# Natural Resources Site Technical Due Diligence

Prepared for Property of Threemile Canyon Farms

January 2025



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Prepared for

**Property of Threemile Canyon Farms** 

Prepared by

#### **Parametrix**

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## Certification

The technical material and data contained in this document were prepared under the supervision and direction of the undersigned.

signing for

Prepared by Chloe Kott

Checked by Colton Kyro

Approved by Joe Mitzel, PE

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## **Acronyms and Abbreviations**

ACIS Applied Climate Information System

DSL Oregon Department of State Lands

EFU Exclusive Farm Use

FEMA Federal Emergency Management Agency

HUC Hydrologic Unit Code

IPaC Information for Planning and Consultation

LWI Local Wetland Inventory

NOAA National Oceanic Atmospheric Administration

NRCS Natural Resources Conservation Service

NWI National Wetlands Inventory

ODA Oregon Department of Agriculture

ODFW Oregon Department of Fish and Wildlife

ORBIC Oregon Biodiversity Information Center

PP photo point

SAI Space Age Industrial

SP sample plot

USACE U.S. Army Corps of Engineers

USFWS U.S. Fish and Wildlife Service

## 1. Introduction

The purpose of this Natural Resources Due Diligence report is to describe the general natural resources characteristics of the Site (see map in Figure 1) owned by Threemile Canyon Farms. The Site is located in the Morrow County, Oregon (Township 4N, Range 23E, Sections 23, 24, and 25, portion of tax lot 110; Township 4N, Range 24E, Section 19, tax lot 121, and portion of tax lot 110). A portion of the Site is located within the Exclusive Farm Use (EFU), while another portion falls under the Space Age Industrial (SAI) county zoning designation (Morrow County 2023).

Parametrix evaluated the Site using readily available data, including aerial photographs, topographic maps, public GIS datasets, and information from agency websites. Parametrix also reviewed the rare species location records requested from the Oregon Biodiversity Information Center (ORBIC). In addition, a 1-day site visit was conducted on December 18, 2023, to inspect the Site for natural resources of special concern. Background data are presented in Appendix B. All ORBIC resource records obtained for the project are confidential and are not included as an appendix to this report but are on file with Parametrix . Representative site photographs are included in Appendix C.

## 2. Methods

## 2.1 Review of Existing Information

The following available environmental data, maps, and materials related to the site were reviewed:

- Aerial imagery of the Site from 1952 to 2023 (EDR 2023; Google Earth 2023; Nationwide Environmental Title Research, LLC 2023).
- Federal Emergency Management Agency (FEMA) flood insurance rate map (FEMA 2023).
- Natural Resources Conservation Service (NRCS) Web Soil Survey in the Site. (USDA NRCS 2023).
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) in the Site (USFWS 2023a).
- USFWS Critical Habitat for Threatened and Endangered Species maps (USFWS 2023b).
- USFWS Information for Planning and Consultation (IPaC) resource list (USFWS 2023c).
- Oregon Department of Agriculture (ODA) WeedMapper (ODA 2023a).
- ODA Oregon Listed Plants by County (ODA 2023b).
- ODA Noxious Weed Policy and Classification System (ODA 2023c).
- ORBIC Rare, Threatened, and Endangered Species Records (within a 2-mile radius of the project; generated March 24, 2023) (ORBIC 2023).
- Oregon Department of Fish and Wildlife (ODFW) Threatened and Endangered Species List (ODFW 2023).

There is no Local Wetland Inventory (LWI) at the Site and its vicinity.

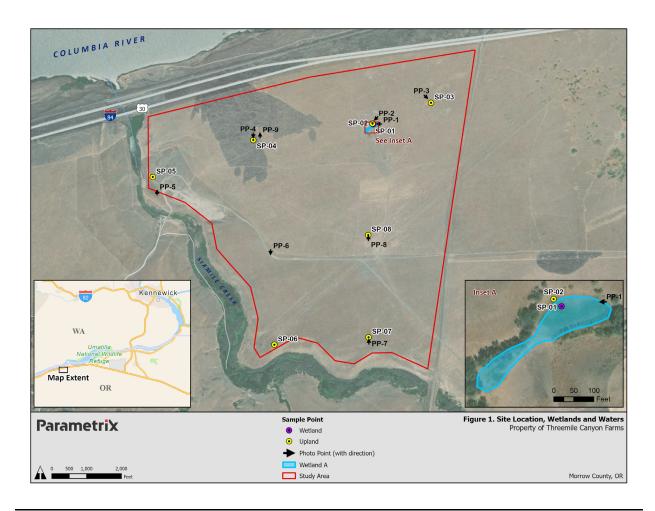


Figure 1. Site Map

### 2.2 Site Visit

Parametrix scientists Colton Kyro and Chloe Kott conducted a site visit on December 18, 2023, to identify whether waters of the United States and/or waters of the state occur within the Site and to assess vegetation, wildlife habitat characteristics, and other natural resources of special concern.

Weather during the site visit was cloudy with a high of 39°F. There was no precipitation during the site visit.

The presence of wetlands and waters was determined using methods specified in the U.S. Army Corps of Engineers (USACE) Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008). Vegetation, soil, and hydrology conditions were documented at eight sample plot (SP) locations. At each SP, Parametrix collected vegetation, soils, and hydrology data on standardized wetland determination data forms and documented field conditions with photographs. Additionally, Parametrix documented site conditions at 20 photo point (PP) locations. Sample plot and photo point locations were recorded using a handheld GPS. The locations of the SPs and the PPs are shown on Figure 1. Representative photographs are included in Appendix C. Wetland determination data forms are included in Appendix D.

General observations regarding wildlife habitats, vegetation communities, and signs of avian and wildlife site use were documented in field notes.

# 3. General Characteristics and Existing Conditions

## 3.1 Landscape Setting and Site Use

The Site is located within the Crow Butte-Lake Umatilla watershed (Hydrologic Unit Code [HUC] 170701010905) and the Poverty Ridge-Sixmile Canyon (HUC 170701010804) (USGS 2023). The topography of the Site is a mostly uniform flat plains with occasional bedrock outcroppings; hillsides and cliffs are present along the south and west site border above the Sixmile Canyon. The Site has an elevation range of approximately 340 to 440 feet above sea level.

The Site consists of pastureland currently used for cattle grazing operations, a gravel mine, and undeveloped land. The Site is bordered by Highway 84/Vietnam Veterans Memorial Highway and the Columbia River to the north, a Union Pacific railway and undeveloped grasslands to the east, and Sixmile Canyon to the south and west. The Columbia River is located approximately 0.31 miles to the north of the Site. Six Mile Creek runs approximately 0.09 miles to the west of the Site. Willow Creek Wildlife Area is located approximately 5.53 miles west of the Site.

## 3.2 Hydrology and Precipitation

Parametrix reviewed historical and current precipitation data from the weather station in Boardman, Oregon, available on the National Oceanic Atmospheric Administration (NOAA) Regional Climate Center website powered by the Applied Climate Information System (ACIS) (ACIS 2023). The normal range of annual precipitation in the area is between 6.72 and 8.57 inches. Most of the annual precipitation falls as rain or snow between October and May. The average growing season lasts 210 days, from the beginning of April to the end of October; however, there is a dry season that extends from June to October, with normal monthly precipitation ranging from 0.11 to 0.86 inches. Average temperatures range from 41.2°F to 65.8°F, with the highest monthly average temperature in July at 91.8°F and the lowest monthly average temperature in January at 27.9°F. The site visit was conducted in mid-December outside of the growing season, during the wet season.

Parametrix conducted precipitation analysis to determine whether monthly precipitation in the 3-month period prior to the site visit was normal. According to the WETS table for the period 1991 to 2020 and recorded precipitation for September, October, and November 2023, the hydrologic condition on the Site was normal for this time of the year.

## 3.3 Soils

According to NRCS soil mapping, several soil map units are mapped within the Site (USDA NRCS 2023 (see Table 1). All soils within the Site are nonhydric, well-drained, or excessively drained soils. Appendix B includes descriptions of the listed soil map units.

Table 1. Summary of Soils Mapped Within the Study Area

Map Unit Symbol	Map Unit Name	Hydric Soil	Drainage Class
13E	Gravden very gravelly loam, 20 to 40 percent slopes	No	Well-drained
37A	Prosser silt loam, 0 to 2 percent slopes	No	Well-drained
38D	Prosser-Rock outcrop complex, 1 to 20 percent slopes	No	Well-drained
41B	Quinton loamy fine sand, 2 to 5 percent slopes	No	Excessively drained
42D	Quinton-Rock outcrop complex, 2 to 20 percent slopes	No	Excessively drained

## 3.4 Upland Habitat

The vegetation within the Site is dominated by herbaceous bulbous blue grass (*Poa bulbosa*), long-beak stork's-bill (*Erodium botrys*), downy cheatgrass (*Bromus tectorum*), and bluebunch fescue (*Festuca idahoensis*). Occasionally, stands of shrubs were present, including rubber rabbitbrush (*Ericameria nauseosa*), broom snakeweed (*Gutierrezia sarothrae*), big sagebrush (*Artemisia tridentata*), and bitter-brush (*Purshia tridentata*). Trees of Russian-olive (*Elaeagnus angustifolia*) were present in upland around wetland boundary.

Vegetation communities formed by these plants are non-hydrophytic because they are dominated either by upland species or by species that are not listed in the National Wetland Plant List (Lichvar et al. 2016).

#### 3.5 Wetlands and Waters

NWI indicates that a 1.31-acre freshwater palustrine unconsolidated bottom persistent emergent semipermanently flooded excavated (PUB/EM1Fx) feature is located in the northeastern portion of the Site (USFWS 2023a) (Appendix B). Historical aerial photographs from 1952 to 2020 indicate that this excavation occurred sometime between 1970 and 1977, likely due to earth material excavation (EDR 2023). Gravel mining operations are visible starting in 1977. Saturation signatures of the wetland are persistent through time. There are no LWIs for Morrow County.

#### 3.5.1 Wetland A

Presence of wetland was confirmed in the location where the NWI feature was mapped. Wetland A was classified as a freshwater palustrine emergent persistent feature in the depressional hydrogeomorphic class. No open water was observed. Wetland vegetation was formed by common reed (*Phragmites australis*), fowl blue grass (*Poa palustris*), and rough cockleburr (*Xanthium strumarium*). Hydrology is supplied by water table exposed by excavation. Soils were found to be hydric. Wetland A lacks a hydrologic surface connection to any other wetlands or waters.

## 3.6 Floodplains

The FEMA floodplain maps show a 100-year floodplain in the narrow valley of the Sixmile Canyon, and also along the Columbia River (Maps 40149C0100D and 41049C0125D, effective December 18, 2007) (FEMA 2023).

The Site is located above the 100-year floodplain elevations.

## 3.7 Listed, Candidate, or Species of Concern

Available environmental data indicated that there are several special status species records within the vicinity, including a 2-mile radius buffer (ORBIC 2023; USFWS 2023c; NOAA 2023). Table 2 presents a summary of sensitive species that are known to occur in the vicinity and their occurrence potential within the Site; Appendix E includes descriptions of listed species habitats.

Bull trout (Salvelinus confluentus), Pacific lamprey (Entosphenus tridentatus), and steelhead (Oncorhynchus mykiss) occur in the Umatilla River and Columbia River (USFWS 2023c; ORBIC 2023). An additional protected aquatic species, Northwestern pond turtle (Actinemys marmorata), is known to occur in the vicinity (ORBIC 2023; Oregon Conservation Strategy 2023). However, suitable habitats (perennial waterbodies) are not present at the Site. The only wetland location at the Site is isolated from and located upslope from any suitable aquatic habitat where turtles can possibly occur. Therefore, these species were determined to be absent from the Site.

Monarch butterfly (*Danaus plexippus*), a federally listed candidate species, occurs in the vicinity (USFWS 2023c; USFWS 2023d). A small population of narrowleaf milkweed was found on the Site. Nectar of this flowering plant is essential food for this butterfly. However, due to the size of milkweed population, the forage supply is very limited at the site. Therefore, it was determined that this species is not likely to occur at the Site.

Table 2. Summary of Federal and State Statuses for Species Mapped in the Study Area and Vicinity

Description	Common Name (Scientific Name)	Federal Status a	State Status a	Occurrence Potential <sup>b</sup>
Mammals	Washington ground squirrel (Urocitellus washingtoni)	-	Е	Present
Birds	Bald eagle (Haliaeetus leucocephalus)	D; Bald and Golden Eagle Protection Act	-	Absent
	Golden eagle (Aquila chrysaetos)	D; Bald and Golden Eagle Protection Act	-	Absent
Reptiles	Northwestern pond turtle (Actinemys marmorata)	PT	-	Not Likely to Occur
Fish	Bull trout (Salvelinus confluentus)	Т	SC (Umatilla SMU° [BM, CP]; John Day SMU [BM, CP])	Absent
	Pacific lamprey (Entosphenus tridentatus)	SOC	S	Absent
	Steelhead (Oncorhynchus mykiss) (population 28; Middle Columbia River evolutionary significant units, summer run)	Т	SC (Middle Columbia SMU °/ESU [BM, CP, EC])	Absent
Invertebrate Animals	Monarch butterfly (Danaus plexippus)	С	-	Not Likely to Occur
Plants	Lawrence's milkvetch (Astragalus collinus var. laurentii)	-	Т	Absent

a D = delisted; E = endangered; SOC = species of concern; SC = sensitive-critical; S = sensitive; T = threatened; PT = proposed threatened; C = candidate for listing.

May Occur = species is expected to occur and habitat meets special requirements;
 Not Likely to Occur = habitat is only marginally suitable or is suitable but not within species geographic range;
 Absent = habitat does not meet species requirements as currently understood in the scientific community.

c SMU = Species Management Units; ESU = Evolutionary Significant Unity; BM = Blue Mountains; CP = Columbia Plateau; EC = East Cascades.

Various migratory birds that are protected under the Migratory Bird Treaty Act of 1918 may forage on or nest on the Site. The bald eagle (*Haliaeetus leucocephalus*) is also protected under the Bald and Golden Eagle Protection Act of 1940 and is known to occur in the vicinity (USFWS 2023c). Bald eagles prefer large trees for perching and nesting, typically near rivers, large lakes, and other open water. Such habitats are not present at the Site, and this species was determined to be absent from the Site. The golden eagle (*Aquila chrysaetos*) is also protected under the Bald and Golden Eagle Protection Act of 1940 and is known to occur in the vicinity (USFWS 2023c). Golden eagles prefer cliffs and steep escarpments in grassland, chapparal, shrubland, and forest for nesting, typically near canyonlands, rimrock terrain, and riverside cliffs and bluffs (Cornell Lab of Ornithology 2023). Such habitats are not present at the Site, and this species was determined to be absent from the Site. Other protected bird species identified by IPaC include the following:

- American white pelican (*Pelecanus erythrorhynchos*).
- California gull (*Larus californicus*).
- Evening grosbeak (Coccothraustes vespertinus).
- Lewis's woodpecker (*Melanerpes lewis*).
- Rufous hummingbird (Selasphorus rufus).

American white pelican and California gull do not occur on the Site due to a lack of large open water bodies. Evening grosbeak does not occur on the Site due to a lack of deciduous woodlands at elevations between 5,000 and 10,000 feet. Lewis's woodpecker does not occur on the Site due to a lack of pine forest and open riparian woodland dominated by cottonwood. Rufous hummingbird does not occur on the Site due to a lack of forest and coniferous or deciduous trees (USFWS 2023d).

There are no designated critical habitats for federally listed or candidate animal or plant species protected under the Endangered Species Act on the Site (USFWS 2023b).

The Washington ground squirrel (*Urocitellus washingtoni*) is listed as a state endangered species in Oregon. The Washington ground squirrel survey was conducted in separate study. Survey methods, results, and recommendations were included in the *Washington Ground Squirrel Survey* technical memorandum (Parametrix 2023), which was provided to the property owner.

#### 3.8 Noxious Weeds

Plant species listed as noxious by the Oregon Department of Agriculture (ODA 2023a) and/or as designated weeds by the Oregon Department of State Lands (DSL) are present on the Site. (See Table 3 below.)

Table 3. Noxious Weeds That Are Present or Have Potential to Be Present on the Site

Scientific Name	Common Name	ODA List/DSL Designation a
Centaurea solstitialis L.	Yellow star thistle	List B
Centaurea diffusa	Tumble knapweed	List B
Cynoglossum officinale	Houndstongue	List B
Phragmites australis	Common reed	List B
Onopordum acanthium	Scotch thistle	List B

Note: DSL-designated weed = known problem species.

a List B =a weed of economic importance that is regionally abundant but may have limited distribution in some counties (ODA 2023c).

## 4. Regulatory Requirements

#### 4.1 Federal

Wetland and water resources found on the Site were evaluated using requirements established in the Final Rule: Revised Definition of "Waters of the United States"; Conforming Guidance (Federal Register Vol. 88, No. 173; 33 Code of Federal Regulations (CFR) Part 328; and 40 CFR Part 120. September 8, 2023).

Wetland A is likely not jurisdictional to the USACE, as it does not meet the definition of any jurisdictional waters defined in paragraphs (a)(1), (a)(2), (a)(3), and (a)(4) of the Final Rule. Also, due to Wetland A's lack of continuous surface connection to or significant effect on larger downstream waters, the wetland does not meet the relatively permanent or significant nexus standards defined in paragraph (a)(5). Site development would not require permitting under Section 404 of the Clean Water Act.

Federally listed threatened and endangered species or designated critical habitat are not present within the Site; therefore, site development would not require permitting under Section 10 or Section 7 of the Endangered Species Act.

The Migratory Bird Treaty Act makes it illegal to take, possess, import, export, transport, sell, purchase, barter, or offer for sale any migratory bird or the parts, nests, or eggs of such bird except under the terms of a valid federal permit from the USFWS. To avoid and minimize effects to migratory birds, initial site development (vegetation clearing and grubbing) should be conducted during the nonnesting season. The nonnesting season generally extends from August 1 to January 31 and splits into two major timeframes:

- Early Nesting Season: February 1 to April 15. Raptors (owls, eagles, falcons, and hawks), herons, geese, and hummingbirds are early nesters.
- Primary Nesting Season: April 15 to July 31. Songbirds and most other avian species are late nesters.

Initial vegetation disturbance (clearing and grubbing) should be conducted during the nonnesting season. If vegetation disturbance occurs during the nesting season, the Site should be surveyed for nesting birds by a qualified biologist. If an active nest is found, an exclusion buffer around the nest should be established at an appropriate distance assigned by the biologist. Temporary protection fencing should be installed and maintained around the buffer area until young chicks have fledged to avoid impacts to migratory birds. Once young have fledged, construction may commence in the protected area.

## 4.2 State of Oregon

Wetland A is likely exempt from DSL jurisdiction per Oregon Administrative Rule 141-085-0515(7) Exempt Artificially Created Wetlands and Ponds.

"Artificially created wetlands and ponds created entirely from upland, regardless of size, are not waters of this state, if they are constructed for the purpose of: (g) surface mining."

As described in Section 3.5, Wetland A is a result of gravel mining, which was active starting in 1977; therefore, OAR 141-085-0515(7)(g) applies. Impact to Wetland A is not subject to the Oregon Removal/Fill Law requirements.

Washington ground squirrel protection was addressed in the *Washington Ground Squirrel Survey* technical memorandum (Parametrix 2023). There is no permitting nexus to the state agency's review of the development; therefore, coordination with ODFW would not be required for the site development. However, ODFW provides recommendations for minimizing impacts to this protected species and its habitat.

Plant species listed noxious by the ODA (ODA 2023c) or designated as weeds by DSL are present on the Site. Site development has the potential to spread the noxious/invasive weed species. To avoid the spread of the noxious weeds, best management practices shall be established at the Site for control, containment, or eradication of listed noxious weeds.

#### 4.3 Local

The Morrow County Comprehensive Plan calls for protection of riparian vegetation, wetlands, bald and golden eagle nest sites, and land areas incorporated in wildlife preserves, refuges, or private or governmental game management areas (Morrow County Ordinance OR-1-2013) (Morrow County 2013a).

Based on the site's location and natural resources characteristics, this Site contains no resources on the adopted Statewide Planning Goal 5 inventories for significant natural resources, and associated local natural resource-specific permits from the County would not be needed for the Site development (Morrow County 2013b, 2013c).

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# **Appendix A**

Curriculum Vitae



#### **EXPERIENCE**

Years of Experience: 6 years Time with Parametrix: 3 months

#### EDUCATION

BS, Fish, Wildlife, & Conservation Biology, 2017

## Chloe Kott

Chloe Kott is a multi-faceted Environmental Professional with a demonstrated history of delivering customer satisfaction and project management expertise. Her background includes environmental risk, due diligence, wildlife ecology, and regulatory research. Her expertise includes preparing Phase I ESAs, Records Search with Risk Assessments, and 24 CFR Part 50 and Part 58 Environmental Reviews for clientele throughout the country. Her experience further includes preparing technical documentation in support of National Environmental Policy Act (NEPA) and the US Department of Housing and Urban Development. She is currently working on wetlands and waters delineations and permitting, ESA permitting, and assists with a variety of natural resource projects with Parametrix.

### Selected Project Experience

## Three Mile Canyon Washington Ground Squirrel Survey

Confidential Client | Arlington, OR Chloe assisted with fieldwork and drafted report for Washington ground squirrel presence on the Site.

## Raptor and Sensitive Bird Species Surveys

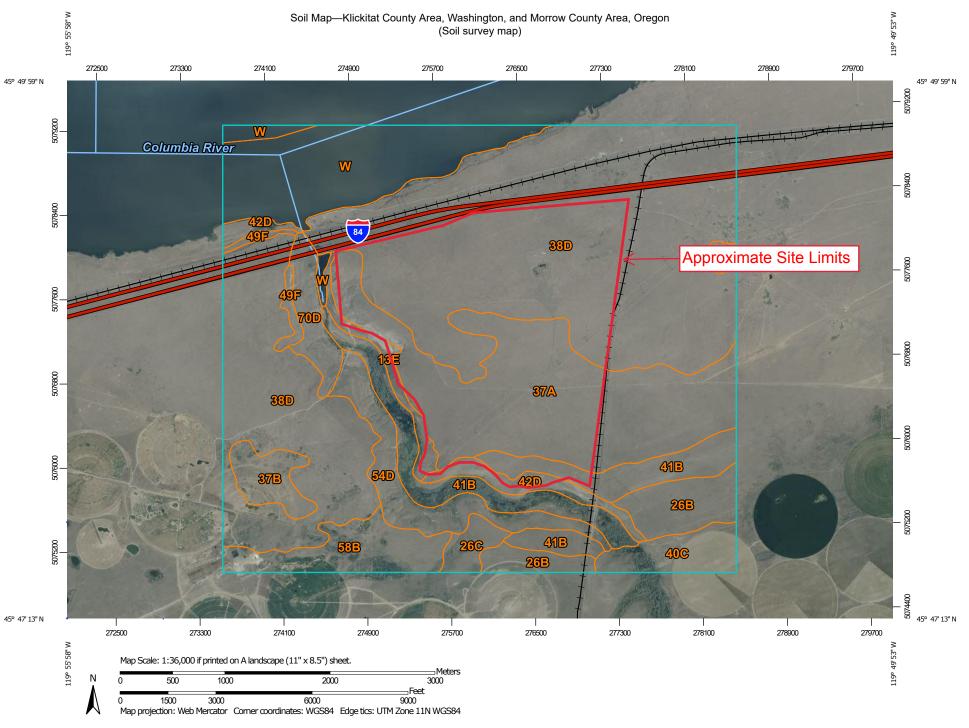
Oregon Parks and Recreation Department | Terrebonne, OR Chloe prepared report describing methods, findings, and recommendations on raptor and sensitive bird species observed at a newly acquired parcel.

#### Haul Road Emergency Repair

Port of Grays Harbor | Grays Harbor, WA Chloe conducted fieldwork and prepared a report on sensitive bird species for the Haul Road emergency bank stabilization project. The Haul Road located along the bank of the Chehalis River where bank erosion continues to threaten critical infrastructure. Haul Road.

# **Appendix B**

Background



#### MAP LEGEND

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**Water Features** 

Transportation

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Background

Spoil Area

Stony Spot

Wet Spot

Other

Rails

**US Routes** 

Major Roads

Local Roads

Very Stony Spot

Special Line Features

Streams and Canals

Interstate Highways

Aerial Photography

#### Area of Interest (AOI)

Area of Interest (AOI)

#### Soils

Soil Map Unit Polygons



Soil Map Unit Points

#### Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Walsh of Swall

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

The soil surveys that comprise your AOI were mapped at 1:24.000.

