

**WETLAND AND STREAM ASSESSMENT REPORT  
BLUEBIRD TO GARDEN SPRINGS 230 kV WEST PLAINS  
TRANSMISSION LINE PROJECT  
SPOKANE COUNTY, WASHINGTON**

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## EXECUTIVE SUMMARY

Twenty aquatic resources were identified within or in the near vicinity of the study area. The aquatic resources include 11 wetlands and 9 streams.

Wetlands were rated using the Washington State Wetland Rating System for Eastern Washington. Wetland ratings resulted in 8 Category III wetlands and 3 Category IV wetlands.

Stream types were mapped based on the Washington State Department of Natural Resources Forest Practices Application Mapping Tool (FPAMT) and evaluated during site visits. Two named Type F (Fish bearing) streams were identified (Deep Creek and Coulee Creek) and the remainder were assumed to be Type Np (Non Fish bearing perennial) or not a stream. Only one of the unnamed drainages had stream characteristics visible in the study area.

## LIST OF ACRONYMS AND ABBREVIATIONS

AgACIS	Agricultural Applied Climate Information System
AW	Arid West
DP	Data Point
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FPAMT	Forest Practices Application Mapping Tool
HUC	Hydrologic Unit Code
NAIP	National Aerial Imagery Program
NHD	National Hydrography Dataset
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
PEM	Palustrine Emergent
PFO	Palustrine Forested
Project	Bluebird to Garden Springs 230 kV West Plains Transmission Line Project
REM	Riverine Emergent
ROW	Right-of-Way
SCCAO	Spokane County Critical Areas Ordinance
TMDL	Total Maximum Daily Load
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
WRIA	Water Resources Inventory Area
WSAR	Wetland and Stream Assessment Report
WSS	Web Soil Survey

## 1.0 INTRODUCTION

This report identifies the location of and describes wetlands, streams, and other waters of the U.S. within the study area for the Bluebird to Garden Springs 230 kV West Plains Transmission Line Project (Project). This information will be used to avoid and minimize impacts to aquatic resources as practicable and to support the permitting for any unavoidable impacts. Due to the construction schedule and property permissions, this report will cover construction of the transmission line only. A separate Wetland and Stream Assessment Report (WSAR) was developed for the Bluebird Substation location.

### 1.1 STUDY AREA

The Project is located in Spokane County, Washington within Water Resources Inventory Area (WRIA) 54 – Lower Spokane watershed and WRIA 56 – Hangman watershed. It is within the Land Resource Region (LRR) B, and Major Land Resource Area (MLRA) Palouse and Nez Perce Prairies. The project study area begins south of the proposed Bluebird Substation near Coulee Hites Road and Bluebird Lane and extends southeast, through the eastern side of the Spokane International Airport and ends at the Garden Springs Substation south of I-90.

**Legal:** Listed in order from north to south.

T 26 N, R 41 E, Section 17  
T 26 N, R 41 E, Section 20  
T 26 N, R 41 E, Section 21  
T 26 N, R 41 E, Section 28  
T 26 N, R 41 E, Section 27  
T 26 N, R 41 E, Section 34  
T 26 N, R 41 E, Section 35  
T 25 N, R 41 E, Section 02  
T 25 N, R 41 E, Section 01  
T 25 N, R 41 E, Section 12  
T 25 N, R 42 E, Section 07  
T 25 N, R 42 E, Section 18  
T 25 N, R 42 E, Section 17  
T 25 N, R 42 E, Section 20  
T 25 N, R 42 E, Section 21  
T 25 N, R 42 E, Section 28  
T 25 N, R 42 E, Section 27

**Approximate Coordinates:**

47.744577, -117.654102 to 47.628959, -117.483971

The study area for onsite field investigation includes the existing easements and proposed easements where permission was granted. This includes a 100 ft wide area centered on the proposed transmission line centerline. The lands adjacent to the study area (approximately 200 ft from the study area) was

reviewed for potential wetlands and other waters of the U.S. using aerial imagery and visual observation from the easements. If wetlands or streams were found, buffers were calculated to determine if buffers could be impacted by the project. See **Figure 1** for a Vicinity Map.

Vicinity Map Bluebird Transmission Line 9/3/2025 3:44 PM

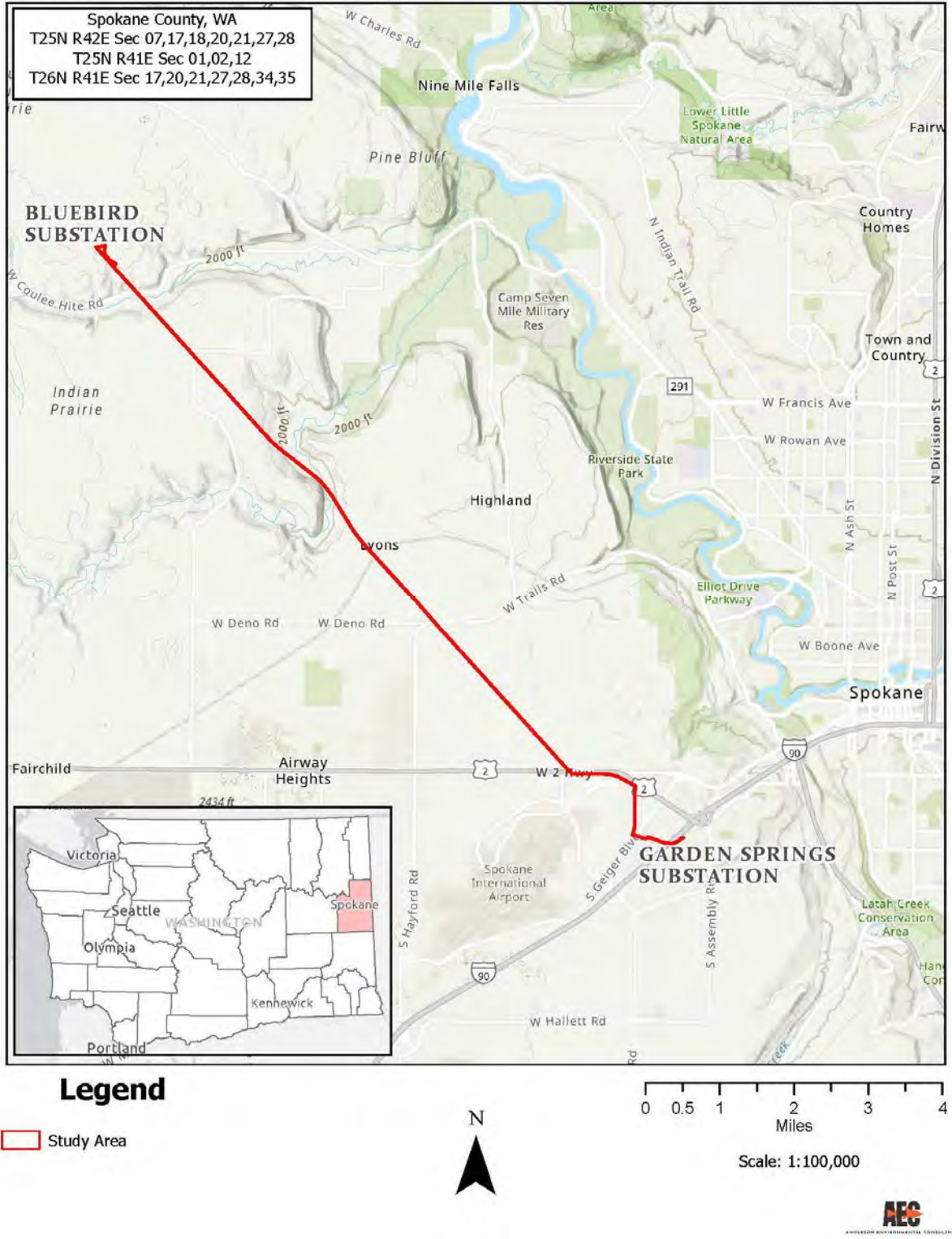


Figure 1: Vicinity Map

## 1.2 PROJECT DESCRIPTION

Avista Corporation is proposing to construct the Bluebird to Garden Springs 230 kV West Plains Transmission Line Project which would increase the reliability, safety and capacity of the transmission line system and connect the proposed Bluebird Substation and the Garden Springs Substation over an approximately 13-mile distance. Construction will involve installing new single poles made of weathered steel and stringing 230kV conductors (cables) and optical ground wire. Existing poles will be removed or replaced.

