tinker's penny	OBL	Native
Hypericum perforatum ssp. *perforatum*	Klamathweed	FACU	non-native
Iridaceae (Iris Family)			
Iris macrosiphon	ground iris	UPL	Native
Iris tenuissima	slender iris	UPL	Native
Juncaceae (Rush Family)			
Eleocharis acicularis	needle spikerush	OBL	Native
Eleocharis bella	beautiful spikerush	FACW	Native
Eleocharis macrostachya (*Eleocharis palustrus*)	common spikerush	OBL	Native
Juncus balticus ssp. *ater*	Baltic rush	FACW	Native
Juncus bufonius	toad rush	FACW	Native
Juncus effusus	common bog rush	FACW	Native
Juncus nevadensis	Sierran rush	FACW	Native
Juncus occidentalis	western rush	FACW	Native
Juncus xiphioides	iris-leaved rush	OBL	Native
Lamiaceae (Labiateae) (Mint Family)			
Mentha pulegium	pennyroyal	OBL	non-native (invasive)
Mentha spicata	spearmint	FACW	non-native
Stachys ajugoides	hedge nettle	OBL	Native
Trichostema lanceolatum	vinegar weed	FACU	Native
Liliaceae (Lily Family)			
Lilium pardalinum	California tiger lily	FACW	Native
Malvaceae (Mallow Family)			
Sidalcea gigantea	giant checkerbloom	UPL	Native
Melanthiaceae (False-hellebore Family)			
Veratrum californicum var. californicum	California corn lily	FAC	Native
Trillium albidum	giant white trillium	FACU	Native
Montiaceae (Miner's Lettuce Family)			
Calyptridium umbellatum	pussy toes	-	Native
Myrsinaceae (Myrsine Family)			
Lysimachia latifolia	Pacific starflower	FACW	Native
Nymphaeaceae (Waterlily Family)			
Nuphar polysepala	Rocky Mountain pond-lily	OBL	Native
Oleaceae (Olive Family)			
Fraxinus latifolia	Oregon ash	FACW	Native
Onagraceae (Evening-Primrose Family)			
Chamerion angustifolium	fireweed	UPL	Native
Ludwigia palustris	marsh purslane	OBL	Native
Ophioglossaceae (Adder's-tongue Family)			
Sceptridium multifidum	leather grape-fern	FAC	Native
Orchidaceae (Orchid Family)			
Goodyera oblongifolia	rattlesnake-plantain	FACU	Native
Platanthera dilatata	white-flowered bog-orchid	FACW	Native

Scientific Name[1]	Common Name	Wetland Indicator Status[2]	Origin
Orobanchaceae (Broomrape Family)			
Castilleja campestris	vernal pool paintbrush	FACW	Native
Castilleja lacera	cut leaved owl's clover	UPL	Native
Epilobium brachycarpum	tall annual willowherb	UPL	Native
Epilobium campestre	smooth willowherb	OBL	Native
Epilobium ciliatum	fringed willowherb	FACW	Native
Phrymaceae (Lopseed Family)			
Mimulus guttatus	seep monkey flower	OBL	Native
Pinaceae (Pine Family)			
Abies concolor	white silver fir	-	Native
Pinus contorta	lodgepole pine	FAC	Native
Pinus lambertiana	sugar pine	-	Native
Pinus ponderosa	yellow pine	FACU	Native
Pseudotsuga menziesii var. menziesii	Douglas fir	FACU	Native
Plantaginaceae (Plantain Family)			
Keckiella breviflora	bush beardtongue	UPL	Native
Plantago lanceolata	ribwort	FACU	non-native (invasive)
Veronica americana	American brooklime	OBL	native
Veronica anagallis-aquatica	water speedwell	OBL	non-native (invasive)
Veronica peregrina	purslane speedwell	FACW	native
Polemoniaceae (Phlox Family)			
Navarretia intertexta	needleleaf navarretia	FACW	native
Polygonaceae (Buckwheat Family)			
Rumex acetosella	sheep sorrel	FACU	non-native (invasive)
Rumex crispus	curly dock	FAC	non-native (invasive)
Rumex occidentalis	western dock	FACW	native
Poaceae (Gramineae) (Grass Family)			
Alopecurus pratensis	meadow foxtail	FAC	non-native
Anthoxanthum odoratum	sweet vernal grass	FACU	non-native (invasive)
Bromus carinatus	California bromegrass	-	native
Bromus hordeaceus	soft chess	FACU	non-native (invasive)
Bromus tectorum	downy chess	-	non-native (invasive)
Cynosurus echinatus	dogtail grass	-	non-native (invasive)
Dactylis glomerata	orchardgrass	FACU	non-native (invasive)
Danthonia californica	California oatgrass	FAC	native
Deschampsia cespitosa	tufted hair grass	FACW	native
Elymus caput-medusae	Medusa head	UPL	non-native (invasive)
Elymus glaucus	blue wildrye	FACU	native
Elymus triticoides	beardless wild rye	UPL	native
Festuca arundinacea	tall fescue	FAC	non-native (invasive)
Glyceria striata	ridged manna grass	OBL	native
Holcus lanatus	common velvetgrass	FAC	non-native (invasive)
Panicum acuminatum	western panicgrass	FAC	native
Phalaris aquatica	Harding grass	FACU	non-native (invasive)
Phalaris paradoxa	hood canary grass	FAC	non-native

Appendix C Plant Species Observed

Scientific Name[1]	Common Name	Wetland Indicator Status[2]	Origin
Poa palustris	fowl blue grass	FAC	non-native
Poa pratensis ssp. *pratensis*	Kentucky blue grass	FAC	non-native (invasive)
Poa secunda	nevada blue grass	FACU	native
Stipa miliacea	smilo grass	UPL	non-native
Ranunculaceae (Buttercup Family)			
Aconitum columbianum	Columbian monkshood	FACW	native
Aquilegia formosa	crimson columbine	FAC	native
Ranunculus californicus	California buttercup	FAC	native
Ranunculus flammula	water buttercup	FACW	native
Ranunculus orthorhynchus	straight beaked buttercup	FACW	native
Rhamnaceae (Buckthorn Family)			
Ceanothus cordulatus	mountain whitethorn	UPL	native
Ceanothus integerrimus	deer brush	UPL	native
Ceanothus velutinus	tobacco brush	-	native
Frangula californica	California coffeeberry	-	native
Frangula purshiana	cascara sagrada	FAC	native
Rosaceae (RoseFamily)			
Drymocallis glandulosa	sticky cinquefoil	FAC	native
Heteromeles arbutifolia	toyon	-	native
Holodiscus discolor	oceanspray	FACU	native
Prunus emarginata	bitter cherry	FACU	native
Rosa californica	California wild rose	FAC	native
Rosa gymnocarpa	wood rose	FACU	native
Rubus armeniacus	Himalayan blackberry	FAC	non-native (invasive)
Rubus leucodermis	white bark raspberry	FACU	native
Rubus parviflorus	thimbleberry	FACU	native
Rubus ursinus	California blackberry	FACU	native
Sorbus scopulina	Cascade mountain ash	FACU	native
Spiraea douglasii	Douglas spiraea	FACW	native
Rubiaceae (Bedstraw Family)			
Galium trifidum	three petaled bedstraw	FACW	native
Galium triflorum	sweet scented bedstraw	FACU	native
Ruscaceae (Butcher's-Broom Family)			
Maianthemum racemosum	feathery false lily of the valley	FAC	native
Salicaceae (Willow Family)			
Populus tremuloides	quaking aspen	FACU	native
Salix exigua	narrowleaf willow	FACW	native
Salix lasiandra	Pacific willow	FACW	native
Salix lasiolepis	arroyo willow	FACW	native
Salix scouleriana	Scouler willow	FAC	native
Sapindaceae (Soapberry Family)			
Acer circinatum	vine maple	FAC	native
Acer macrophyllum	bigleaf maple	FACU	native
Saxifragaceae (Saxifrage Family)			
Darmera peltata	Indian rhubarb	OBL	native

Scientific Name[1]	Common Name	Wetland Indicator Status[2]	Origin
Scrophulariaceae (Figwort Family)			
Verbascum blattaria	moth mullein	UPL	non-native
Verbascum thapsus	woolly mullein	FACU	non-native (invasive)
Smilacaceae (Smilax Family)			
Smilax californica	California greenbriar	UPL	native
Taxaceae (Yez Family)			
Taxus brevifolia	Pacific yew	FACU	native
Themidaceae (Brodiaea Family)			
Triteleia hyacinthina	white brodiaea	FAC	native
Urticaceae (Nettle Family)			
Urtica dioica	stinging nettle	FAC	native
Verbenaceae (Verbena Family)			
Verbena lasiostachys	western vervain	FAC	native
Violaceae (Violet Family)			
Viola glabella	stream violet	FACW	native

[1] Taxonomic nomenclature for plant species follows the Jepson eFlora (2019).

[2] Wetland indicator status for plant species followed Lichvar, R. W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. *Phytoneuron* 2016-30: 1-17.

Appendix D PHOTO LOG

Photo 1. Intermittent stream documented by data point

Photo 2. Fresh emergent wetland adjacent to Little Hatchet Creek.

Photo 3. Little Hatchet Creek, a perennial stream documented by data point 8.

Photo 4. Wetland seep spring along an access road.

Photo 5. Ephemeral stream documented by data point 9.

Photo 6. Fresh emergent wetland within Carberry Creek (data points 10 and 12).

Photo 7. Riparian wetland adjacent to Carberry Creek (data points 11 and 12).

Photo 8. Wetland meadow adjacent to Carberry Creek (data points 13 and 14).

Photo 9. Non-vegetated ditch (data point 15). Orientation: northwest.

Photo 10. Ephemeral stream documented (data point 16). Orientation: east.

Photo 11. Non-vegetated ditch (data point 17). Orientation: southeast

Photo 12. Wetland meadow (data points 18 and 19). Orientation: west.

Photo 13. Fresh emergent wetland in a seasonally inundated pond (data points 20, 21 and 22). Orientation: southwest.

Photo 14. Riparian wetland (data points 23 and 24). Orientation: south

Photo 15. Intermittent stream (data point 25). Orientation: south.

Photo 16. Suspect area documented as an upland (data point 26). Orientation: southwest

Photo 17. Seasonal wetland adjacent to a road (data points 27 and 28). Orientation: southwest.

Photo 18. Intermittent stream (data point 29). Orientation: southwest.

Photo 19. Wetland meadow (data points 30 and 31). Orientation: west.

Photo 20. Riparian wetland within Hatchet Creek (data points 32 and 33).

Photo 21. Seasonal wetland within a wetland meadow (data point 34).

Photo 22. Wetland meadow (data points 35 and 36). Orientation: west.

Photo 23. Non-vegetated ditch (data point 37). Orientation: noth

Photo 24. Vegetated ditch (data points 38 and 39). Orientation: east

Photo 25. Riparian wetlands adjacent to North Fork of Montgomery Creek (data points 40 and 41). Orientation: northwest.

Photo 26. Cedar Creek, a perennial stream (data points 42-44). Adjacent riparian wetlands are recovering from a recent bridge installation. Orientation: southwest.

Photo 27. Wetland seep spring adjacent to a road (data points 45 and 46). Orientation: northwest.

Photo 28. Ephemeral stream (data point 47). Orientation: north.