MAP INFORMATION

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Klickitat County Area, Washington

Survey Area Data: Version 18, Aug 29, 2023

Soil Survey Area: Morrow County Area, Oregon Survey Area Data: Version 11, Sep 8, 2023

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 3, 2020—Jun 26, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## **Map Unit Legend**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI	
W	Water	24.0	0.5%	
Subtotals for Soil Survey Area	1	24.0	0.5%	
Totals for Area of Interest		5,161.2	100.0%	

Man Unit Combail Man Unit Name Ages in ACI Page 45 ACI				
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI	
13E	Gravden very gravelly loam, 20 to 40 percent slopes	61.2	1.2%	
26B	Koehler loamy fine sand, 2 to 5 percent slopes	181.5	3.5%	
26C	Koehler loamy fine sand, 5 to 12 percent slopes	50.2	1.0%	
37A	Prosser silt loam, 0 to 2 percent slopes	838.8	16.3%	
37B	Prosser silt loam, 2 to 7 percent slopes	108.0	2.1%	
38D	Prosser-Rock outcrop complex, 1 to 20 percent slopes	2,358.5	45.7%	
40C	Quincy loamy fine sand, 2 to 12 percent slopes	112.7	2.2%	
41B	Quinton loamy fine sand, 2 to 5 percent slopes	376.7	7.3%	
42D	Quinton-Rock outcrop complex, 2 to 20 percent slopes	97.8	1.9%	
49F	Rock outcrop-Rubble land complex, very steep	30.3	0.6%	
54D	Sagehill fine sandy loam, 12 to 20 percent slopes	199.5	3.9%	
58B	Taunton fine sandy loam, 2 to 5 percent slopes	183.3	3.6%	
70D	Warden very fine sandy loam, 12 to 20 percent slopes	91.7	1.8%	
W	Water	446.7	8.7%	
Subtotals for Soil Survey A	Area	5,136.8	99.5%	
Totals for Area of Interest		5,161.2	100.0%	

#### Morrow County Area, Oregon

#### 13E—Gravden very gravelly loam, 20 to 40 percent slopes

#### **Map Unit Setting**

National map unit symbol: 21rx Elevation: 500 to 1,700 feet

Mean annual precipitation: 9 to 12 inches

Mean annual air temperature: 50 to 54 degrees F

Frost-free period: 150 to 190 days

Farmland classification: Not prime farmland

#### **Map Unit Composition**

Gravden and similar soils: 85 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

#### Description of Gravden

#### Setting

Landform: Hillslopes

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Gravelly alluvium and colluvium

#### **Typical profile**

H1 - 0 to 3 inches: very gravelly loam
H2 - 3 to 7 inches: very gravelly loam
H3 - 7 to 14 inches: extremely gravelly loam
H4 - 14 to 20 inches: cemented material
H5 - 20 to 60 inches: cemented material

#### **Properties and qualities**

Slope: 20 to 40 percent

Depth to restrictive feature: 10 to 20 inches to duripan; 20 to 60

inches to duripan

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low

to moderately low (0.00 to 0.06 in/hr) Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Calcium carbonate, maximum content: 10 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0

mmhos/cm)

Available water supply, 0 to 60 inches: Very low (about 1.1 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: D Ecological site: R007XY020OR - South 8-10 PZ

Hydric soil rating: No

#### **Data Source Information**

Soil Survey Area: Benton County Area, Washington

Survey Area Data: Version 19, Aug 29, 2023

Soil Survey Area: Klickitat County Area, Washington

Survey Area Data: Version 18, Aug 29, 2023

Soil Survey Area: Morrow County Area, Oregon Survey Area Data: Version 11, Sep 8, 2023

#### Morrow County Area, Oregon

#### 37A—Prosser silt loam, 0 to 2 percent slopes

#### **Map Unit Setting**

National map unit symbol: 21t3 Elevation: 300 to 600 feet

Mean annual precipitation: 7 to 9 inches

Mean annual air temperature: 50 to 54 degrees F

Frost-free period: 160 to 200 days

Farmland classification: Prime farmland if irrigated

#### **Map Unit Composition**

Prosser and similar soils: 65 percent

Estimates are based on observations, descriptions, and transects of

the mapunit.

#### **Description of Prosser**

#### Setting

Landform: Strath terraces

Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear Parent material: Loess

#### Typical profile

H1 - 0 to 4 inches: silt loam H2 - 4 to 29 inches: silt loam

H3 - 29 to 39 inches: unweathered bedrock

#### Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: 20 to 40 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 5.2 inches)

#### Interpretive groups

Land capability classification (irrigated): 3e Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C

Ecological site: R007XY014OR - Loamy 8-10 PZ

Hydric soil rating: No

### **Data Source Information**

Soil Survey Area: Benton County Area, Washington

Survey Area Data: Version 19, Aug 29, 2023

Soil Survey Area: Klickitat County Area, Washington

Survey Area Data: Version 18, Aug 29, 2023

Soil Survey Area: Morrow County Area, Oregon Survey Area Data: Version 11, Sep 8, 2023

#### Morrow County Area, Oregon

#### 38D—Prosser-Rock outcrop complex, 1 to 20 percent slopes

#### **Map Unit Setting**

National map unit symbol: 21t5 Elevation: 300 to 600 feet

Mean annual precipitation: 7 to 9 inches

Mean annual air temperature: 50 to 54 degrees F

Frost-free period: 160 to 200 days

Farmland classification: Farmland of statewide importance

#### **Map Unit Composition**

Prosser and similar soils: 60 percent

Rock outcrop: 20 percent

Estimates are based on observations, descriptions, and transects of

the mapunit.

#### **Description of Prosser**

#### Setting

Landform: Strath terraces

Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear Parent material: Loess

#### **Typical profile**

H1 - 0 to 4 inches: silt loam H2 - 4 to 29 inches: silt loam

H3 - 29 to 39 inches: unweathered bedrock

#### **Properties and qualities**

Slope: 1 to 20 percent

Depth to restrictive feature: 20 to 40 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 5.2 inches)

#### Interpretive groups

Land capability classification (irrigated): 4e Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C

Ecological site: R007XY014OR - Loamy 8-10 PZ

Hydric soil rating: No

#### **Description of Rock Outcrop**

#### **Setting**

Landform: Strath terraces

Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

#### **Typical profile**

R - 0 to 60 inches: unweathered bedrock

#### **Properties and qualities**

Slope: 1 to 20 percent

Depth to restrictive feature: 0 inches to lithic bedrock

#### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydric soil rating: No

#### **Data Source Information**

Soil Survey Area: Benton County Area, Washington

Survey Area Data: Version 19, Aug 29, 2023

Soil Survey Area: Klickitat County Area, Washington

Survey Area Data: Version 18, Aug 29, 2023

Soil Survey Area: Morrow County Area, Oregon Survey Area Data: Version 11, Sep 8, 2023

#### **Morrow County Area, Oregon**

#### 41B—Quinton loamy fine sand, 2 to 5 percent slopes

#### **Map Unit Setting**

National map unit symbol: 21t9 Elevation: 250 to 700 feet

Mean annual precipitation: 7 to 8 inches

Mean annual air temperature: 52 to 54 degrees F

Frost-free period: 140 to 180 days

Farmland classification: Not prime farmland

#### **Map Unit Composition**

Quinton and similar soils: 85 percent

Estimates are based on observations, descriptions, and transects of

the mapunit.

#### **Description of Quinton**

#### Setting

Landform: Strath terraces

Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Eolian sands over basalt

#### Typical profile

H1 - 0 to 30 inches: loamy fine sand

H2 - 30 to 37 inches: gravelly loamy fine sand H3 - 37 to 47 inches: unweathered bedrock

#### Properties and qualities

Slope: 2 to 5 percent

Depth to restrictive feature: 20 to 40 inches to lithic bedrock

Drainage class: Excessively drained

Capacity of the most limiting layer to transmit water (Ksat): High to

very high (5.95 to 19.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0

mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 3.2 inches)

#### Interpretive groups

Land capability classification (irrigated): 4e Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: A

Ecological site: R007XY011OR - Sands 8-10 PZ

Hydric soil rating: No

### **Data Source Information**

Soil Survey Area: Benton County Area, Washington

Survey Area Data: Version 19, Aug 29, 2023

Soil Survey Area: Klickitat County Area, Washington

Survey Area Data: Version 18, Aug 29, 2023

Soil Survey Area: Morrow County Area, Oregon Survey Area Data: Version 11, Sep 8, 2023

#### Morrow County Area, Oregon

#### 42D—Quinton-Rock outcrop complex, 2 to 20 percent slopes

#### **Map Unit Setting**

National map unit symbol: 21tb Elevation: 250 to 700 feet

Mean annual precipitation: 7 to 8 inches

Mean annual air temperature: 52 to 54 degrees F

Frost-free period: 140 to 180 days

Farmland classification: Not prime farmland

#### **Map Unit Composition**

Quinton and similar soils: 60 percent

Rock outcrop: 20 percent

Estimates are based on observations, descriptions, and transects of

the mapunit.

#### **Description of Quinton**

#### Setting

Landform: Strath terraces

Landform position (three-dimensional): Riser

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Eolian sands over basalt

#### **Typical profile**

H1 - 0 to 30 inches: loamy fine sand

H2 - 30 to 37 inches: gravelly loamy fine sand H3 - 37 to 47 inches: unweathered bedrock

#### **Properties and qualities**

Slope: 2 to 20 percent

Depth to restrictive feature: 20 to 40 inches to lithic bedrock

Drainage class: Excessively drained

Capacity of the most limiting layer to transmit water (Ksat): High to

very high (5.95 to 19.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0

mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 3.2 inches)

#### Interpretive groups

Land capability classification (irrigated): 4e Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: A

Ecological site: R007XY011OR - Sands 8-10 PZ

Hydric soil rating: No

#### **Description of Rock Outcrop**

#### **Setting**

Landform: Strath terraces

Landform position (three-dimensional): Riser

Down-slope shape: Linear Across-slope shape: Linear

#### **Typical profile**

R - 0 to 60 inches: unweathered bedrock

#### **Properties and qualities**

Slope: 2 to 20 percent

Depth to restrictive feature: 0 inches to lithic bedrock

#### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydric soil rating: No

#### **Data Source Information**

Soil Survey Area: Benton County Area, Washington

Survey Area Data: Version 19, Aug 29, 2023

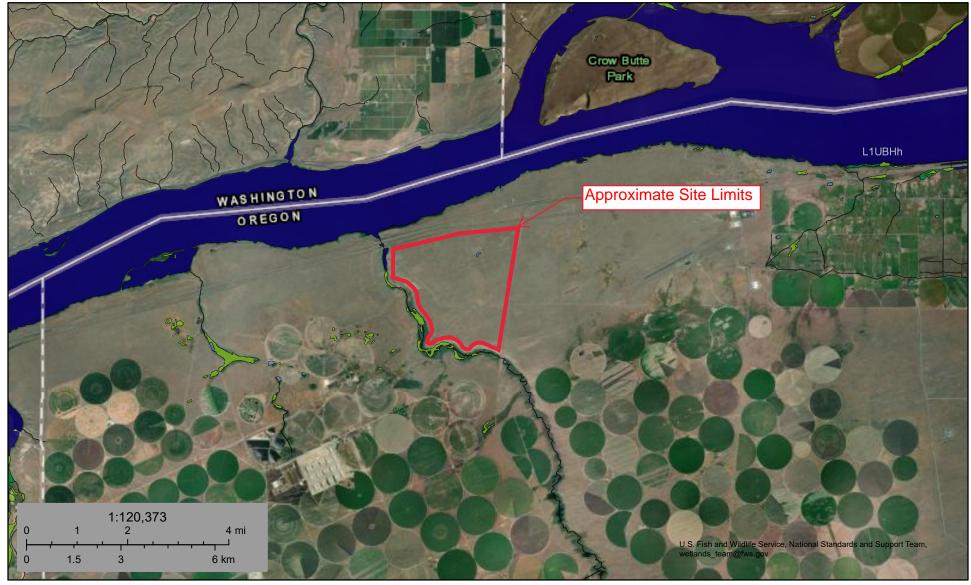
Soil Survey Area: Klickitat County Area, Washington

Survey Area Data: Version 18, Aug 29, 2023

Soil Survey Area: Morrow County Area, Oregon Survey Area Data: Version 11, Sep 8, 2023

## U.S. Fish and Wildlife Service **National Wetlands Inventory**

## National Wetlands Inventory



December 4, 2023

#### Wetlands

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Lake

Other

Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



#### Site

Morrow County Boardman, OR 97818

Inquiry Number:

December 07, 2023

## The EDR Aerial Photo Decade Package



#### **EDR Aerial Photo Decade Package**

12/07/23

Site Name: Client Name:

Site Parametrix, Inc.

Morrow County 700 NE Multnomah

Boardman, OR 97818 Portland, OR 97232

EDR Inquiry # 7514816.5 Contact: Adam Romey



Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

#### Search Results:

Year	Scale	Details	Source
		<del></del>	
2020	1"=875'	Flight Year: 2020	USDA/NAIP
2016	1"=875'	Flight Year: 2016	USDA/NAIP
2012	1"=875'	Flight Year: 2012	USDA/NAIP
2009	1"=875'	Flight Year: 2009	USDA/NAIP
2005	1"=875'	Flight Year: 2005	USDA/NAIP
2001	1"=875'	Acquisition Date: January 01, 2001	USGS/DOQQ
1996	1"=875'	Acquisition Date: July 12, 1996	USGS/DOQQ
1981	1"=875'	Flight Date: June 26, 1981	USGS
1977	1"=875'	Flight Date: July 01, 1977	USGS
1970	1"=875'	Flight Date: July 06, 1970	USGS
1952	1"=875'	Flight Date: September 14, 1952	USGS

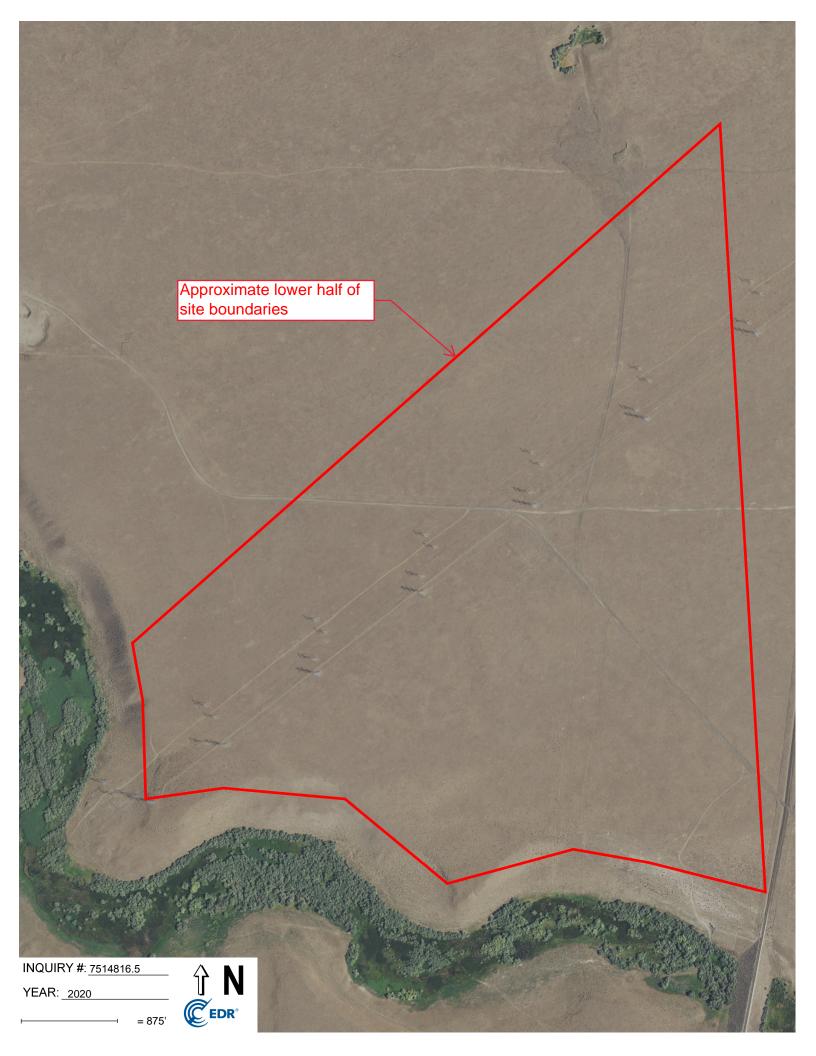
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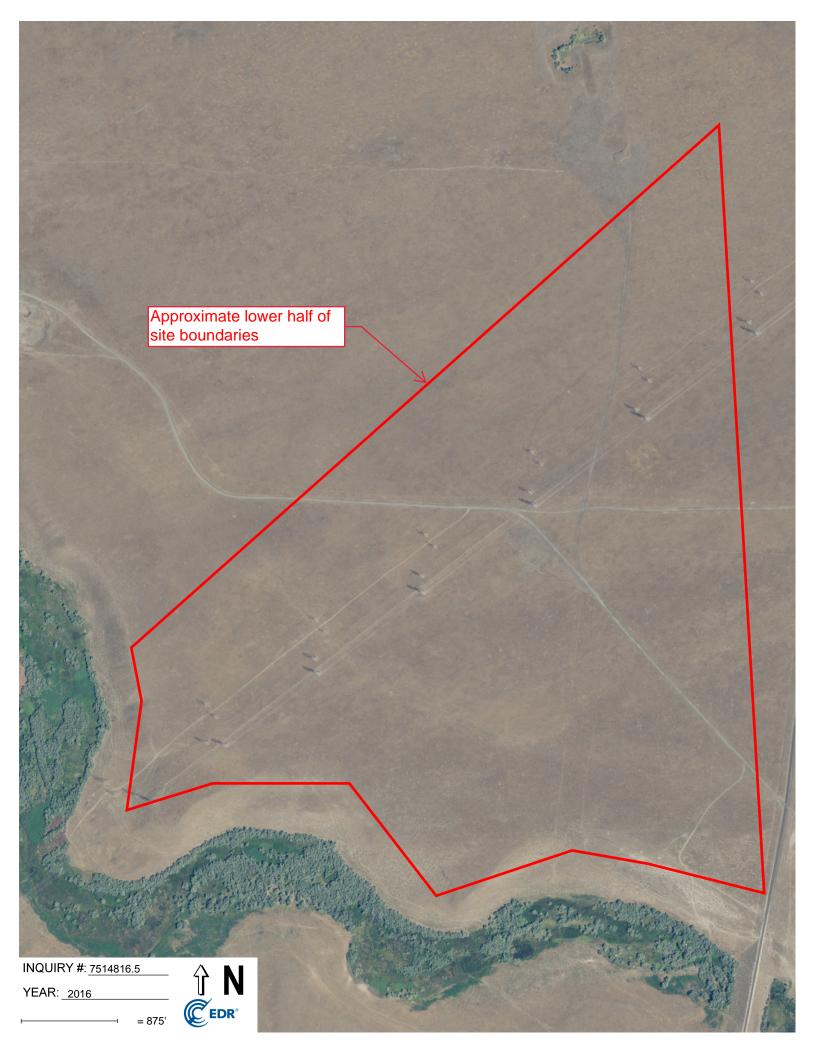
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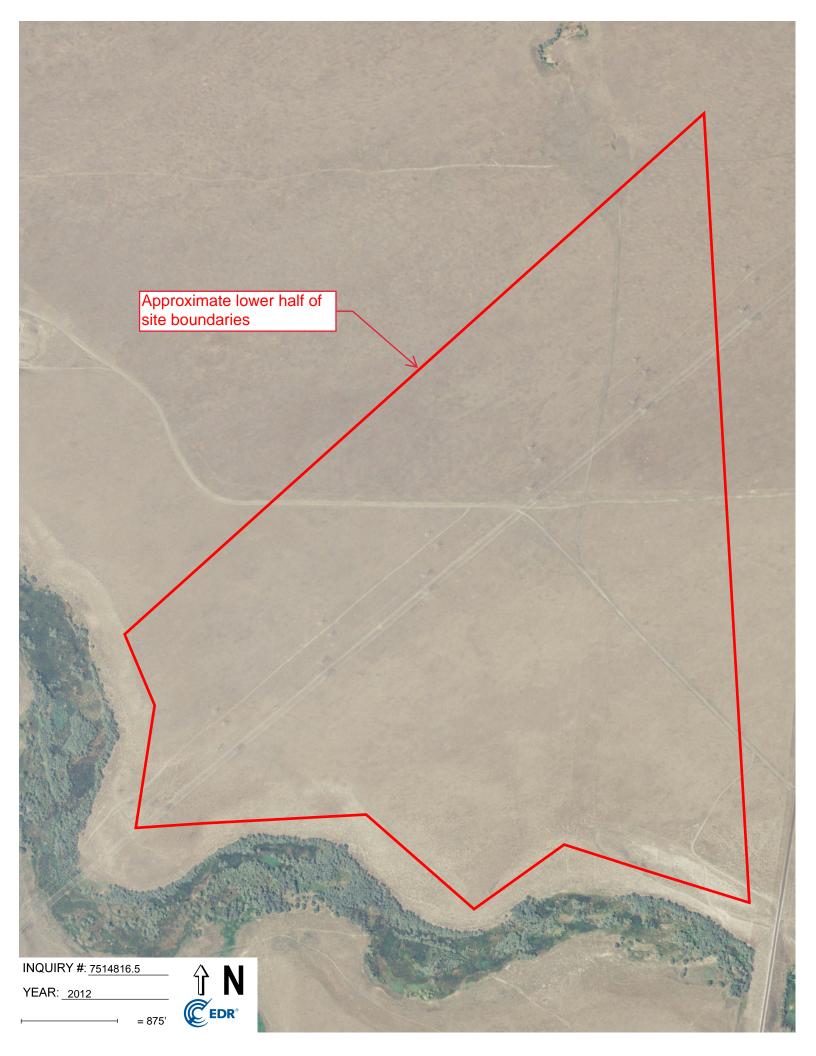
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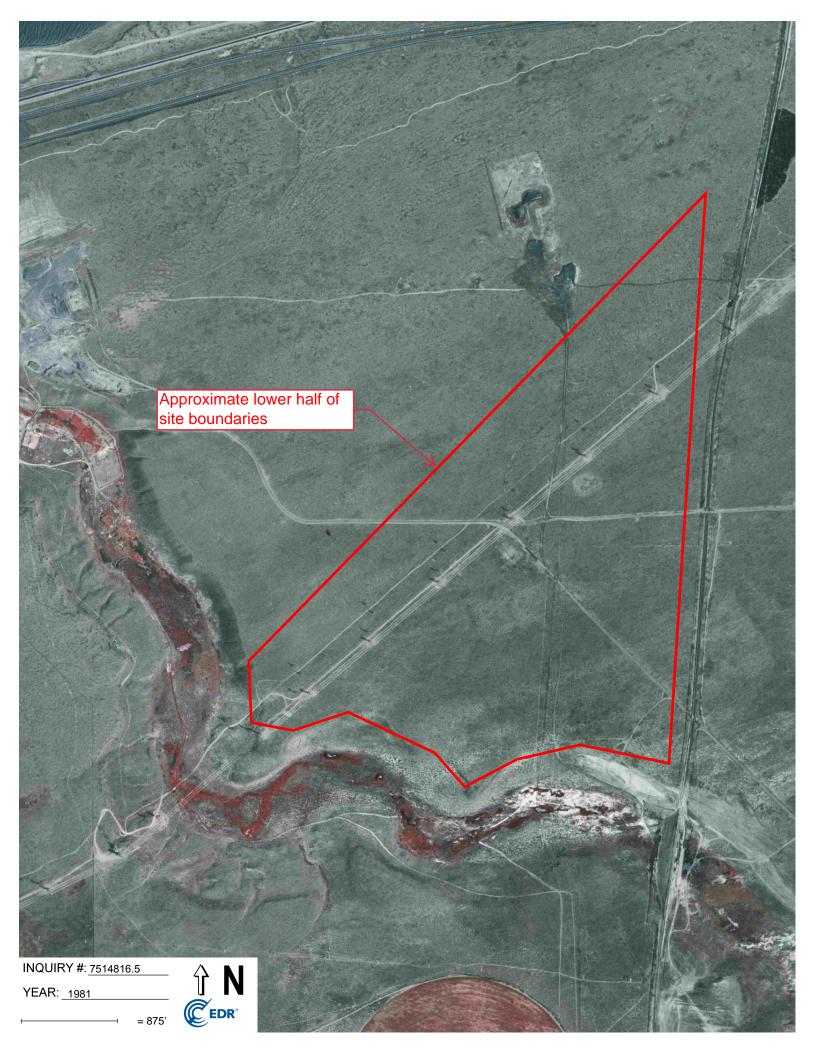