## 2.0 METHODS

### 2.1 PROTOCOLS

The wetland delineation has been conducted in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) with the Regional Supplement to the U.S. Army Corps of Engineers Wetland Delineation Manual: Arid West (AW) (USACE 2010). The U.S. Army Corps of Engineers (USACE) and the State of Washington recognize the use of these methodologies for delineating wetlands in specific vegetation zones.

Wetlands were classified using the U.S. Fish and Wildlife Service (USFWS) classification system (Cowardin). Wetlands were rated using the Washington State Wetland Rating System for Eastern Washington and applicable updates (Hruby, 2015) The Spokane County Code references the USACE Corps Methodology, Arid West Supplement and 2014 version of the Rating System for critical areas ordinance compliance. In addition, for planning purposes expected buffers per the Spokane Critical Areas Ordinance were applied to mapped drainages based on mapped stream types; however, streams were not retyped.

### 2.2 BACKGROUND INFORMATION

Information was collected prior to field evaluation to assist with data collection and to provide information regarding the Project study area. Data sources included the following:

1. Aerial Imagery-National Aerial Imagery Program (NAIP) (USDA 2019)
2. Precipitation Data, Two and Thirty-Year Monthly Averages Precipitation (USDA 2025a)
3. Websoil Survey (WSS) for Spokane County, Washington (USDA 2025b)
4. U.S. Geological Survey (USGS) National Hydrography Dataset (NHD) (USGS 2025)
5. USFWS National Wetland Inventory (NWI) maps (USFWS 2025)
6. Washington State Department of Natural Resources (WADNR) Forest Practices Application Mapping Tool (FPAMT) (FPAMT 2025)

### 2.3 FIELD INVESTIGATION

The study area encompasses the areas associated with the new transmission line located within the utility easement as requested by Avista Corporation, in Spokane County, WA. The aquatic resources

were delineated by Anderson Environmental Consulting LLC staff on April 16, 22, 23, and 24, May 8, and July 31, 2025. See **Attachment A** for a maps of the wetlands and streams.

Formal wetland data points were selected based on topography, hydrophytic vegetation, saturated soils, and drainage patterns. In addition, all areas that were mapped as wetland in the NWI received a data point (DP). Each DP was assigned a unique number and a data form from the AW Supplement was completed in both upland and wetland representative areas to delineate the wetland boundaries. Additional soil pits were dug around wetland boundaries to confirm that the recorded DPs are representative of the soil types and hydrologic conditions of each wetland. If no wetland vegetation or wetland hydrology was noted, then no DPs were recorded, and the area is assumed to be upland. Permission was not granted to conduct wetland delineation along Coulee Creek within the study area; so only the creek location is shown on the maps and described in the report. The area will need to be further evaluated after an easement is obtained.

Where the Forest Practices Application Mapping Tool (FPAMT) or NWI indicated there were streams, photos were taken, water flow (or absence of flow) were noted and signs of OHWM were observed within the study area. Where streams were mapped as N (Non Fish), a determination was made as to whether it was perennial (Np) or seasonal (Ns). If streams were mapped as F (Fish bearing) the stream type was unchanged. Streams mapped as U (Unclassified) were not typed but were assumed for the purpose of this report to be Np and buffers applied for planning purposes; however, with further evaluation, the U stream types could be eliminated from mapping with no applicable buffer. Stream buffers were applied per the Spokane County Critical Areas Ordinance (SCCAO).

Wetland boundaries and DPs were recorded using a Trimble DA2 resource grade GPS with sub-foot (ft) accuracy . Wetland DPs were flagged with pink pin-flags and labeled “DP” followed by the assigned DP number (e.g. DP1). Field data was mapped and overlain on aerial imagery from 2019. Field data was mapped and figures, buffers and area calculations were completed in ArcGIS Pro 3.2.2.

## 2.4 VEGETATION

Hydrophytic vegetation consists of those plant species that have adapted to growing in substrates that are consistently deficient of oxygen due to saturated soil conditions. Five basic groups of vegetation are recognized based on their frequency of occurrence in wetlands. These categories, referred to as the “wetland indicator status” (from the wettest to driest habitats) are as follows:

- obligate wetland (OBL)
- facultative wetland (FACW)
- facultative (FAC)
- facultative upland (FACU)
- upland (UPL)

Vegetative communities with dominant plants that could be considered distinctively hydrophytic or upland were used to identify the best DPs. Dominant plant species were visually estimated and recorded for each point and for each wetland based on variably shaped communities. The wetland indicator status of each dominant plant was determined based on the U.S. Army Corps of Engineers, Wetland Plant List (USACE 2023).

Tree layers were recorded within an approximate 30-foot radius and shrub and herbaceous vegetation within an approximate 5-foot radius. The shape of the vegetative area was adjusted to best incorporate the representative community. A determination of dominance of hydrophytic vegetation was made using the 50-20 rule. Dominant plant species were determined by estimating the percentage of aerial cover per stratum. If over 50 percent of the dominant species included by the above criteria were FAC, FACW or OBL, the vegetative community was considered hydrophytic.

## 2.5 SOILS

Mapped soil units were evaluated based on the USDA Web Soil Survey (WSS) to determine expected soil types. These soils were evaluated in the field to determine the presence of hydric soils. Hydric soils are soils formed exclusively under saturated soil conditions. Test pits were excavated at each data point, and data was recorded for the soil profiles. This included determining soil colors using the Munsell (2009) color charts, investigating for redoximorphic features, reduced soils, depleted soils, organic matter, texture, and other positive indicators for hydric soils.

## 2.6 HYDROLOGY

Positive hydrological field indicators were observed and recorded as applicable for each DP. These are indicators that the site is subject to flooding, ponding or saturation for a duration that is sufficient to create anaerobic soil conditions. Hydrological indicators should be present even if the site is not currently inundated. Positive hydrological indicators may include features such as oxidized rhizospheres, drainage patterns, saturation, and drift deposits.

# 3.0 EXISTING CONDITIONS

## 3.1 LANDSCAPE SETTING

The project area consists of rural residences, existing transmission lines, BPA easements, small-scale agriculture, an airport, and both low and high volume roadways. The Project ranges from approximately 1,980 to 2,380 ft above sea level.

## 3.2 CLIMATE

According to the Natural Resources Conservation Service (NRCS) Agricultural Applied Climate Information System (AgACIS) 30-year averages for the weather station at Spokane International Airport, the area receives an average of 16.43 inches of rainfall per year. Summer temperatures generally reach the high 60's (Fahrenheit (°F)) and winter temperatures dip into the low 30's (°F)) (USDA 2025a).

The weather station shows that precipitation rates have varied but are generally normal for this time of year and compared to previous years.

See **Attachment B** for the Antecedent Precipitation information.