Photo 29. Intermittent stream (data point 48). Orientation: north.

Photo 30. W-10, W-11. Ephemeral stream (data point 49). Orientation: north.

Photo 31. Non-vegetated ditch (data point 50). Orientation: west.

Photo 32. Riparian wetland (data points 51 and 52). Orientation: northwest.

Photo 33. Wetland seep spring (data points 53 and 54). Orientation: north.

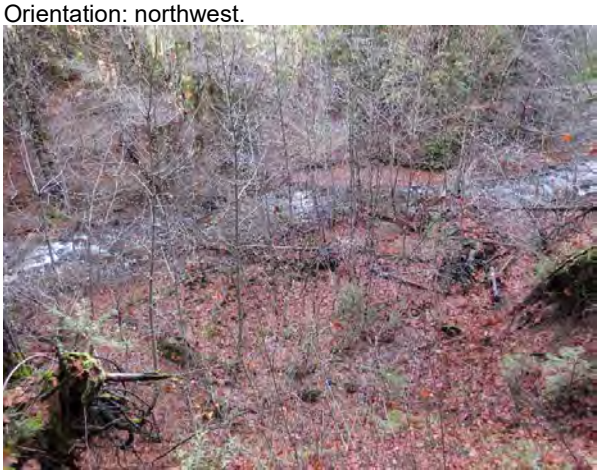

Photo 34. Little Cow Creek and riparian wetlands (data points 55 and 56). Orientation: north.

Photo 35. Riparian wetland (data points 57 and 58). Orientation: west.

Photo 36. Wetland seep spring (data points 59 and 60). Orientation: east.

Photo 37. Fresh emergent wetland in a perennial stream (behind shovel) and riparian wetland (in front of shovel) (data points 61-63). Orientation: north.

Photo 38. Vegetated ditch (data points 64 and 65). Orientation: east.

Photo 39. Water marks on a rock in a seasonal wetland (data points 66 and 67).

Photo 40. Intermittent stream (data point 68). Orientation: southeast.

Photo 41. Hatchet Creek a perennial stream documented (data point 69). Orientation: southwest.

Photo 42. Riparian wetland (wetland [W-] 1).

Photo 43. Wetland meadow (W-2).

Photo 44. Wetland meadow (W-3).

Photo 45. Riparian wetland (W-5 and W-6), and perennial drainage (D-) A1, Hatchet Creek.

Photo 46. Riparian wetland (W-8, W-9), perennial drainage D-1, North Fork of Cedar Creek. Orientation: west

Photo 47. Wetland seep (W-10, W-11).

Photo 48. Riparian wetland (W-50).

Photo 49. Intermittent drainage (D-B).

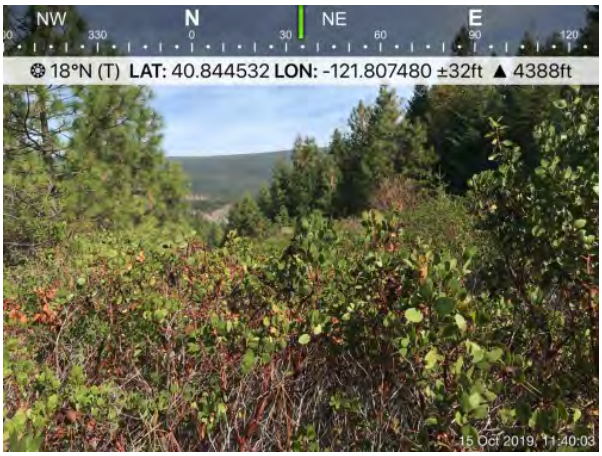

Photo 50. Ephemeral drainage (D-C).

Photo 51. Intermittent drainage (D-D).

Photo 52. Intermittent drainage (D-G1).

Photo 53. Perennial drainage (D-H) in a wetland meadow (W-2).

Photo 54. Perennial drainage (D-J).

Photo 55. Perennial drainage (D-K).

Photo 56. Perennial drainage (D-K1), North Fork Little Cow Creek.

Photo 57. Intermittent drainage (D-L).

Photo 58. Perennial drainage (D-L1).

Photo 59. Perennial drainage (D-O), North Fork of Montgomery Creek.

Photo 60. Intermittent drainage (D-P1).

Photo 61. Perennial drainage (D-Q), South Fork of Montgomery Creek.

Photo 62. Perennial drainage (D-R).


Photo 63. Perennial drainage (D-S). Orientation: north

Appendix E BIOLOGIST RESUMES

John Holson

Project Biologist

For 10 years, John has managed and assisted in the field data collection for a variety of assessments and surveys, including special-status plant surveys, vegetation mapping, wetland delineations, special-status bird surveys, nesting bird surveys, and mitigation monitoring. He has written and managed special-status plant survey reports, wetland delineation reports, special-status bird survey reports, numerous environmental impact reports (EIR) in accordance to CEQA, environmental impact statements (EIS) in accordance to NEPA, biological assessments (BAs), and natural environment studies (NES) in accordance to Caltrans projects.

John has extensive botanical experience throughout California, conducting spring floristic surveys and wetland delineations for the past ten field seasons. He has also done botanical work in several other states in the US West, including Montana, Washington, Nevada, Arizona, and Utah. His experiences with wildlife biology, specifically with birds, also make him a versatile employee. He has been working with birds for the past eight years, including activities such as surveying, banding, and monitoring.

John's project management experience includes overseeing budgets, personnel, coordinating schedules, and communicating with resource agencies, California Department of Fish and Wildlife (CDFW), U.S. Fish and Wildlife Service (USFWS), Bureau of Land Management (BLM), Regional Water Quality Control Board (RWQCB), and Army Corp of Engineers (Corps).

EDUCATION

BS, Ecology, University of California, Santa Barbara, California, 2004

CERTIFICATIONS & TRAINING

Raptor Handling and Banding Permit, Golden Gate Raptor Observatory, San Francisco, California, 2017

Bald and Golden Eagle Workshop, San Francisco, California, 2015

California Rapid Assessment Method (CRAM) Training, California Wetlands Monitoring Workgroup, Willits, California, 2010

Basic Wetland Delineation, Wetland Training Institute, Sacramento, California, 2009

California Native Plant Society Vegetation Rapid Assessment Workshop, Sierra Nevada Aquatic Research Laboratory, Mammoth Lakes, California, 2007

Jepson Manual Workshop, Santa Barbara Botanical Garden, Santa Barbara, California, 2005

PROJECT EXPERIENCE

HIGH SPEED RAIL

DesertXpress Environmental Services EIR/EIS * | Barstow to Prim, California and Nevada | Lead Botanist/Wetland Ecologist

John conducted botanical surveys in addition to a wetland delineation in and around Las Vegas and Prim, Nevada, as well as Baker and Barstow, California. His duties included identifying local vegetation, assessing soils, and identifying hydrologic indicators. Wetland delineation information compiled was used by the Corps to verify potentially jurisdictional waters of the United States in that region.

Pacheco Pass Corridor EIR/EIS* | San Jose, California, United States | 2009-2017 | Lead Botanist/Wetland Ecologist

John managed and participated in botanical and wetland delineation surveys in support of an EIR/EIS for a new high speed rail proposed from San Jose to Merced, California. His duties included managing a crew of five botanists, plotting daily routes, conducting botanical surveys, as well as every day logistics for the project. John conducted vegetation classification, a botanical inventory, identification of special-status plant species, as well as plant identification and classification based on the wetland indicator status of the plant species. Wetland delineation information compiled was put into a wetland delineation report and used by the Corps to verify potentially jurisdictional waters of the United States in that region. Role: Lead Botanist/Wetland Ecologist | Dates involved: 2009-2017

California High Speed Rail Project Wetland Delineation* | Chowchilla, California, United States | 2013-2017 | Wetland Ecologist

John collected extensive wetland delineation field surveys in support of a delineation of waters of the United States and State for the Central Valley Wye segment of the project, in Merced and Madera Counties. These delineations encompassed a variety of habitats including riparian forest, freshwater marsh, seasonal wetland, and extensive agricultural land. Data collected also involved

** denotes projects completed with other firms*

mapping wetland features using ArcGIS and GPS units, vegetation classification, a botanical inventory, as well as identification and classification based on the wetland indicator status of the plant species. Wetland delineation information compiled was put into a wetland delineation report and used by the Corps to verify potentially jurisdictional waters of the United States in that region. Role: Wetland Ecologist | Dates involved: 2013-2017

RENEWABLE ENERGY

Tehachapi Renewable Transmission Project Biological Consulting Services* | Southern California | Wildlife Biologist

John conducted monitoring and surveys in support of a large-scale transmission line project through several areas of Southern California, specifically Segments 7 and 8. This involved appropriate project training, using the FRED and Sugarsync programs, and becoming familiar with SCE protocols. His duties include construction monitoring for wetlands, nesting birds, and other biological resources.

Tehachapi Renewable Transmission Project (TRTP) Wetland Delineation* | Greater Los Angeles Area and Angeles National Forest, Los Angeles County, California | Wetland Ecologist

John conducted surveys in support of large-scale wetland delineation report for a proposed transmission line through several areas of Southern California, including in the Angeles National Forest. His duties included collecting data to characterize waters of the United States, including wetlands, and adjacent vegetation types per guidance from the Corps. Data was collected and mapped using Tremble Yuma GPS units and plotted on aerial photo-based maps utilizing ARCPAD software.

BOTANICAL SURVEYS

Mokelumne River Plant Surveys* | El Dorado National Forest, California | Lead Botanist

John conducted large-scale vegetation mapping in addition to special-status plant surveys along PG&E roads near the Mokelumne River in El Dorado National Forest. His duties included mapping and reporting any special-status/forest service sensitive species or communities located and led to the observation of several protected species in the area. A subsequent report was prepared using the results of the survey.

North County Corridor EIR/EIS* | Modesto, California, United States | 2011-2017 | Lead Botanist/Wetland Ecologist

John conducted large-scale botanical surveys and wetland delineation in and around Oakhurst, Riverside, and Salida, California. John conducted vegetation classification, a botanical inventory, identification of special-status plant species, as well as plant identification and classification based on the wetland indicator status of the plant species. Wetland delineation information compiled was used by the U.S. Army Corps of Engineers to verify potential jurisdictional waters of the United States. Role: Lead Botanist/Wetland Ecologist | Dates involved: 2011-2017

BIOLOGICAL MONITORING

CP Biological Effectiveness Monitoring* | Sacramento, California | Lead Botanist

John conducted several types of vegetation mapping surveys for the Natomas Basin Conservancy, a primarily agricultural area north of Sacramento. This includes mapping land cover types, surveying for special-status plant species, surveying for noxious weed populations in the area, as well as assessing the change in land cover types over the last five years. Data was used to determine habitat for special-status species including the giant garter snake and Swainson’s hawk.

Caltrans Restoration Project - Service-Approved Biological Monitoring for Red-Legged Frog and California Tiger Salamander* | Livermore, California, United States | 2017 | Wildlife Biologist

John monitored mitigation and restoration efforts near Livermore, California, which included monitoring for disturbance near bodies of water that had known occurrences for California tiger salamander and red-legged frog. This included pre-construction surveys, monitoring all ground disturbance activities, and environmental education concerning the California tiger salamander and red-Legged Frog. Role: Wildlife Biologist | Dates involved: 2017

Palermo Transmission Line Project Habitat Monitoring For Giant Garter Snake* | Marysville, California | Wildlife Biologist

John monitored mitigation and restoration efforts near Marysville, California, which include surveying wetland habitat suitability for Giant Garter Snake. His duties included mapping, sampling, and assessing wetland vegetation in areas restored as giant garter snake habitat.