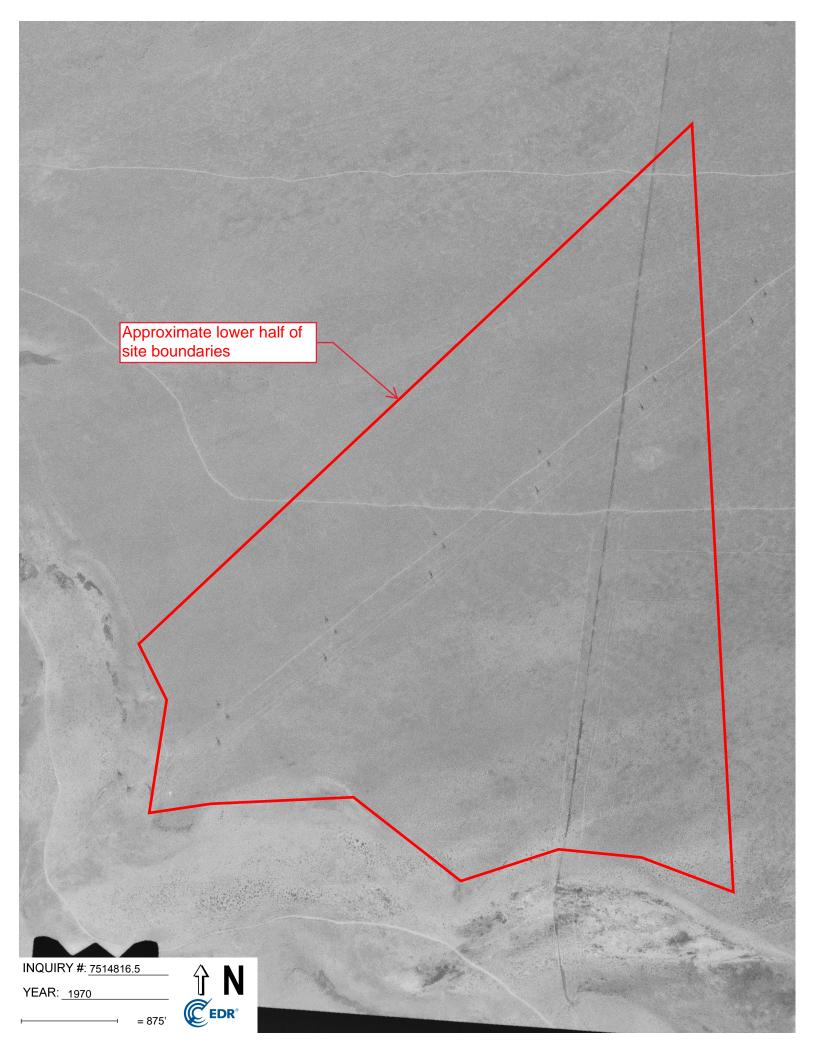














7514815.5

December 07, 2023

# The EDR Aerial Photo Decade Package



#### **EDR Aerial Photo Decade Package**

12/07/23

**Client Name:** 

Parametrix, Inc. 700 NE Multnomah Portland, OR 97232 Contact: Adam Romey



7514815.5

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

#### Search Results:

Year	Scale	Details	Source
2020	1"=1250'	Flight Year: 2020	USDA/NAIP
2016	1"=1250'	Flight Year: 2016	USDA/NAIP
2014	1"=1250'	Flight Year: 2014	USDA/NAIP
2011	1"=1250'	Flight Year: 2011	USDA/NAIP
2005	1"=1250'	Flight Year: 2005	USDA/NAIP
2001	1"=1250'	Acquisition Date: January 01, 2001	USGS/DOQQ
1996	1"=1250'	Acquisition Date: July 12, 1996	USGS/DOQQ
1981	1"=1250'	Flight Date: June 26, 1981	USGS
1977	1"=1250'	Flight Date: July 01, 1977	USGS
1970	1"=1250'	Flight Date: July 06, 1970	USGS
1952	1"=1250'	Flight Date: September 14, 1952	USGS

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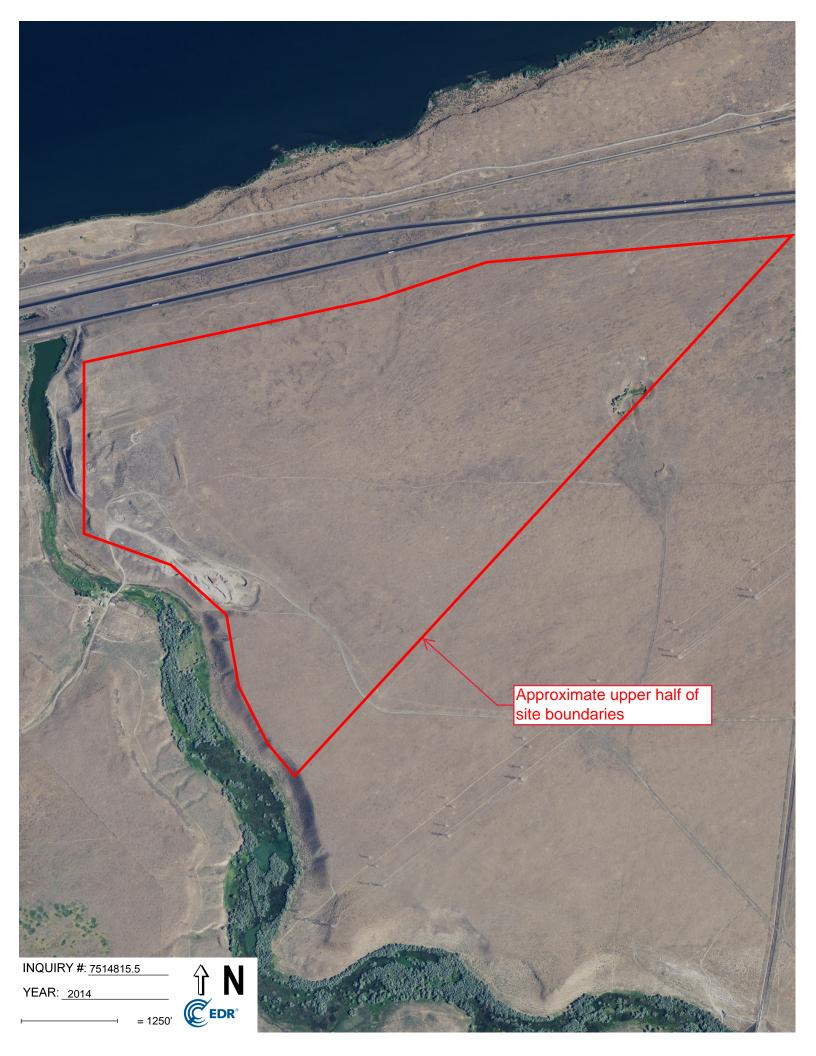
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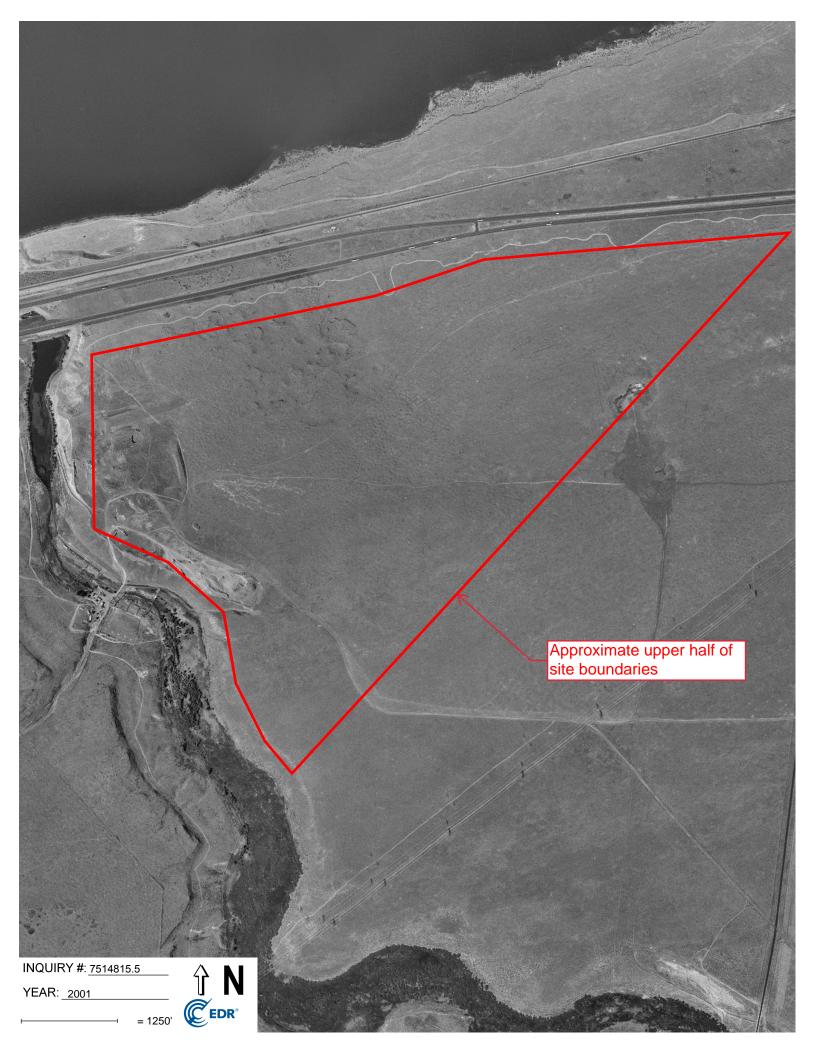




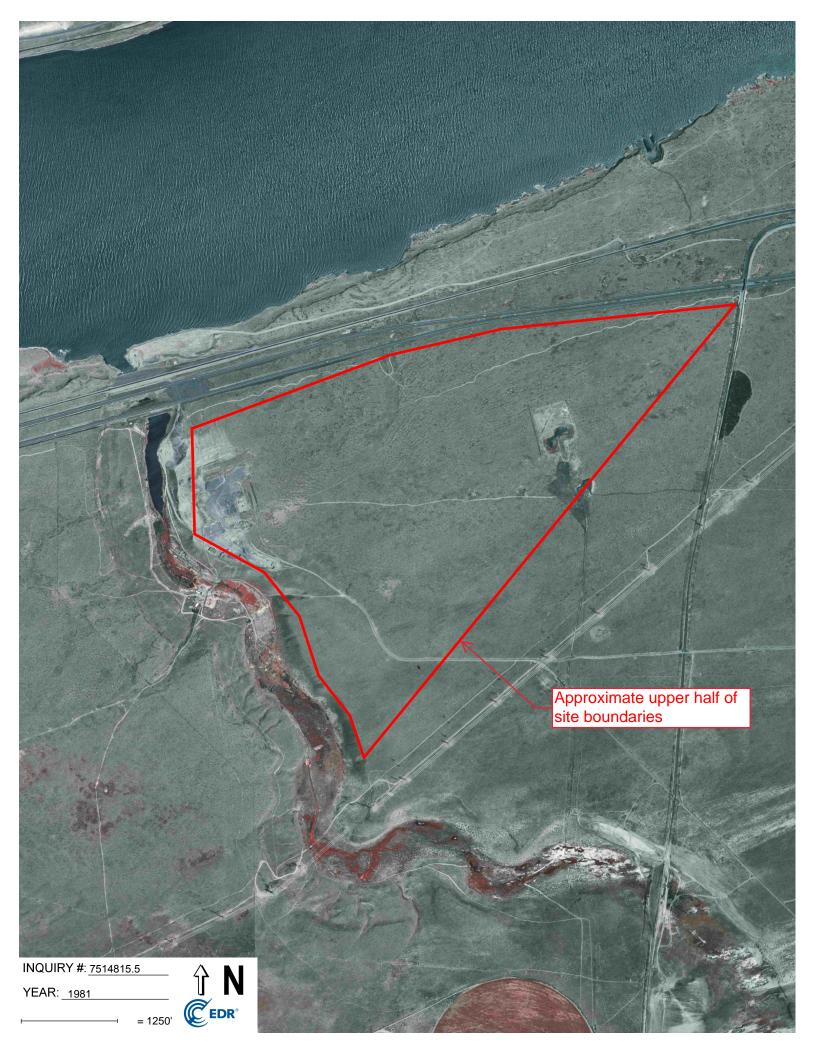


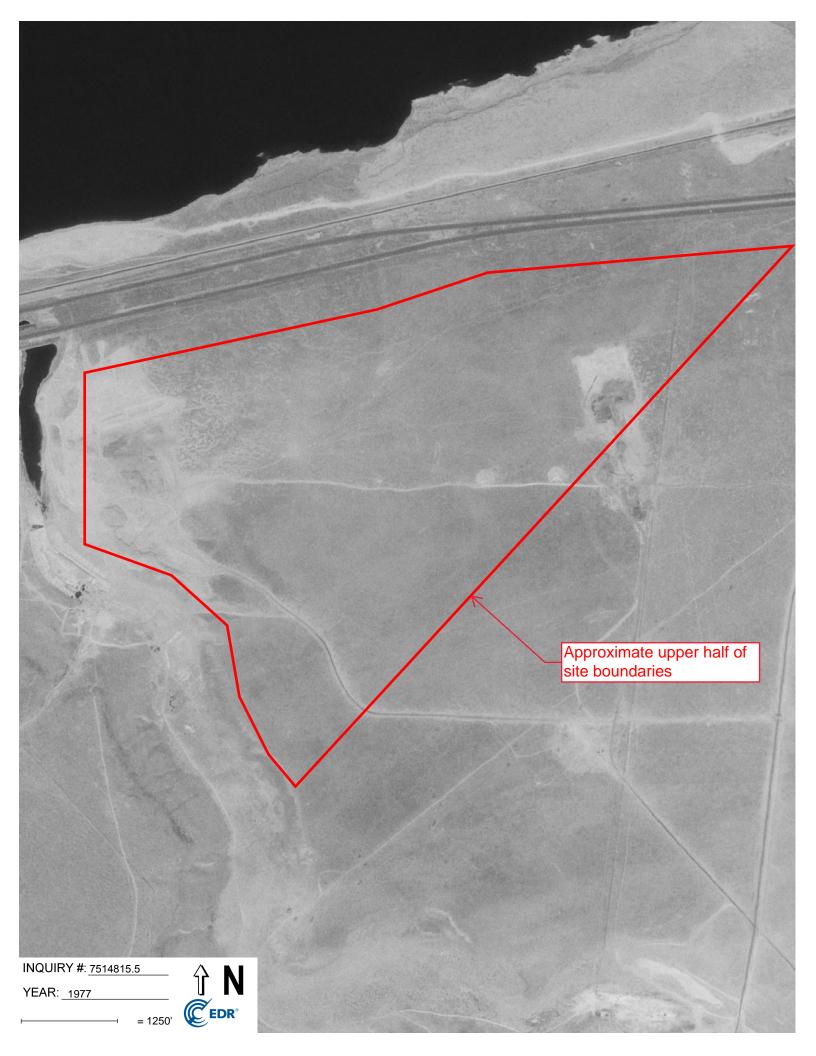




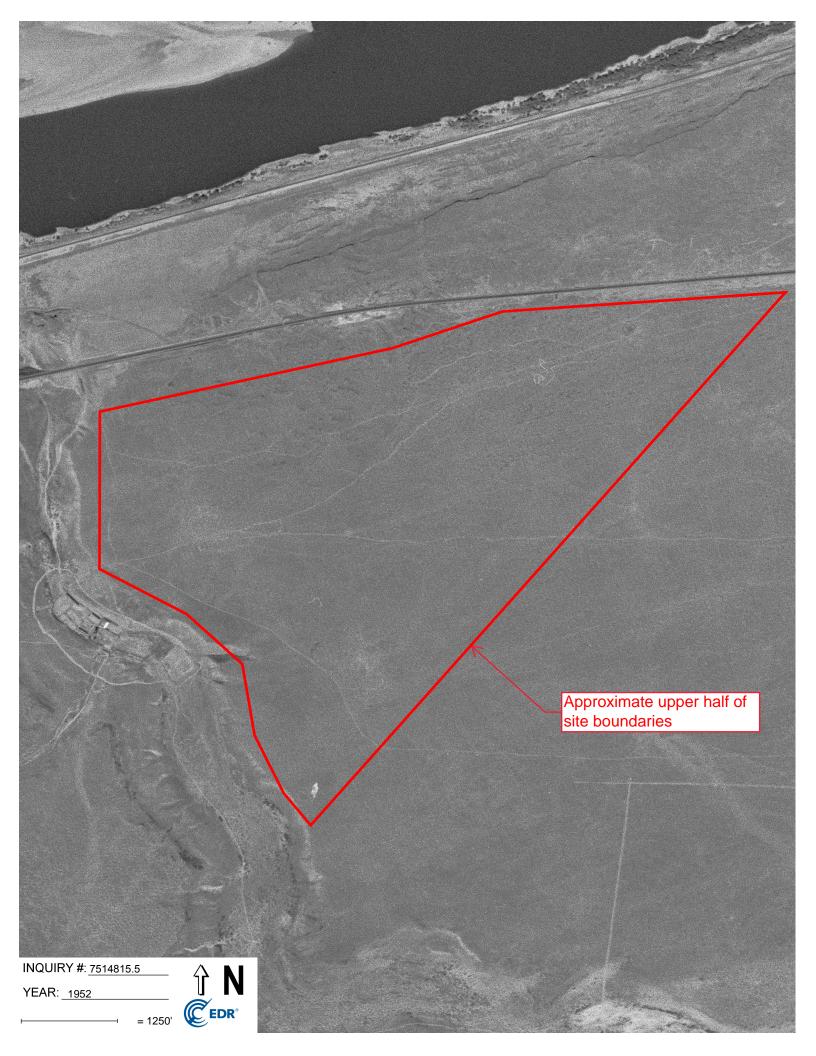












### **IPaC**

# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

### Location





### Local office

Oregon Fish And Wildlife Office

**\( (503) 231-6179** 

**(503) 231-6195** 

NOT FOR CONSULTATIO

2600 Southeast 98th Avenue, Suite 100 Portland, OR 97266-1398

# **Endangered species**

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

- 1. Draw the project location and click CONTINUE.
- 2. Click DEFINE PROJECT.
- 3. Log in (if directed to do so).
- 4. Provide a name and description for your project.
- 5. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the <u>Ecological Services Program</u> of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact <u>NOAA Fisheries</u> for <u>species under their jurisdiction</u>.

1. Species listed under the <u>Endangered Species Act</u> are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the <u>listing status page</u> for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

## Reptiles

NAME STATUS

Northwestern Pond Turtle Actinemys marmorata

**Proposed Threatened** 

Wherever found

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/1111

### **Fishes**

NAME STATUS

**Bull Trout** Salvelinus confluentus

Threatened

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/8212

### Insects

NAME

Monarch Butterfly Danaus plexippus

Candidate

Wherever found

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/9743

### Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

## Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act<sup>1</sup> and the Migratory Bird Treaty Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats<sup>3</sup>, should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

#### Additional information can be found using the following links:

- Eagle Managment <a href="https://www.fws.gov/program/eagle-management">https://www.fws.gov/program/eagle-management</a>
- Measures for avoiding and minimizing impacts to birds
   <a href="https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds">https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds</a>
- Nationwide conservation measures for birds <a href="https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf">https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf</a>
- Supplemental Information for Migratory Birds and Eagles in IPaC <a href="https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action">https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action</a>

### There are bald and/or golden eagles in your project area.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME BREEDING SEASON

#### Bald Eagle Haliaeetus leucocephalus

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Breeds Dec 1 to Aug 31

#### Golden Eagle Aquila chrysaetos

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

https://ecos.fws.gov/ecp/species/1680

Breeds Jan 1 to Aug 31

## **Probability of Presence Summary**

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

#### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

- 1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
- 2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
- 3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

### Breeding Season (=)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

#### Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

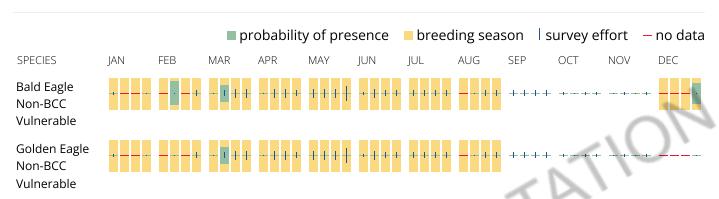
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

#### No Data (–)

A week is marked as having no data if there were no survey events for that week.

#### **Survey Timeframe**

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



## What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the <u>Avian Knowledge Network (AKN)</u>. The AKN data is based on a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u> and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (<u>Eagle Act</u> requirements may apply). To see a list of all birds potentially present in your project area, please visit the <u>Rapid Avian Information Locator (RAIL) Tool</u>.

# What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS <u>Birds of Conservation Concern (BCC)</u> and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the <u>Avian Knowledge Network (AKN)</u>. The AKN data is based on a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u> and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (<u>Eagle Act</u> requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the <u>Rapid Avian Information Locator (RAIL) Tool</u>.

#### What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the <u>Eagle Act</u> should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

# Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats<sup>3</sup> should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

- 1. The Migratory Birds Treaty Act of 1918.
- 2. The <u>Bald and Golden Eagle Protection Act</u> of 1940.

Additional information can be found using the following links:

- Eagle Management <a href="https://www.fws.gov/program/eagle-management">https://www.fws.gov/program/eagle-management</a>
- Measures for avoiding and minimizing impacts to birds
   <a href="https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds">https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds</a>
- Nationwide conservation measures for birds <a href="https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf">https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf</a>
- Supplemental Information for Migratory Birds and Eagles in IPaC <a href="https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action">https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action</a>

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American White Pelican pelecanus erythrorhynchos This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/6886">https://ecos.fws.gov/ecp/species/6886</a>	Breeds Apr 1 to Aug 31
Bald Eagle Haliaeetus leucocephalus  This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Dec 1 to Aug 31
California Gull Larus californicus  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 1 to Jul 31
Evening Grosbeak Coccothraustes vespertinus  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 15 to Aug 10
Golden Eagle Aquila chrysaetos  This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1680">https://ecos.fws.gov/ecp/species/1680</a>	Breeds Jan 1 to Aug 31
Lewis's Woodpecker Melanerpes lewis  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9408">https://ecos.fws.gov/ecp/species/9408</a>	Breeds Apr 20 to Sep 30
Rufous Hummingbird selasphorus rufus  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/8002">https://ecos.fws.gov/ecp/species/8002</a>	Breeds Apr 15 to Jul 15

Western Grebe aechmophorus occidentalis

Breeds Jun 1 to Aug 31 This is a Bird of Conservation Concern (BCC) throughout its

range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/6743

## **Probability of Presence Summary**

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

#### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

- 1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
- 2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
- 3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

### Breeding Season (-)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

#### Survey Effort (1)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

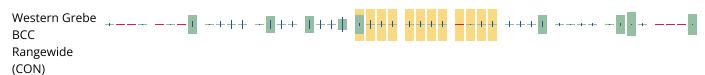
#### No Data (-)

A week is marked as having no data if there were no survey events for that week.

#### **Survey Timeframe**

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





## Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

## What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS <u>Birds of Conservation Concern (BCC)</u> and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the <u>Avian Knowledge Network (AKN)</u>. The AKN data is based on a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u> and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (<u>Eagle Act</u> requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the <u>Rapid Avian Information Locator (RAIL) Tool</u>.

## What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the <u>Avian Knowledge Network (AKN)</u>. This data is derived from a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u>.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

### How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the <u>RAIL Tool</u> and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird

on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

- 1. "BCC Rangewide" birds are <u>Birds of Conservation Concern</u> (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
- 2. "BCC BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
- 3. "Non-BCC Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the <u>Eagle Act</u> requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the <u>Northeast Ocean Data Portal</u>. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the <u>NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.</u>

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the <u>Diving Bird Study</u> and the <u>nanotag studies</u> or contact <u>Caleb Spiegel</u> or <u>Pam Loring</u>.

### What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to <u>obtain a permit</u> to avoid violating the Eagle Act should such impacts occur.

### Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is

the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

### **Facilities**

### National Wildlife Refuge lands

Any activity proposed on lands managed by the <u>National Wildlife Refuge</u> system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

### Fish hatcheries

There are no fish hatcheries at this location.

# Wetlands in the National Wetlands Inventory (NWI)

Impacts to <u>NWI wetlands</u> and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local <u>U.S. Army Corps of Engineers District</u>.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

PEM1C

FRESHWATER POND

PUB/EM1Fx

A full description for each wetland code can be found at the <u>National Wetlands Inventory</u> website

**NOTE:** This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

### **Data limitations**

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

### **Data exclusions**

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

### Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or

products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATIO

### **Critical Habitat for Threatened & Endangered Species [USFWS]**



A specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection.

Earthstar Geographics | Oregon State Parks, State of Oregon GEO, WA State Parks GIS, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA

## **Appendix C**

Photos

Parametrix 553-4805-014 / February 2024

## Site Photographs

Job Name: <u>Due Diligence</u>

Job Number/Phase (Task) Mo/Yr: 553-4805-014 / February 2024



Photo No. 1. Wetland A, SP-01.



**Photo No. 2.** Wetland A at the bottom of depression, upland slopes of depression.



**Photo No. 3.** General view of the site, upland shrub. Location of SP-3.



Photo No. 4. Upland grassland. Location of SP-04.

Parametrix 553-4805-014 / February 2024



**Photo No. 5.** Southern border of the site. The slope to Six Mile Creek is located outside of the study area.



Photo No. 6. General view of the site.



**Photo No. 7.** General view of the site. Location of SP-07.



**Photo No. 8.** General view of the site. Location of SP-08.

**Parametrix** 



Photo No. 9. Rock outcrops.