### 3.3 VEGETATION

The study area consists of plant communities including emergent wetland, forested wetland, and upland communities.

The emergent wetland areas are generally dominated by reed canarygrass (*Phalaris arundinacea*) and cattail (*Typha latifolia*), some with aquatic vegetation. Forested wetland communities consisted of quaking aspen (*Populus tremuloides*) and reed canarygrass.

Much of the upland areas are dominated by Ponderosa pine (*Pinus ponderosa*), serviceberry (*Amelanchier alnifolia*), Idaho fescue (*Festuca idahoensis*), Japanese brome (*Bromus japonicus*), Sandberg bluegrass (*Poa secunda*), and common mullein (*Verbascum thapsus*).

### 3.4 SOILS

USDA soil units within the study area are detailed in **Table 1**.

**Table 1: Soils in Study Area**

Soil ID Number	Soil Name	Drainage Type	Typical Location	Depth to Water Table	Hydric (Y/N)
<b>1020</b>	Cocolalla ashy silt loam, 0-3% slopes	Poorly drained	Drainageways, depressions	11 inches	Y
<b>1021</b>	Cocolalla-Hardesty complex, 0-3% slopes	Poorly drained / Moderately well drained	Depressions, drainageways	30 inches	Y (Cocolalla only)
<b>1203</b>	Haploxerolls ashy silt loam, channeled, 0-8% slopes	Moderately well drained	Stream terraces	50 inches	N
<b>2053</b>	Speigle-Rock outcrop complex, 15-30% slopes	Well drained	Escarpments, side slopes	>80 inches	N
<b>2054</b>	Speigle-Rubble land-Rock outcrop complex, 30-90% slopes	Well drained	Escarpments, side slopes	>80 inches	N
<b>3026</b>	Phoebe, dry-Battleplain complex, 0-8% slopes	Well drained / Somewhat excessively drained	Outwash plains	>80 inches	N
<b>3040</b>	Cheney-Alecanyon complex, 0-8% slopes	Well drained / Somewhat excessively drained	Outwash plains	>80 inches	N
<b>3041</b>	Alecanyon, very stony-Cheney complex, 0-8% slopes	Somewhat excessively drained / Well drained	Outwash plains	>80 inches	N
<b>3044</b>	Cheney ashy silt loam, 0-8% slopes	Well drained	Outwash plains	>80 inches	N
<b>3045</b>	Rockly-Deno complex, 0-15% slopes	Well drained	Plateaus, uplands	60 inches	N
<b>3046</b>	Cheney-Seaboldt, dry, complex, 0-8% slopes	Well drained / Moderately deep	Outwash plains, plateaus	>80 inches	N
<b>3110</b>	Fourmound-Stutler complex, 0-8% slopes	Well drained	Plateaus	>60 inches	N
<b>3113</b>	Stutler-Springdale complex, 3-15% slopes	Well drained / Somewhat excessively drained	Terraces, side slopes	>80 inches	N
<b>3114</b>	Rockly-Fourmound complex, 0-15% slopes	Well drained	Plateaus	40 inches	N

<b>3115</b>	Northstar–Rock outcrop complex, 3-15% slopes	Well drained	Plateaus, side slopes	40 inches	N
<b>3117</b>	Northstar–Rock outcrop–Rockly complex, 0-15% slopes	Well drained	Plateaus	40 inches	N
<b>3120</b>	Marble loamy sand, 0-8% slopes	Well drained	Outwash plains	>80 inches	N
<b>3122</b>	Marble loamy sand, 15-30% slopes	Well drained	Outwash plains	>80 inches	N
<b>3123</b>	Marble loamy sand, 30-55% slopes	Well drained	Outwash plains	>80 inches	N
<b>3141</b>	Springdale gravelly ashy coarse sandy loam, 8-15% slopes	Somewhat excessively drained	Outwash terraces	>80 inches	N
<b>3143</b>	Spens very gravelly loamy coarse sand, 30-65% slopes	Somewhat excessively drained	Outwash terraces, risers	>80 inches	N
<b>3144</b>	Wapal gravelly ashy coarse sandy loam, 0-8% slopes	Well drained	Outwash plains	>80 inches	N
<b>3145</b>	Wapal gravelly ashy coarse sandy loam, 15-30% slopes	Well drained	Outwash plains	>80 inches	N
<b>3146</b>	Scoop–Wapal complex, 30-60% slopes	Excessively drained / Well drained	Steep outwash terraces	>80 inches	N
<b>3503</b>	Uhlig ashy silt loam, dry, 0-8% slopes	Moderately well drained	Outwash terraces	>80 inches	N
<b>3504</b>	Brincken ashy silt loam, 0-3% slopes	Poorly drained	Depressions, drainageways	12 inches	Y

See **Appendix E** for details of soils in the study area from the USDA Web Soil Survey.

### 3.5 HYDROLOGY

The NWI map, WADNR FPAMT and NHD identified several drainages in the study area, including Coulee Creek, Deep Creek and several unnamed drainages. The Project area is within Hydraulic Unit Code (HUC) 17010307 Lower Spokane River and HUC 17010306 Hangman.

FEMA flood map #53063C0525D (July 6, 2010) shows that the project area will cross two floodplain areas (Coulee Creek and Deep Creek respectively).

## 4.0 WETLANDS AND STREAMS

Eleven wetlands, 2 streams and 7 unnamed drainages were identified within or in the near vicinity of the study area. See **Table 2** for information about these wetlands and streams. See **Attachment A** for wetland maps and **Attachment C** for wetland determination forms.

Table 2: Wetland and Stream Overview

Resource ID	Cowardin	In Study Area/Offsite?	Latitude	Longitude	Acres*
<b>WETLANDS</b>					
Wetland A	PEM/PFO	Off site	47.744710	-117.648957	8.38
Wetland B	PEM	Off site	47.742619	-117.652853	0.45
Wetland C	PFO	In Study Area	47.742214	-117.649337	0.17
Wetland D	REM	In Study Area	47.698800	-117.587955	0.002
Wetland E	REM	In Study Area	47.698674	-117.587741	0.01
Wetland F	PEM	In Study Area	47.640455	-117.501096	0.79
Wetland G	PEM	In Study Area	47.634861	-117.497205	0.15
Wetland H	PEM	In Study Area	47.632905	-117.497264	0.03
Wetland I	PEM	Off Site	47.641692	-117.500006	0.06
Wetland J	PEM	Off site	47.640467	-117.501131	2.96
Wetland K	PEM	In Study Area	47.742262	-117.651128	0.17
<b>WATERBODIES/STREAMS</b>					
Unnamed Drainage A		In Study Area	47.741206	-117.650000	-
Unnamed Drainage B		Off-site	47.737844	-117.645989	-
Unnamed Drainage C		In Study Area	47.737130	-117.643818	-
Unnamed Drainage D		In Study Area	47.705358	-117.599896	-
Unnamed Drainage E		In Study Area	47.697536	-117.586235	-
Unnamed Drainage F		In Study Area	47.694896	-117.583664	-
Unnamed Drainage G		In Study Area	47.691514	-117.580659	-
Coulee Creek		In Study Area	47.734975	-117.640998	-
Deep Creek		In Study Area	47.698800	-117.587876	-

\*Quantities include only wetland areas delineated in the study area

## 4.1 HYDROLOGY

The northern study area, near Wetlands A, B, C, K, Coulee Creek and the unnamed drainages, is hilly with shallow basalt layers where hydrology flows generally to the south and southwest then emerges at the surface where there are restrictive layers.