STUDIES AND EVALUATIONS

Rosamond PV Solar Technical Studies* | Rosamond, California | Lead Botanist/Wetland Ecologist

John conducted botanical surveys in addition to a wetland delineation on the Rosamond PV project site in Kern County, California. John conducted vegetation classification, a botanical inventory, identification of special-status plant species, as well as plan identification and classification based on the wetland indicator status of the plant species. Wetland delineation information compiled was used by the Corps to verify potentially jurisdictional waters of the United States.

APPROVALS AND PERMITTING

Carrizo to Midway Permitting Augmentation* | San Luis Obispo and Kern Counties, California | Wetland Ecologist

John conducted a wetland delineation along a transmission line from the Carrizo Plain to Buttonwillow, California. His duties included identifying local vegetation types, assessing soils, and identifying hydrologic indicators. Wetland delineation information compiled was used by the Corps to verify potentially jurisdictional waters of the United States in that region.

WILDLIFE SURVEYS AND STUDIES

Swainson’s Hawk Surveys and Monitoring - West Feather River Levee Project,* | Feather River, California | Lead

Wildlife Biologist

John conducted protocol level Swainson's Hawk surveys for four year concurrently in support of a large-scale levee improvement project along the Feather River. His duties included construction surveying for Swainson's hawks, monitoring for nesting birds and other biological resources.

Crane Valley Dam, Stockpile Expansion Bio Surveys* | Sierra National Forest, California | Lead Botanist/Wildlife Biologist

John was tasked with providing environmental surveys and documentation to support the additional quarry stockpile areas needed for the Crane Valley Dam Seismic Retrofit Project. Surveys conducted include wetland resources, special-status/forest service sensitive plant species, California spotted owl surveys, and Northern goshawk surveys. This included duties, such as mapping wetlands using Tremble GPS units, walking transects for plant species, and conducting playback surveys for the aforementioned bird species. A subsequent report was prepared using the results of the survey.

CONSTRUCTION MONITORING

Shiloh III Wind Farm Construction Monitoring for Wetlands, California Tiger Salamander* | Solano County, California, United States | 2010-2012 | Wildlife Biologist

John monitored the construction of a wind farm in Solano County, which included monitoring for disturbance near wetlands that had known occurrences for California tiger salamander. This included ensuring that wetlands and their associated buffers were not disturbed, mapping potential wetlands/habitat, and environmental education concerning the salamander. Role: Wildlife Biologist | Dates involved: 2010-2012

ENVIRONMENTAL CONSULTING

Raptor and Songbird Banding* | Northern California | 2008-2015 | Wildlife Biologist

John participated in local bird banding efforts near the Bay Area and Sacramento, California. Birds were trapped using a variety of techniques involving mist nets, dho-gaza nets, and bow nets. Bird bands, both lock and butt varieties, were placed on the bird's leg, after which data was collected and the birds released. Species include numerous songbirds in addition to raptor specific banding which involves bird of prey species.

Gabe Youngblood

Project Biologist

Gabe has 15 years of experience as a professional biologist working throughout northern California. He has conducted protocol-level and targeted surveys, biotic assessments, and construction site monitoring for numerous species of special-status wildlife including benthic invertebrates, fairy shrimp, terrestrial mollusks, valley elderberry longhorn beetle, Shasta salamander, California red -legged frog, giant garter snake, northern goshawk, spotted owl, willow flycatcher, pileated woodpecker, white-headed woodpecker, and forest carnivores. He also has significant experience in conducting botanical surveys, wetland delineations, Forest Inventory Analysis, and fish population surveys. In addition to biological field surveys and monitoring, Gabe has experience with the regulatory requirements of the California Environmental Quality Act, National Environmental Policy Act, and Endangered Species Act; and he has participated in the preparation of natural environment study reports, biological assessments, environmental assessments, initial studies, and environmental impact reports.

EDUCATION

Bachelor of Science, Wildlife Management, Humboldt State University, Arcata, California, 2006

PROJECT EXPERIENCE

ENVIRONMENTAL

Big Hill Carnivore Survey* | California | 2011 | Biologist

Conducted a sensitive forest carnivore survey within Plumas National Forest. Methods involved the use of photographic bait stations to detect sensitive species.

Forest Inventory Analysis* | California | 2008-2011 | Forestry Technician

Conducted sampling of permanent vegetation plots throughout multiple National Forests in California as part of USDA Forest Service Forest Inventory Analysis.

Coleman-South Guy and Anchor Project* | California | 2009 | Biologist

Conducted a delineation of waters of the United States within a 50-foot radius around each of 40 wood poles located along an 8-mile stretch of the Coleman-South 60 kV Line.

Cottonwood–Roseville Optical Ground Wire Project Wetland Delineation* | California | 2012 | Biologist

Performed an assessment of biological and wetland resources for a large transmission line upgrade project extending from Shasta to Placer counties, California. The assessment included a wetland delineation to U.S. Army Corps of Engineers standards in the entire study area, which encompassed 2,700+ acres, extended 140+ miles through 7 counties, and involved hundreds of private landowners.

L402 ILI Upgrade Project | Redding, California | 2015-2016 | Biologist

Evaluated habitat to support special-status species and defined boundaries of waters of the United States. Developed avoidance and minimization measures to avoid impacts on sensitive resources. Conducted pre-construction nesting bird surveys.

L402 Strength Test * | Redding, California | 2016 | Biologist

Performed pre-construction nesting bird surveys and biological constraints assessments. Conducted a delineation of waters of the United States at project locations where wetlands were identified during biological constraints assessments.

Logan Creek Pole Replacement Project* | California | 2012 | Biologist

Conducted a delineation of waters of the United States in a 25-foot radius around 20 wooden utility poles along one-and-a-half miles of 12 kV Line located adjacent to County Road 39.

Mokelumne River Re-Licensing Support, Fishery Surveys * | 2009 | Biologist

Collected aquatic habitat (SWAMP) data and conducted snorkel and backpack electrofishing surveys to assess fish species composition and fish abundance on several tributaries to the Mokelumne River.

Northern Spotted Owl and Barred Owl Surveys* | California | 2010 | Biologist

Conducted protocol-level northern spotted owl surveys and experimental barred owl surveys for seven vegetation management projects located in the Mendocino National Forest.

Region 5 Sensitive Mammals Evaluation* | California | 2007 | Biologist

Prepared an ecological assessment for over 100 rare mammals within National Forest lands throughout California. The assessment included a comprehensive

** denotes projects completed with other firms*

literature review and preparation of a summary of the biology and ecology of each species; culminating in a determination of whether each species should be considered “Sensitive” to National Forest System management actions.

Roseville–Elverta Optical Ground Wire Project* | Roseville, California | 2013 | Biologist

Performed biological surveys, worker awareness training, and environmental monitoring for Western’s Roseville-Elverta Optical Ground Wire project. Environmental issues included vernal pools and other wetlands, nesting raptors, and other nesting birds.

Klamath Northern Spotted Owl Surveys* | California | 2010 | Biologist

Conducted northern spotted owl surveys supporting management activities on the Klamath National Forest. Northern spotted owl surveys were conducted following the protocol-level “nighttime surveys using roads” technique. Follow-up surveys and nest searches were also conducted following the survey protocol.

L-121 Strength Test * | Yuba City, California | 2016 | Biologist

Performed construction monitoring for giant garter snake during gas pipeline inspection and replacement.

Deschutes Road Widening Project – Phase 1* | California | 2016-2017 | Biologist

Conducted a wetland delineation survey, biological reconnaissance survey, and protocol-level valley elderberry longhorn beetle survey. Prepared wetland delineation and natural environmental study reports, and a technical memo explaining why project would have no impacts on valley elderberry longhorn beetle.

Parkville Road at Ash Creek Bridge (06C-0220) Replacement Project* | California | 2015

Conducted a wetland delineation survey and biological reconnaissance survey. Prepared a wetland delineation report and a technical memo explaining why the project would have no impacts on California red-legged frog.

Shasta Dam and Reservoir Enlargement NEPA Documentation and Technical Studies* | California | 2009-2015 | Biologist

Conducted surveys for a variety of technical studies related to the proposed enlargement of Shasta Lake. These studies include survey and manage terrestrial mollusks, amphibians, forest carnivores, botanical resources, wetland resources, and avian species.

Pileated Woodpecker and White-Headed Woodpecker Surveys* | Oregon | 2007 | Biologist

Conducted surveys for pileated woodpecker and white-headed woodpecker as part of the biological resource monitoring of 24,000 acres in the Sun Pass State Forest. The surveys included determination of presence/absence of these species and follow-up surveys to locate nest stands or trees.

PG&E McCloud/Pit Re-Licensing Support* | California | 2007 | Biologist

Conducted protocol surveys for northern spotted owl and Shasta salamander at McCloud Reservoir, Hawkins Bar, Iron Canyon Reservoir, Pit 5, Pit 6, and Pit 7.

Pipeline Pathways Program* | California | 2013-2015 | Biologist

Conducted environmental constraints analyses, San Joaquin Valley Habitat Conservation Plan (SJVHCP) pre-activity surveys, CDFW Master Stream Alteration Agreement Verification Request Forms, preconstruction nesting bird surveys, worker environmental training, and monitoring. Work was conducted in Glenn, Yolo, Stanislaus, San Joaquin, Sutter, Colusa, Shasta, Tehama, Trinity, Fresno, and Amador counties.

Quartz Hill Road Improvement Project* | Redding, California | 2016-2017 | Biologist

Preformed reconnaissance-level biological survey, vegetation and habitat mapping, and a delineation of waters of the United States. Prepared Natural Environmental Study and wetland delineation reports.

Eastside Road at Onley Creek Bridge Replacement Project* | Redding, California | 2016 | Biologist

Preformed reconnaissance-level biological survey, vegetation and habitat mapping, and a delineation of waters of the United States.

On-Call Biological Services Western Area Power Administration | California | 2011-Present | Biologist

Currently conducting biological surveys, preparing impact assessments, and developing biological conservation measures for Western’s Integrated Vegetation Management Program. Tasks also include Migratory Bird Treaty Act compliance surveys for avian species and biological monitoring for giant garter snake, California red-legged frog, and nesting birds.

Orland Sand and Gravel Delineation of Stony Creek Ordinary High Water Mark* | California | 2017

Preformed delineation of the ordinary high water mark of Stony Creek on four privately owned parcels. Prepared ordinary high water mark delineation report.

** denotes projects completed with other firms*

Sheryl Creer M.S.

Biologist, Botanist

Sheryl has over 10 years of experience as a field biologist and botanist in California and specializes in large-scale infrastructure and utilities projects such as electric transmission lines, gas pipelines, wind energy, and groundwater storage and recovery. She conducts rare plant surveys, wetland and drainage delineations, impacts analyses, habitat assessments, maps vegetation, and prepares habitat restoration and mitigation and monitoring plans. Sheryl also has extensive experience in environmental inspection and construction monitoring. She also prepares technical documents and permit applications for various regulatory agencies including the U.S. Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW), and the United States Fish and Wildlife Service (USFWS).