## **Appendix D**

**Determination Forms** 

Project/Site: Site	Э			City/County	y: Unincorporate	ed Morrow County	Sampling Date:	December	18, 2023
Applicant/Owner:	Confidential Client					State: Oregon	Sampling	Point:	SP-01
Investigator(s):	Colton Kyro, Chloe Ko	ott				Section, Township, Range:	4N23I	E24SENE	
Landform (hillslope, to	-	Depression			_	cal relief (concave, convex, none):	concave	Slope (%):	None
Subregion (LRR):	(B) Columbia/Snake F			Lat: 45.817335		g: <u>-119.874741</u>		NAD 83	
Soil Unit (Name-ID-I	-			ex, 1-20% slopes -	38D		classification:	PUB/EM	
	logic conditions on the s				Ye disturbed? A		(If no, explain		
Are Vegetation Are Vegetation	, Soil , Soil	, or H , or H		significantly on naturally prob		are "Normal Circumstances" preso If needed, explain any answers in		X No	
Ale vogetation	,	,	yurolog,		Jicinatio. (.	ii iioodod, oxpidii. dii.j diioi	Tromanc.,		
STIMMARY OF	FINDINGS _ Atta	ch eito man e	howing es	empling point loc	otione trans	sects, important features	o ata		
Hydrophytic Vegeta		Yes	X	No	alions, trans	sects, important leatures	, etc.		
Hydric Soil Present		Yes	X	No No	Is the Samp	led Area			
Wetland Hydrology		Yes	X	No No	within a We	4110	No		
						163 <u>X</u>			
Precipitation prior Precipitation was with	ithin the normal range for	or the three month	s prior to the	site visit					
1 Toolphadon was wi	um the normal range is	or the three month	o prior to tric	one viole.					
Remarks:									
SP-01 was collected	d in an abandoned grav	el mine.							
I									
VEGETATION									
VEGETATION			Absolute	Dominant	Indicator	Dominance Test worksheet:			
Tree Stratum	(Plot size: !	r =15')	% Cover	Species?	Status	Number of Dominant Species			
1.	(1 101 5120	<del></del>	70 OOVCI	Openies:	Otatao	That Are OBL, FACW, or FAC		2	(A)
2.						mat Aic Obl, I AOW, of I Ac	·		_(//)
3.	-	<del></del>				Total Number of Dominant			
4.						Species Across All Strata:		2	(B)
			0%	= Total Cover		openies norons / iii otiaia.	-		_(0)
Sapling/Shrub Stra	atum (Plot size: !	r =10')	0 /0	10(a) 0076		Percent of Dominant Species			
1.	,	<del></del>				That Are OBL, FACW, or FAC	<b>&gt;</b>	100%	(A/B)
2.						Prevalence Index worksheet			(,,,,
3.						Total % Cover of:	Multiply by:		
4.				<u> </u>		OBL species	x 1 =		
5.						FACW species	x 2 =	-	
			0%	= Total Cover		FAC species	x 3 =	-	
Herb Stratum	(Plot size: !	r = 5')	0 /0	10(a) 0076		FACU species	x 4 =		
Phragmites aus	,	<del></del>	80%	Yes	FACW	UPL species	x 5 =		
Poa palustris	nano .		30%	Yes	FAC	Column Totals: 0	(A)	0	(B)
3. Xanthium strum	narium		15%	No	FAC	Prevalence Inde			(-/
4.	Tantanii .					Hydrophytic Vegetation Indi			
5.						X Dominance Test is >5			
6.						Prevalence Index is ≤			
7.						Morphological Adaptat		porting	
8.						data in Remarks or		-	
9.						Problematic Hydrophy			
10.							J ( )	,	
11.				-		<sup>1</sup> Indicators of hydric soil and w	vetland hydrology n	nust	
			125%	= Total Cover		be present.	, 3,		
Woody Vine Stratu	um (Plot size: !	r = 5')	.2070			'			
1				_					
2						Hydrophytic			
		_	0%	_ = Total Cover		•	Yes X	No	
% Bare Ground in	Herb Stratum	0%	% C	over of Biotic Crust		Present?			
Remarks: Coastal salt grass (I	Distichlis spicata ) was a	also observed in th	ne wetland.						

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SOIL							Sampling Point:	SP-01
Profile Description	on: (Describe to the d	epth needed to	o document the indica	ator or confirm the	absence o	of indicators.)		
Depth	Matrix		-	Redox Feat	ures			
(inches)	Color (moist)	%	Color (moist)	<u></u> %	Type <sup>1</sup>	Loc <sup>2</sup>	<sup>3</sup> Texture	Remarks
0 - 1	2.5Y 2/2	100					SL	
1 - 5	2.5Y 2/2	95	7.5YR 4/6	5	С	M, PL	SL	
5+				<del></del>		<del></del>		Bedrock
						<del></del>		
-			-	<del></del>		· -		
_				<del></del> -		<del>-</del>		
						· -		
<sup>1</sup> Type: C=Ceneer	atration D=Danlation D	M=Poduood M	atrix CS=Cavarad ar C	cated Sand Crains	<sup>2</sup> l costi	on: PL=Pore Lining, M=	Motrix	
	ntration, D=Depletion, Rl d; Si = silt; C = clay; L =							
TOXIGIO. O GUIT	a, or one, o olay, E	louin or louiny	. Texture Modifier. 66	oodioc, i line, vi	very inte,	· Houry (more day),	iight (iooo olay)	
Hydric Soil Indic	ators: (Applicable to a	II LRRs, unles	s otherwise noted.)			Indicators for Pro	blematic Hydric Soils⁴:	
Histosol (A1)		_	Sandy Redox (S5)			1 cm Muck	(A9) (LRR C)	
Histic Epiped	on (A2)	_	Stripped Matrix (S6	5)		2 cm Muck	(A10) ( <b>LRR B</b> )	
Black Histic (	A3)	_	Loamy Mucky Mine	ral (F1)		Reduced V	ertic (F18)	
Hydrogen Sul		_	Loamy Gleyed Mate				Material (TF2)	
	ers (A5) (LRR C)	_	Depleted Matrix (F3			Other (Expl	ain in Remarks)	
1 cm Muck (A		_	X Redox Dark Surfac			4		
— ·	ow Dark Surface (A11)	_	Depleted Dark Surf				phytic vegetation and	
Thick Dark St		_	Redox Depressions	s (F8)			/ must be present,	
Sandy Mucky			Vernal Pools (F9)			unless disturbed	or problematic.	
Sandy Gleyed						1		
Restrictive Layer								
_	Bedrock					Unidate On the Boston and On	V V	NI-
Depth (inches):	5	-				Hydric Soil Present?	Yes <u>X</u>	No
Remarks:								
	_							
HYDROLOGY								
Wetland Hydrolo	gy Indicators:							
Primary Indicators	(minimum of one requir	ed; check all th				-	rs (2 or more required)	
Surface Water	` '	_	Salt Crust (B11)				s (B1) (Riverine)	
High Water T		_	Biotic Crust (B12)				eposits (B2) (Riverine)	
Saturation (A		_	Aquatic Invertebrat				its (B3) (Riverine)	
	(B1) (Nonriverine)	_	Hydrogen Sulfide C				atterns (B10)	
	posits (B2) (Nonriverine	<del>_</del>		eres along Living Ro	oots (C3)		Water Table (C2)	
	(B3) (Nonriverine)	_	Presence of Reduc	, ,	20)	Crayfish Bu		
Surface Soil (		- (DZ)		tion in Tilled Soils (0	26)		/isible on Aerial Imagery (C9)	
	sible on Aerial Imagery (		Thin Muck Surface			Shallow Aq		
Water-Staine	d Leaves (B9)	-	Other (Explain in R	emarks)		X FAC-Neutra	al Test (D5)	
Field Observatio	ns:							
Surface Water Pr	resent? Yes		No X	Depth (inches):		_		
Water Table Pres	sent? Yes		No X	Depth (inches):		Wetland H	drology Present?	
Saturation Preser			No X	Depth (inches):		_	Yes X	No
(includes capillary	y fringe)			-				
Describe Record	led Data (stream gauge	e, monitoring v	well, aerial photos, pr	evious inspection	s), if availa	ble:		
Remarks:								

Applicant/Owner: Confidential Client						
Confidential Client				State: Oregon	Sampling Po	oint: SP-02
vestigator(s): Colton Kyro, Chloe Kott				Section, Township, Range:	4N23E2	4SENE
	lope		_	cal relief (concave, convex, none):		Slope (%): <u>3-5%</u>
ubregion (LRR): (B) Columbia/Snake Rive		Lat: 45.817384		g: <u>-119.874818</u>	Datum: N	
	rosser-Rock outcrop comple	ex, 1-20% slopes -	38D		lassification:	None
e climatic / hydrologic conditions on the site			Ye		(If no, explain in	
e Vegetation, Soil e Vegetation , Soil	, or Hydrology , or Hydrology	significantly o		Are "Normal Circumstances" prese	_	X No
e Vegetation, Soil	, or Hydrology	naturally pro	piemauc? (	If needed, explain any answers in	Remarks.)	
JMMARY OF FINDINGS - Attach	site map showing sa	impling point loc	ations, tran	sects, important features	, etc.	
drophytic Vegetation Present?	Yes	No X		•		
ydric Soil Present?	Yes	No <b>X</b>	Is the Samp	led Area		
etland Hydrology Present?	Yes	No X	within a We	tland? Yes	No X	
ecipitation prior to fieldwork:						
ecipitation was within the normal range for th	e three months prior to the	site visit.				
marks:						
EGETATION		<b>.</b>		<u> </u>		
	Absolute	Dominant	Indicator	Dominance Test worksheet:		
ee Stratum (Plot size: $\underline{r} = 1$	<u>% Cover</u>	Species?	<u>Status</u>	Number of Dominant Species		
				That Are OBL, FACW, or FAC	<u> </u>	0 (A)
-		_		Total Number of Dominant		
				Species Across All Strata:		1 (B)
	0%	= Total Cover				
apling/Shrub Stratum (Plot size: $r = 1$	<u>10')</u>			D 4 - 4 D 4 O 1		
. ,				Percent of Dominant Species		
	· 			That Are OBL, FACW, or FAC	: !	0% (A/B)
	<u> </u>			•		<u>0%</u> (A/B)
		<u> </u>		That Are OBL, FACW, or FAC		0% (A/B)
				That Are OBL, FACW, or FAC  Prevalence Index worksheet		0% (A/B)
				That Are OBL, FACW, or FAC  Prevalence Index worksheet  Total % Cover of:	Multiply by:	0% (A/B)
	0%	= Total Cover		That Are OBL, FACW, or FAC  Prevalence Index worksheet	Multiply by:	0% (A/B)
	0%	= Total Cover	<u></u>	That Are OBL, FACW, or FAC Prevalence Index worksheet Total % Cover of: OBL species FACW species	Multiply by: x 1 = x 2 =	0% (A/B)
	0%	= Total Cover	FACU	That Are OBL, FACW, or FAC  Prevalence Index worksheet	Multiply by: x 1 = x 2 = x 3 =	0% (A/B)
e <u>rb Stratum</u> (Plot size: <u>r = 5</u> Poa bulbosa	0%	_	FACU NOL	That Are OBL, FACW, or FAC  Prevalence Index worksheet  Total % Cover of:  OBL species  FACW species  FAC species  FACU species	Multiply by: x 1 = x 2 = x 3 = x 4 =	
erb Stratum (Plot size: <u>r = 5</u>	0% 5') 70% 15%	Yes No	NOL	That Are OBL, FACW, or FAC  Prevalence Index worksheet  Total % Cover of:  OBL species  FACW species  FAC species  FACU species  UPL species	Multiply by: x 1 = x 2 = x 3 = x 4 = x 5 = (A)	
erb Stratum (Plot size: <u>I = 5</u> Poa bulbosa  Aristida longiseta  Lactuca serriola	0% 5') 70% 15% 10%	Yes No No	NOL FACU	That Are OBL, FACW, or FAC  Prevalence Index worksheet  Total % Cover of:  OBL species  FACW species  FAC species  FACU species  UPL species  Column Totals:  0	Multiply by:  x 1 =  x 2 =  x 3 =  x 4 =  x 5 =  (A)  = B/A =	
Prb Stratum (Plot size: I = 5 Poa bulbosa Aristida longiseta Lactuca serriola Xanthium strumarium	0% 5') 70% 15%	Yes No	NOL	That Are OBL, FACW, or FAC  Prevalence Index worksheet  Total % Cover of:  OBL species  FACW species  FAC species  FACU species  UPL species  Column Totals:  0  Prevalence Index	Multiply by:  x 1 =  x 2 =  x 3 =  x 4 =  x 5 =  (A)  = B/A =  sators:	
e <mark>rb Stratum</mark> (Plot size: <u>I = 5</u> Poa bulbosa Aristida longiseta Lactuca serriola	0% 70% 15% 10%	Yes No No	NOL FACU FAC	That Are OBL, FACW, or FAC  Prevalence Index worksheet  Total % Cover of:  OBL species  FACW species  FAC species  FACU species  UPL species  Column Totals:  Prevalence Index  Hydrophytic Vegetation India  Dominance Test is >50	Multiply by:  x 1 =  x 2 =  x 3 =  x 4 =  x 5 =  (A)  = B/A =  cators:	
Print Stratum (Plot size: L= 5) Poa bulbosa Aristida longiseta Lactuca serriola Xanthium strumarium	0% 70% 15% 10%	Yes No No	NOL FACU FAC	That Are OBL, FACW, or FAC  Prevalence Index worksheet  Total % Cover of:  OBL species  FACW species  FAC species  FACU species  UPL species  Column Totals:  Prevalence Index  Hydrophytic Vegetation India  Dominance Test is >50  Prevalence Index is ≤3	Multiply by:  x 1 =  x 2 =  x 3 =  x 4 =  x 5 =  (A)  = B/A =  cators:	0
erb Stratum (Plot size: L= 5 Poa bulbosa Aristida longiseta Lactuca serriola Xanthium strumarium	0% 70% 15% 10%	Yes No No	NOL FACU FAC	That Are OBL, FACW, or FAC  Prevalence Index worksheet  Total % Cover of:  OBL species  FACW species  FAC species  FACU species  UPL species  Column Totals:  Prevalence Index  Hydrophytic Vegetation India  Dominance Test is >50  Prevalence Index is ≤3  Morphological Adaptati	Multiply by:  x 1 =  x 2 =  x 3 =  x 4 =  x 5 =  (A)  = B/A =  sators:  %  Of  Or  Or  Or  Or  Or  Or  Or  Or  Or	0 orting
Print Stratum (Plot size: L= 5) Poa bulbosa Aristida longiseta Lactuca serriola Xanthium strumarium	0% 70% 15% 10%	Yes No No	NOL FACU FAC	That Are OBL, FACW, or FAC  Prevalence Index worksheet  Total % Cover of:  OBL species  FACW species  FACU species  UPL species  Column Totals:  Prevalence Index  Hydrophytic Vegetation India  Dominance Test is >50  Prevalence Index is ≤3  Morphological Adaptatidatin Remarks or	Multiply by:  x1 =  x2 =  x3 =  x4 =  x5 =  (A)  = B/A =  sators:  %  Ons <sup>1</sup> (Provide suppoon a separate sheet	0 orting
Pro Stratum (Plot size: I = 5 Poa bulbosa Aristida longiseta Lactuca serriola Xanthium strumarium Centaurea diffusa	0% 70% 15% 10%	Yes No No	NOL FACU FAC	That Are OBL, FACW, or FAC  Prevalence Index worksheet  Total % Cover of:  OBL species  FACW species  FAC species  FACU species  UPL species  Column Totals:  Prevalence Index  Hydrophytic Vegetation India  Dominance Test is >50  Prevalence Index is ≤3  Morphological Adaptati	Multiply by:  x1 =  x2 =  x3 =  x4 =  x5 =  (A)  = B/A =  sators:  %  Ons <sup>1</sup> (Provide suppoon a separate sheet	0 (
Pro Stratum (Plot size: I = 5 Poa bulbosa Aristida longiseta Lactuca serriola Xanthium strumarium Centaurea diffusa	0% 70% 15% 10%	Yes No No	NOL FACU FAC	That Are OBL, FACW, or FAC  Prevalence Index worksheet  Total % Cover of:  OBL species  FACW species  FACU species  UPL species  Column Totals:  Prevalence Index  Hydrophytic Vegetation India  Dominance Test is >50  Prevalence Index is ≤3  Morphological Adaptati data in Remarks or  Problematic Hydrophyte	Multiply by:  x 1 =  x 2 =  x 3 =  x 4 =  x 5 =  (A)  = B/A =  cators:  %  ons¹ (Provide suppo on a separate sheet c Vegetation¹ (Explant)	0 ( rting )
erb Stratum (Plot size: I = 5 Poa bulbosa Aristida longiseta Lactuca serriola Xanthium strumarium Centaurea diffusa	0% 70% 15% 10% 5%	Yes No No No No	NOL FACU FAC	That Are OBL, FACW, or FAC  Prevalence Index worksheet  Total % Cover of:  OBL species  FACW species  FACU species  UPL species  Column Totals:  Prevalence Index  Hydrophytic Vegetation India  Dominance Test is >50  Prevalence Index is <30  Morphological Adaptati data in Remarks or  Problematic Hydrophyt	Multiply by:  x 1 =  x 2 =  x 3 =  x 4 =  x 5 =  (A)  = B/A =  cators:  %  ons¹ (Provide suppo on a separate sheet c Vegetation¹ (Explant)	0 ( rting )
erb Stratum (Plot size: r = 5  Poa bulbosa Aristida longiseta Lactuca serriola Xanthium strumarium Centaurea diffusa	0%  70% 15% 10% 5%	Yes No No	NOL FACU FAC	That Are OBL, FACW, or FAC  Prevalence Index worksheet  Total % Cover of:  OBL species  FACW species  FACU species  UPL species  Column Totals:  Prevalence Index  Hydrophytic Vegetation India  Dominance Test is >50  Prevalence Index is ≤3  Morphological Adaptati data in Remarks or  Problematic Hydrophyte	Multiply by:  x 1 =  x 2 =  x 3 =  x 4 =  x 5 =  (A)  = B/A =  cators:  %  ons¹ (Provide suppo on a separate sheet c Vegetation¹ (Explant)	0 ( rting )
erb Stratum (Plot size: r = 5 Poa bulbosa Aristida longiseta Lactuca serriola Xanthium strumarium Centaurea diffusa  0. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	0%  70% 15% 10% 5%	Yes No No No No	NOL FACU FAC	That Are OBL, FACW, or FAC  Prevalence Index worksheet  Total % Cover of:  OBL species  FACW species  FACU species  UPL species  Column Totals:  Prevalence Index  Hydrophytic Vegetation India  Dominance Test is >50  Prevalence Index is <30  Morphological Adaptati data in Remarks or  Problematic Hydrophyt	Multiply by:  x 1 =  x 2 =  x 3 =  x 4 =  x 5 =  (A)  = B/A =  cators:  %  ons¹ (Provide suppo on a separate sheet c Vegetation¹ (Explant)	0 ( rting )
erb Stratum (Plot size: r = 5  Poa bulbosa Aristida longiseta Lactuca serriola Xanthium strumarium Centaurea diffusa	0%  70% 15% 10% 5%	Yes No No No No	NOL FACU FAC	That Are OBL, FACW, or FAC  Prevalence Index worksheet  Total % Cover of:  OBL species  FACW species  FACU species  UPL species  Column Totals:  Prevalence Index  Hydrophytic Vegetation India  Dominance Test is >50  Prevalence Index is <30  Morphological Adaptati data in Remarks or  Problematic Hydrophyt	Multiply by:  x 1 =  x 2 =  x 3 =  x 4 =  x 5 =  (A)  = B/A =  cators:  %  ons¹ (Provide suppo on a separate sheet c Vegetation¹ (Explant)	O (
Pro Stratum (Plot size: I = 5 Poa bulbosa Aristida longiseta Lactuca serriola Xanthium strumarium Centaurea diffusa	0%  70% 15% 10% 5%	Yes No No No No	NOL FACU FAC	That Are OBL, FACW, or FAC  Prevalence Index worksheet  Total % Cover of:  OBL species  FACW species  FACU species  UPL species  Column Totals:  Prevalence Index  Hydrophytic Vegetation India  Dominance Test is >50  Prevalence Index is ≤3  Morphological Adaptati  data in Remarks or  Problematic Hydrophyt  Indicators of hydric soil and webe present.	Multiply by:  x1 =  x2 =  x3 =  x4 =  x5 =  (A)  = B/A =  cators:  %  .0¹  ons¹ (Provide suppo on a separate sheet c Vegetation¹ (Expla	o (l

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US Army Corps of Engineers Arid West Region (Version 2.0) Project No.: 553-4805-014

SOIL							Sampling Point:	SP-02
	n: (Describe to the d	epth needed to	o document the indi			of indicators.)		
Depth	Matrix	0/	Calar (mariet)	Redox Fe	- 1	Loc <sup>2</sup>	<sup>3</sup> Texture	Damanika
(inches) 0 - 1	Color (moist) 10YR 3/3	99	Color (moist) 2.5Y 5/6		Type' C	Loc M	LS	Remarks Gravel inclusions
1+	1011(3/3		2.31 3/0	- <del>- '</del>				Bedrock
			-		-	· ——		Bourook
						-		
			-			<del></del>		
						-		
<sup>1</sup> Type: C=Concent	ration, D=Depletion, R	M=Reduced Ma	atrix, CS=Covered or	Coated Sand Grair	ns. <sup>2</sup> Locati	ion: PL=Pore Lining, M=	:Matrix.	
						; + = heavy (more clay);		
		,						
-	tors: (Applicable to a	II LRRs, unles					blematic Hydric Soils⁴:	
Histosol (A1)		_	Sandy Redox (S5				(A9) (LRR C)	
Histic Epipedo		_	Stripped Matrix (S				(A10) (LRR B)	
Black Histic (A		_	Loamy Mucky Mir			Reduced V		
Hydrogen Sulfi	` '	_	Loamy Gleyed Ma				Material (TF2)	
	rs (A5) (LRR C)	_	Depleted Matrix (I	•		Other (Expl	ain in Remarks)	
1 cm Muck (AS		_	Redox Dark Surfa			<sup>4</sup> Indicators of hydro	phytic vegetation and	
	w Dark Surface (A11)	_	Depleted Dark Su					
Thick Dark Sur Sandy Mucky I	, ,	_	Redox Depression Vernal Pools (F9)			unless disturbed	/ must be present,	
Sandy Mucky I	, ,		vernai Foois (F9)			uniess disturbed	or problematic.	
	, ,					1		
Restrictive Layer								
	drock					Under Cail Decame?	Voc	No X
Depth (inches):	1	-				Hydric Soil Present?	Yes	No X
HYDROLOGY								
Wetland Hydrolog	y Indicators:							
Primary Indicators	(minimum of one requir	red; check all th	at apply)			Secondary Indicato	rs (2 or more required)	
Surface Water	(A1)	_	Salt Crust (B11)			Water Mark	s (B1) (Riverine)	
High Water Ta	ble (A2)	_	Biotic Crust (B12)				eposits (B2) (Riverine)	
Saturation (A3		_	Aquatic Invertebra	, ,			its (B3) (Riverine)	
	B1) (Nonriverine)	_	Hydrogen Sulfide				atterns (B10)	
	osits (B2) (Nonriverine	e)		heres along Living	Roots (C3)		Water Table (C2)	
	(B3) (Nonriverine)	_	Presence of Redu			Crayfish Bu		
Surface Soil C		_		ction in Tilled Soils	(C6)		/isible on Aerial Imagery (C9	1
	ible on Aerial Imagery (	(B7) <u> </u>	Thin Muck Surfac	. ,		Shallow Aq		
Water-Stained	Leaves (B9)	_	Other (Explain in	Remarks)		FAC-Neutra	al Test (D5)	
Field Observation	s:							
Surface Water Pre	esent? Yes		No X	Depth (inches):				
Water Table Prese	ent? Yes		No X	Depth (inches):		Wetland H	drology Present?	
Saturation Present	t? Yes			Depth (inches):			Yes	No X
(includes capillary	fringe)							
Describe Recorde	d Data (stream gauge	e, monitoring v	well, aerial photos, p	previous inspection	ns), if availa	able:		
Remarks:								
Remarks:								