The middle of the study area includes Wetlands D, E, Deep Creek and unnamed drainages. Wetlands D and E are adjacent to Deep Creek and influence the wetland hydrology. Hydrology also appears to be from seasonal runoff and intermittent drainages.

The southern end of the study area includes the remaining wetlands. Hydrology in these areas is influenced by seasonal precipitation and roadway runoff.

Additional information on specific features identified in the study area is provided in Section 4.4.

## 4.2 VEGETATION

Wetlands in the study area include palustrine emergent (PEM), palustrine forested (PFO) and riverine (R) wetlands. **Table 3** shows the plant species found in the study area and their corresponding wetland indicator status.

**Table 3: Vegetation in Study Area**

Scientific Name	Common Name	Wetland Indicator Status
<b>Allium cernuum</b>	Nodding Onion	FACU
<b>Achillea millefolium</b>	Common yarrow	FACU
<b>Alnus incana</b>	Thinleaf alder	FACW
<b>Amelanchier alnifolia</b>	Serviceberry	FACU
<b>Betula papyrifera</b>	Paper birch	FAC
<b>Bromus japonicus</b>	Japanese brome	FACU
<b>Bromus tectorum</b>	Cheatgrass	UPL
<b>Centaurea stoebe</b>	Spotted knapweed	UPL
<b>Crataegus douglasii</b>	Douglas hawthorn	FAC
<b>Festuca idahoensis</b>	Idaho Fescue	FACU
<b>Hydrophyllum capitatum</b>	Ballhead waterleaf	FACU
<b>Hypericum perforatum</b>	St. John's wort	FACU
<b>Leymus triticoides</b>	Beardless wildrye	FAC
<b>Linaria vulgaris</b>	Toadflax	FACU
<b>Lupinus sericeus</b>	Silky lupine	FAC
<b>Mahonia aquifolium</b>	Creeping Oregon grape	FAC
<b>Phalaris arundinacea</b>	Reed canarygrass	FACW
<b>Pinus ponderosa</b>	Ponderosa pine	FACU
<b>Poa pratensis</b>	Kentucky bluegrass	FAC
<b>Poa secunda</b>	Sandberg bluegrass	FACU
<b>Polygonum douglasii</b>	Douglas' knotweed	FACU
<b>Populus balsamifera</b>	Cottonwood	FAC
<b>Populus tremuloides</b>	Quaking aspen	FACU
<b>Potentilla recta</b>	Sulphur cinquefoil	FAC
<b>Pseudotsuga menziesii</b>	Douglas fir	FACU
<b>Ribes aureum</b>	Golden currant	FACU
<b>Rosa nutkana</b>	Nootka rose	FACU
<b>Rosa woodsii</b>	Woods rose	FACU
<b>Salix spp.</b>	Willow	FACW
<b>Sisymbrium altissimum</b>	Tall tumbled mustard	FACU
<b>Symphoricarpos albus</b>	Snowberry	FACU
<b>Taraxacum officinale</b>	Common dandelion	FACU

### 4.3 SOILS

Soil evaluated in the field were consistent with the USDA soil survey and were primarily silt loams, sandy loams and sandy silty loams with gravel. Hydric soil indicators were observed within mapped wetland areas.

### 4.4 WETLAND CHARACTERISTICS

**Table 4** summarizes the characteristics of the identified wetlands and drainages.

**Table 4: Wetland Characteristics**

Resource ID	DP#	Cowardin Class/Dominant Vegetation	Hydric Soils	Hydrology	Category/Stream Type	Buffer
<b>WETLANDS</b>						
<b>Wetland A</b>	None-off site	PEM/PFO-Quaking aspen, black cottonwood,	NA	Inundation on aerials	III	110
<b>Wetland B</b>	None-off site	PEM	NA	Inundation on aerials	III	110
<b>Wetland C</b>	DP3=upland DP4=wetland	PFO-Black cottonwood, red osier dogwood, snowberry	Muck	Water table and saturation	IV	40
<b>Wetland D</b>	DP7=wetland DP8=upland	PEM-reed canarygrass	Difficult soils, vegetated floodplain, alluvial	Water table and saturation	III	110
<b>Wetland E</b>	DP9=wetland	PEM with PSS components-Pacific willow, chokecherry and reed canarygrass	Sandy redox	Drift deposits, drainage patterns, FAC-Neutral	III	110
<b>Wetland F</b>	DP18=wetland DP19=upland	PEM-Baltic rush and cattail	Depleted matrix	Saturation	III	110

Resource ID	DP#	Cowardin Class/Dominant Vegetation	Hydric Soils	Hydrology	Category/Stream Type	Buffer
<b>Wetland G</b>	DP16=wetland DP17=upland	PEM-reed canarygrass	Redox dark surface	Inundation on aerial	IV	40
<b>Wetland H</b>	DP14=wetland DP15=upland	PEM-reed canarygrass	Depleted Matrix, depleted below dark surface	Inundation on aerials	III	60
<b>Wetland I</b>	None-off site delineation	PEM-cattail and reed canarygrass	NA	Inundation on aerials	IV	40
<b>Wetland J</b>	None-off site delineation	PEM-cattail and reed canarygrass	NA	Inundation on aerials	III	110
<b>Wetland K</b>	DP1=upland	Aquatic and willow, quaking aspen, snowberry, red osier dogwood and reed canarygrass	NA	Inundation on aerials	III	110
<b>WATERBODIES/STREAMS</b>						
<b>Drainage A</b>	N/A	N/A	N/A	Flow observed down roadway and rocky slope	Mapped N (Np- perennial wetland upslope and flows to Coulee Creek)	75
<b>Drainage B</b>	N/A	N/A	N/A	No water flowing in easement but assume intermittent perennial	Mapped U (Assumed Np but no visible OHWM in easement)	75
<b>Drainage C</b>	N/A	N/A	N/A	No water flowing in easement but assume intermittent perennial	Mapped N (Assumed Np but no visible OHWM and	75

Resource ID	DP#	Cowardin Class/Dominant Vegetation	Hydric Soils	Hydrology	Category/Stream Type	Buffer
					could not see entire area upstream)	
<b>Drainage D</b>	N/A	N/A	N/A	No water flowing in easement but assume intermittent perennial	Mapped U (Assumed Np- No OHWM or flow but map shows that it drains to F stream under Garfield Road)	75
<b>Drainage E</b>	N/A	N/A	N/A	No water flowing -assume intermittent perennial. Flows into Deep Creek (F)	Mapped N (Np- no wetland upstream but drains to F stream under Garfield Road)	75
<b>Drainage F</b>	N/A	N/A	N/A	No water flowing -assume intermittent perennial. Flows into Deep Creek (F)	Mapped N (Np- no wetland upstream but drains to F stream under Garfield Road)	75
<b>Drainage G</b>	N/A	N/A	N/A	No water flowing but assume intermittent perennial	Mapped N (Assumed Np but no visible OHWM)	75
<b>Coulee Creek</b>	N/A	N/A	N/A	Perennial flow	Mapped F stream	100
<b>Deep Creek</b>	N/A	N/A	N/A	Perennial flow	Mapped F stream	100

#### 4.4.1 Wetland Descriptions

**Wetland A** is a Palustrine Emergent (PEM) wetland with Forested (PFO) and aquatic components. The wetland is classified as a Category III wetland based on function. It rated high for habitat, and moderate for hydrologic functions improving water quality. The high rating was due to the diverse vegetative types, interspersed habitats, structure of the plant community, and accessibility for wildlife. An aspen forested wetland is present to the east of the study area; however, the Spokane County Critical Areas Ordinance (SCCAO) states “In using the rating system, the County will not consider aspen-dominant forested wetlands larger than 0.25-acre as Category 1 wetland unless they also meet one or more of the criteria for a Category 1 Wetland”. Since the forested area of Wetland A is approximately 1.58 acres, which exceeds the 0.25-acre threshold, it is not a Category I wetland. Per SCCAO, the buffer for a Category III wetland is 110 ft utilizing Alternative 3.