EDUCATION

B.S., Biology, concentration in Botany, San Francisco State University, San Francisco, California, 2010

M.S., Biology, concentration in Ecology, Evolution, and Conservation, San Francisco State University, San Francisco, California, 2013

MEMBERSHIPS

Member, former Board Member, California Botanical Society

Member, California Native Plant Society, 2009-Present

AWARDS

2013 Department of Biology Distinguished Graduate Student Award, San Francisco State University

PROJECT EXPERIENCE

BOTANICAL SURVEYS

Eldorado-Lugo-Mohave Transmission Line Upgrade Project* | Mojave Desert and Other Locations in California and Nevada, California and Nevada, United States | 2014-2016 | Field Lead

Sheryl coordinated a team of eight botanists for protocol-level rare plant surveys and vegetation mapping along a transmission line corridor spanning 245 miles from Hesperia, California, east to Laughlin, Nevada, and north to Boulder City, Nevada. She coordinated and conducted wetland and drainage delineations along the same corridor. Special-status species mapped during plant surveys included short-joint beavertail cactus (Opuntia basilaris var. brachyclada), spiny-hair blazing star (Mentzelia tricuspis), and Mojave menodora (Menodora spinescens var. mohavensis), among others. Role: Field Lead | Dates involved: 06/2014–06/2016

650 Line Rebuild Project* | Tahoe National Forest and Placer County, California, United States | 2014-2016 | Botanist/Wetland Specialist

Sheryl conducted biological surveys—including wetland delineations, vegetation mapping, and rare plant and noxious weed surveys—for the wood to steel rebuild of approximately 9 miles of electric transmission line in Tahoe National Forest and adjacent areas in Placer County. She prepared the Botanical Resources Survey Report and Preliminary Wetland Delineation Report as well as the drainage delineation and permit application package for a CDFW Lake or Streambed Alteration Agreement (LSAA). Sheryl also developed a post-construction Habitat Restoration Plan that included the restoration of wetlands and riparian zones and monitoring of a population of a special-status plant species, Plumas ivesia (Ivesia sericoleuca). She assisted with pre-construction special-status wildlife species surveys, including pedestrian night surveys for bats, burrow mapping, and pedestrian amphibian surveys. Role: Botanist/Wetland Specialist | Dates involved: 05/2014–08/2016

Pipeline Safety & Reliability Project* | San Diego County, California, United States | 2015 | Botanist

Sheryl conducted protocol-level rare plant surveys, field confirmation of vegetation mapping, and a wetland delineation for the construction of an approximately 50-mile natural gas transmission pipeline in San Diego County. She assisted in identifying and mapping host plants for Quino checkerspot butterfly (Plantago erecta and Castilleja exserta) and Hermes copper butterfly (Rhamnus crocea). Sheryl also authored the Special-Status Plant Species Report and co-authored the Biological Technical Report, the Jurisdictional Delineation Report, and the Biological Resources section of a Proponent's Environmental Assessment (PEA) for the project. Role: Botanist | Cost: unknown | Dates involved: 02/2015–06/2015

ENVIRONMENTAL INSPECTION

Groundwater Storage and Recovery Project* | San Mateo County, California | 2015-2016 | environmental inspector

Sheryl served as an environmental inspector and monitor for the construction and operation of 13 new groundwater well facilities in San Mateo County. The project involved environmental inspection, specialty monitoring, and interpretation of agency-imposed mitigation measures associated with sensitive species and water quality.

** denotes projects completed with other firms*

BIOLOGICAL MONITORING

Line 109 Hydrostatic Testing* | Woodside, California, United States | 2015 | Lead Biological Monitor

Sheryl conducted biological monitoring for the excavation and hydrostatic testing of a natural gas transmission pipeline located within critical habitat for Bay checkerspot butterfly. She prepared environmental compliance training materials and provided training to crew members and supervisors. Sheryl also prepared daily environmental inspection reports. Upon project completion, she assisted with habitat restoration and prepared a post-construction report for the USFWS. Role: Lead Biological Monitor | Dates involved: 07/2015-11/2015

ECOSYSTEM RESTORATION

City of Sunnyvale Primary Water Treatment Facility Upgrade* | Sunnyvale, California | 2017-2018

Sheryl managed the development of a restoration plan for a wetland and riparian mitigation site. She also implemented and monitored compliance with project permit requirements including coordinating nesting bird and burrowing owl surveys and developing and providing worker environmental awareness training.

VEGETATION ASSESSMENTS

Hollister 115 Kilovolt Power Line Reconductoring Project* | San Benito County, California, United States | 2014-2016 | Bontanist

Sheryl conducted 3 years of annual vegetation restoration monitoring and reporting for the reconductoring and replacement of structures along approximately 16 miles of 115 kilovolt power lines. Vegetation monitoring included sampling vegetation within rangeland, chaparral planting monitoring, and wetland monitoring including soils, hydrology, and vegetation. She also prepared annual reports for agency submittal. Role: Botanist | Dates involved: 04/2014-04/2016

North-South Interconnect Project* | San Bernardino and Riverside Counties, California | 2014-2016

Sheryl complied and analyzed revegetation monitoring data collected during post-construction monitoring for the conversion of approximately 76 miles of petroleum pipeline to natural gas, as well as the construction of approximately 1.2 miles of new pipeline in San Bernardino and Riverside counties. She also authored the Year 3 Restoration and Revegetation Annual Report.

PUBLICATIONS

Creer, S. and R. Patterson. Book Review: The Drunken Botanist, by Amy Stewart.. *Madroño*, 2014, pp. 61(1):144-145.

PRESENTATIONS

Sub-Family Reunion: Will the North American Arbutoids be Invited?. *California Botanical Society Symposium*, 2013.

Addressing Paraphyly in Arbutus (Ericaceae). *Northern California Botanists Symposium*, 2014.

** denotes projects completed with other firms*

Brendan Cohen

Biologist/Environmental Scientist

Brendan is a professional biologist and associate environmental planner with experience evaluating biological and environmental impacts in California. He has conducted special-status species surveys, habitat site assessments, wetland delineations, and prepared biological sections for CEQA/NEPA environmental documents. He routinely implements Worker Environmental Awareness Programs (WEAP), conducts preconstruction surveys, and performs biological construction monitoring. He has experience drafting Biological Resource Assessments, Biological Assessments, Jurisdictional Determinations/Wetland Delineations, and Caltrans Natural Environment Studies. Brendan has experience with GPS equipment for arborist surveys, wetland delineations, and other natural resource analyses.

Brendan also drafts CEQA/NEPA environmental documents which includes analyzing impacts to various environmental resources and reviewing and preparing technical studies. Brendan has assisted in the preparation of environmental documents including Initial Studies/Mitigated Negative Declarations (IS/MND) and Environmental Impact Reports/Environmental Assessments (EIR/EA). He has also assisted with preliminary documents and technical studies for Caltrans-funded projects. These include Preliminary Environmental Awareness Reports, Preliminary Environmental Study forms, Section 4(f) analyses, Community Impact Assessments, and Visual Impact Assessments. He has also prepared public noticing documents, responded to public comments, drafted Mitigation Monitoring Programs (MMP), and prepared final document packages.

EDUCATION

Bachelor of Science, Ecology and Evolutionary Biology, University of California, Santa Cruz, California, 2013

CERTIFICATIONS & TRAINING

CPR/First Aid Certification, Sacramento, California, 2017

Rare Pond Species Survey Techniques Workshop. California tiger salamander (CTS), Western Pond Turtle, and California red-legged frog (CRLF). Workshop allowed for the handling of larval CTS and adult CRLF in the presence of a permitted biologist, Santa Rosa, California, 2017

Ringtail Workshop, Yuba City, California, 2017

Amphibian of the Bay Area Workshop, Santa Rosa, California, 2016

CEQA Essentials Workshop, West Sacramento, California, 2016

CEQA Training for Biologists, Rancho Cordova, California, 2016

CNDDB/BIOS/RareFind5 Training, Sacramento, California, 2015

Western Pond Turtle Workshop, Petaluma, California, 2015

Habitat Conservation Planning Workshop, Vacaville, California, 2015

MEMBERSHIPS

Member, Superior California Chapter, California Association of Environmental Professionals

PROJECT EXPERIENCE

ASSESSMENT, PERMITTING AND COMPLIANCE

APHIS-WS Integrated Wildlife Damage Management (IWDM) Program and Agreement Renewal* | Monterey County, California | 2017

The USDA Animal Plant and Health Inspection Service (APHIS) – Wildlife Services (WS) division implements a program in Monterey County to protect human health, agricultural resources, and infrastructure from predators and nuisance wildlife. Analyzed the biological impacts associated with renewal of the cooperative agreement for the IWDM program. Drafted the Initial Study biological resources section.

BNSF Le Grand to Merced Double Track Project* | Merced County, California | 2015 | Biological Monitor

Conducted daily biological construction monitoring for the construction of a new railroad track. Species of concern included San Joaquin kit fox, western pond turtle, giant garter snake (GGS), CTS, burrowing owl, Swainson's hawk and other nesting birds. Implemented buffers for active nests, trained workers using a WEAP and presented daily morning updates to the work crew.

California State Prison, Los Angeles County Wind Energy Generation Project* | Los Angeles County, California | 2016-2017 | Environmental Planner

Drafted an IS/MND evaluating impacts from the development of a wind turbine within the California State

** denotes projects completed with other firms*

Prison, Los Angeles County. Responded to public comments, filed the Notice of Intent and IS/MND with the State Clearing House and Los Angeles County Clerk, and prepared the final document package.

Camanche Tank 9 Replacement* | Ione, California | 2017 | Biologist/Biological Monitor

Conducted a preconstruction sensitive area demarcation, nesting bird survey, WEAT, and compliance monitoring. Duties included demarcating an area for exclusionary fencing to be placed around an elderberry shrub, placing pin flags at potential CTS burrows, and identifying active bird nests prior to construction. Conducted a WEAP for new workers as well as daily monitoring of ground disturbing activities.

Chappell Road Annexation Project* | Hollister, California | 2016 | Biologist

This project included the preparation of an EIR for a Sphere of Influence Annexation on a property in the City of Hollister. Conducted a biological site visit and evaluated the potential for special-status species to occur including burrowing owl, San Joaquin kit fox, San Joaquin whipsnake, and nesting birds. Drafted the biological section of the EIR and prescribed minimization measures for the above species.

City of Elk Grove Routine Channel Maintenance* | Elk Grove, California | 2015-2016 | Biologist and Monitor

Monitored maintenance activities within the City's drainages and creeks under City's Routine Maintenance Agreement and Routine General Permit. Performed daily WEAPs and preconstruction surveys for GGS, Valley Elderberry Longhorn Beetle (VELB), western pond turtle, and nesting migratory birds and raptors.

Community Pipeline Safety Initiative Program* | Multiple Locations, California | 2017-Present | Biologist

Performed preconstruction nesting bird surveys at multiple locations throughout California's Central Valley. Duties included performing reconnaissance level bird surveys following established protocols, and documenting active bird nests.

Corral Bottom Road at Trinity River Bridge Replacement Project* | Trinity County, California | 2017-Present | Environmental Planner

Drafted the Drafted the Visual Impact Assessment (VIA) for a bridge replacement project. Conducted the fieldwork for the VIA which included photographing the project from key viewpoints.