Project/Site: Site	e				City/County	y: Unincorporate	ed Morrow County	Sampling Dat	te: Decemb	per 18, 2023
Applicant/Owner:	Confidential Client						State: Oregon	Samplir	ng Point:	SP-03
Investigator(s):	Colton Kyro, Chloe k	Cott					Section, Township, Range:		24E19NENW	
Landform (hillslope,	•	Depression				Lo	cal relief (concave, convex, none):	concave	Slope (%	5): <3%
Subregion (LRR):	(B) Columbia/Snake				45.818991		g: <u>-119.868211</u>		m: <u>NAD 83</u>	
Soil Unit (Name-ID-	,	Prosser-Rock o			slopes -	38D		classification:	Nor	
	logic conditions on the				nianificantly.	Ye.			ain in Remark	
Are Vegetation Are Vegetation	, Soil , Soil	, or H , or H	vdrology		significantly on naturally prol		Are "Normal Circumstances" pres If needed, explain any answers ir		es X No	· —
	,,	,	, 9,		, ,		,	,		
SUMMARY OF	FINDINGS _ Att	ch site man s	howing e	mnlina	noint loc	ations trans	sects, important features	e atc		
Hydrophytic Vegeta			nowing se		X	auons, uan	sects, important leatures	i, etc.		
Hydric Soil Present		_			X	Is the Samp	led Area			
Wetland Hydrology		Yes		_ No	X	within a We	tland? Yes	No	X	
Precipitation prior					<del></del> _					
	ithin the normal range	for the three month	s prior to the	site visit.						
. reespitation mae n	ure rierriai range		o p.101 to 1110	one vien.						
Remarks:										
VEGETATION										
			Absolute		Dominant	Indicator	Dominance Test worksheet:			
Tree Stratum	(Plot size:	<u>r = 15')</u>	% Cover		Species?	Status	Number of Dominant Species			
1.							That Are OBL, FACW, or FAC	<b>)</b> :	0	(A)
2.										_``
3.							Total Number of Dominant			
4.							Species Across All Strata:		3	(B)
			0%	= Total C	Cover					_
Sapling/Shrub Str	atum (Plot size:	<u>r = 10')</u>		_			Percent of Dominant Species			
Gutierrezia sar	othrae		15%		Yes	NOL	That Are OBL, FACW, or FAC	):	<u>0%</u>	(A/B)
2. Ericameria nau	iseosa		5%		Yes	NOL	Prevalence Index workshee	t:		
3.							Total % Cover of:	Multiply by:		=
4.							OBL species	x 1 =		
5							FACW species	x 2 =		
			20%	_ = Total C	Cover		FAC species	x 3 =		
Herb Stratum	(Plot size:	<u>r = 5')</u>					FACU species	x 4 =		
Poa bulbosa			70%		Yes	FACU	UPL species	x 5 =		
<ol><li>Bassia scopari</li></ol>	a		20%		No	FAC	Column Totals: 0	(A)	0	(B)
<ol> <li>Lactuca serriol.</li> </ol>	а		5%		No	FACU	Prevalence Inde			
Salsola kali			5%		No	NOL	Hydrophytic Vegetation Indi			
5. Asclepias fasci	icularis		1%		No	FAC	Dominance Test is >5			
6.							Prevalence Index is ≤			
7.							Morphological Adapta			
8.							data in Remarks or		,	
9.							Problematic Hydrophy	tic Vegetation' (I	Explain)	
10.							1			
11							<sup>1</sup> Indicators of hydric soil and w	etland hydrology	y must	
Woody Vine Strati	um (Plot size:	r = 5')	101%	= Total C	Cover		be present.			
1.	um (Flot size.	<u> ,</u>								
2.							Hydrophytic			
			0%	= Total C	Cover		Vegetation	Yes	No	Х
% Bare Ground in	Herb Stratum	0%	% C	over of Bio	otic Crust _		Present?			
Remarks:							1			-

Project No.: 553-4805-014

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rofilo Docorintia-	· (Docoribo to the de	nth needed	to document the indica	ator or confirm 4L	o abecnes	of indicators \	Sampling Point:	
Depth	Matrix	ptn needed	to document the indica	Redox Fea		or indicators.)		
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<sup>3</sup> Texture	Rema
0 - 12	12.5Y 5/3	100	Color (moist)		Турс		LS	TOTAL
0 - 12	12.51 5/5	100	·			<del></del>		
							·	
ype: C=Concentra	ation, D=Depletion, RM	1=Reduced M	Matrix, CS=Covered or C	oated Sand Grains	s. <sup>2</sup> Locatio	on: PL=Pore Lining, M	=Matrix.	
Fexture: S = sand;	Si = silt; C = clay; L = I	oam or loam	y. Texture Modifier: co =	coarse; f = fine; vf	f = very fine;	+ = heavy (more clay);	- = light (less clay)	
ydric Soil Indicate	ors: (Applicable to al	I LRRs, unle	ss otherwise noted.)			Indicators for Pro	blematic Hydric Soils⁴:	
Histosol (A1)		_	Sandy Redox (S5)			1 cm Muck	(A9) (LRR C)	
Histic Epipedon	(A2)	_	Stripped Matrix (S6	i)		2 cm Muck	(A10) ( <b>LRR B</b> )	
Black Histic (A3	3)	_	Loamy Mucky Mine	eral (F1)		Reduced \	/ertic (F18)	
Hydrogen Sulfid	le (A4)	_	Loamy Gleyed Matr	rix (F2)		Red Paren	t Material (TF2)	
Stratified Layers	s (A5) ( <b>LRR C</b> )	-	Depleted Matrix (F3	3)		Other (Exp	olain in Remarks)	
1 cm Muck (A9)	(LRR D)	_	Redox Dark Surface	e (F6)		4		
Depleted Below	Dark Surface (A11)	-	Depleted Dark Surfa	ace (F7)		*Indicators of hydro	ophytic vegetation and	
Thick Dark Surf	, ,	-	Redox Depressions	s (F8)			gy must be present,	
Sandy Mucky M			Vernal Pools (F9)			unless disturbed	or problematic.	
Sandy Gleyed N	Matrix (S4)							
Sandy Gleyed N Restrictive Layer (i								
Restrictive Layer (i						Hydric Soil Present?	Yes	No 2
Restrictive Layer (i						Hydric Soil Present?	Yes	No )
Restrictive Layer (i Type: Depth (inches):						Hydric Soil Present?	Yes	No
Restrictive Layer (i Type: Depth (inches):						Hydric Soil Present?	Yes	No )
Restrictive Layer (i Type: Depth (inches):						Hydric Soil Present?	Yes	No
Restrictive Layer (i Type: Depth (inches):						Hydric Soil Present?	Yes	No
Restrictive Layer (i Type: Depth (inches):						Hydric Soil Present?	Yes	No )
Restrictive Layer (i Type: Depth (inches): Remarks:	f present):					Hydric Soil Present?	Yes	No 2
Restrictive Layer (i Type: Depth (inches): Remarks:	f present):	ed; check all t	that apply)				Yes	No )
Restrictive Layer (i Type: Depth (inches): Remarks:	f present):  / Indicators: minimum of one require	ed; check all t	that apply) Salt Crust (B11)			Secondary Indicate		No )
AYDROLOGY  Vetland Hydrology	f present):  / Indicators: minimum of one require (A1)	ed; check all t				Secondary Indicate Water Mar	ors (2 or more required)	No )
AYDROLOGY  Vetland Hydrology  Surface Water (i	f present):  / Indicators: minimum of one require (A1)	ed; check all t	Salt Crust (B11)	es (B13)		Secondary Indicate Water Mar Sediment I	ors (2 or more required) ks (B1) ( <b>Riverine</b> )	No
AYDROLOGY  Wetland Hydrology  Frimary Indicators (r Surface Water ( High Water Tab Saturation (A3)	f present):  / Indicators: minimum of one require (A1)	ed; check all t	Salt Crust (B11) Biotic Crust (B12)	, ,		Secondary Indicate Water Mar Sediment I	ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine)	No
AYDROLOGY  Wetland Hydrology rimary Indicators (r Surface Water ( High Water Tab Saturation (A3) Water Marks (B	y Indicators: minimum of one require (A1) le (A2)	- - -	Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrate	Odor (C1)	doots (C3)	Secondary Indicate Water Mar Sediment I Drift Depos	ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine)	No
Restrictive Layer (i Type: Depth (inches): Remarks:  HYDROLOGY Vetland Hydrology Primary Indicators (r Surface Water ( High Water Tab Saturation (A3) Water Marks (B Sediment Depo	y Indicators: minimum of one require (A1) lee (A2)	- - -	Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrate  Hydrogen Sulfide O	Odor (C1) eres along Living R	toots (C3)	Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso	ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10)	No
Restrictive Layer (i Type: Depth (inches): Remarks:  HYDROLOGY Vetland Hydrology Primary Indicators (r Surface Water ( High Water Tab Saturation (A3) Water Marks (B Sediment Depo	/ Indicators: minimum of one require (A1) ble (A2) sit) (Nonriverine) sits (B2) (Nonriverine) 33) (Nonriverine)	- - -	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate Hydrogen Sulfide O Oxidized Rhizosphe	Odor (C1) eres along Living R eed Iron (C4)		Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi	ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2)	
temarks:  HYDROLOGY  Wetland Hydrology  Irimary Indicators (r Surface Water (High Water Tab Saturation (A3)  Water Marks (B Sediment Depo Drift Deposits (E Surface Soil Cra	/ Indicators: minimum of one require (A1) ble (A2) sit) (Nonriverine) sits (B2) (Nonriverine) 33) (Nonriverine)	- - - - ) - -	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduc	Odor (C1) eres along Living R ed Iron (C4) tion in Tilled Soils (		Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi Saturation	ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) urrows (C8)	
estrictive Layer (i Type: Depth (inches): emarks:  IYDROLOGY /etland Hydrology rimary Indicators (r Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (t Surface Soil Cra	/ Indicators: minimum of one require (A1) ble (A2) sit) (Nonriverine) sits (B2) (Nonriverine) acks (B6) ble on Aerial Imagery (E	- - - - ) - -	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduc Recent Iron Reduct	odor (C1) eres along Living R ed Iron (C4) tion in Tilled Soils ( (C7)		Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi Saturation Shallow Ac	ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9)	
estrictive Layer (i Type: Depth (inches):  Idemarks:  I	y Indicators: minimum of one require (A1) site (A2) sits (B2) (Nonriverine) sits (B2) (Nonriverine) acks (B6) acks (B6) le on Aerial Imagery (E Leaves (B9)	- - - - ) - -	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduc Recent Iron Reduct Thin Muck Surface	odor (C1) eres along Living R ed Iron (C4) tion in Tilled Soils ( (C7)		Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi Saturation Shallow Ac	ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) quitard (D3)	
estrictive Layer (i Type: Depth (inches):  Iemarks:  Interpretation (inches):  Iemarks:  Interpretation (Inches):  Iemarks:  Interpretation (Inches):  Iemarks:  Interpretation (Inches):  Interpretatio	r Indicators: minimum of one require (A1) lele (A2) (1) (Nonriverine) sits (B2) (Nonriverine) acks (B6) lele on Aerial Imagery (E Leaves (B9)	- - - ) - - - - 337) -	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduc Recent Iron Reduct Thin Muck Surface Other (Explain in Re	odor (C1) eres along Living R ed Iron (C4) tion in Tilled Soils ( (C7) emarks)		Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi Saturation Shallow Ac	ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) quitard (D3)	
Restrictive Layer (i Type: Depth (inches): Remarks:  HYDROLOGY Vetland Hydrology Vetland Hydrology Surface Water ( High Water Tab Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (i Surface Soil Cra Inundation Visit Water-Stained I Vater-Stained I Vater-Stained I Vater Water Press	/ Indicators: minimum of one require (A1) sits (B2) (Nonriverine) sits (B2) (Nonriverine) acks (B6) sle on Aerial Imagery (E Leaves (B9) s: sent? Yes	- - - ) - - - 37) -	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduct Recent Iron Reduct Thin Muck Surface Other (Explain in Reduct No X	odor (C1) eres along Living R ed Iron (C4) tion in Tilled Soils ( (C7) ermarks)  Depth (inches):		Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi Saturation Shallow Ad FAC-Neutr	ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) quitard (D3) ral Test (D5)	
estrictive Layer (i Type: Depth (inches):  Iemarks:  Interpretation (inches):  Iemarks:  Interpretation (inches):  Iemarks:  Interpretation (inches):  Interpretation (inches)	/ Indicators: minimum of one require (A1) ble (A2) c1) (Nonriverine) sits (B2) (Nonriverine) acks (B6) ble on Aerial Imagery (E Leaves (B9) s: sent? Yes	37)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduc Recent Iron Reduct Thin Muck Surface Other (Explain in Re	odor (C1) eres along Living R ed Iron (C4) tion in Tilled Soils ( (C7) ermarks)  Depth (inches): Depth (inches):		Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi Saturation Shallow Ad FAC-Neutr	ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) In Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) quitard (D3) ral Test (D5)	
AYDROLOGY  Wetland Hydrology  Wetland Hydrology  Wetland Hydrology  Wetland Hydrology  Inimary Indicators (r Surface Water (a) Saturation (A3) Water Marks (B) Sediment Deposits (E) Surface Soil Cra Inundation Visib Water-Stained I  Wield Observations  Surface Water Preser  Saturation Present  Saturation Present  Saturation Present	/ Indicators: minimum of one require (A1) site (A2) sit (Nonriverine) sits (B2) (Nonriverine) acks (B6) sle on Aerial Imagery (E Leaves (B9) stephon	- - - ) - - - - - -	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduct Recent Iron Reduct Thin Muck Surface Other (Explain in Reduct No X	odor (C1) eres along Living R ed Iron (C4) tion in Tilled Soils ( (C7) ermarks)  Depth (inches):		Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi Saturation Shallow Ad FAC-Neutr	ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) quitard (D3) ral Test (D5)	
estrictive Layer (i Type: Depth (inches): emarks:  IYDROLOGY /etland Hydrology rimary Indicators (r Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (i Surface Soil Cra Inundation Visit Water-Stained I ield Observations Surface Water Preservaturation Presentaturation Presentaturation Presentaturation Preservaturation Pre	/ Indicators: minimum of one require (A1) sits (B2) (Nonriverine) sits (B2) (Nonriverine) acks (B6) sle on Aerial Imagery (E Leaves (B9) s: sent? Yes ringe)	37)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduc Recent Iron Reduct Thin Muck Surface Other (Explain in Ret  No X No X No X	odor (C1) eres along Living R ded Iron (C4) tion in Tilled Soils ( (C7) ermarks)  Depth (inches): Depth (inches):	C6)	Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi Saturation Shallow Ad FAC-Neutr	ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) In Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) quitard (D3) ral Test (D5)	
estrictive Layer (i Type: Depth (inches):  Iemarks:  IMPOROLOGY  Vetland Hydrology  Vetland Hydrology  Importance Water (i Saurface Water (i Saurface Water (i Saurface Soil Cra Inundation Visit Water-Stained I Water-Stained I Water Table Preser  Saurface Water Preser  Saurfa	/ Indicators: minimum of one require (A1) sits (B2) (Nonriverine) sits (B2) (Nonriverine) acks (B6) sle on Aerial Imagery (E Leaves (B9) s: sent? Yes ringe)	37)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduc Recent Iron Reduct Thin Muck Surface Other (Explain in Re	odor (C1) eres along Living R ded Iron (C4) tion in Tilled Soils ( (C7) ermarks)  Depth (inches): Depth (inches):	C6)	Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi Saturation Shallow Ad FAC-Neutr	ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) In Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) quitard (D3) ral Test (D5)	

Applicant/Owner: Confidential Client		City/Count	y: Unincorporate	od Monow County	Sampling Date: Dece	-, -
				State: Oregon	Sampling Point:	SP-04
vestigator(s): Colton Kyro, Chloe Kott				Section, Township, Range:	4N23E24SE	NW
ndform (hillslope, terrace, etc.): Depre	ssion		Lo	cal relief (concave, convex, none):	concave Slope	e (%): None
bregion (LRR): (B) Columbia/Snake River F	Plateau	Lat: 45.816166	Lon	g: <u>-119.888287</u>	Datum: NAD	83
	sser-Rock outcrop comple	ex, 1-20% slopes -				None
e climatic / hydrologic conditions on the site type	•		Ye		(If no, explain in Rer	
e Vegetation , Soil	, or Hydrology	significantly		re "Normal Circumstances" prese		No
e Vegetation, Soil	, or Hydrology	naturally pro	olematic? (I	f needed, explain any answers in	Remarks.)	
UMMARY OF FINDINGS – Attach s	ito man chowing ca	mpling point los	ations trans	eacte important foatures	oto	
ydrophytic Vegetation Present?	Yes	No X	alions, trans	secis, important reatures,	etc.	
ydric Soil Present?	Yes	No X	Is the Samp	led Area		
etland Hydrology Present?	Yes	No X	within a We	tland? Yes	NoX	
ecipitation prior to fieldwork:	_					
ecipitation was within the normal range for the	three months prior to the	site visit.				
· · · · · · · · · · · · · · · · · · ·	·					
emarks:						
P-04 was collected in a localized depression.						
EGETATION						
	Absolute	Dominant	Indicator	Dominance Test worksheet:		
ee Stratum (Plot size: $\underline{r} = 15$	<u>% Cover</u>	Species?	Status	Number of Dominant Species		
				That Are OBL, FACW, or FAC:	0	(A)
				Total Number of Dominant		
				Species Across All Strata:	2	(B)
	0%	= Total Cover				
pling/Shrub Stratum (Plot size: $\underline{r} = 10^{\circ}$	7			Percent of Dominant Species		
				That Are OBL, FACW, or FAC:	<u>0%</u>	(A/B)
				Prevalence Index worksheet:		
				Total % Cover of:	Multiply by:	
					Multiply by: x 1 =	
				Total % Cover of:		<u> </u>
	0%	= Total Cover		Total % Cover of: OBL species	x 1 =	
erb Stratum (Plot size: r = 5')	0%	= Total Cover		Total % Cover of:  OBL species  FACW species	x 1 = x 2 =	
rb Stratum (Plot size: ፫ = 5')  Erodium botrys	0%	= Total Cover	FACU	Total % Cover of:  OBL species  FACW species  FAC species	x 1 = x 2 = x 3 =	
•		-	FACU FACU	Total % Cover of:  OBL species  FACW species  FAC species  FACU species	x 1 = x 2 = x 3 = x 4 =	0 (1
Erodium botrys	60%	Yes		Total % Cover of:  OBL species  FACW species  FAC species  FACU species  UPL species	x 1 = x 2 = x 3 = x 4 = x 5 = (A)	0 (0
Erodium botrys	60%	Yes		Total % Cover of:  OBL species  FACW species  FAC species  FACU species  UPL species  Column Totals:  0	x 1 = x 2 = x 3 = x 4 = x 5 = (A) = B/A =	0 ((
Erodium botrys	60%	Yes		Total % Cover of:  OBL species  FACW species  FAC species  FACU species  UPL species  Column Totals:  0  Prevalence Index	x 1 = x 2 = x 3 = x 4 = x 5 = (A) = B/A =	0 ((
Erodium botrys	60%	Yes		Total % Cover of:  OBL species  FACW species  FAC species  FACU species  UPL species  Column Totals:  O  Prevalence Index  Hydrophytic Vegetation India	x 1 = x 2 = x 3 = x 4 = x 5 = (A) = B/A = ators:	0 ((
Erodium botrys	60%	Yes		Total % Cover of:  OBL species  FACW species  FACU species  UPL species  Column Totals:  O  Prevalence Index  Hydrophytic Vegetation Indic  Dominance Test is >50  Prevalence Index is ≤3.	x 1 = x 2 = x 3 = x 4 = x 5 = (A) = B/A = **ators: **	
Erodium botrys	60%	Yes		Total % Cover of:  OBL species  FACW species  FACU species  UPL species  Column Totals:  Prevalence Index  Hydrophytic Vegetation Indic  Dominance Test is >50  Prevalence Index is ≤3.  Morphological Adaptation	x 1 = x 2 = x 3 = x 4 = x 5 = (A) = B/A = ators:	
Erodium botrys	60%	Yes		Total % Cover of:  OBL species  FACW species  FACU species  UPL species  Column Totals:  Prevalence Index  Hydrophytic Vegetation Indic  Dominance Test is >50  Prevalence Index is ≤3.  Morphological Adaptatic  data in Remarks or of	x 1 = x 2 = x 3 = x 4 = x 5 = (A) = B/A = sators: % 0¹ 0¹ (Provide supporting on a separate sheet)	
Poa bulbosa	60%	Yes		Total % Cover of:  OBL species  FACW species  FACU species  UPL species  Column Totals:  Prevalence Index  Hydrophytic Vegetation Indic  Dominance Test is >50  Prevalence Index is ≤3.  Morphological Adaptation	x 1 = x 2 = x 3 = x 4 = x 5 = (A) = B/A = sators: % 0¹ 0¹ (Provide supporting on a separate sheet)	
Erodium botrys Poa bulbosa	60%	Yes		Total % Cover of:  OBL species  FACW species  FACU species  UPL species  Column Totals:  O Prevalence Index  Hydrophytic Vegetation Indic Dominance Test is >50 Prevalence Index is ≤3.  Morphological Adaptatic data in Remarks or of Problematic Hydrophytic	x 1 = x 2 = x 3 = x 4 = x 5 = (A) = B/A = sators: % 0¹ 0¹ (Provide supporting on a separate sheet) c Vegetation¹ (Explain)	
Erodium botrys Poa bulbosa	60%	Yes Yes		Total % Cover of:  OBL species  FACW species  FACU species  UPL species  Column Totals:  Prevalence Index  Hydrophytic Vegetation Indic  Dominance Test is >50  Prevalence Index is ≤3.  Morphological Adaptatic  data in Remarks or of	x 1 = x 2 = x 3 = x 4 = x 5 = (A) = B/A = sators: % 0¹ 0¹ (Provide supporting on a separate sheet) c Vegetation¹ (Explain)	
Erodium botrys Poa bulbosa	60%	Yes		Total % Cover of:  OBL species  FACW species  FAC species  FACU species  UPL species  Column Totals:  O Prevalence Index  Hydrophytic Vegetation Indic  Dominance Test is >50 Prevalence Index is ≤3.  Morphological Adaptatic data in Remarks or of Problematic Hydrophytic  ¹Indicators of hydric soil and we	x 1 = x 2 = x 3 = x 4 = x 5 = (A) = B/A = sators: % 0¹ 0¹ (Provide supporting on a separate sheet) c Vegetation¹ (Explain)	
Erodium botrys Poa bulbosa	60%	Yes Yes		Total % Cover of:  OBL species FACW species FAC species FACU species UPL species Column Totals:  O Prevalence Index Hydrophytic Vegetation Indic Dominance Test is >50 Prevalence Index is ≤3. Morphological Adaptatic data in Remarks or o Problematic Hydrophyti	x 1 = x 2 = x 3 = x 4 = x 5 = (A) = B/A = sators: % 0¹ 0¹ (Provide supporting on a separate sheet) c Vegetation¹ (Explain)	
Erodium botrys Poa bulbosa	60%	Yes Yes  Yes  Total Cover		Total % Cover of:  OBL species  FACW species  FACU species  UPL species  Column Totals:  Prevalence Index  Hydrophytic Vegetation Indic  Dominance Test is >50  Prevalence Index is ≤3.  Morphological Adaptatic  data in Remarks or or problematic Hydrophyti  Indicators of hydric soil and we be present.	x 1 =  x 2 =  x 3 =  x 4 =  x 5 =  (A)  = B/A =  sators:  %  0¹  ons¹ (Provide supporting on a separate sheet)  c Vegetation¹ (Explain)  etland hydrology must	1
Erodium botrys Poa bulbosa	60%	Yes Yes		Total % Cover of:  OBL species FACW species FAC species FACU species UPL species Column Totals:  O Prevalence Index Hydrophytic Vegetation Indic Dominance Test is >50 Prevalence Index is ≤3. Morphological Adaptatic data in Remarks or o Problematic Hydrophyti  Indicators of hydric soil and we be present.	x 1 = x 2 = x 3 = x 4 = x 5 = (A) = B/A = sators: % 0¹ 0¹ (Provide supporting on a separate sheet) c Vegetation¹ (Explain)	

Parametrix
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SOIL							Sampling Boint	SP-04
	(Dagariba ta tha d					of indicators \	Sampling Point:	3F-04
· ·	on: (Describe to the d	eptn needed to	document the in			of indicators.)		
Depth (inches)	Matrix	0/	Color (moist)	Redox Fe	- 1	Loc <sup>2</sup>	<sup>3</sup> Texture	Domorko
(inches) 0 - 16	Color (moist) 10YR 3/3	100	Color (moist)	%	Type	LOC	LS	Remarks
0 - 16	10113/3	100	-				LS	
-			-					
-			-					
						· -		
				<del>-</del>		. ———		
			-					
			-	<u> </u>				
17 0. 0	totion D Doubtion D	A. Dadas ad Ma	t-i 00 0	0 t - 1 0 1 0 1	21 4:	and Die Daniel Links and A	Market.	
l. * ·	tration, D=Depletion, RI					on: PL=Pore Lining, M=		
Texture: S = sand	d; Si = silt; C = clay; L =	loam or loamy.	l exture Modifier: o	co = coarse; f = fine; v	t = very tine;	+ = heavy (more clay); -	= light (less clay)	
Hvdric Soil Indica	ators: (Applicable to a	II LRRs. unles	s otherwise noted	i.)		Indicators for Prob	lematic Hydric Soils <sup>4</sup> :	
Histosol (A1)		,	Sandy Redox (S				A9) (LRR C)	
Histic Epipedo	on (A2)	_	Stripped Matrix			<del></del>	A10) (LRR B)	
Black Histic (A		_	Loamy Mucky N			Reduced Ve		
Hydrogen Sulf		_	Loamy Gleyed I	Matrix (F2)		Red Parent	Material (TF2)	
	ers (A5) (LRR C)	_	Depleted Matrix	(F3)			in in Remarks)	
1 cm Muck (As	9) (LRR D)		Redox Dark Su	rface (F6)				
Depleted Belo	w Dark Surface (A11)		Depleted Dark	Surface (F7)		⁴Indicators of hydrop	phytic vegetation and	
Thick Dark Su	ırface (A12)		Redox Depress	sions (F8)		wetland hydrology	must be present,	
Sandy Mucky	Mineral (S1)		Vernal Pools (F	F9)		unless disturbed of	r problematic.	
Sandy Gleyed	Matrix (S4)							
Restrictive Layer	(if present):							
Type:	( p							
Depth (inches):						Hydric Soil Present?	Yes	No X
, , ,						_		
Remarks:								
HYDROLOGY								
Wetland Hydrolog	gy Indicators:							
Primary Indicators	(minimum of one requir	ed; check all th	at apply)			Secondary Indicator	s (2 or more required)	
Surface Water			Salt Crust (B11	)		Water Marks	s (B1) (Riverine)	
High Water Ta	able (A2)	_	Biotic Crust (B1			Sediment De	eposits (B2) (Riverine)	
Saturation (A3		_	Aquatic Inverte	brates (B13)		Drift Deposit	s (B3) (Riverine)	
Water Marks (	(B1) (Nonriverine)		Hydrogen Sulfic	de Odor (C1)		Drainage Pa	itterns (B10)	
Sediment Dep	oosits (B2) (Nonriverine	<u> </u>	Oxidized Rhizos	spheres along Living F	Roots (C3)	Dry-Season	Water Table (C2)	
Drift Deposits	(B3) (Nonriverine)		Presence of Re	educed Iron (C4)		Crayfish Bur	rows (C8)	
Surface Soil C	Cracks (B6)		Recent Iron Re	duction in Tilled Soils	(C6)	Saturation V	isible on Aerial Imagery (C9)	
Inundation Vis	sible on Aerial Imagery (	B7)	Thin Muck Surf	ace (C7)		Shallow Aqu	itard (D3)	
Water-Stained	d Leaves (B9)		Other (Explain i	in Remarks)		FAC-Neutral	Test (D5)	
Field Obsessed to								
Field Observation								
Surface Water Pre			No X	Depth (inches):		-		
Water Table Prese		!		Depth (inches):		Wetland Hy	drology Present?	
Saturation Presen		1	No X	Depth (inches):		-	Yes	No X
(includes capillary			uall aaniel - b - f		if"	bla		
Describe Records	ed Data (stream gauge	, monitoring v	veii, aeriai photos	s, previous inspectio	ns), if availa	ipie:		
Remarks:								