**Wetland B** is a PEM wetland with an aquatic component. No DPs were dug for this wetland as permission was not granted outside of the study area. The wetland is classified as a Category III wetland based on function. The wetland rated moderate for habitat, hydrologic function, and improving water quality. The wetland buffer is 110 ft per the SCCAO utilizing Alternative 2.

**Wetland C** is a sloped PFO wetland that received hydrology from Wetland A draining downslope from the north. The wetland is classified as a Category IV wetland based on function. It rated moderate for habitat, and low for improving water quality and hydrology. The wetland buffer is 40 ft per the SCCAO, utilizing Alternative 3.

**Wetland D** is a PEM wetland located along the OHWM of Deep Creek. During the field investigation of this wetland, hydric soil indicators were not observed likely due to alluvial nature of the site and constant shifting of soils adjacent to Deep Creek. The wetland buffer is 110 ft buffer per SCCAO, utilizing Alternative 3.

**Wetland E** is a PEM wetland with a PFO component located on the east side of the OHWM of Deep Creek. Conditions in this wetland were similar to Wetland D except that Wetland E was approximately 1-2 ft higher. The wetland is classified as a Category III wetland based on function. The wetland buffer is 110 ft per the SCCAO, utilizing Alternative 3.

**Wetland F** is a PEM wetland located south of the US-2 / Airport Drive junction. The wetland contains multiple cattail stands with other emergent vegetation throughout the rest of the wetland. The wetland is classified as a Category III wetland based on function. The wetland rated high for hydrologic function, and moderate for habitat and improving water quality. The wetland buffer is 110 ft per the SCCAO, utilizing Alternative 3.

**Wetland G** is a PEM slope wetland located within a wide channel that crosses through the study area. The wetland is dominated by reed canarygrass, with no other vegetation growing within the boundary. The wetland is classified as a Category IV wetland based on function. The wetland buffer is 40 ft per the SCCAO, utilizing Alternative 3.

**Wetland H** is a PEM depressional wetland located within the study area, north of Gieger Blvd. The wetland was dry at the time of the field investigation, though it did show signs of ponding at some time throughout the year. Aerial imagery confirmed that the wetland does pond during spring after snow melt occurs. The wetland is classified as a Category III wetland based on function. The wetland buffer is 60 ft buffer per the SCCAO, utilizing Alternative 3.

**Wetland I** is a small PEM depressional wetland located to the north of the study area, within the junction of Sunset Hwy, Airport Drive, and US-2. The wetland is surrounded by high traffic roadways with runoff and a culvert under US-2 being the primary hydrology influences. The wetland contains cattail stands with other emergent vegetation present. The wetland is classified as a Category IV wetland based on function. The wetland buffer is 40 ft buffer per the SCCAO, utilizing Alternative 3.

**Wetland J** is a PEM depressional wetland located outside the study area, to the south of Airport Drive. This wetland was rated based on aerial imagery and views from the roadside. The wetland has several cattail stands located within the lower parts of the wetland, with other emergent vegetation, primarily reed canarygrass, throughout the rest of the wetland boundary. The wetland is classified as a Category III wetland based on function. The wetland buffer is 110 ft per the SCCAO, utilizing Alternative 3.

**Wetland K** is a PEM depressional wetland with an aquatic component located underneath the existing powerlines on the northwest end of the project area. The ponded area of the wetland was not visibly vegetated at the time of the spring site visit; however, the NWI map indicated that the pond was a wetland so a DP was dug at the edge of the pond to determine if hydric soils were present. No hydric soil indicators were observed in the soil profile however the pond was determined to support aquatic vegetation later in the year so was determined to be wetland. The wetland is classified as a Category III wetland based on function. It rated high for habitat, and moderate for hydrologic functions improving water quality. The wetland buffer is 110 ft per the SCCAO, utilizing Alternative 3.

#### 4.4.2 Streams and Drainages:

**Unnamed Drainage A** is a combination of multiple drainages stemming from Wetland C to the north. It is mapped as a non-fish stream (N). These drainages begin by exiting Wetland C and flowing over Bluebird Ln then disperse through the rocky hillside. There is no culvert that conveys these drainages. Since there is a perennial wetland upslope and the stream drains to a fish bearing stream, they are considered to be Np. Type Np stream buffers are 75 ft per the SCCAO.

**Coulee Creek** is a perennial fish bearing stream (F) that flows through the project area. Coulee Creek flows to the east until its confluence with Deep Creek. Type F streams have a 100 ft buffer per the SCCAO.

**Deep Creek** is a perennial fish bearing stream (F) that flows through the project area in a south-north direction. Deep Creek flows to the north until its confluence with the Spokane River. Type F streams have a 100 ft buffer per the SCCAO.

**Unnamed Drainages B through G** -These were drainages that appeared in the NWI, NHD or FPAMTs. None of these drainages appeared to have flowing water or signs of OHWM within the study area. Most

were determined to be Np as they could not be fully evaluated to determine a seasonal stream type or to confirm that the flow was not intermittent as permission was not granted to evaluate them outside of the easement, therefore perennial flow (which can be intermittent) was assumed for the purpose of this study. If stream typing per the SCCAO is required or map revisions are determined warranted, it will be conducted under a separate study.

See **Attachment D** for the wetland functional assessment rating forms and see Section 5.0 for photos.