Humboldt Bay Trail South* | Humboldt County, California | 2017 | Environmental Planner

Drafted the VIA for a Class I multi-use trail project. Conducted the fieldwork for the VIA which included photographing the project from key viewpoints.

Old Town Elk Grove Streetscape Project, Phase II* | Elk Grove, California | 2016 | Environmental Planner and Biologist

Drafted an IS/MND evaluating impacts from implementation of a streetscape improvement project in the Old Town Elk Grove Historic District. Prepared the IS/MND, created the MMP and handled public noticing requirements. Responded to public comments and drafted the City's Staff Report and Resolution to present to the City Council for project adoption.

Pacific Connector Gas Pipeline Project* | Environmental Analyst

Assisted in the preparation of technical studies for the creation of a 232-mile long pipeline project. Revised technical studies that support the project's compliance with the Northwest Forest Plan.

Soledad Wind Energy Generation Project 2* | Soledad, California | 2016 | Environmental Planner

The City of Soledad proposed to install a second wind turbine within the City's wastewater treatment plant to provide 100% renewable energy. Drafted an IS/MND, responded to public comments, prepared the MMP, and filed the Notice of Completion.

Swainson's Hawk Conservation Easement Monitoring* | Elk Grove, California | 2015-2016 | Biologist

Visited sites under annual conservation easements for Swainson's hawk foraging habitat with the City of Elk Grove. Verified crop types, biological conditions, and the presence of nearby raptor nests. Drafted annual status reports documenting condition changes and compliance with the easement.

Taylor Boulevard Development* | Pleasant Hill, California | 2016 | Biologist

Conducted a peer review of biological studies and performed a site visit documenting habitat for a residential subdivision project. Evaluated the site for potential occurrences of VELB, burrowing owl, and Alameda whipsnake. Drafted a peer review memo and biological section for the IS/MND.

Eastside Road at Olney Creek Bridge Replacement Project* | Redding, California | 2017 | Environmental Planner

Drafted the IS, MND, and MMP. Resources analyzed in the environmental document include aesthetics, agricultural resources, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazardous materials, hydrology, land use, mineral resources, noise, population, public services, recreation, transportation, tribal cultural resources, and utilities.

Hawkins Station Generator Project* | Santa Rosa, California | 2016 | Monitor

Conducted biological monitoring for the placement of a new generator pad at a Cal Water station within Santa Rosa. The project site contained adjacent vernal pools; monitored for potential CTS activity and habitat destruction.

Honeydew Bridge Replacement Project* | Humboldt County, California | 2017-Present | Environmental Planner

Drafted the VIA. Conducted the fieldwork for the VIA which included photographing the project from key viewpoints. Drafted the EIR/EA. Resources analyzed included land use, community impacts, utilities, traffic,

visual/aesthetics, paleontology, hazardous waste, air quality, noise, energy, biological resources, greenhouse gases, and cumulative impacts.

Horseshoe Bend Levee Improvement Project* | Bethel Island, California | 2016 | Biologist and Environmental Planner

Assisted with a habitat site assessment and wetland delineation. Assisted in drafting the Jurisdictional Determination and Biological Assessment. Special-status species evaluated included vernal pool crustaceans, anadromous fish. Assisted BIMID in circulating the IS/MND for public review and responding to public comment.

Live Oak WWTP Plant Solar Project* | Live Oak, California | 2016 | Biologist

Conducted a site visit and evaluated biological impacts for the Live oak wastewater treatment plant to install solar panels on their property. Analyzed potential habitat and impacts to burrowing owl, VELB, GGS, CTS, and nesting birds. Drafted the IS/MND biology section and prescribed minimization measures for the above species.

McKean Road Tank and Pipeline Project* | Santa Clara County, California | 2017 | Biological Monitor

Conducted biological construction monitoring for the construction of a new water tank and pipeline. Species of concern included CTS, CRLF, Least Bell's vireo, western pond turtle, Bay checkerspot butterfly, burrowing owl, Blainville's horned lizard, white-tailed kite, golden-eagle, pallid bat, San Francisco dusky-footed woodrat, Chinook salmon, Steelhead, and special-status plants. Performed daily pre-activity clearance surveys; trained workers using a WEAP; and monitored project's compliance to 1602 Streambed Alteration Agreement, USFWS Biological Opinion, and Santa Clara Valley Habitat Conservation Plan permit.

SPMUD Trunk Sewer Relocation Project* | Rocklin, California | 2017 | Biological Monitor

Performed daily pre-activity surveys, WEAP trained new workers, and monitored the status of birds nesting near the project area.

Sara Cortez

Senior Biologist

As a senior biologist with over 13 years of experience, Sara has been involved in a variety of project including collaborating with the U.S. Army Corps of Engineers (Corps) and Regional Water Quality Control Board (RWQCB) CWA Sections 401 and 404, California Department of Fish and Wildlife (CDFW) California Fish and Game Codes (CFGC) Sections 1600 and 2081, and with U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) for projects requiring federal Endangered Species Act (ESA) authorization.
Sara has acquired experience on a wide variety of projects throughout California. She has a diverse skillset in wetland ecology, botany, aquatic invertebrate biology and water quality analysis. She has experience surveying and monitoring special-status species including; California red-legged frog (Rana draytonii), burrowing owl (Athene cunicularia), California tiger salamander (Ambystoma californiense) and federally listed vernal pool crustaceans.
Sara routinely prepares wetland delineations, habitat suitability assessments, and special-status species investigations and has prepared numerous permit applications. She has also prepared reports and assessments to document compliance with California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), Migratory Bird Treaty Act, federal and state Endangered Species Acts (ESA), Clean Water Act (CWA), and California Fish and Game Codes (CFGC).

EDUCATION

Bachelor of Science, Environmental and Resource Sciences, Hydrobiology Emphasis, University of California, Davis, California, 2002

CERTIFICATIONS & TRAINING

California Rapid Assessment Method (CRAM) Practitioner Riparian Systems–Riverine Module, San Francisco Estuary Institute, Moss Landing, California, 2012

California Rapid Assessment Method (CRAM)-Estuarine Module, San Francisco Estuary Institute, Costa Mesa, California, 2012

Wetlands Restoration Ecology, Tiburon Romberg Center for Environmental Studies, San Francisco State University, Tiburon, California, 2011

Biology Sacramento Valley and Lower Foothill Region, Auburn and Walnut Grove, California, 2008

Biology and Management of the California Red-legged Frog (Rana draytonii) Workshop, Livermore, California, 2008

Basic Wetland Delineation Training, U.S. Army Corps of Engineers (Corps), San Diego, California, 2007

Biology and Management of the California Tiger Salamander (Ambystoma californiense) Workshop, Livermore, California, 2007

California Fairy Shrimp (Linderiella occidentalis) Class, Davis, California, 2006

Aquatic Bioassessment Survey Training, Roseville, California, 2006

Aquatic Weed School, Davis, California, 2004

Field Botany Course, Sacramanto, California, 2005

Tricolored Blackbird (Agelaius tricolor) Biology, Conservation, and Survey Techniques Workshop, Folsom, California, 2016

PROJECT EXPERIENCE

WILDLIFE ASSESSMENTS

Vernal Pool Species Study and Analysis* | Sacramento County, California | Deputy Project Manager

As deputy project manager, Sara included the review and compilation of information pertaining to the six listed vernal pool crustaceans in California and southern Oregon. During the course of this project, Sara held position in the USFWS Sacramento Office and given access to USFWS files. She coordinated directly with Holly Herod, the Sacramento Valley Branch Chief, through completion of the project. Following the review and compilation process of the database, the relevant species information was summarized and presented in a report to USFWS for use in their preparation of the five-year status reviews for these six species.

SCAS Terminal B Replacement and Modernization Program "Big Build"* | Sacramanto County, California | Senior Biologist

As senior biologist, Sara conducted biological monitoring both during and prior to active construction of this project. Tasks included pre-construction clearance and monitoring of the project site for presence of sensitive resources including burrowing owl (Athene cunicularia) and Swainson's hawk (Buteo swainsoni). Sara acted as field team leader and organized and facilitated the pre-

construction clearance of project areas for presence of burrowing owls. Biological monitoring continued during the construction activities at the airport as part of the Terminal Modernization Program, which was finalized in October 2012.

Habitat Conservation Plan (HCP)* | Sacramento County, California | Project Coordinator

Sara was involved in this multi-species HCP is being prepared to cover SMUD's covered activities (primarily operations and maintenance activities) in its Service Area (which encompasses Sacramento County and portions of adjacent counties). Species proposed for inclusion in the HCP would include; vernal pool plants and invertebrates, California tiger salamander (Ambystoma californiense), giant garter snake (Thamnophis gigas), Swainson's hawk (Buteo swainsoni), and burrowing owl (Athene cunicularia). As project coordinator of the SMUD HCP, Sara was responsible for preparing and reviewing the document, staff management, contract/schedule management, and Geographic Information System (GIS) data analysis. She was also responsible for regular collaboration and coordination between regulatory agencies (U.S. Fish and Wildlife Service [USFWS] and California Department of Fish and Wildlife [CDFW]) and the SMUD Environmental Management team to meet both the required biological and statutory requirements of the HCP and the needs of SMUD as a utility provider. Sara also attended monthly meetings with SMUD and the regulatory agencies to discuss and determine various approach strategies, reviewed technical documents, discussed species conservation strategies and determine mutually agreeable approaches to the HCP document sections.

WILDLIFE SURVEYS AND STUDIES

On-Call Services, Burrowing Owl Surveys and Monitoring* | Sacramento, California | Senior Biologist

As senior biologist, Sara assisted biologists at SAFCA in performing protocol-level burrowing owl (Athene cunicularia) surveys and implementing passive relocation methods to exclude burrowing owls from canal system levees set to be retrofitted. She conducted emergency biological monitoring for burrowing owl during construction of local levee protection projects. Sara also presented worker awareness training for the burrowing owl.

Campus Parkway Phase I* | Merced County, California | Senior Biologist

As senior biologist, Sara performed site biological field surveys which included nesting raptor, San Joaquin kit fox (Vulpes macrotis mutica), burrowing owl (Athene cunicularia), and nesting songbird surveys. Subsequent summary documents were also created for the project detailing the survey protocols followed and the findings of the surveys.

SMUD Nature Preserve Mitigation Bank* | Sacramento County, California | Biologist

As biologist, Sara conducted large branchiopod and California tiger salamander (Ambystoma californiense) aquatic surveys. The California tiger salamander aquatic surveys were completed to document overwintering larvae in a managed stock pond and included tissue collection for genetic analysis.