е			City/Co	unty. Oninoorporus	ed Morrow County		December	18, 2023
Confidential Client					State: Oregon	Sampling F	oint: S	SP-05
	Kott				Section, Township, Range: _		23NESE	
-	Terrace			Lo	cal relief (concave, convex, none):		Slope (%): _	<3%
					· <del></del>	_		
			20-40 % slopes					
			ojanifican					
, 30ii				•	·	_	NO _	
,	,	, a. o.og ,		problemane. (	noodod, oxpidin dily dilonolo il	rtemante.)		
FINDINGS _ AH	tach site man	ehowing es	mpling point	locations tran	socts important features	etc		
					scots, important leatures	, 010.		
				Is the Samp	led Area			
				within a We	tland? Yes	No X	(	
							<del></del>	
	for the three mor	nths prior to the	site visit.					
3		'						
		Absolute	Dominan	t Indicator	Dominance Test worksheet:			
(Plot size	: <u>r = 15')</u>	% Cover	Species'	Status	Number of Dominant Species			
					That Are OBL, FACW, or FAC	ā	1 (	(A)
								. ,
					Total Number of Dominant			
					Species Across All Strata:		4 (	(B)
		0%	= Total Cover					
atum (Plot size	: <u>r = 10')</u>		_		Percent of Dominant Species			
ntata		30%	Yes	NOL	That Are OBL, FACW, or FAC	3	25%	(A/B)
ata		10%	Yes	NOL	Prevalence Index worksheet	:		
					Total % Cover of:	Multiply by:		
					OBL species	x 1 =		
					FACW species	x 2 =		
		40%	= Total Cover		FAC species	x 3 =		
(Plot size	<u>r = 5')</u>				FACU species	x 4 =		
ım		20%	Yes	NOL	UPL species	x 5 =		
		15%	Yes	FAC	Column Totals: 0	(A)	0	(B)
1		5%	No	FACU	Prevalence Index	: = B/A =		
				_	Hydrophytic Vegetation Indi	cators:		
				_	Dominance Test is >50	)%		
					Prevalence Index is ≤3	i.0 <sup>1</sup>		
					Morphological Adaptat	ions <sup>1</sup> (Provide supp	orting	
					data in Remarks or	on a separate shee	et)	
					Problematic Hydrophyt	ic Vegetation <sup>1</sup> (Exp	lain)	
					<sup>1</sup> Indicators of hydric soil and w	etland hydrology mi	ust	
	<b>5</b> 10	40%	= Total Cover		be present.			
<u>um</u> (Plot size	: <u>r = 5')</u>							
					Hydrophytic			
			-					,
	_	0%	= Total Cover		Vegetation `	Yes	N∩ X	
Harh Stratum	60%	0%	_ = Total Cover		-	Yes	No X	<u> </u>
Herb Stratum	60%		_ = Total Cover over of Biotic Crust	t	Vegetation Present?	Yes	No <u>X</u>	<u> </u>
	Confidential Client Colton Kyro, Chloe terrace, etc.):  (B) Columbia/Snake Hydric Rating): logic conditions on the , Soil  FINDINGS - Att ation Present? t? r to fieldwork: ithin the normal range  (Plot size  atum (Plot size  (Plot size	Confidential Client Colton Kyro, Chloe Kott  terrace, etc.): Terrace  (B) Columbia/Snake River Plateau  Hydric Rating): Gravden ve logic conditions on the site typical for tr  , Soil , o  FINDINGS – Attach site map ation Present? Ye re reference for the three mo  (Plot size: r = 15')  atum (Plot size: r = 10')  Intata  ata  (Plot size: r = 5')  Imm  (Plot size: r = 5')	Confidential Client	Confidential Client	Confidential Client	State: Oregon   Cotinn Kyro. Chlos Kott   Section, Township, Range:   Interace, etc.;   Terrace   Lat: 45.813304   Long: -119.899658   No   NWI of coordinations on the site typical for this time of year?   significantly disturbed?   Are "Normal Circumstances" present of the site	Collon Kyto, Chloc Kott  Collon Kyto, Chloc Kott  Terrace  (B) Collumbia Shake River Plateau  Hydric Rating)  Caradon very gravelly beam 20-04 % slopes   13E   No   NVI classification:    Soil	State: Cregon   Sampling Point: S   State: Cregon   Sampling Point: S   Section Kyro, Chlock Kott   Section, Torrator   Local Telef (pencare, ceres, none)   convex   Stope (%)   Columbia/Snake River Plateau   Lat: 45.813304   Long: +119.899663   Datum: NAD 83   NAD 83

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SOIL							Sompling Boints	SD 05
							Sampling Point:	SP-05
· ·	on: (Describe to the de	epth needed to	document the in			of indicators.)		
Depth (inches)	Matrix	0/	Color (moist)	Redox Fea	- 1	Loc <sup>2</sup>	<sup>3</sup> Texture	Remarks
(inches) 0 - 12	Color (moist) 10YR 3/3	100	Color (moist)		Type'	LOC	coGS	
0 - 12	10113/3	100						Small gravel inclusions
				<del></del>				IIICIUSIOTIS
				<del></del>		· -		
			•					
			•					
				<del></del>				
<sup>1</sup> Tupo: C=Concon	tration, D=Depletion, RI	A=Doduced Ma	atrix CS=Covered	or Coatad Sand Crain	o <sup>2</sup> l conti	on: PL=Pore Lining, M=	Matrix	
l. * ·	•					+ = heavy (more clay); -		
Texture. 5 - Sand	1, 31 - Siit, 0 - Clay, L -	ioaiii oi ioaiiiy.	rexture Modifier.	to - coarse, r - nne, v	ı – very iirle,	+ - neavy (more clay), -	- light (less clay)	
Hydric Soil Indica	ators: (Applicable to a	II LRRs, unles	s otherwise noted	l.)		Indicators for Prob	olematic Hydric Soils <sup>4</sup> :	
Histosol (A1)			Sandy Redox (S	S5)		1 cm Muck	(A9) ( <b>LRR C</b> )	
Histic Epipedo	on (A2)	_	Stripped Matrix	(S6)		2 cm Muck	(A10) ( <b>LRR B</b> )	
Black Histic (A	A3)		Loamy Mucky N	/lineral (F1)		Reduced Ve	ertic (F18)	
Hydrogen Sulf	fide (A4)		Loamy Gleyed I	Matrix (F2)		Red Parent	Material (TF2)	
Stratified Laye	ers (A5) (LRR C)	_	Depleted Matrix	(F3)		Other (Expla	ain in Remarks)	
1 cm Muck (A	9) ( <b>LRR D</b> )	_	Redox Dark Su	rface (F6)				
Depleted Belo	w Dark Surface (A11)	_	Depleted Dark S	Surface (F7)		⁴Indicators of hydro	ohytic vegetation and	
Thick Dark Su	ırface (A12)	_	Redox Depress	ions (F8)		wetland hydrology	must be present,	
Sandy Mucky	Mineral (S1)		Vernal Pools (F	9)		unless disturbed of	or problematic.	
Sandy Gleyed	I Matrix (S4)							
Restrictive Layer	(if present):							
Type:								
Depth (inches):						Hydric Soil Present?	Yes	No X
Remarks:								
Komarko.								
HYDROLOGY								
Wetland Hydrolog								
		ad: abaak all th	at apply)			Cocondon/Indicator	rs (2 or more required)	
-	(minimum of one requir	eu, check all th		`			s (B1) (Riverine)	
Surface Water High Water Ta	` '	_	Salt Crust (B11 Biotic Crust (B1				eposits (B2) (Riverine)	
Saturation (A3		_	Aquatic Invertel	,			ts (B3) (Riverine)	
	(B1) (Nonriverine)	_	Hydrogen Sulfic				atterns (B10)	
	posits (B2) (Nonriverine			spheres along Living F	Roots (C3)		Water Table (C2)	
	(B3) (Nonriverine)	' <u> </u>		duced Iron (C4)	10010 (00)	Crayfish Bu	, ,	
Surface Soil C		_		duction in Tilled Soils	(C6)		isible on Aerial Imagery (C9)	
	sible on Aerial Imagery (	B7)	Thin Muck Surfa		(00)	Shallow Aqu		
Water-Stained		_	Other (Explain i	* *		FAC-Neutra		
	, ,	_					. 1 001 (2 0)	
Field Observation	ns:							
Surface Water Pre	esent? Yes	1	No X	Depth (inches):				
Water Table Pres	ent? Yes	1		Depth (inches):		Wetland Hy	drology Present?	
Saturation Presen		1	No X	Depth (inches):			Yes	No X
(includes capillary								
Describe Recorde	ed Data (stream gauge	, monitoring v	vell, aerial photos	, previous inspectio	ns), if availa	ble:		
Remarks:								
. terriar No.								

Project/Site: Site		City/Count	y: Unincorporat	ed Morrow County	Sampling Date: De	ecember 18, 2023
Applicant/Owner: Confidential Client				State: Oregon	Sampling Poir	nt: SP-06
Investigator(s): Colton Kyro, Chloe Ko	tt			Section, Township, Range: _	4N23E25	SENW
	Terrace		<del></del>	ocal relief (concave, convex, none):	convex Slo	ope (%): <u>&lt;3%</u>
Subregion (LRR): (B) Columbia/Snake R		Lat: 45.800002		ng: -119.886077	Datum: NA	
Soil Unit (Name-ID-Hydric Rating):	Quinton-Rock outcrop comp		42D		classification:	None
Are climatic / hydrologic conditions on the si			Ye diaturbada		(If no, explain in F	
Are Vegetation, Soil Are Vegetation , Soil	, or Hydrology , or Hydrology	significantly naturally pro		Are "Normal Circumstances" prese (If needed, explain any answers in		
,	,,				, , , , , , , , , , , , , , , , , , , ,	
SUMMARY OF FINDINGS - Attac	ch eite man ehowing e	ampling point loc	ations tran	sects important features	etc	
Hydrophytic Vegetation Present?	Yes		auons, nan	sects, important leatures	, etc.	
Hydric Soil Present?	Yes		Is the Samp	oled Area		
Wetland Hydrology Present?	Yes	No X	within a We	etland? Yes	No X	
Precipitation prior to fieldwork:	100					<del>_</del>
Precipitation was within the normal range fo	or the three months prior to the	e site visit.				
· resipilation was vitalin als normal range is	Tale and menale prior to an	one vien.				
Remarks:						
VEGETATION						
	Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: <u>r</u>	= 15') % Cover	Species?	Status	Number of Dominant Species		
1.			·	That Are OBL, FACW, or FAC	<b>;</b> : (	0 (A)
2.						
3.				Total Number of Dominant		
4.				Species Across All Strata:	į.	5 (B)
	0%	= Total Cover				``
Sapling/Shrub Stratum (Plot size: L	= 10')	_		Percent of Dominant Species		
Ericameria nauseosa	10%	Yes	NOL	That Are OBL, FACW, or FAC	): <u>0</u> 9	<u>%</u> (A/B)
2. Purshia tridentata	5%	Yes	NOL	Prevalence Index worksheet	ı:	
3.				Total % Cover of:	Multiply by:	,
4.				OBL species	x 1 =	
5.				FACW species	x 2 =	
	15%	= Total Cover	<u> </u>	FAC species	x 3 =	
Herb Stratum (Plot size: L	= 5')	<u> </u>		FACU species	x 4 =	
Bromus tectorum	60%	Yes	NOL	UPL species	x 5 =	
2. Erodium botrys	50%	Yes	FACU	Column Totals: 0	(A)	0 (B)
3. Poa bulbosa	50%	Yes	FACU	Prevalence Index	κ = B/A =	
4. Holcus lanatus	10%	No	FAC	Hydrophytic Vegetation Indi	cators:	
5		_		Dominance Test is >50	J%	
6		_		Prevalence Index is ≤3	3.0 <sup>1</sup>	
7				Morphological Adaptat	ions <sup>1</sup> (Provide support	ing
8				data in Remarks or	on a separate sheet)	
9				Problematic Hydrophyt	ic Vegetation¹ (Explain	n)
10						
11				<sup>1</sup> Indicators of hydric soil and w	etland hydrology must	
	170%	= Total Cover		be present.		
Woody Vine Stratum (Plot size: L	<u>= 5')</u>					
1. 2.				Hydrophytic		
	0%	= Total Cover	-		Yes No	o X
% Bare Ground in Herb Stratum		= Total Cover Cover of Biotic Crust		Present?		, <u> </u>
Remarks:						
Remarks.						

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rofilo Docerint'	a: (Dosoviho to the de-	nth pages	to document the !nd!	tor or confirm th	no aboons	of indicators )		
Depth	n: (Describe to the dep Matrix	otn needed	to document the indica	tor or confirm to Redox Fea		of indicators.)		
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<sup>3</sup> Texture	Remark
0 - 16	10YR 3/3	100	Color (moist)		.,,,,,		fS	rtoman
						· -		
_								
						· —		
ype: C=Concent	ration, D=Depletion, RM	=Reduced M	Matrix, CS=Covered or Co	oated Sand Grain	s. <sup>2</sup> Locati	on: PL=Pore Lining, M	=Matrix.	
exture: S = sand	Si = silt; C = clay; L = lo	oam or loam	y. Texture Modifier: co =	coarse; f = fine; v	f = very fine;	+ = heavy (more clay);	; - = light (less clay)	
vdric Soil Indica	tors: (Applicable to all	LRRs. unle	ess otherwise noted.)			Indicators for Pro	oblematic Hydric Soils4:	
Histosol (A1)	(. фр		Sandy Redox (S5)				(A9) (LRR C)	
Histic Epipedo	n (A2)	-	Stripped Matrix (S6)	1			(A10) (LRR B)	
Black Histic (A	3)	-	Loamy Mucky Miner	al (F1)		Reduced \	/ertic (F18)	
Hydrogen Sulfi	de (A4)	-	Loamy Gleyed Matri	x (F2)		Red Paren	nt Material (TF2)	
Stratified Layer	rs (A5) ( <b>LRR C</b> )	_	Depleted Matrix (F3)	)		Other (Exp	olain in Remarks)	
1 cm Muck (A9	) (LRR D)	_	Redox Dark Surface	e (F6)				
Depleted Belov	v Dark Surface (A11)	-	Depleted Dark Surfa	ace (F7)		<sup>4</sup> Indicators of hydro	ophytic vegetation and	
Thick Dark Sur	face (A12)		Redox Depressions	(F8)		wetland hydrolog	gy must be present,	
Sandy Mucky I	Mineral (S1)		Vernal Pools (F9)			unless disturbed	or problematic.	
Sandy Gleyed	Matrix (SA)							
Type: Depth (inches):						Hydric Soil Present?	Yes	No_X
Restrictive Layer						Hydric Soil Present?	Yes	No X
Type: Depth (inches):						Hydric Soil Present?	Yes	No X
estrictive Layer Type: Depth (inches): emarks:						Hydric Soil Present?	Yes	No X
Restrictive Layer Type: Depth (inches): Remarks:	(if present):					Hydric Soil Present?	Yes	No X
Restrictive Layer Type: Depth (inches): Remarks: HYDROLOGY Vetland Hydrolog	(if present):	d: check all t	that apply)				Yes	No X
AYDROLOGY Wetland Hydrolog Surface Water	y Indicators: minimum of one require (A1)	d; check all t	that apply) Salt Crust (B11)			Secondary Indicate Water Mar	ors (2 or more required) ks (B1) ( <b>Riverine</b> )	No X
rype: Depth (inches): emarks:  IYDROLOGY Vetland Hydrolog rimary Indicators ( Surface Water High Water Ta	y Indicators: minimum of one require (A1) ble (A2)	d; check all t	Salt Crust (B11)  Biotic Crust (B12)			Secondary Indicate Water Mar	ors (2 or more required) rks (B1) (Riverine) Deposits (B2) (Riverine)	No X
rype: Depth (inches):  emarks:  IYDROLOGY  Vetland Hydrolog rimary Indicators   Surface Water High Water Ta Saturation (A3	y Indicators: minimum of one require (A1) ble (A2)	d; check all t	Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrate	, ,		Secondary Indicate Water Mar Sediment I Drift Depos	ors (2 or more required) rks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine)	No X
Depth (inches):  IYDROLOGY  Metland Hydrolog  rimary Indicators (  Surface Water  High Water Ta  Saturation (A3)  Water Marks (I	y Indicators: minimum of one require (A1) ble (A2) ) B1) (Nonriverine)	- - -	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate Hydrogen Sulfide Od	dor (C1)		Secondary Indicate Water Mar Sediment I Drift Depos	ors (2 or more required) rks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10)	No X
rype: Depth (inches):  Idemarks:  Incomplete	y Indicators: (minimum of one require: (A1) ble (A2) ) B1) (Nonriverine) usits (B2) (Nonriverine)	- - -	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate Hydrogen Sulfide Or Oxidized Rhizosphe	dor (C1) res along Living F	Roots (C3)	Secondary Indicate Water Mar Sediment I Drift Depos	ors (2 or more required) rks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) in Water Table (C2)	No X
Restrictive Layer of Type: Depth (inches): Remarks:  HYDROLOGY Wetland Hydrolog Primary Indicators of High Water Ta Saturation (A3 Water Marks (I Sediment Deposits (I Deposit	y Indicators: (minimum of one require (A1) ble (A2) ) B31) (Nonriverine) basits (B2) (Nonriverine) B3) (Nonriverine)	- - -	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate Hydrogen Sulfide Or Oxidized Rhizosphe Presence of Reduce	dor (C1) res along Living F ed Iron (C4)		Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish B	ors (2 or more required) rks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) in Water Table (C2) urrows (C8)	
rype: Depth (inches):  Idemarks:	y Indicators:  minimum of one require (A1) ble (A2) ) B1) (Nonriverine) bisits (B2) (Nonriverine) B3) (Nonriverine) racks (B6)	- - - - -	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate Hydrogen Sulfide Or Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti	dor (C1) res along Living F ed Iron (C4) on in Tilled Soils		Secondary Indicate Water Mar Sediment I Drift Depor	ors (2 or more required) rks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) in Water Table (C2) urrows (C8) Visible on Aerial Imagery (C6)	
emarks:  IYDROLOGY  Vetland Hydrolog rimary Indicators ( Saturation (A3)  Water Marks (( Sediment Deposits ( Surface Soil C Inundation Visi	y Indicators:  iminimum of one require (A1) ble (A2) ) B1) (Nonriverine) bits (B2) (Nonriverine) B3) (Nonriverine) racks (B6) ble on Aerial Imagery (B	- - - - -	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate Hydrogen Sulfide Oc Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti Thin Muck Surface (	dor (C1) res along Living F ed Iron (C4) on in Tilled Soils (C7)		Secondary Indicate Water Mar Sediment I Drift Depor	ors (2 or more required) rks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C8) quitard (D3)	
estrictive Layer Type: Depth (inches): emarks:  IYDROLOGY /etland Hydrolog rimary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (I) Sediment Depo Drift Deposits ( Surface Soil C Inundation Visi Water-Stained	y Indicators: minimum of one require (A1) ble (A2) ) B1) (Nonriverine) bists (B2) (Nonriverine) B3) (Nonriverine) racks (B6) ble on Aerial Imagery (B Leaves (B9)	- - - - -	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate Hydrogen Sulfide Or Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti	dor (C1) res along Living F ed Iron (C4) on in Tilled Soils (C7)		Secondary Indicate Water Mar Sediment I Drift Depor	ors (2 or more required) rks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) in Water Table (C2) urrows (C8) Visible on Aerial Imagery (C6)	
rype: Depth (inches):  Permarks:  Surface Water  High Water Ta  Saturation (A3  Water Marks (I)  Sediment Deposits (I)  Surface Soil C  Inundation Vision  Water-Stained	y Indicators: minimum of one require (A1) ble (A2) ) B1) (Nonriverine) bists (B2) (Nonriverine) B3) (Nonriverine) racks (B6) ble on Aerial Imagery (B Leaves (B9)	- - - - -	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate Hydrogen Sulfide Oc Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti Thin Muck Surface (	dor (C1) res along Living F ed Iron (C4) on in Tilled Soils (C7)		Secondary Indicate Water Mar Sediment I Drift Depor	ors (2 or more required) rks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C8) quitard (D3)	
HYDROLOGY Wetland Hydrolog rimary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (i Sediment Depo Drift Deposits ( Surface Soil C Inundation Visi Water-Stained	y Indicators: minimum of one require (A1) ble (A2) ) 31) (Nonriverine) ssits (B2) (Nonriverine) racks (B6) ble on Aerial Imagery (B Leaves (B9) s:	- - - - -	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate Hydrogen Sulfide Or Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti Thin Muck Surface ( Other (Explain in Re	dor (C1) res along Living F ed Iron (C4) on in Tilled Soils (C7)		Secondary Indicate Water Mar Sediment I Drift Depor	ors (2 or more required) rks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C8) quitard (D3)	
rimary Indicators ( Sediment Deposits ( Sediment Deposits ( Surface Soil C  Inundation Visit	y Indicators: minimum of one require (A1) ble (A2) ) 31) (Nonriverine) sits (B2) (Nonriverine) racks (B6) ble on Aerial Imagery (B Leaves (B9) s: sent? Yes_	- - - - -	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate Hydrogen Sulfide Or Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti Thin Muck Surface ( Other (Explain in Re	dor (C1) res along Living F ed Iron (C4) on in Tilled Soils (C7) emarks)		Secondary Indicate Water Mar Sediment I Drift Depor Drainage F Dry-Seaso Crayfish B Saturation Shallow Ad FAC-Neutr	ors (2 or more required) rks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C8) quitard (D3)	
rype: Depth (inches):  Idemarks:	y Indicators: minimum of one require: (A1) bite (A2) ) B1) (Nonriverine) B3) (Nonriverine) racks (B6) ble on Aerial Imagery (B Leaves (B9) s: sent? Yes_ ent? Yes_ ? Yes_	- - - - -	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate Hydrogen Sulfide Or Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti Thin Muck Surface ( Other (Explain in Re	dor (C1) res along Living F ed Iron (C4) on in Tilled Soils (C7) emarks)  Depth (inches):		Secondary Indicate Water Mar Sediment I Drift Depor Drainage F Dry-Seaso Crayfish B Saturation Shallow Ad FAC-Neutr	ors (2 or more required) rks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C3 quitard (D3) ral Test (D5)	
estrictive Layer Type: Depth (inches): emarks:  IYDROLOGY Vetland Hydrolog rimary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (I Sediment Depo Drift Deposits ( Surface Soil C Inundation Visi Water-Stained ield Observation Surface Water Presentation Present	y Indicators: minimum of one require (A1) bile (A2) ) 31) (Nonriverine) sits (B2) (Nonriverine) racks (B6) bile on Aerial Imagery (B Leaves (B9) s: sent? Yes_ rint? Yes_ rint? Yes_ fringe)	- - - - - - - - -	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate Hydrogen Sulfide Or Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti Thin Muck Surface ( Other (Explain in Re	dor (C1) res along Living F ed Iron (C4) on in Tilled Soils (C7) emarks)  Depth (inches): Depth (inches):	(C6)	Secondary Indicate Water Mar Sediment I Drift Depor Drainage F Dry-Seaso Crayfish B Saturation Shallow Ac FAC-Neutr	ors (2 or more required) rks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C3 quitard (D3) ral Test (D5)	9)
estrictive Layer Type: Depth (inches):  Idemarks:  Idem	y Indicators: minimum of one require (A1) bile (A2) ) 31) (Nonriverine) sits (B2) (Nonriverine) racks (B6) bile on Aerial Imagery (B Leaves (B9) s: sent? Yes_ rint? Yes_ rint? Yes_ fringe)	- - - - - - - - -	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate Hydrogen Sulfide Or Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti Thin Muck Surface ( Other (Explain in Re	dor (C1) res along Living F ed Iron (C4) on in Tilled Soils (C7) emarks)  Depth (inches): Depth (inches):	(C6)	Secondary Indicate Water Mar Sediment I Drift Depor Drainage F Dry-Seaso Crayfish B Saturation Shallow Ac FAC-Neutr	ors (2 or more required) rks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C3 quitard (D3) ral Test (D5)	9)