## 5.0 PHOTOS



***Photo 1: Wetland A, facing SW***



***Photo 2: Wetland B, Google Earth aerial used to rate the wetland***



***Photo 3: DP4, wetland DP within Wetland C***



***Photo 4: Soil profile for DP4***



***Photo 5: DP4, surrounding area***



***Photo 6: Drainage A, facing downslope to the south***



***Photo 7: Deep Creek, facing downstream to the north***



***Photo 8: DP7, located in Wetland D***



**Photo 9: DP7, soil profile**



**Photo 11: Wetland D, surrounding area**



**Photo 11: DP9, wetland DP within Wetland E**



**Photo 12: DP9, soil profile**



**Photo 13: Wetland E, surrounding area**



**Photo 14: DP18, wetland DP within Wetland F**



**Photo 15: DP18, soil profile**



**Photo 16: Wetland F**



**Photo 17: DP16, wetland DP within Wetland G**



**Photo 18: DP16, soil profile**



**Photo 19: Wetland G, surrounding area**



**Photo 20: DP14, Wetland DP within Wetland H**



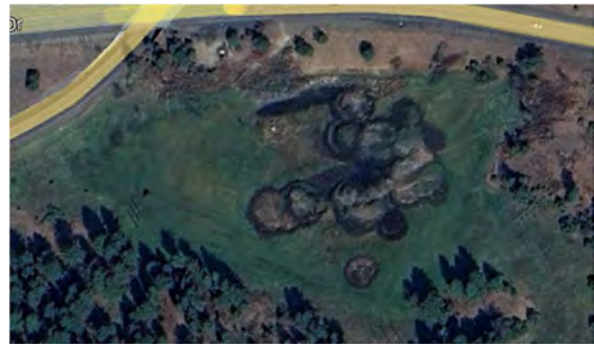
***Photo 21: DP14, soil profile***



***Photo 22: Wetland H, surrounding area***



***Photo 23: Wetland I, surrounding area, concrete culvert visible***



***Photo 24: Wetland J, Google Earth aerial imagery used to rate the wetland***



***Photo 25: Representative existing conditions, taken from Geiger Blvd, facing NW***



***Photo 26: Representative existing conditions, taken from the Polo Fields, facing NW***



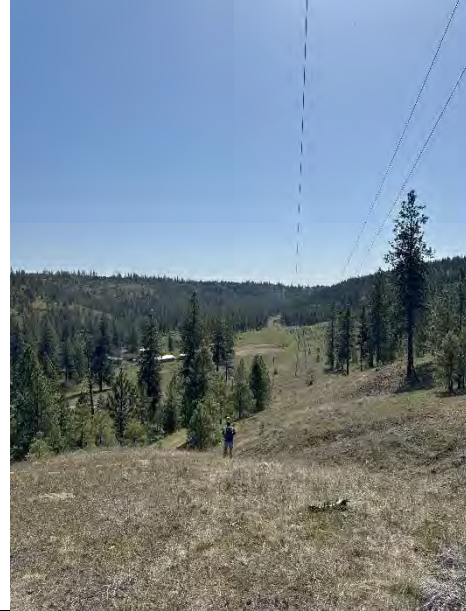
***Photo 27: Representative existing conditions, taken from BNSF Railroad, facing SE***



***Photo 28: Representative existing conditions, facing NW***



***Photo 29: Representative existing conditions, facing SE***



***Photo 30: Representative existing conditions, facing SE***



***Photo 31: Representative existing conditions, facing SE***



***Photo 32: Representative existing conditions, facing SE***



***Photo 33: Wetland K, facing SE***



***Photo 34: Wetland K, facing NW***



***Photo 35: Unnamed Drainage B, facing S from the existing utility easement***



***Photo 36: Unnamed Drainage C, facing S from Bluebird Ln***



***Photo 37: Unnamed Drainage C, Facing N from Coulee Hite Rd***



***Photo 38: Unnamed Drainage D, facing SW***



***Photo 39: Unnamed Drainage D, facing NE***



***Photo 40: Unnamed Drainage E, facing SW***



***Photo 41: Unnamed Drainage E, facing W***



***Photo 42: Unnamed Drainage F, facing E***



***Photo 43: Unnamed Drainage F, facing NE***



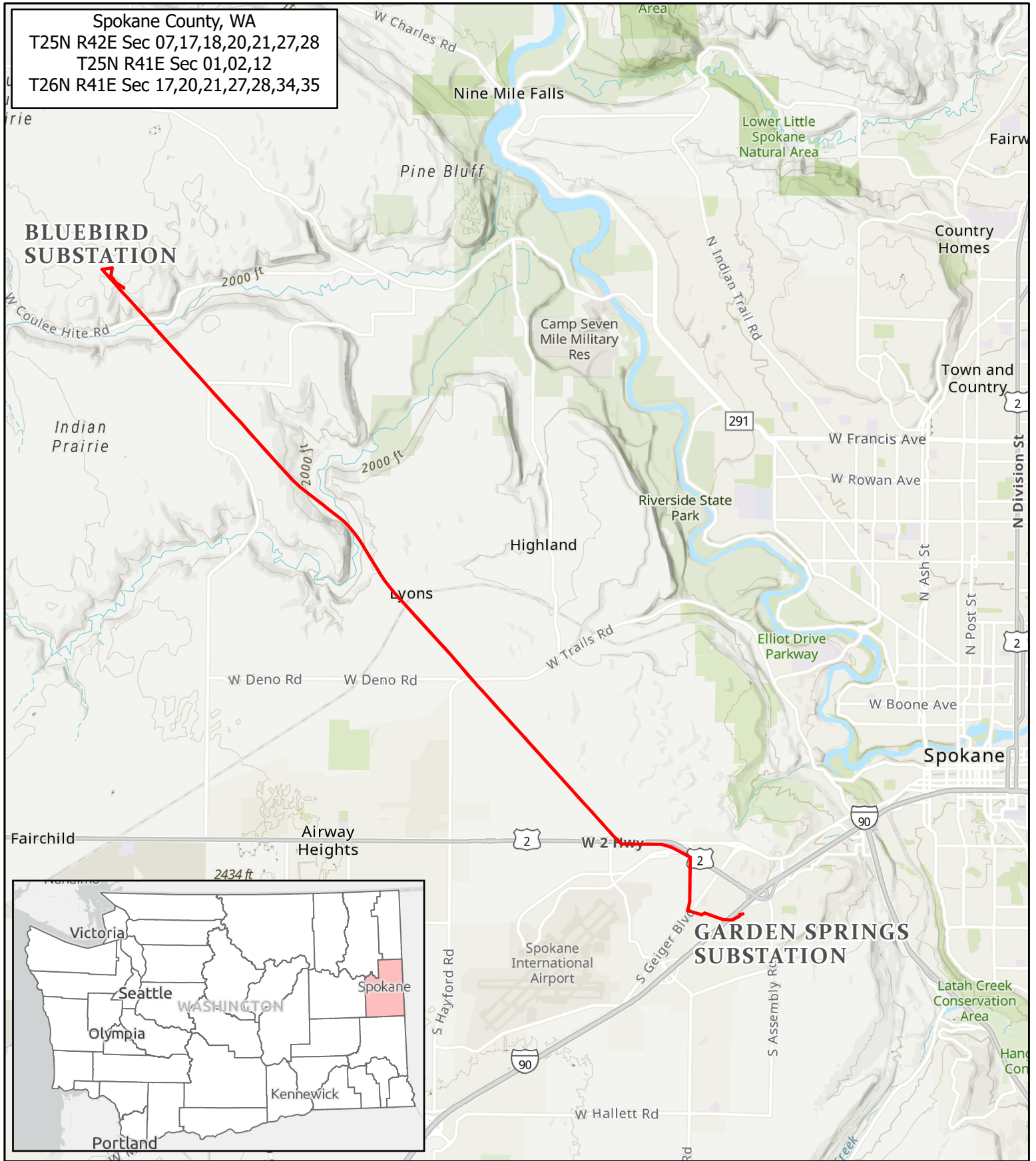
***Photo 44: Unnamed Drainage G, facing NE***