TRANSIT

On-Call Biological Support Services—Caltrans, East Counties of District 4* | Multiple Counties, California, United States | 2018 | Senior Biologist/USFWS Liaison

As part this on-call contract for biological support services, Sara coordinated with Caltrans to avoid listed species and their habitats, prepared effects determinations, coordinated technical assistance, reviewed Biological Assessments, prepared Biological Opinions per Section 7 of the Endangered Species Act, and coordinated with Caltrans during the construction phase to confirm regulatory compliance of permitted activities as related to Bay Area federally-threatened and endangered species. Role: Senior Biologist/USFWS Liaison | Dates involved: 01/2017–07/2018

California High Speed Rail, CP4—California High-Speed Rail Authority* | Central Valley, California, United States | 2018-Ongoing | Senior Biologist

Sara is working on various Incidental Take Permit (ITP) Amendments for the CDFW to address changes in the alignment footprint and/or covered activities of the permit and address any potential changes to the associated effects to Covered Species under the take permit. Role: Senior Biologist | Dates involved: 08/2018–present

BRIDGES

San Joaquin River Bridge on Italian Bar Road Replacement Project* | Fresno County, California | Biologist

Sara was involved in a project to replace the Italian Bar Road Bridge crossing the San Joaquin River at the Fresno-Madera county line in the Sierra National Forest. This is a federally funded California Department of Transportation (Caltrans) Local Assistance project. She completed a biological resources site assessment and prepared the U.S. Forest Service (USFS) Special Use Permit Application for the project.

OIL AND GAS PIPELINES

PG&E Line 406/407 Natural gas Pipeline* | Yolo County, Sutter County, Placer County, California | Senior Biologist

As senior biologist, Sara acted as third-party lead field monitor for the California State Lands Commission during construction activities. She managed biological monitoring staff and helped ensure project compliance per the project permits and the Mitigation Monitoring and Reporting Requirements during the first phase of project construction activities which involved the construction of a newly established section of natural gas transmission pipeline in Yolo County.

Pacific Gas and Electric (PG&E) – Line 108 Natural Gas Pipeline Environmental Impact Report (EIR)* | Sacramento County, California | Senior Biologist

As senior biologist, Sara prepared the Draft EIR (DEIR) with respect to plant and wildlife resources potentially affected by the project and acted as lead third party Field Monitor for the California State Lands Commission during construction activities. She managed biological monitoring

staff and helped ensure project compliance per the project permits and the Mitigation Monitoring and Reporting Requirements during project construction activities which included the replacement of 11 miles of natural gas transmission pipeline.

TRANSPORTATION

California High Speed Train System -Merced to Fresno Section Construction Package 1* | Fresno County and Madera County, California | Deputy Project Manager

As deputy project manager, Sara coordinating closely with the client to prepare all pre-construction reports, surveys, and actions to be consistent and in compliance with the environmental permits and the Mitigation Monitoring and Reporting Requirements.

STORMWATER

Constra Costa Clean Water Program* | Constra Costa, California | Senior Biologist

As senior biologist, Sara assisted in the implementation of a 2-year evaluation of organic-based fertilizer technologies as a best management practice to reduce the nutrient and pesticide pollutant load entering surface waters within Contra Costa County. Project work activities included use of aquatic toxicity testing and chemical water quality analysis to evaluate up and downstream water quality in waterways flowing adjacent or through golf courses. She was responsible for performing regular on-site stormwater event sampling and subsequent evaluation of water quality parameters including; dissolved oxygen, nitrogen, phosphorus, and electrical conductivity. The data collected was then analyzed to compare water quality in courses using traditional synthetic fertilizers versus newer organic-based products.

WATER AND SEWER

Linda Creek Sewer Crossing Rehabilitation Project* | Placer County, California | Wildlife Biologist

Sara conducted a biological field survey and wetland delineation for a small sewer replacement project in close proximity to active stream and riparian habitats within in the City of Roseville. She was also responsible for the preparation and coordination of various permit applications including, federal Section 404, 401, and California Department of Fish and Wildlife (CDFW) Sections 1600-1616 permits for sanitary sewer improvement activities. During the construction phase of the project, acted as Project Manager and Lead Monitor. Managed a biological monitoring staff, ensured project compliance per the project permits and the Mitigation Monitoring and Reporting Requirements during project construction activities, and communicated with client to manage the project timeline and construction scheduling changes.

WATER DAMS & RESERVOIRS

Los Vaqueros Reservoir Expansion Project Environmental Impact Statement/Environment Impact Report* | Sacramento, California | Senior Biologist

Sara performed field surveys to quantify the oak tree species within portions of the project area. This survey was conducted in an effort to calculate estimated habitat loss data following the expansion of Los Vaqueros Reservoir. She performed field surveys and assessments of potential habitat mitigation lands considered for the project.

WATER OPEN CHANNELS & AQUEDUCTS

South Bay Aqueduct Maintenance and Rehabilitation Project* | Alameda and Santa Clara Counties, California | Senior Biologist

Sara conducted biological monitoring both during and prior to active construction of this project. She monitored vegetation restoration sites, pre-construction clearance, and monitored the project site for presence of sensitive resources. She also acted as field team lead in organizing and facilitating the multi-year pre-construction clearance effort to passively exclude burrowing owls (Athene cunicularia) from large portions of the project area.

WETLANDS

Broderick Boat Launch Facility Improvements* | Yolo County, California | Senior Biologist

As senior biologist, Sara conducted the biological field survey and wetland delineation and prepared the Biological Assessment (BA) and the biological resources section of the Initial Study/Mitigated Negative Declaration (IS/MND) document. Sara coordinated with resource agencies and prepared the permit applications for federal Section 404, 401, and California Department of Fish and Wildlife (CDFW) Sections 1600-1616 permits for park expansion and improvement activities.

Hot Springs Road Improvement Project* | Alpine County, California | Wildlife Biologist and Project Coordinator

As wildlife biologist and project coordinator, Sara is coordinating in the preparation of technical reports for a Caltrans Department of Transportation (Caltrans) District 10 Local Assistance road widening project in Markleeville. Technical reports include a Natural Environment Study (NES), wetland deliniation, Historic Property Survey Report (HPSR), and Archeological Survey Report (ASR).

Delta Wetlands Project* | Contra Costa and San Joaquin Counties, California | Project Manager and Senior Biologist

Sara conducted extensive field surveys of the approximate 20,000-acre project area to complete biological resource assessments and update the wetland delineation. She coordinated with state and federal agencies to complete updates to the U.S. Fish and Wildlife Service (USFWS) Biological Assessment (BA), National Marine Fisheries Services (NMFS) Biological Assessment (BA), and the Incidental Take Permit Application.

Jackson Valley Quarry Expansion and Reclamation Environmental Impact Report (EIR) and Mitigation Monitoring Program* | Amador County | Senior Biologist

As senior biologist, Sara conducted biological field assessments (including a wetland delineation) and prepared the Wetland Delineation Report and the biological resources section of the EIR. This EIR analyzed potential impacts that would result from the proposed

project activities, which involved the expansion of the existing Jackson Valley Quarry operation to an adjacent parcel.

Payran to Southpoint Multi-Use Pathway Project—GHD, Inc.* | Sonoma County, California, United States | 2017-2018 | Senior Biologist

For this Caltrans District 4 Local Assistance project, Sara conducted field work and prepared a biological resources technological memorandum to document biological constraints and re-verify the extent of previously delineated wetlands for a portion of the SMART Non-motorized Pathways in Petaluma, California. Role: Senior Biologist | Dates involved: 08/2017–07/2018

CONSERVATION AND RESOURCE MANAGEMENT

Initial Study/Mitigated Negative Declaration (IS/MND) Document* | Alameda County, California | Senior Biologist

As senior biologist, Sara helped prepare an IS/MND document for projects in Alameda County for the use of aquatic herbicides in stormwater conveyances to control aquatic weeds. This document was produced to comply with National Pollutant Discharge Elimination System Aquatic Pesticide Permit requirements. She performed regular on-site biological surveys and evaluated potential risk of herbicide exposure to federally and state-listed species in estuarine and wetland habitats. Sara also conducted regular water sampling and analysis as part of on-going monitoring and reporting plans.

SOURCE WATER ASSESSMENT

Laguna de Santa Rosa Ludwigia Control Project* | Sonoma County, California | Senior Biologist

As senior biologist, Sara assisted in the preparation of an Aquatic Pesticide Application Plan to the North Coast Regional Water Quality Control Board (RWQCB) on behalf of California Department of Fish and Wildlife (CDFW) and the Sonoma County Water Agency. Following the issuance of National Pollutant Discharge Elimination System permits, she worked with RWQCB staff to develop a Monitoring and Reporting Plan to be carried out during the first phase of the project. Sara also made bi-weekly field visits to the site to monitor water quality, maintain field equipment (including continuous water quality monitoring instruments), monitor field crew progress, and evaluate the effectiveness of the best management practices. At the end of phase I, she compiled all collected data for summary and inclusion in the Annual Report that was submitted to RWQCB.

ENVIRONMENTAL ASSESSMENT

Payette National Forest: Disease Transmission of Bighorn Sheep Supplemental Draft Environmental Impact Statement (DEIS)* | Washington County, Idaho | Senior Biologist

As senior biologist, Sara assisted in comment review and categorization process of a large Content Analysis Team (CAT) project for the USFS, Payette National Forest. The CAT project catalogued and summarized public comment on the Draft Supplemental Environmental Impact Statement for Bighorn Sheep Viability Analysis and Forest Plan Amendment.

BRIDGES, ROAD

Atlantic/Eureka I-80 Westbound On-ramp Widening Project* | Placer County, California, United States | 2018 | Senior Biologist/Project Coordinator

Sara provided oversight for the preparation of the technical reports, as well as an IS/MND (IS/MND) for CEQA compliance for the project. Technical reports included a Natural Environment Study, wetland delineation, National Marine Fisheries Service (NMFS) Biological Assessment, Historic Property Survey Report, Archaeological Survey Report, and extended phase I archaeological investigation. She also coordinated agency consultation with NMFS to address potential effects to listed fish species. 06/2017–07/2018

BIOLOGICAL MONITORING

Initial Study/Migigated Negative Declaration (IS/MND) Document* | Alameda County, California | Senior Biologist

Sara assisted in the preparation of an IS/MND document for projects in Alameda County for the use of aquatic herbicides in stormwater conveyances to control aquatic weeds. This document was produced to comply with National Pollutant Discharge Elimination System Aquatic Pesticide Permit requirements. Sara performed regular on-site biological surveys and evaluated potential risk of herbicide exposure to federally and state-listed species in estuarine and wetland habitats. Additionally, Sara conducted regular water sampling and analysis as part of on-going monitoring and reporting plans. Bureau of Land Management–Reach 4B San Joaquin River Restoration Project, Merced County, California: Field Team Lead. Sara performed surveys of habitats that would be flooded along Reach 4B of the San Joaquin River if restoration activities proceed as proposed. Biological surveys included; general habitat assessment, preliminary wetland delineation, sensitive vegetation community assessment (including vernal pools), and nesting bird surveys.

Hirschdale Transmission Line Project Initial Study/Mitigated Negative Declaration* | Nevada County, California | Senior Biologist

As senior biologist, Sara conducted biological monitoring during active construction of this project. She coordinated with the daily monitor and site foreman to help ensure that the project and all related activities remained in compliance with project permits. As a third-party monitor, weekly site visits were performed of the project site to monitor for presence of sensitive resources and project compliance with all applicant proposed mitigation measures including Stormwater Pollution Prevention Plan (SWPPP) measures and produced weekly reports summarizing field findings.

VERNAL POOL STUDIES/DESIGN

Yolo Grasslands Park Project* | Yolo County, California | Field Biologist and Project Manager

As field biologist and project manager, Sara initially performed regular collections of hydrology data within vernal pools and conducted California Burrowing Owl Consortium protocol-level surveys for burrowing owls (Athene cunicularia). During subsequent years, she

performed annual plant population assessments (utilizing transect survey methods) to determine distributional data for the two special-status plant species, Solano grass (Tuctoria mucronata) and Colusa grass (Neostapfia colusana), that occur within the vernal pools on the site. She performed quarterly site visits to monitor site progress or potential problems, submitting quarterly and annual reports and maintaining communication with the project client, sub-consultant, and regulatory agencies.