Project/Site: Site					City/Count	y: Unincorporate	ed Morrow County	Sampling Dat	e: Decemb	er 18, 2023
Applicant/Owner:	Confidential Client						State: Oregon	Samplir	ng Point:	SP-07
Investigator(s):	Colton Kyro, Chloe Ko	ott					Section, Township, Range: _	4N2	23E25SENE	
Landform (hillslope, te	· -	Depression				Loc	cal relief (concave, convex, none):	concave	Slope (%	): None
Subregion (LRR):	(B) Columbia/Snake F			_	5.800539		g: <u>-119.875455</u>		m: <u>NAD 83</u>	
Soil Unit (Name-ID-I	, ,,	Quinton loamy fi		2-5 % slop	es -	41B		classification:	Non	
	ogic conditions on the s			_	ignificantly	Yes	s X No No re "Normal Circumstances" prese		in in Remark	
Are Vegetation Are Vegetation	, Soil , Soil	or Hydro, or Hydro,	ology		aturally pro		f needed, explain any answers in		es X No	, —
7 to vogotation	, con	, or riyare	,iogy		atarany pro	biomatio: (i	Thooded, explain any answers in	rtomanto.)		
SIIMMADV OF	EINDINGS - Atta	ch eito man ehou	vina sa	mnlina	noint loc	atione trans	sects, important features	oto		
Hydrophytic Vegeta				No No	X	alions, trans	sects, important leatures	, etc.		
Hydric Soil Present				No _	X	Is the Sample	led Area			
Wetland Hydrology		Yes		No _	<u>X</u>	within a Wet		No	X	
		165		140_			165			
Precipitation prior	เ <b>ด ก่อเฉพอกะ:</b> thin the normal range fo	or the three months or	ior to the s	ite vicit						
i recipitation was wi	unin the normal range is	or the three months pr	ioi to tric s	ite visit.						
Remarks:										
I										
I										
VEGETATION										
		A	bsolute		Dominant	Indicator	Dominance Test worksheet:			
Tree Stratum	(Plot size: 1	= 15') %	Cover	9	Species?	Status	Number of Dominant Species			
1.	,	_		-		·	That Are OBL, FACW, or FAC	:	0	(A)
2.				_				_		_('')
3.				_			Total Number of Dominant			
4.				_			Species Across All Strata:		3	(B)
_			0%	= Total C	over		'			_` ′
Sapling/Shrub Stra	ntum (Plot size: !	= 10')					Percent of Dominant Species			
Ericameria naus	seosa		5%		Yes	NOL	That Are OBL, FACW, or FAC	:	0%	(A/B)
2.				_			Prevalence Index worksheet	:		
3.				_			Total % Cover of:	Multiply by:		_
4.				_			OBL species	x 1 =		
5.				_			FACW species	x 2 =		
			5%	= Total C	over		FAC species	x 3 =		
Herb Stratum	(Plot size: I	= 5')					FACU species	x 4 =		
Bromus tectorui	m		70%		Yes	NOL	UPL species	x 5 =		
2. Festuca idahoe	nsis		60%		Yes	FACU	Column Totals: 0	(A)	0	(B)
3. Draba verna			30%		No	NOL	Prevalence Index	c = B/A =		
4. Holcus lanatus			10%		No	FAC	Hydrophytic Vegetation Indi	cators:		
5. Erodium botrys			10%		No	FACU	Dominance Test is >50	0%		
6.							Prevalence Index is ≤3	3.0 <sup>1</sup>		
7.							Morphological Adaptat	ions <sup>1</sup> (Provide s	upporting	
8.				_			data in Remarks or	on a separate s	heet)	
9.				_			Problematic Hydrophyl	tic Vegetation <sup>1</sup> (I	Explain)	
10.				_						
11						-	<sup>1</sup> Indicators of hydric soil and w	etland hydrology	must	
			180%	= Total C	over		be present.			
Woody Vine Stratu	<u>m</u> (Plot size: <u>f</u>	<u>= 5')</u>								
1. 2.				_			Hydrophytic			
2.			0%	= Total C	over			Yes	No	Y
% Bare Ground in	Harb Stratum	0%		ver of Bio			Present?		NO	<u>X</u>
	Herb Stratum	<u> </u>	% Co	ver of Bio	tic Crust		Fiesent:			
Remarks:										

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SOIL							Compling Boints	SP-07
	(Dagariba ta tha d			diantau au aaufiuu th		of indicators \	Sampling Point:	3F-07
-	on: (Describe to the d	eptn needed to	document the in			of indicators.)		
Depth (inches)	Matrix	0/	Color (moist)	Redox Fea	- 1	Loc <sup>2</sup>	<sup>3</sup> Texture	Remarks
(inches) 0 - 16	Color (moist)	100	Color (moist)		Type'	LOC	fS	Remarks
0 - 16	10YR 3/4	100	-			· ——		
			-			· ——		
			-			· ——		
					-			
			-					
17 0. 0	totion D Doubtion D	A. Dadas ad Ma	t-i 00 0	0 t - 1 0 1 0 1-	21 41	and Die Daniel Indian Maria	14-4-2-	
l. * ·	tration, D=Depletion, RI					on: PL=Pore Lining, M=		
Texture: S = sand	d; Si = silt; C = clay; L =	loam or loamy.	l exture Modifier: o	co = coarse; f = fine; v	t = very tine;	+ = heavy (more clay); -	= light (less clay)	
Hvdric Soil Indica	ators: (Applicable to a	II LRRs. unles	s otherwise noted	1.)		Indicators for Prob	lematic Hydric Soils <sup>4</sup> :	
Histosol (A1)		.,	Sandy Redox (S			1 cm Muck (		
Histic Epipedo	on (A2)	_	Stripped Matrix				A10) ( <b>LRR B</b> )	
Black Histic (A		_	Loamy Mucky N			Reduced Ve		
Hydrogen Sulf		_	Loamy Gleyed I	Matrix (F2)		Red Parent	Material (TF2)	
Stratified Laye	ers (A5) (LRR C)	_	Depleted Matrix	(F3)			in in Remarks)	
1 cm Muck (A	9) (LRR D)		Redox Dark Su	rface (F6)				
Depleted Belo	w Dark Surface (A11)		Depleted Dark	Surface (F7)		<sup>4</sup> Indicators of hydrop	hytic vegetation and	
Thick Dark Su	ırface (A12)		Redox Depress	sions (F8)		wetland hydrology	must be present,	
Sandy Mucky	Mineral (S1)		Vernal Pools (F	F9)		unless disturbed of	r problematic.	
Sandy Gleyed	Matrix (S4)							
Restrictive Layer	(if present):							
Type:	( p							
Depth (inches):						Hydric Soil Present?	Yes	No X
, , ,								
Remarks:								
HYDROLOGY								
Wetland Hydrolog	gy Indicators:							
Primary Indicators	(minimum of one requir	ed; check all th	at apply)			Secondary Indicator	s (2 or more required)	
Surface Water			Salt Crust (B11	)		Water Marks	(B1) (Riverine)	
High Water Ta	able (A2)	_	Biotic Crust (B1			Sediment De	eposits (B2) (Riverine)	
Saturation (A3		_	Aquatic Inverte	brates (B13)		Drift Deposit	s (B3) (Riverine)	
Water Marks (	(B1) (Nonriverine)		Hydrogen Sulfic	de Odor (C1)		Drainage Pa	tterns (B10)	
Sediment Dep	oosits (B2) (Nonriverine	<u> </u>	Oxidized Rhizos	spheres along Living F	Roots (C3)	Dry-Season	Water Table (C2)	
Drift Deposits	(B3) (Nonriverine)		Presence of Re	educed Iron (C4)		Crayfish Burrows (C8)		
Surface Soil C	Cracks (B6)		Recent Iron Re	duction in Tilled Soils	(C6)	Saturation V	isible on Aerial Imagery (C9)	
Inundation Vis	sible on Aerial Imagery (	B7)	Thin Muck Surf	ace (C7)		Shallow Aquitard (D3)		
Water-Stained	d Leaves (B9)		Other (Explain i	in Remarks)		FAC-Neutral	Test (D5)	
		_		·		· <u></u>		
Field Observation								
Surface Water Pre			No X	Depth (inches):				
Water Table Pres		1		Depth (inches):		Wetland Hy	drology Present?	
Saturation Presen		1	No X	Depth (inches):			Yes	No X
(includes capillary								
Describe Recorde	ed Data (stream gauge	, monitoring v	veil, aerial photos	, previous inspection	ns), if availa	bie:		
Remarks:								
. comunico.								

Project/Site: Site			City/Count	y: Unincorporate	ed Morrow County	Sampling Date:	December 18, 2023
Applicant/Owner:	Confidential Client				State: Oregon	Sampling I	Point: SP-08
	Colton Kyro, Chloe Kott				Section, Township, Range: _	4N23F	E24SESE
Landform (hillslope, ter	· _ ·			_	cal relief (concave, convex, none):	concave	Slope (%): <3%
	(B) Columbia/Snake River F		Lat: 45.808601	_	g: <u>-119.875409</u>	•	NAD 83
Soil Unit (Name-ID-H		Prosser silt loam, 0-2				classification:	None
Are climatic / hydrolog Are Vegetation	gic conditions on the site typ			Ye		(If no, explain	
Are Vegetation	, Soil , Soil	, or Hydrology , or Hydrology	significantly on naturally pro		Are "Normal Circumstances" prese If needed, explain any answers in		No
, no regonation	, 55	, c ya. c. cgy		,	ii noodod, oxpidiii diiy diionolo ii	riomanio.)	
SIIMMADV OF E	INDINGS - Attach ei	to man chowing ca	mpling point loc	atione tran	eacte important faaturae	oto	
Hydrophytic Vegetati		Yes		auons, trans	sects, important features	, etc.	
Hydric Soil Present?		Yes		Is the Samp	oled Area		
Wetland Hydrology F		Yes	No X	within a We		No 2	x
		165			163		
Precipitation prior t	o fieldwork: nin the normal range for the	three months prior to the	eita vieit				
Frecipitation was with	iiii tile normai range ioi tile	unee monus phor to the	site visit.				
Remarks:							
VEGETATION							
720217111011		Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum	(Plot size: <u>r = 15'</u>		Species?	Status	Number of Dominant Species		
1.	(1 101 0120:	<u> 70 00001</u>	ореско.	<u>Otatas</u>	That Are OBL, FACW, or FAC	٠.	0 (A)
2.					mat Arc ODL, I AOVV, OF I AC	•	(//)
3.					Total Number of Dominant		
4.					Species Across All Strata:		5 (B)
-		0%	= Total Cover		opedico / torodo / tir otrata.		(B)
Sapling/Shrub Strat	tum (Plot size: <u>r = 10</u> '				Percent of Dominant Species		
Ericameria nause		3%	Yes	NOL	That Are OBL, FACW, or FAC	:	<u>0%</u> (A/B)
Gutierrezia sarot		2%	Yes	NOL	Prevalence Index worksheet		(;;=)
3.					Total % Cover of:	Multiply by:	
4.					OBL species	x 1 =	
5.					FACW species	x 2 =	
		5%	= Total Cover		FAC species	x 3 =	
Herb Stratum	(Plot size: $r = 5'$ )		_		FACU species	x 4 =	
1. Poa bulbosa		70%	Yes	FACU	UPL species	x 5 =	
2. Erodium botrys		60%	Yes	FACU	Column Totals: 0	(A)	0 (B)
Bromus tectorum	1	60%	Yes	NOL	Prevalence Index	c = B/A =	
4.					Hydrophytic Vegetation Indi	cators:	
5.					Dominance Test is >50	)%	
6.					Prevalence Index is ≤3	3.0 <sup>1</sup>	
7.				<u> </u>	Morphological Adaptat	ions <sup>1</sup> (Provide sup	porting
8.		<u> </u>	<u> </u>		data in Remarks or	on a separate she	et)
9.					Problematic Hydrophyl	ic Vegetation¹ (Exp	olain)
10.							
11					<sup>1</sup> Indicators of hydric soil and w	etland hydrology m	iust
		190%	= Total Cover		be present.		
Woody Vine Stratur	$\underline{\mathbf{n}} \qquad \qquad (\text{Plot size: } \underline{\mathbf{r} = 5'})$		_				
1.		<del></del>			I le column de coté a		
2					Hydrophytic Vegetation	Yes	No. V
0/ David Outroom 4 to 11	1t- 044	0%	_ = Total Cover		Present?		No <u>X</u>
% Bare Ground in H	erb Stratum	<u>0%</u> % C	over of Biotic Crust		Fresents		
Remarks:							