## 6.0 REFERENCES

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## ATTACHMENT A. MAPS



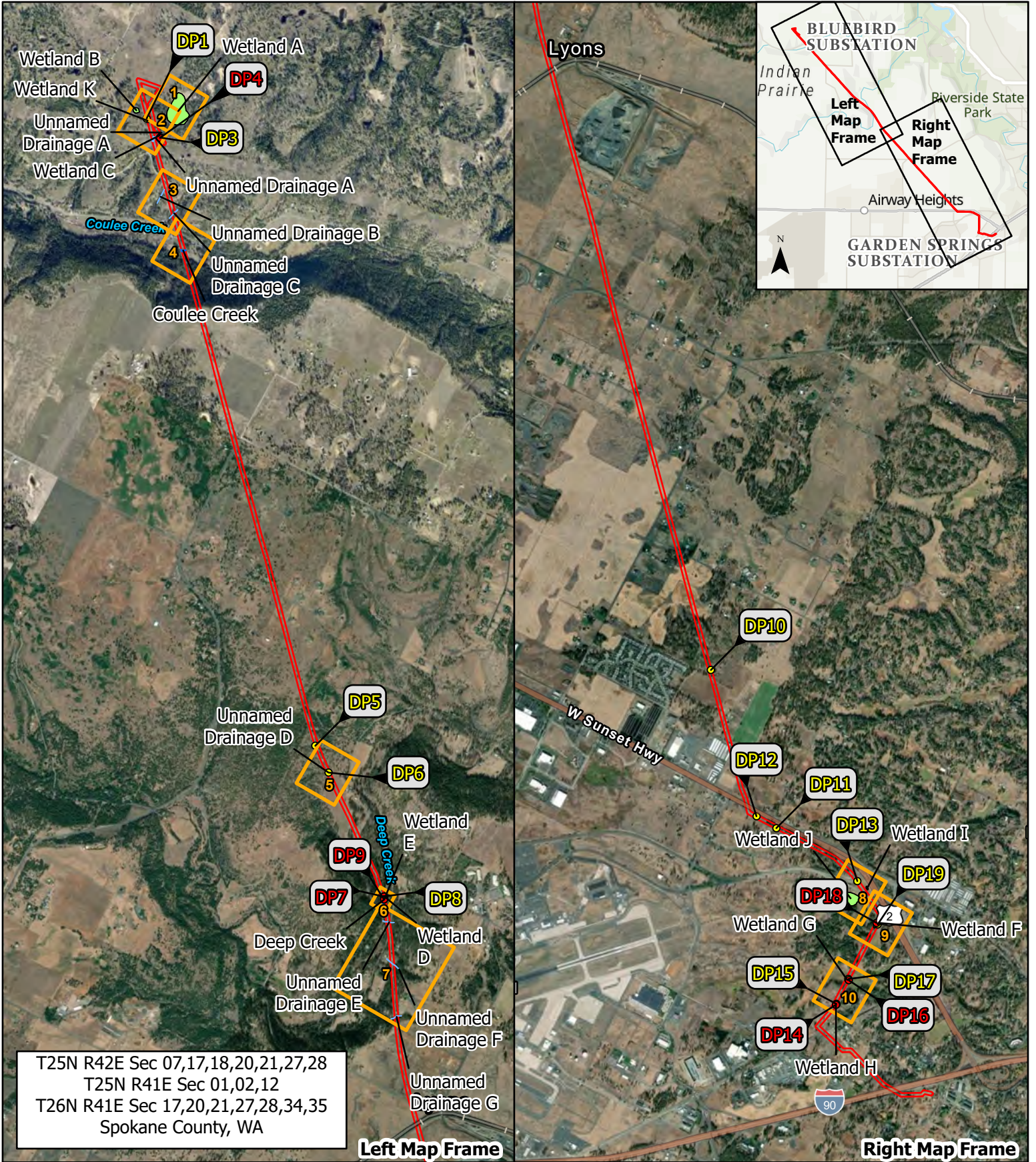


### Legend

Study Area



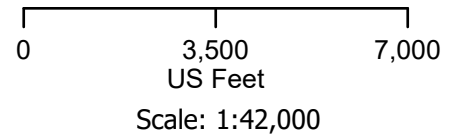
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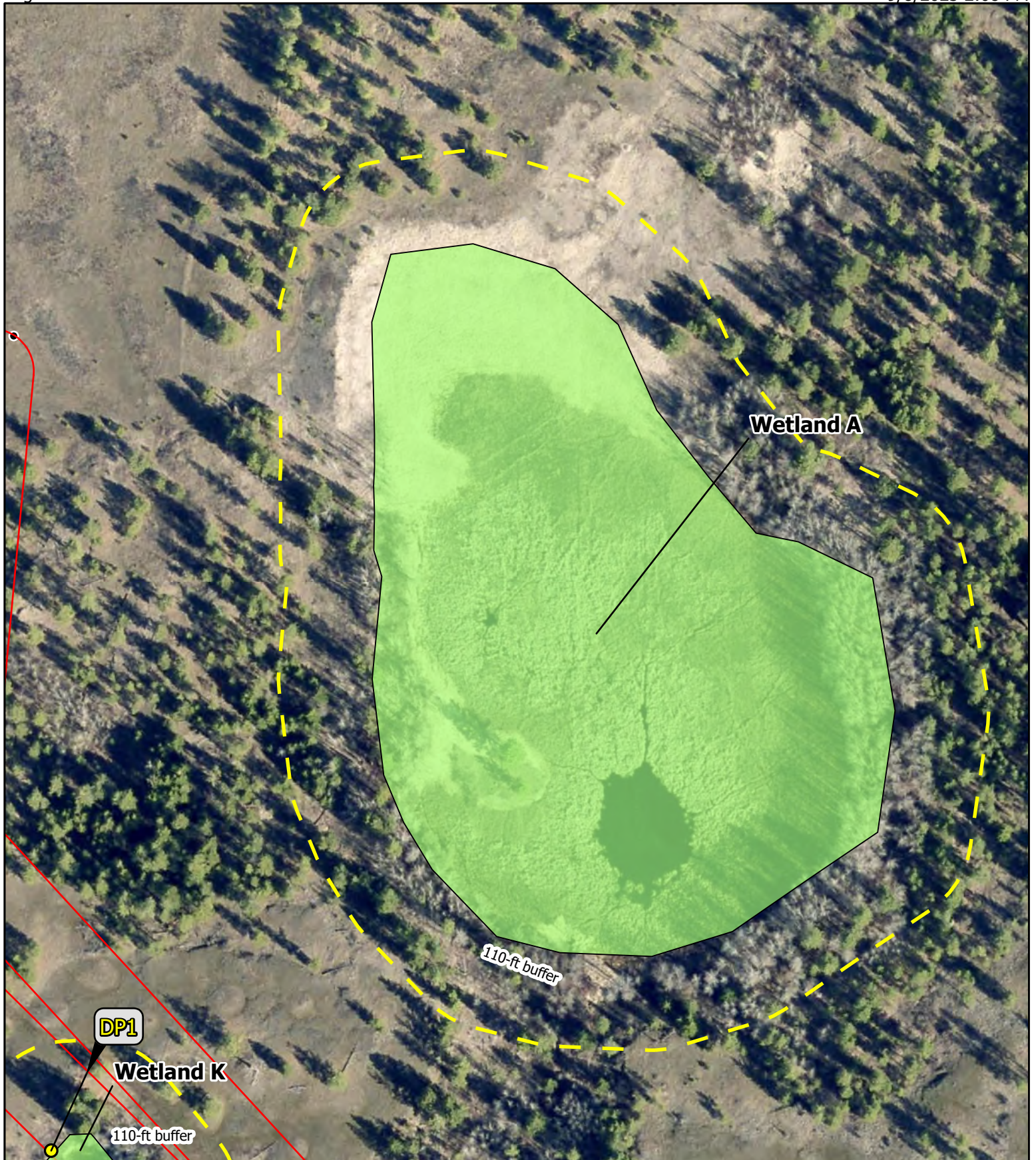