STREAM/RIVER RESTORATION

Reach 4B San Joaquin River Restoration Project* | Merced County, California | Field Team Lead

As field team lead, Sara performed surveys of habitats that would be flooded along Reach 4B of the San Joaquin River if restoration activities proceed as proposed. Biological surveys included; general habitat assessment, preliminary wetland delineation, sensitive vegetation community assessment (including vernal pools), and nesting bird surveys.

CONVEYANCE - OPEN CHANNELS & AQUEDUCTS

North Bay Aqeduct Alternate Intake Project Environemntal Impact Report (EIR)* | Alameda and Santa Clara counties, California | Senior Biologist

Sara prepared the Draft EIR (DEIR) with respect to aquatic resources as well as the terrestrial plant and wildlife resources that could be potentially affected by the project. She also assisted in the habitat impact analysis in ArcGIS as part of the document preparation.

HABITAT EVALUATIONS

San Joaquin Habitat Conservation Plan (HCP) On Call Biological Services* | San Joaquin County, California | Senior Biologist

As senior biologist, Sara conducted preconstruction surveys for a proposed Home Depot in Lathrop. She coordinated with SJCOG staff and project proponents to schedule field visit and verify compliance with San Joaquin Multi-Species HCP measures.

ENVIRONMENTAL IMPACT ASSESSMENTS

Aquatic Permitting for Herbicide Use* | Solano County, California | Senior Biologist

As senior biologist, Sara assisted in the implementation of a Monitoring and Reporting Plan for SCWA to assess environmental impacts of the use of aquatic pesticides for weed control. Work involved a collection of water quality parameters and herbicide levels during active in-water applications of herbicide. She analyzed all collected data and prepared annual reports for SCWA to meet the requirements of the National Pollutant Discharge Elimination System (NPDES) permitting process.

AIRPORTS

Rancho Murieta Airport Resource Study* | Sacramento County, California | Senior Biologist

As senior biologist, Sara conducted biological field surveys including an arborist survey, Valley elderberry longhorn beetle survey (Desmocerus californicus dimorphus), and habitat assessment.She prepared the Resource Management Report and biological section for the Environmental Impact Report (EIR) for the County of Sacramento. These reports evaluated the natural resources within the Rancho Murieta Recreation Area that had the potential to interfere with flight operations at the adjacent Rancho Murieta Airport.

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QUALIFICATIONS

- Experience performing vegetation and wildlife surveys, and familiar with species-specific protocols and USACE wetland delineation process.
- Practiced CEQA author with experience writing the Biological Resources and Hydrology and Water Quality Resources sections of several CEQA documents including several EIRs for transmission projects at the direction of the CPUC.
- Experience in managing and performing construction monitoring on commercial solar and wind development projects, including managing budgets and field staff.
- Familiar with permit conditions associated with CWA Section 401 and 404, Biological Opinions, Incidental Take Permits, and well-versed in ensuring those conditions are met.
- Proficient with handheld GPS, ArcGIS, and Google Earth.

EXPERIENCE

Ecology and Environment, Inc., San Francisco, CA (January 2015 – Present)
Environmental Scientist. Contributed to all phases of environmental review document preparation, including drafting biological resource sections and responding to public comment for CEQA documents. Surveyed existing and prospective solar, wind, and transmission projects for threatened and endangered wildlife species. Managed the biological monitoring for the decommissioning of a wind energy project in the Altamont Pass.

Great Basin Institute, Reno, NV (May 2014 - July 2014)
Vegetation/Habitat Assessment Crew Member. Performed habitat assessment activities, including vegetation sampling and inventories, soil testing, and logging photo points, while working with the Nevada Dept. of Wildlife sage grouse habitat-monitoring project.

Great Basin Institute, US Forest Service, Carson City, NV (May 2013 – November 2013)
Invasive Species Technician. Surveyed US Forest Service lands for invasive species and mapped new infestations. Eradicated invasive plant infestations with chemical, biological, and mechanical methods.

National Audubon Society, Trabuco Canyon, CA (November 2012 – May 2013)
Invasive Species Crew Member. Eradicated invasive plant infestations by mechanical means, performed invasive plant surveys, conducted experimental treatments and collected data.

EDUCATION

SUNY College of Environmental Science and Forestry, Syracuse, NY
Master of Professional Studies, Environmental Science (December 2014)

SUNY College of Environmental Science and Forestry, Syracuse, NY
Bachelor of Science, Natural Resources Management (May 2011)

TRAINING

HAZWOPER 40-Hr Training (April 2015), 8-Hr Refresher (January 2017)
Introduction to Desert Tortoises and Field Techniques, Desert Tortoise Council (November 2015)
FERC Environmental Review and Compliance for Natural Gas Facilities (April 2016)

REFERENCES

Available Upon Request

FOOTHILL ASSOCIATES

ENVIRONMENTAL CONSULTING ● PLANNING ● LANDSCAPE ARCHITECTURE

Cristian Singer

Senior Botanist

Education

Bachelor of Science, Environmental Biology, Humboldt State University, 1996

Certifications

CDFW Scientific Collecting Permit for State Designated Endangered, Threatened, and Rare Plants, No. 07003

California Endangered Species Act, Native Plant Protection Act, Plant Voucher Collecting Permit No. 2081(a)-18-139-V

Experience

Foothill Associates, Botanist

ICF International, Botanist

U.S. Forest Service, Botanist, Susanville, California.

U.S. Forest Service, Botanist, Nevada City, California

U.S. Forest Service, Botanist, Nevada City, California

The Nature Conservancy, Botanist, San Francisco, California

Bureau of Land Management, Botanist, Bakersfield, California

U.S. Geological Survey, Botanist, Barstow, California

Cristian Singer has twenty-three years of experience conducting large-scale vegetation mapping projects, floristic inventories, rare plant surveys and wetland delineations throughout the State of California, southern Oregon, and southern Nevada. Cristian utilizes dichotomous keys to facilitate accurate and timely identification of plant specimens (including grasses, sedges and rushes) in the course of botanical surveys, vegetation community sampling and wetland delineations. He specializes in conducting floristic surveys for special-status plant species in accordance with federal, state and local agency guidelines. He has surveyed hundreds of vegetation community plots in the course of developing base-line data for the development of large-scale vegetation maps. Cristian is a strong project manager and regularly communicates and coordinates with multidisciplinary professionals to complete project goals in a timely manner; effectively manages project timelines and produces accurate cost estimates; prepares and reviews technical reports and documents; maintains a safe and productive working environment; and supervises and trains junior personnel.

Representative Experience

Floristic Surveys— Butte County Meadowfoam. Conducted surveys for and extensive mapping of Butte County Meadowfoam, a state and federally listed endangered plant species, in Butte County, California.

District 1 Biologist—Caltrans; Humboldt, Mendocino, Sierra and Sonoma counties, California. Conducted special-status plant surveys and wetland delineations at various existing bridge locations and proposed culvert improvement sites.

1-80/1-680 Interchange Project PA/ED—Solano County Transportation Authority/Mark Thomas and Company, Solano County, California. Conducted special-status plant surveys within a proposed improvement footprint at the Interstate 80 and Interstate 680 interchange. The work will form the environmental baseline and obtain environmental permits for project planning and implementation.

SR-299 Blue Lake Slide Wetland Delineation and Permitting—Caltrans, Humboldt County, California. Conducted a wetland delineation and functional assessment to meet both Caltrans and the Corps standards. The work will form the environmental baseline and obtain environmental permits for project planning and implementation.

SR 197/US 199 Safe STAA Access Project—Caltrans District 1, Del Norte County, California. Field delineated wetlands and other waters using the routine on-site determination methods detailed in the Corps Wetlands Delineation Manual and the Corps Draft Interim Regional Supplement to the Corps 1987 Manual: Western Mountains, Valleys and Coast Region at the Narrows location on US 199 in the Middle Fork Smith River canyon, one of seven isolated locations where Caltrans is proposing improvements on SR 197 and US 199 to be able to classify the routes as part of the Surface Transportation Assistance Act truck route network. The wetland delineation report was one of several reports prepared to support the environmental impact analysis for the project.

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Environmental Support Services for Transportation Improvement (Contract 03A1317)—Caltrans Districts 1, 2, and 3 (Various Locations in Northern California). Conducted wetland delineations for an additional 10 task orders under this contract.

U.S. 101 Willits Bypass Project Mitigation Planning and Design and Permitting—Caltrans District 1, Mendocino County, California. The Willits Bypass Project is a 5.9-mile long roadway bypass of U.S. Highway 101 (Hwy 101) to the east of the City of Willits, in Mendocino County, California. The complex project realigns Hwy 101 with a four-lane highway around the City of Willits through the Little Lake Valley and reconnects with the existing Hwy 101. The project improves traffic access by relieving traffic congestion associated with the Hwy 101 and State Route 20 (SR-20) interchange, constructing a new 4-lane roadway segment, and making other improvements along the alignment, including new and improved bridges, interchanges, viaducts, retaining walls, and fish passage improvements. The new roadway segment includes twenty-two bridges over existing waterways, riparian corridor, streets, and railroad right-of-ways. The new roadway affects endangered species, waters of the State and United States, requiring a complex suite of permits and onsite mitigation plan.

North County Corridor EIR/EIS for New SR-108—North County Corridor Joint Powers Authority, Stanislaus County and San Joaquin County, California. Conducted a wetland delineation for the proposed SR-108 in San Joaquin and Stanislaus County. Caltrans, as the CEQA/NEPA lead agency, in cooperation with the North County Corridor Transportation Expressway Authority, propose to construct an expressway that would extend approximately 25 miles from SR-99 in the vicinity of Kiernan Avenue/the Salida community, to SR-120 approximately 6 miles east of the City of Oakdale.

Delta Wind Technical Studies—enXco, Solano County, California. Conducted an initial mapping project on a proposed 12,000-acre wind farm in order to facilitate planning efforts to minimize or eliminate potential project-related impacts to special-status plant species and wetlands.

Central California Clean Energy 500 kV Transmission Line Project Proponents Environmental Assessment (PEA)—Pacific Gas & Electric Company (PG&E), Fresno County, Kings County, and Madera County, California. Conducted special-status plant surveys throughout the proposed transmission alignment.

Sunrise Powerlink 2008 Rare Plant Surveys—San Diego Gas & Electric Company (SDG&E)/Arcadis, San Diego County, California. Conducted special-status plant surveys throughout the existing transmission alignment and within the proposed, expanded transmission alignment.

Carrizo to Midway Transmission Line—Pacific Gas & Electric Company (PG&E), Carrizo Plain National Monument, San Luis Obispo County and Kern County, California. Conducted special-status plant surveys and delineated wetlands and other waters of the U.S. within the proposed alignment using the routine on-site determination methods detailed in the U.S. Army Corps of Engineers Wetlands Delineation Manual and the U.S. Army Corps of Engineers Draft Interim Regional Supplement to the Corps of Engineers 1987 Manual: Arid West Region.