Project No.: 553-4805-014

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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) % Type¹ Loc² ³Texture Re  0 - 16 10YR 3/3 100 LS Smi incl  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Living, M=Matrix.  Textures S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)  Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histic Epipedon (A2) Sandy Redox (S5) Indicators for Problematic Hydric Soils*:  Histic Epipedon (A2) Loamy Mucky Mineral (F1) Reduced Vertic (F18)  Hydric Soil Reduced Vertic (F18)  Hydric Soil Reduced Vertic (F18)  Type: Depleted Below Dark Surface (A11) Depleted Matrix (F3) Other (Explain in Remarks)  1 cm Muck (A9) (LRR D) Redox Dark Surface (F7)  Thick Dark Surface (A12) Redox Dark Surface (F7)  Thick Dark Surface (A12) Redox Dark Surface (F7)  Sandy Mucky Mineral (S1) Vernal Pools (F9) unless disturbed or problematic.  Hydric Soil Present? Yes No  Remarks:  HydroLOGY  Wetland Hydrology indicators:  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)	Color (moist)  Redox Features  Color (moist)  My Type¹ Loc²  LS Small gravel  LS Small gravel  inclusions  CCS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.  Exture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)  therwise noted.)  Sandy Redox (S5)  Indicators for Problematic Hydric Soils⁴:  1 cm Muck (AP) (LRR C)  Redox Depleted Matrix (S6)  Depleted Matrix (F2)  Depleted Dark Surface (F7)  Redox Depressions (F8)  Vernal Pools (F9)  Redox Depressions (F8)  Water Marks (B1) (Riverine)  Salt Crust (B11)  Salt Crust (B11)  Salt Crust (B11)  Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Hydric Soil Present? Yes No X  Apuatic Invertebrates (B13)  Hydrogen Suffice Cdor (C1)  Drainage Patterns (B10)  Drift Deposits (B2) (Riverine)  Hydrogen Suffice Cdor (C1)  Drainage Patterns (B10)  Orith Ceposits (B2) (Riverine)  Drift Deposits (B2) (Riverine)  Drift Deposits (B2) (Riverine)  Drift Deposits (B2) (Riverine)  Drianage Patterns (B10)	Profile Description: (Describe to Depth (inches) Color (moist)	Matrix	d to document the indicat	tor or confirm the	absence o	of indicators.)	Sampling Point	SP-08	
Depth	Color (moist)	Depth Color (moist)	Matrix	ed to document the indicat	tor or confirm the	absence o	of indicators.)			
(inches) Color (moist) % Color (moist) % Type Loc 3-Texture Re 0 - 16 10YR 3/3 100 LS Sma incl  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2-Location: PL=Pore Lining, M=Matrix.  Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: oo = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)  Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histics (A1) Sandy Redox (S5) Indicators (A1) CLRR B)  Black Histic (A3) Loamy Mucky Mineral (F1) Reduced Vertic (F18)  Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Red Parent Material (TF2)  Stratified Layer (A5) (LRR C) Depleted Matrix (F3) Other (Explain in Remarks)  1 cm Muck (A9) (LRR D) Redox Dark Surface (F6)  Depleted Benv Dark Surface (A11) Depleted Dark Surface (F7)  Thick Dark Surface (A12) Redox Dapressions (F8) wetland Hydrology must be present, unless disturbed or problematic.  Sandy Mucky Mineral (S1) Vernal Pools (F9) Hydrolytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Hydric Soil Present? Yes No  Remarks:  HYDROLOGY  Wetland Hydrology Indicators:  Erimany Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)	Color (moist)	(inches) Color (moist)	t) %							
100	LS Small gravel inclusions    Comparison   C					1	. 2	3-	Domeste	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.   Texture: S = sand; SI = slit; C = clay; L = loam or loamy. Texture Modifier: oo = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)  Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)	inclusions    CS=Covered or Coated Sand Grains.   2   2   2   2   2   2   2   2   2	0 - 16 10YR 3/3		Color (moist)		Type	Loc			
'Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.    'Location: PL=Pore Lining, M=Matrix.  'Texture: S = sand, Si = silt; C = clay; L = loam or loamy. Texture Modifier: oo = coarse; f = fine; vf = very fine; + = heavy (more clay); -= light (less clay)  Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)	(c, CS=Covered or Coated Sand Grains.    2 Location: PL=Pore Lining, M=Matrix.  Exture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)  Indicators for Problematic Hydric Soils <sup>4</sup> :  Sandy Redox (S5)		100					LS		
Fexture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); -= light (less clay)  Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Sandy Redox (S5)  Histic Epipedon (A2)  Stripped Matrix (S6)  Black Histic (A3)  Loamy Mucky Mineral (F1)  Hydrogen Sulfide (A4)  Loamy Gleyed Matrix (F2)  Stratified Layers (A5) (LRR C)  1 cm Muck (A9) (LRR B)  Reduced Vertic (F18)  Hydrogen Sulfide (A4)  Loamy Gleyed Matrix (F3)  Depleted Matrix (F3)  Depleted Below Dark Surface (A11)  Depleted Dark Surface (F6)  Thick Dark Surface (A12)  Redox Depressions (F8)  Wetland hydrology must be present,  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Restrictive Layer (if present):  Type:  Depth (inches):  Hydric Soil Present?  Yes  No  Remarks:	Indicators for Problematic Hydric Soils*:    Sandy Redox (S5)								inclusions	
Fexture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); -= light (less clay)  Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Sandy Redox (S5)  Histic Epipedon (A2)  Stripped Matrix (S6)  Black Histic (A3)  Loamy Mucky Mineral (F1)  Hydrogen Sulfide (A4)  Stratified Layers (A5) (LRR C)  Pepleted Matrix (F3)  Depleted Matrix (F3)  Depleted Dark Surface (F6)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Seleyed Matrix (S4)  Restrictive Layer (if present):  Type:  Depth (inches):  Hydric Soil Present?  Hydric Soil Present?  Secondary Indicators (2 or more required)	Indicators for Problematic Hydric Soils*:    Sandy Redox (S5)	<del></del>	<del>_</del>							
Fexture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); -= light (less clay)  Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Sandy Redox (S5)  Histic Epipedon (A2)  Stripped Matrix (S6)  Black Histic (A3)  Loamy Mucky Mineral (F1)  Hydrogen Sulfide (A4)  Stratified Layers (A5) (LRR C)  Pepleted Matrix (F3)  Depleted Matrix (F3)  Depleted Dark Surface (F6)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Seleyed Matrix (S4)  Restrictive Layer (if present):  Type:  Depth (inches):  Hydric Soil Present?  Hydric Soil Present?  Secondary Indicators (2 or more required)	Indicators for Problematic Hydric Soils*:    Sandy Redox (S5)	<del></del>							-	
Fexture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); -= light (less clay)  Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Sandy Redox (S5)  Histic Epipedon (A2)  Stripped Matrix (S6)  Black Histic (A3)  Loamy Mucky Mineral (F1)  Hydrogen Sulfide (A4)  Stratified Layers (A5) (LRR C)  Pepleted Matrix (F3)  Depleted Matrix (F3)  Depleted Dark Surface (F6)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Seleyed Matrix (S4)  Restrictive Layer (if present):  Type:  Depth (inches):  Hydric Soil Present?  Hydric Soil Present?  Secondary Indicators (2 or more required)	Indicators for Problematic Hydric Soils*:    Sandy Redox (S5)			_						
Fexture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); -= light (less clay)  Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Sandy Redox (S5)  Histic Epipedon (A2)  Stripped Matrix (S6)  Black Histic (A3)  Loamy Mucky Mineral (F1)  Hydrogen Sulfide (A4)  Stratified Layers (A5) (LRR C)  Pepleted Matrix (F3)  Depleted Matrix (F3)  Depleted Dark Surface (F6)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Seleyed Matrix (S4)  Restrictive Layer (if present):  Type:  Depth (inches):  Hydric Soil Present?  Hydric Soil Present?  Secondary Indicators (2 or more required)	Indicators for Problematic Hydric Soils*:    Sandy Redox (S5)									
Fexture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); -= light (less clay)  Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Sandy Redox (S5)  Histic Epipedon (A2)  Stripped Matrix (S6)  Black Histic (A3)  Loamy Mucky Mineral (F1)  Hydrogen Sulfide (A4)  Stratified Layers (A5) (LRR C)  Pepleted Matrix (F3)  Depleted Matrix (F3)  Depleted Dark Surface (F6)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Seleyed Matrix (S4)  Restrictive Layer (if present):  Type:  Depth (inches):  Hydric Soil Present?  Hydric Soil Present?  Secondary Indicators (2 or more required)	Acture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)  Indicators for Problematic Hydric Soils <sup>4</sup> :  Sandy Redox (S5)  Stripped Matrix (S6)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)  Redox Depressions (F8)  Vernal Pools (F9)   Secondary Indicators (2 or more required)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Roots (C3)  Presence of Reduced Iron (C4)  I om Muck (A9) (LRR C)  1 om Muck (A9) (LRR C)  2 cm Muck (A9) (LRR B)  1 om Muck (A9) (LRR C)  2 cm Muck (A9) (LRR C)  4 nd Muck (A9) (LRR B)  2 cm Muck (A9) (LRR C)  4 nd Muck (A9) (LRC C)  4 nd Muck (A10) (LRC C)  5 nd Muck (A10) (LRC C)  6 nd Muck (A10) (LRC C)  6 nd Muck (A10) (LRC C)  6 nd Muck (A10) (LRC C)  7 nd Muck (A10) (LRC C)  8 nd Muck (A10) (LRC C)  8 nd Muck (A10) (LRC C)			_						
Fexture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); -= light (less clay)  Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Sandy Redox (S5)  Histic Epipedon (A2)  Stripped Matrix (S6)  Black Histic (A3)  Loamy Mucky Mineral (F1)  Hydrogen Sulfide (A4)  Stratified Layers (A5) (LRR C)  Pepleted Matrix (F3)  Depleted Matrix (F3)  Depleted Dark Surface (F6)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Seleyed Matrix (S4)  Restrictive Layer (if present):  Type:  Depth (inches):  Hydric Soil Present?  Hydric Soil Present?  Secondary Indicators (2 or more required)	Acture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)  Indicators for Problematic Hydric Soils <sup>4</sup> :  Sandy Redox (S5)  Stripped Matrix (S6)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)  Redox Depressions (F8)  Vernal Pools (F9)   Secondary Indicators (2 or more required)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Roots (C3)  Presence of Reduced Iron (C4)  I om Muck (A9) (LRR C)  1 om Muck (A9) (LRR C)  2 cm Muck (A9) (LRR B)  1 om Muck (A9) (LRR C)  2 cm Muck (A9) (LRR C)  4 nd Muck (A9) (LRR B)  2 cm Muck (A9) (LRR C)  4 nd Muck (A9) (LRC C)  4 nd Muck (A10) (LRC C)  5 nd Muck (A10) (LRC C)  6 nd Muck (A10) (LRC C)  6 nd Muck (A10) (LRC C)  6 nd Muck (A10) (LRC C)  7 nd Muck (A10) (LRC C)  8 nd Muck (A10) (LRC C)  8 nd Muck (A10) (LRC C)	1				2				
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) I cm Muck (A9) (LRR C) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loarny Mucky Mineral (F1) Hydrogen Sulfide (A4) Loarny Gleyed Matrix (F2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) Other (Explain in Remarks)  I cm Muck (A9) (LRR D) Pepleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches): Hydrology Wetland Hydrology Indicators:  Primary Indicators (minimum of one required: check all that apply)  Secondary Indicators (2 or more required)	Indicators for Problematic Hydric Soils <sup>4</sup> :  Sandy Redox (S5)  Stripped Matrix (S6)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Red Parent Material (TF2)  Depleted Dark Surface (F6)  Depleted Dark Surface (F7)  Redox Depressions (F8)  Vernal Pools (F9)  Hydric Soil Present?  Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Roots (C3)  Presence of Reduced Iron (C4)  I midicators for Problematic Hydric Soils <sup>4</sup> :  1 cm Muck (A9) (LRR C)  1 cm Muck (A9) (LRR C)  2 cm Muck (A10) (LRR B)  Reduced Vertic (F18)  Reduced Vertic (F18)  Reduced Vertic (F18)  Red Parent Material (TF2)  Depleted Matrix (F2)  Red Parent Material (TF2)  R									
Histosol (A1) Sandy Redox (S5) 1 cm Muck (A9) (LRR C) Histic Epipedon (A2) Stripped Matrix (S6) 2 cm Muck (A10) (LRR B) Black Histic (A3) Loamy Mucky Mineral (F1) Reduced Vertic (F18) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Red Parent Material (TF2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) Other (Explain in Remarks) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Alndicators of hydrophytic vegetation and Thick Dark Surface (A12) Redox Depressions (F8) Wetland hydrology must be present, unless disturbed or problematic.  Sandy Mucky Mineral (S1) Vernal Pools (F9) unless disturbed or problematic.  Restrictive Layer (if present): Type: Depth (inches): Hydric Soil Present? Yes No  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)	Sandy Redox (\$55)	"Texture: S = sand; Si = silt; C = cla	ay; L = loam or loa	my. Texture Modifier: co = c	coarse; f = fine; vf	= very fine;	+ = heavy (more clay);	- = light (less clay)		
Histosol (A1) Sandy Redox (S5) 1 cm Muck (A9) (LRR C) Histic Epipedon (A2) Stripped Matrix (S6) 2 cm Muck (A10) (LRR B) Black Histic (A3) Loamy Mucky Mineral (F1) Reduced Vertic (F18) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Red Parent Material (TF2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) Other (Explain in Remarks) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Alndicators of hydrophytic vegetation and Thick Dark Surface (A12) Redox Depressions (F8) Wetland hydrology must be present, unless disturbed or problematic.  Sandy Mucky Mineral (S1) Vernal Pools (F9) unless disturbed or problematic.  Restrictive Layer (if present): Type: Depth (inches): Hydric Soil Present? Yes No  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)	Sandy Redox (\$55)	Hydric Soil Indicators: (Applicabl	ole to all I RRs. ur	less otherwise noted.)			Indicators for Pro	oblematic Hydric Soils4:		
Histic Epipedon (A2)  Black Histic (A3)  Loamy Mucky Mineral (F1)  Reduced Vertic (F18)  Hydrogen Sulfide (A4)  Loamy Gleyed Matrix (F2)  Stratified Layers (A5) (LRR C)  1 cm Muck (A9) (LRR D)  Depleted Below Dark Surface (A11)  Depleted Dark Surface (F6)  Depleted Below Dark Surface (A11)  Straty Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (F9)  Redox Depressions (F8)  Wetland Hydrology Indicators:  Hydric Soil Present?  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)	Stripped Matrix (S6)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)  Redox Depressions (F8)  Vernal Pools (F9)  Apply)  Salt Crust (B11)  Boltic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Roots (C3)  Presence of Reduced Vertic (F18)  Reduxed Vertic (F18)  Red Varient (F1)  Red Varient (F1)  Red Varient (F10)  Red Varie									
Black Histic (A3) Loamy Mucky Mineral (F1) Reduced Vertic (F18)  Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Red Parent Material (TF2)  Stratified Layers (A5) (LRR C) Depleted Matrix (F3) Other (Explain in Remarks)  1 cm Muck (A9) (LRR D) Redox Dark Surface (F6)  Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Indicators of hydrophytic vegetation and Thick Dark Surface (A12) Redox Depressions (F8) wetland hydrology must be present, Sandy Mucky Mineral (S1) Vernal Pools (F9) unless disturbed or problematic.  Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches): Hydric Soil Present? Yes No  Remarks:  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)	Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Red Parent Material (TF2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Vernal Pools (F9)  Hydric Soil Present?  Secondary Indicators (2 or more required) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4)  Redox Vertical (F18) Red Parent Material (TF2) Red Parent Material (TF2) Redox Parent Mater									
Hydrogen Sulfide (A4)  Loamy Gleyed Matrix (F2)  Stratified Layers (A5) (LRR C)  Depleted Matrix (F3)  1 cm Muck (A9) (LRR D)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Restrictive Layer (if present):  Type:  Depth (inches):  Hydric Soil Present?  Hydric Soil Present?  Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)	Loamy Gleyed Matrix (F2)							, ,, ,		
Stratified Layers (A5) (LRR C)  Depleted Matrix (F3)  Cother (Explain in Remarks)  1 cm Muck (A9) (LRR D)  Redox Dark Surface (F6)  Depleted Below Dark Surface (A11)  Depleted Dark Surface (F7)  Alndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Restrictive Layer (if present):  Type:  Depth (inches):  Hydric Soil Present?  Yes No  Remarks:  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)	Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Vernal Pools (F9)  Hydric Soil Present?  Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4)  Pidicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Hydric Soil Present?  Yes No X  Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4)  Crayfish Burrows (C8)				, ,					
1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) wetland hydrology must be present, unless disturbed or problematic.  Sandy Mucky Mineral (S1) Vernal Pools (F9) unless disturbed or problematic.  Restrictive Layer (if present): Type: Depth (inches): Hydric Soil Present? Yes No  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)	Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Wetland hydrology must be present, unless disturbed or problematic.  Hydric Soil Present? Yes No X  Apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4)  All Microsoft hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Hydric Soil Present? Yes No X  Available Present?  Ves No DX  Available Present (B10)  Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)				. ,					
Depleted Below Dark Surface (A11)  Depleted Dark Surface (F7)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Restrictive Layer (if present):  Type:  Depth (inches):  Hydric Soil Present?  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  All Indicators of hydrophytic vegetation and wetland hydrology must be present, wetland hydrology must be present, unless disturbed or problematic.  Hydric Soil Present?  Vernal Pools (F9)  Wetland Hydric Soil Present?  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)	Apply Secondary Indicators (2 or more required) Salt Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4)  Author Wetland hydrology must be present, unless disturbed or problematic.  Hydric Soil Present?  Yes No X  Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4)  Author Wetland hydrology must be present, wetland hydrology must be present, unless disturbed or problematic.							,		
Thick Dark Surface (A12) Redox Depressions (F8) wetland hydrology must be present, unless disturbed or problematic.  Sandy Mucky Mineral (S1) Vernal Pools (F9) unless disturbed or problematic.  Restrictive Layer (if present): Type: Depth (inches): Hydric Soil Present? Yes No  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)	Redox Depressions (F8) wetland hydrology must be present, unless disturbed or problematic.  Hydric Soil Present? Yes No X  Apply) Secondary Indicators (2 or more required) Salt Crust (B11) Water Marks (B1) (Riverine) Biotic Crust (B12) Sediment Deposits (B2) (Riverine) Aquatic Invertebrates (B13) Drift Deposits (B3) (Riverine) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Oxidized Rhizospheres along Living Roots (C3) Dry-Season Water Table (C2) Presence of Reduced Iron (C4) Crayfish Burrows (C8)		(A11)				<sup>4</sup> Indicators of hydro	ophytic vegetation and		
Sandy Mucky Mineral (S1) Vernal Pools (F9) unless disturbed or problematic.  Restrictive Layer (if present):     Type:     Depth (inches): Hydric Soil Present? Yes No  Remarks:  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)	Apply) Secondary Indicators (2 or more required) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4)  Hydric Soil Present?  Yes No X  Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B2) (Riverine) Drainage Patterns (B10) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4)  Crayfish Burrows (C8)									
Restrictive Layer (if present):     Type:     Depth (inches):  Hydric Soil Present?  Yes  No  Remarks:  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)	Secondary Indicators (2 or more required)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Roots (C3)  Presence of Reduced Iron (C4)  Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)	Thick Dark Surface (A12)								
Restrictive Layer (if present):     Type:     Depth (inches):  Hydric Soil Present?  Yes  No  Remarks:  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)	Secondary Indicators (2 or more required)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Roots (C3)  Presence of Reduced Iron (C4)  Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)			Vernal Pools (F9)						
Type: Depth (inches): Hydric Soil Present? Yes No  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required)	Secondary Indicators (2 or more required)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Roots (C3)  Presence of Reduced Iron (C4)  Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)	Sandy Mucky Mineral (S1)		Vernal Pools (F9)			unices disturbed	or problematio.		
Depth (inches):    Hydric Soil Present? Yes No	Secondary Indicators (2 or more required)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Roots (C3)  Presence of Reduced Iron (C4)  Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)		Vernal Pools (F9)		ı	unicas disturbed	or problematio.		
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)	Secondary Indicators (2 or more required)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Roots (C3)  Presence of Reduced Iron (C4)  Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present):		Vernal Pools (F9)			unices disturbed	or problematic.		
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)	Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Roots (C3)  Presence of Reduced Iron (C4)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type:		Vernal Pools (F9)					No. Y	
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)	Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Roots (C3)  Presence of Reduced Iron (C4)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type:		Vernal Pools (F9)					No X	
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)	Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Roots (C3)  Presence of Reduced Iron (C4)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):		Vernal Pools (F9)					No X	
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)	Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Roots (C3)  Presence of Reduced Iron (C4)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):		Vernal Pools (F9)					No X	
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)	Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Roots (C3)  Presence of Reduced Iron (C4)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):		Vernal Pools (F9)					No X	
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)	Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Roots (C3)  Presence of Reduced Iron (C4)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):		Vernal Pools (F9)					No X	
Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)	Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Roots (C3)  Presence of Reduced Iron (C4)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):		Vernal Pools (F9)					No X	
	Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Roots (C3)  Presence of Reduced Iron (C4)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:		Vernal Pools (F9)					No X	
	Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Roots (C3)  Presence of Reduced Iron (C4)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:  HYDROLOGY		Vernal Pools (F9)					No X	
Deligious valenta in San Cristiani San Cristiani Walen Marks (D.H. (Kriverine)	Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Roots (C3)  Presence of Reduced Iron (C4)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators:	e required: check a				Hydric Soil Present?	Yes	No X	
	Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Roots (C3)  Presence of Reduced Iron (C4)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one	e required; check a	all that apply)			Hydric Soil Present?	Yes ors (2 or more required)	No X	
	Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Roots (C3)  Presence of Reduced Iron (C4)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1)	e required; check a	all that apply)Salt Crust (B11)			Hydric Soil Present?  Secondary Indicate Water Mar	Yes  ors (2 or more required) ks (B1) (Riverine)	No X	
	Oxidized Rhizospheres along Living Roots (C3)  Presence of Reduced Iron (C4)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2)	e required; check a	all that apply)Salt Crust (B11)Biotic Crust (B12)	s (B13)		Hydric Soil Present?  Secondary Indicate Water Mar Sediment I	Yes ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine)	No X	
	Presence of Reduced Iron (C4) Crayfish Burrows (C8)	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3)		all that apply)Salt Crust (B11)Biotic Crust (B12)Aquatic Invertebrates	, ,		Secondary Indicate Water Mar Sediment I Drift Depos	Yes	No X	
		Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrivering	ne)	all that apply)Salt Crust (B11)Biotic Crust (B12)Aquatic InvertebratesHydrogen Sulfide Od	dor (C1)		Secondary Indicate Water Mar Sediment I Drift Depos	Yes	No X	
	Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrivering Sediment Deposits (B2) (Nonri	ne) riverine)	all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate: Hydrogen Sulfide Od Oxidized Rhizospher	dor (C1) res along Living Ro		Secondary Indicate Water Mar Sediment I Drift Depos	Yes  Ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2)	No X	
Inundation Visible on Aerial Imagery (B7)  Thin Muck Surface (C7)  Shallow Aquitard (D3)	<u> </u>	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrivering Sediment Deposits (B2) (Nonri	ne) riverine)	all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate: Hydrogen Sulfide Od Oxidized Rhizospher Presence of Reduce	dor (C1) res along Living Ro ed Iron (C4)	poots (C3)	Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi	Yes  Ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) urrows (C8)		
		Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine Sediment Deposits (B2) (Nonriverine Drift Deposits (B3) (Nonriverine Surface Soil Cracks (B6)	ne) riverine) ne)	all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Od Oxidized Rhizospher Presence of Reduce	dor (C1) res along Living Ro ed Iron (C4) on in Tilled Soils (0	poots (C3)	Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi Saturation	Yes  Ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9)		
		Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine Sediment Deposits (B2) (Nonri Drift Deposits (B3) (Nonriverine Surface Soil Cracks (B6) Inundation Visible on Aerial Ima	ne) riverine) ne)	all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Od Oxidized Rhizospher Presence of Reduces Recent Iron Reductic	dor (C1) res along Living Ro d Iron (C4) on in Tilled Soils (C	poots (C3)	Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi Saturation Shallow Ac	Yes  Ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9 quitard (D3)		
Field Observations:	Other (Explain in Remarks)  FAC-Neutral Test (D5)	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine Sediment Deposits (B2) (Nonriverine Drift Deposits (B3) (Nonriverine Surface Soil Cracks (B6) Inundation Visible on Aerial Imal	ne) riverine) ne)	all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Od Oxidized Rhizospher Presence of Reduces Recent Iron Reductic	dor (C1) res along Living Ro d Iron (C4) on in Tilled Soils (C	poots (C3)	Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi Saturation Shallow Ac	Yes  Ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9 quitard (D3)		
Surface Water Present? Yes No X Depth (inches):		Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine Sediment Deposits (B2) (Nonri Drift Deposits (B3) (Nonriverine Surface Soil Cracks (B6) Inundation Visible on Aerial Ima	ne) riverine) ne)	all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Od Oxidized Rhizospher Presence of Reduces Recent Iron Reductic	dor (C1) res along Living Ro d Iron (C4) on in Tilled Soils (C	poots (C3)	Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi Saturation Shallow Ac	Yes  Ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9 quitard (D3)		
	Other (Explain in Remarks)  FAC-Neutral Test (D5)	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine Sediment Deposits (B2) (Nonriverine Drift Deposits (B3) (Nonriverine Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Water-Stained Leaves (B9)  Field Observations:	ne) riverine) ne) nagery (B7)	all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Od Oxidized Rhizospher Presence of Reduces Recent Iron Reductic Thin Muck Surface (t	dor (C1) res along Living Ro red Iron (C4) on in Tilled Soils (C C7) marks)	poots (C3)	Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi Saturation Shallow Ac	Yes  Ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9 quitard (D3)		
Water Table Present? Yes No X Depth (inches): Wetland Hydrology Present?	Other (Explain in Remarks) FAC-Neutral Test (D5)  X Depth (inches):	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine Sediment Deposits (B2) (Nonriverine Drift Deposits (B3) (Nonriverine Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Water-Stained Leaves (B9)  Field Observations: Surface Water Present?	riverine) ne) agery (B7) Yes	all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Od Oxidized Rhizospher Presence of Reducei Recent Iron Reductic Thin Muck Surface (t Other (Explain in Ret	dor (C1) res along Living Ro red Iron (C4) on in Tilled Soils (C C7) marks)	poots (C3)	Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi Saturation Shallow Ac FAC-Neutr	Yes		
Water Table Present?         Yes         No         X         Depth (inches):         Wetland Hydrology Present?           Saturation Present?         Yes         No         X         Depth (inches):         Yes         No	Other (Explain in Remarks)         FAC-Neutral Test (D5)           X         Depth (inches):           X         Depth (inches):           Wetland Hydrology Present?	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine Sediment Deposits (B2) (Nonriverine Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imalian Water-Stained Leaves (B9)  Field Observations: Surface Water Present? Water Table Present? Saturation Present?	riverine) ne) sagery (B7) Yes Yes	all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Od Oxidized Rhizospher Presence of Reduces Recent Iron Reductic Thin Muck Surface (( Other (Explain in Ref	dor (C1) res along Living Ro red Iron (C4) on in Tilled Soils (C C7) marks)  Depth (inches): Depth (inches):	poots (C3)	Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi Saturation Shallow Ac FAC-Neutr	Yes  Ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9 quitard (D3) ral Test (D5)		
Water Table Present? Yes No X Depth (inches): Wetland Hydrology Present?	Other (Explain in Remarks)  FAC-Neutral Test (D5)  X Depth (inches): X Depth (inches): Wetland Hydrology Present?	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine Sediment Deposits (B2) (Nonriverine Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imalian Water-Stained Leaves (B9)  Field Observations: Surface Water Present? Water Table Present? Saturation Present?	riverine) ne) sagery (B7) Yes Yes	all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Od Oxidized Rhizospher Presence of Reduces Recent Iron Reductic Thin Muck Surface (( Other (Explain in Ref	dor (C1) res along Living Ro red Iron (C4) on in Tilled Soils (C C7) marks)  Depth (inches): Depth (inches):	poots (C3)	Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi Saturation Shallow Ac FAC-Neutr	Yes  Ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9 quitard (D3) ral Test (D5)		
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	<u> </u>	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrivering Sediment Deposits (B2) (Nonri	ne) riverine)	all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate: Hydrogen Sulfide Od Oxidized Rhizospher Presence of Reduce	dor (C1) res along Living Ro ed Iron (C4)	poots (C3)	Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi	Yes  Ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) urrows (C8)		
	maon canaco (cr)	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine Sediment Deposits (B2) (Nonriverine Drift Deposits (B3) (Nonriverine Surface Soil Cracks (B6)	ne) riverine) ne)	all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Od Oxidized Rhizospher Presence of Reduce	dor (C1) res along Living Ro ed Iron (C4) on in Tilled Soils (0	poots (C3)	Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi Saturation	Yes  Ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9)		
		Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine Sediment Deposits (B2) (Nonri Drift Deposits (B3) (Nonriverine Surface Soil Cracks (B6) Inundation Visible on Aerial Ima	ne) riverine) ne)	all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Od Oxidized Rhizospher Presence of Reduces Recent Iron Reductic	dor (C1) res along Living Ro d Iron (C4) on in Tilled Soils (C	poots (C3)	Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi Saturation Shallow Ac	Yes  Ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9 quitard (D3)		
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		Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine Sediment Deposits (B2) (Nonriverine Drift Deposits (B3) (Nonriverine Surface Soil Cracks (B6) Inundation Visible on Aerial Imal	ne) riverine) ne)	all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Od Oxidized Rhizospher Presence of Reduces Recent Iron Reductic	dor (C1) res along Living Ro d Iron (C4) on in Tilled Soils (C	poots (C3)	Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi Saturation Shallow Ac	Yes  Ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9 quitard (D3)		
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	Other (Explain in Remarks) FAC-Neutral Test (D5)	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine Sediment Deposits (B2) (Nonriverine Drift Deposits (B3) (Nonriverine Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Water-Stained Leaves (B9)  Field Observations:	ne) riverine) ne) nagery (B7)	all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Od Oxidized Rhizospher Presence of Reduces Recent Iron Reductic Thin Muck Surface (t	dor (C1) res along Living Ro red Iron (C4) on in Tilled Soils (C C7) marks)	poots (C3)	Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi Saturation Shallow Ac	Yes  Ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9 quitard (D3)		
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	Other (Explain in Remarks) FAC-Neutral Test (D5)  X Depth (inches):	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine Sediment Deposits (B2) (Nonriverine Drift Deposits (B3) (Nonriverine Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Water-Stained Leaves (B9)  Field Observations: Surface Water Present?	riverine) ne) agery (B7) Yes	all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Od Oxidized Rhizospher Presence of Reducei Recent Iron Reductic Thin Muck Surface (t Other (Explain in Ret	dor (C1) res along Living Ro red Iron (C4) on in Tilled Soils (C C7) marks)	poots (C3)	Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi Saturation Shallow Ac FAC-Neutr	Yes		
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Water Table Present?         Yes         No         X         Depth (inches):         Wetland Hydrology Present?           Saturation Present?         Yes         No         X         Depth (inches):         Yes         No	Other (Explain in Remarks)  FAC-Neutral Test (D5)  X Depth (inches):  X Depth (inches):  Wetland Hydrology Present?	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine Sediment Deposits (B2) (Nonriverine Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Water-Stained Leaves (B9)  Field Observations: Surface Water Present? Water Table Present? Saturation Present?	riverine) ne) sagery (B7) Yes Yes	all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Od Oxidized Rhizospher Presence of Reduces Recent Iron Reductic Thin Muck Surface (( Other (Explain in Ref	dor (C1) res along Living Ro red Iron (C4) on in Tilled Soils (C C7) marks)  Depth (inches): Depth (inches):	poots (C3)	Secondary Indicate Water Mar Sediment I Drift Depos Drainage F Dry-Seaso Crayfish Bi Saturation Shallow Ac FAC-Neutr	Yes  Ors (2 or more required) ks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9 quitard (D3) ral Test (D5)		

## **Appendix E**

**Special Status Species** 

**Federally and State Listed Species Occurrence Potential** 

Common Name	Federal	State Status	Habitat Characteristics	Occurrence Potential
(Scientific Name)	Status			
Mammals				
Washington ground squirrel (Urocitellus washingtoni)	Not Listed	Endangered	Washington ground squirrels inhabit sites with sandy-loam texture soils that are deep to accommodate its burrow structures. Habitat also requires sufficient forage. Shrubsteppe and native grassland habitats are preferred. Silt loam soils, especially those classified as Warden soils, may be the most important habitat feature (WDFW 2023). There are ORBIC records of occurence of the species on and near the site.	Present. Site survey confirmed presence in one location. Suitable soil type (Prosser silt loam)/habitat present.
Birds				
Bald eagle (Haliaeetus leucocephalus )	Delisted. Bald and Golden Eagle Protection Act	Not Listed	Seacoasts, rivers, large lakes or marshes or other large bodies of open water with an abundance of fish. Typically requires old-growth and mature stands of coniferous or hardwood trees for perching, roosting, and nesting (National Wildlife Federation 2023).	Absent. Suitable habitat not present.
Golden eagle (Aquila	Delisted. Bald	Not Listed	Cliffs and steep escarpments in grassland, chapparal, shrubland, and forest for nesting, typically near	Absent. Suitable escarpments and
chrysaetos)	and Golden Eagle Protection Act		canyonlands, rimrock terrain, and riverside cliffs and bluffs at elevations up to 12,000 feet (Cornell Lab of Ornithology 2023).	elevation not present.
Fish		l .		1
Bull trout (Salvelinus confluentus)	Threatened	Sensitive-Critical	Bottom of deep pools in cold rivers and large tributary streams, often in moderate to fast currents with temperatures 45°–50° F. Now confined mostly to headwater streams (FWS 2023).	Absent. Suitable aquatic habitat not present.
Pacific lamprey (Entosphenus tridentatus)	Species of Concern	Sensitive	Riffle and side channel habitat; juveniles emigrate to ocean where they mature into adults (USFWS 2023).	<b>Absent.</b> Suitable aquatic habitat not present.
Steelhead ( <i>Oncorhynchus mykiss</i> pop. 28) (Middle Columbia River ESU, summer run)	Threatened	Sensitive-Critical	All salmonids require sufficient invertebrate organisms for food; cool, flowing waters free of pollutants; high dissolved oxygen concentrations in rearing and incubation habitats; water of low sediment content during the growing season (for visual feeding); clean gravel substrate for reproduction; and unimpeded migratory access to and from spawning and rearing areas (USWFS 2023). Documented in Columbia River and tributaries (ORBIC 2023).	Absent. Suitable aquatic habitat not present.
Reptiles				
Northwestern Pond Turtle (Actinemys marmorata)	Proposed Threatened	Not Listed	Can be found in marshes, streams, rivers, ponds, and lakes. They use sparsely-vegetated ground nearby for digging nests and moist, shrubby or forested areas for aestivation and over-wintering. They require sunny logs/vegetation for basking and safe movement corridors between aquatic and terrestrial habitat (Oregon Conservation Strategy 2023).	<b>Absent.</b> Suitable aquatic habitat not present.

### **Federally and State Listed Species Occurrence Potential**

Common Name	Federal	State Status	Habitat Characteristics	Occurrence Potential
(Scientific Name)	Status			
Invertebrate Animals				
Monarch butterfly ( <i>Danaus</i> plexippus)	Candidate	Not Listed	•	<b>Not Likely to Occur.</b> May forage on-site, however, supply of forage material is very limited.
Plants				
Lawrence's milkvetch (Astragalus collinus var. laurentii)	Not Listed	Threatened	This species is endemic to the Columbia Plateau of northern Oregon, within the Columbia Basin ecoregion. The majority of known occurrences are small and fragmented, with poor estimated viability. The species is listed to occur in Morrow County. It occupies sandy or rocky soils overlaying basalt on dry slopes mostly at elevations ranging from 2000 to 3400 ft.	Absent. Suitable aquatic habitat not present.

#### **NOTES**

### Occurrence Potential

Present = Known recent records. Species observed during recent survey.

May occur = Species is expected to occur and habitat meets special requirements.

Not likely to occur = Habitat is only marginally suitable or is suitable but not within species geographic range.

Absent = Habitat does not meet species requirements as currently understood in the scientific community. Project

site is outside species geographic range. Surveys conducted to verify absence.

### Federal Categories (USFWS and NMFS)

LE = Listed as endangered by the federal government

LT = Listed as threatened by the federal government

PE/PT = Proposed for listing as endangered or threatened

C = Candidate for federal listing

SOC = Species of concern

#### State Categories (ODFW for fish/wildlife, ODA for plants)

LE = Listed as endangered by state

LT = Listed as threatened by state

PE/PT = Proposed for listing as endangered or threatened

C = Candidate for state listing

S = Sensitive

C = Sensitive critical

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