Rosamond PV Solar Technical Studies—Sempra Energy Utilities, Kern County, California. Conducted special-status plant surveys and delineated wetlands and other waters of the U.S. within a proposed wind farm using the routine on-site determination methods detailed in the U.S. Army Corps of Engineers Wetlands Delineation Manual and the U.S. Army Corps of Engineers Draft Interim Regional Supplement to the Corps of Engineers 1987 Manual: Arid West Region.

Shiloh 3 Wind Project Biological and Cultural Impact Studies—enXco, Contra Costa County, California. Conducted special-status plant surveys within proposed expansion area associated with existing wind farm.

Gas Line 177A Botanical Survey—Pacific Gas & Electric Company (PG&E), Shasta County, California. Conducted special-status plant surveys along a proposed PG&E gas line.

Hollister Tap 1 and 2 115 kV Reconductor PEA—Pacific Gas & Electric Company (PG&E), Monterey County, San Benito County, California. Conducted special-status plant surveys along existing transmission line. Delineated wetlands and other waters of the U.S. within portions of the alignment using the routine on-site determination methods detailed in the U.S. Army Corps of Engineers Wetlands Delineation Manual and the U.S. Army Corps of Engineers Draft Interim Regional Supplement to the Corps of Engineers 1987 Manual: Arid West Region.

Crane Valley Dam Seismic Modifications Permitting Assistance—Pacific Gas & Electric Company (PG&E), Fresno County, California. Conducted floristic inventories in several meadow and riparian complexes as part of an assessment for potential suitable mitigation areas.

Shingle Springs Substation Overhead Distribution Project Biological Services—PG&E, El Dorado County, California. Conducted botanical surveys for proposed pole replacement and re-conductoring to support recent substation expansion work.

Emergency Response Environmental-Cultural Support—PG&E, Various Locations, California. Conducted botanical surveys. ICF is under contract to perform emergency response and short-notice work when requested by PG&E. The scope of work includes wildlife biology, aquatic, water quality, cultural resources, and miscellaneous technical support for a variety of PG&E gas, electric transmission/distribution, and hydroelectric projects throughout PG&E's service territory.

Vernal Pool Monitoring at Van Vleck Ranch Mitigation Bank—Westervelt Ecological Services, Sacramento County

and Solano County, California. Conducted floristic surveys to document the presence/absence of plant species in constructed versus natural vernal pools. Additionally, conducted floristic surveys for special-status plant species.

Arcata Wetland Vegetation Surveys—Caltrans, Humboldt County, California. Conducted a comprehensive floristic examination of wetland/upland conditions in a mosaic of pastures in order to provide an ecological evaluation for potential wetland creation or mitigation.

Sensitive Plant Management Program—U.S.D.A. Forest Service, Susanville, California. Lead Botanist for team conducting special-status plant surveys and comprehensive floristic surveys throughout the National Forests of California

Region 5 Meadow and Riparian Study—U.S.D.A. Forest Service, Nevada City, California. Role: Lead Botanist for team conducting frequency and green-line sampling within meadows and riparian areas throughout the National Forests of California.

Furnace Creek Vegetation Mapping Project—U.S. Geological Survey, Flagstaff, Arizona. Lead Botanist conducting the location and assessment of wetlands associated with an extensive system of seeps and springs in preparation for production of a detailed vegetation map of the study area and surrounding environs.

Mojave Vegetation Mapping Project—U.S. Geological Survey, Flagstaff, Arizona. Lead Botanist testing preliminary vegetation map of the Mojave Desert region for accuracy.

Mojave Vegetation Mapping Project—U.S. Geological Survey, Flagstaff, Arizona. Primary duties involved conducting botanical field investigations, studies, and surveys such as vegetation sampling throughout the Mojave Desert and surrounding environs.

Yosemite National Park Vegetation Mapping Project—The Nature Conservancy, San Francisco, California. Title/Role: Lead Botanist for team conducting botanical investigations, studies and surveys such as vegetation sampling throughout Yosemite National Park and surrounding environs.

Sensitive Plant Management Program—U.S. Bureau of Land Management (BLM), Bakersfield, California. Primary duties involved conducting field surveys for populations of sensitive, threatened and endangered plant species throughout Carrizo Plain National Monument.

Botanical Surveys for Low Effect HCP Santa Cruz and Monterey—PG&E, Monterey County and Santa Cruz County, California. Conducted floristic surveys and mapped special-status plant species along existing gas lines in order to prepare a vegetation management plan.

Desert Conservation Program Rare Plant Inventories—Clark County, Nevada. Conducted targeted surveys to determine the presence or absence of special-status plant species in order to obtain new locations and ecological information to further refine predictive ecological models.

San Joaquin Valley HCP Map Book Survey II—Pacific Gas & Electric Company (PG&E), Kern County, California. Conducted surveys for special-status plant species.

East Contra Costa County HCP/NCCP Implementation—East Contra Costa County Habitat Conservancy, Contra Costa County, California. Conducted surveys for special-status plant species.

Pacheco Pass Corridor EIR/EIS—California High Speed Rail Authority/Parsons Transportation Group, Merced County, Santa Clara County, California. Conducted special-status plant surveys along proposed high-speed rail alignment.

Tejon Mountain Village Biological Surveys—Dudek & Associates, Kern County, California. Conducted surveys for special-status plant species.

Lower Kyle Canyon Development Project EA—U.S.D.A. Forest Service, Clark County, Nevada. Conducted surveys for plant species utilized by special-status butterflies.

Allison Loveless

Biologist

North State Resources, Inc.

Allison has more than 6 years of biological experience. She has served in roles ranging from consulting field biologist to laboratory biodiversity scientist. Allison has performed pre-construction surveys for nesting birds, biological reviews of project sites, and construction monitoring for giant garter snake, nesting birds, and federally listed vernal pool brachiopods. Allison's employment history also displays broad biological skills. Prior to becoming a biologist for NSR, Allison worked as an Assistant Scientist in the Center for Biodiversity at Temple University, Collection Manager at the Oklahoma State Collection of Vertebrates Museum, Forensic Intern with the Wyoming Wildlife Forensic and Fish Health Laboratory, Biology and Human Anatomy Teaching Assistant, Geographic Information Systems (GIS) assistant with Cal Fire, and Botanical Survey Technician in northern and central California for Sierra Pacific Industries. She has also prepared numerous technical reports, including professional, peer-reviewed publications and environmental constraints reports, and has assisted with revisions to environmental impact reports. Her experience ranges from the study of broad population and ecosystem patterns to within-population species assessments, including native and invasive range identifications and predictions, large-scale analyses of population genetic structure and morphology, forensic genetic analyses of wildlife, and conservation of tropical biodiversity. She has also participated in field trips to tropical regions to collect amphibians and reptiles.

Education

M.S., Zoology, Oklahoma State University, Stillwater, 2014

B.S., Geography/Environmental Studies, University of California, Los Angeles, 2009

Relevant Experience*

Vegetation Management Activities—Western Area Power Administration. Biologist. Conducted surveys for sensitive biological resources, including nesting birds, special-status mammals, and waters of the United States, prior to vegetation management activities at Western Area Power Administration rights-of-way. Also performed biological monitoring for vegetation removal activities.

Deschutes Road Widening Technical Memorandum----Shasta County Department of Public Works. Biologist. Reviewed federal, state, and local databases and site lists for known contamination sites, regulated landfill sites, underground tank sites, hazardous waste generators, and other potential sites of concern prior to project initiation. Generated a technical memorandum of hazards at the project location.

Community Pipeline Safety Initiative----Stantec on behalf of PG&E. Biologist. Performed pre-construction surveys for nesting birds and other sensitive resources. Conducted environmental safety training for project workers. Also performed biological monitoring, ensuring that all federal and state environmental regulations were adhered to. Produced daily reports and photographic logs of work activities associated with any potential impacts to natural resources.

Pit 6 Dam Fish Salvage----PG&E. Biologist. Assisted with locating fish in a dewatered stilling basin below Pit 6 Dam prior to construction activities.

Riverland Drive Widening Project Natural Environment Study----Shasta County Department of Public Works. Biologist. Prepared a natural environment study to evaluate the potential effects of the proposed project on special-status plant and animal species, waters of the United States, and other sensitive biological resources. Tasks included identifying the presence of habitat for special-status species, predicting potential impacts to these species and habitats, and proposing mitigation measures to prevent or reduce significant impacts.

Offsite Roadway Improvements for the River Crossing Marketplace Development Project Biological Resource Assessment----Costco Wholesale Corporation. Biologist. Prepared biological resource assessment evaluating the natural environment and potential impacts and mitigation for sensitive biological resources. Also assisted with field wetland delineation and report preparation.

Pacific Connector Gas Pipeline----Administrative Record Maintenance and

**denotes work with another company*

Forest Service Survey and Manage Persistence Evaluations. Biologist. Used GIS species occurrence and land management data to conduct new persistence evaluations for all survey and manage species that may be affected by PCGP activities. Used these species evaluations to revise survey and manage species persistence discussions.

L-402 Strength Test----CH2M Hill on behalf of PG&E. Biologist. Conducted pre-construction surveys for nesting birds and biological reviews of project sites and provided worker environmental safety training. Also performed construction monitoring for excavation and construction activities, including ensuring that state and federal regulations regarding biological and environmental resources were enforced. Produced daily reports and photograph logs for both construction monitoring and nesting bird surveys, showing construction activities and progress and potential environmental impacts.

L-121 Hydrostatic Test—CH2M Hill on behalf of PG&E. Biologist. Performed construction monitoring for giant garter snake and ensured that state and federal regulations regarding biological and environmental resources were enforced. Produced daily reports on construction progress and potential environmental impacts.

Environmental Constraints Reports (various projects)—ICF on behalf of PG&E. Biologist. Prepared environmental constraints reports evaluating potential impacts on biological resources prior to construction activities. Reports included describing habitats and environmental resources in the project area, determining special-status plant and animal species with potential to be present in the project area, and recommending surveys, permits, and avoidance and minimization measures. *

Upper North Fork Feather River Hydroelectric Project, Draft Environmental Impact Report—State Water Resources Control Board. Biologist. Revised and updated Vegetation, Wildlife, and Sensitive Biological Resources section of 2014 Draft EIR in response to comments from PG&E, Forest Service, California Department of Fish and Wildlife, Plumas County, non-governmental organizations, and individuals.*

Oklahoma Wetland Condition Analysis—Oklahoma State University, Departments of Zoology and Natural Resources Ecology and Management (EPA Grant). Research Assistant. Assisted in developing landscape GIS models for the prediction of wetland conditions in Oklahoma.*

Grey Wolf Genetic Database Project----Wildlife Forensic and Fish Health Laboratory, Wyoming Wildlife Game and Fish Department. Forensic Intern. Collected and analyzed microsatellite and DNA sequence data. The genetic data were used to assemble a grey wolf population database for use as a forensic reference to aid in the prosecution of illegal activities involving wolves. *

Viverridae Project----Oklahoma State University. Assisted with ongoing analyses of the native and invasive range identification and prediction for viverrid species based on recent genetic designations.*

Hispaniolan Frogs----Center for Biodiversity, Temple University. Biodiversity Laboratory Specialist. Assisted with the collection and genetic sequence analyses of endemic Hispaniolan frog species. Responsibilities included the discovery and resolution of unique species. Managed project quality and progress, project budgets, and laboratory assistants. *