- Legend**
- Study Area
  - OHWM
  - Upland
  - Wetland

- Aquatic Resource**
- Wetland
  - Named Creek
  - Unnamed Drainage

- Mapbook Series Page





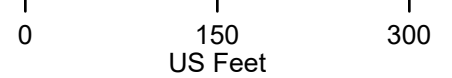
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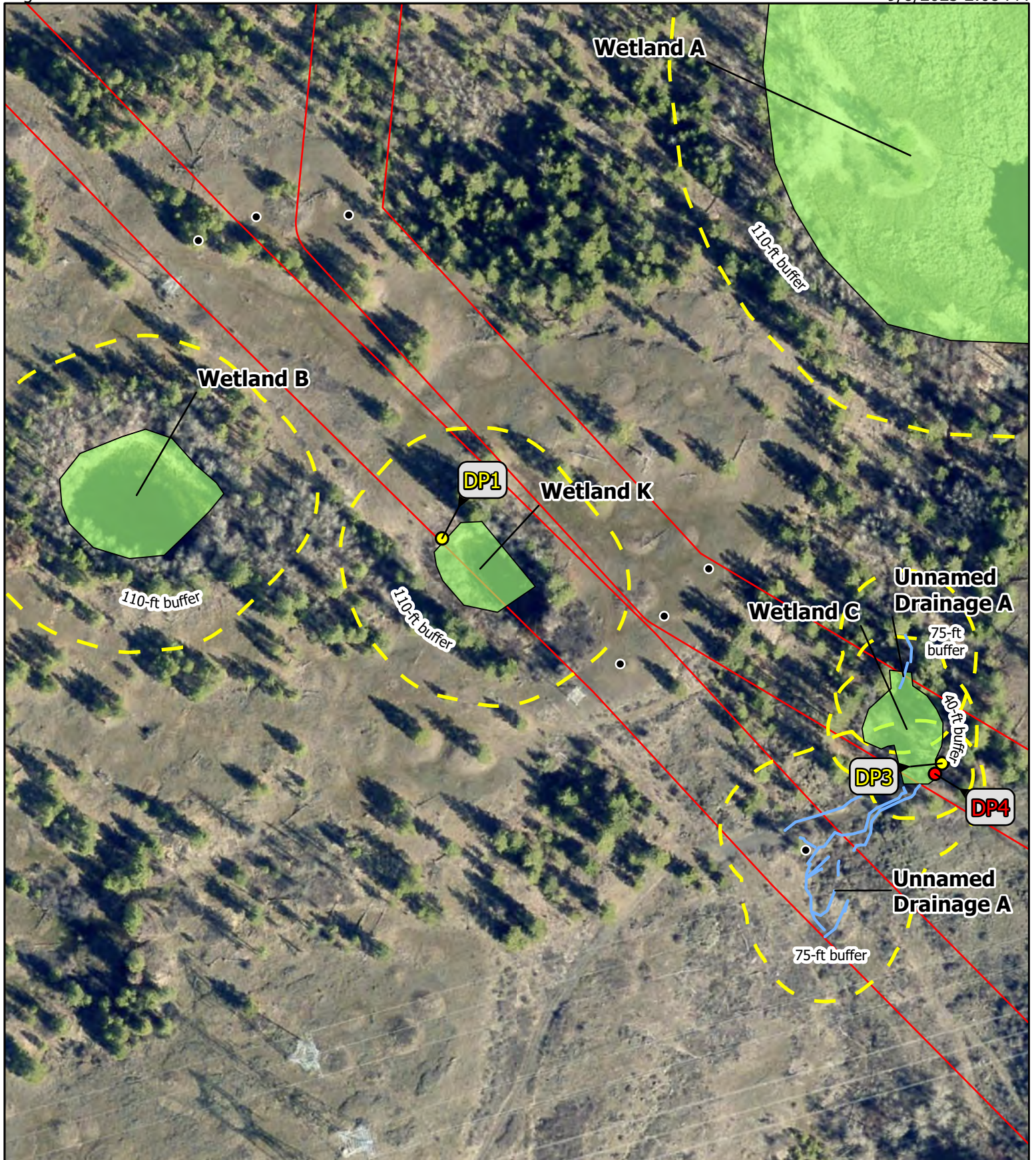
- Study Area
- Proposed Steel Monopole Structures

- Data Points
- Upland

- Aquatic Resource
- Wetland
- Aquatic Resource Buffer

Scale: 1:1,800





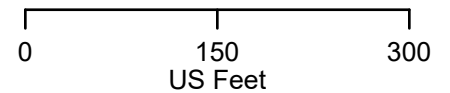
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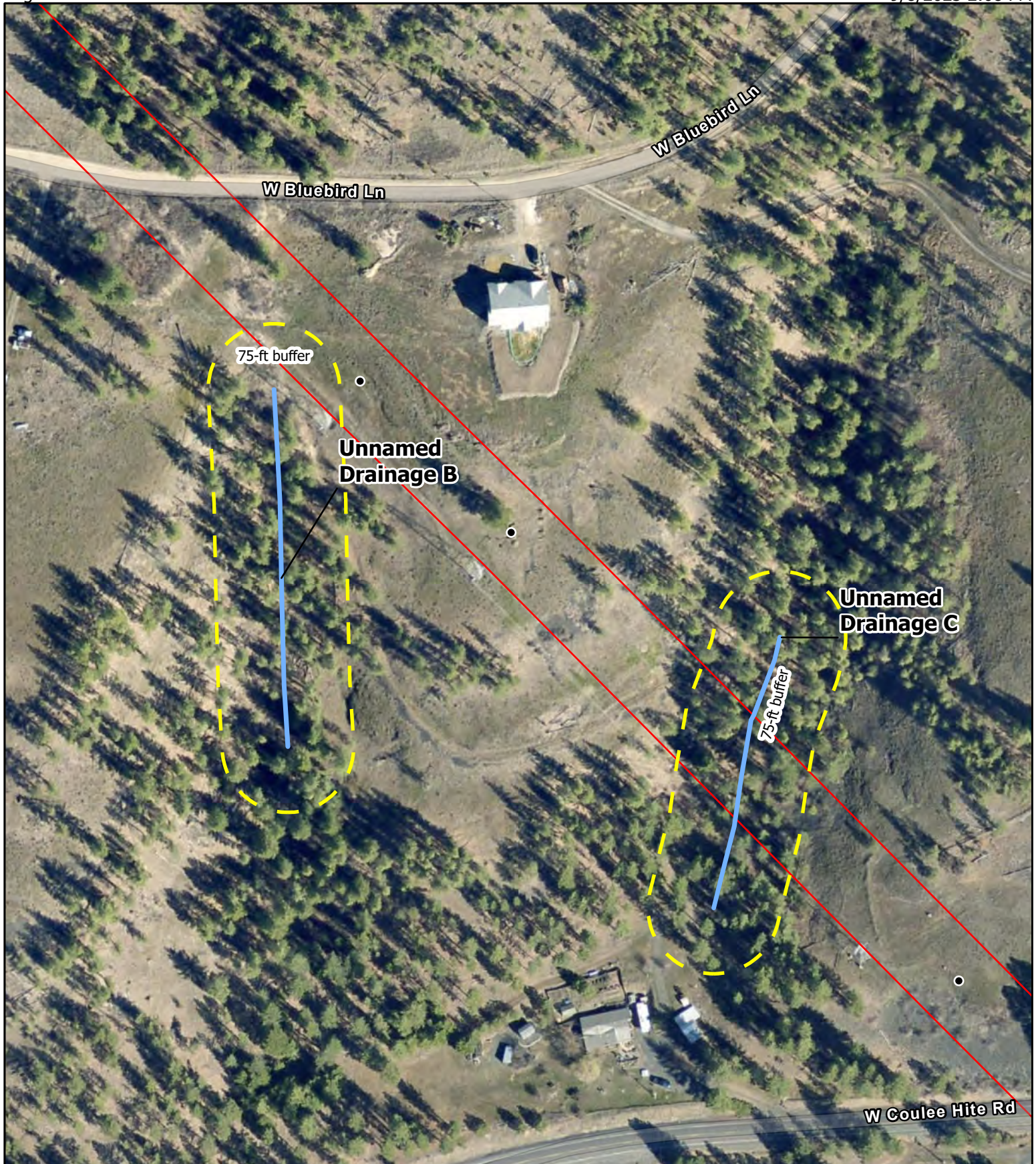
- Study Area
- Proposed Steel Monopole Structures

- Upland
- Wetland

- Aquatic Resource
- Wetland
- Unnamed Drainage
- Aquatic Resource Buffer

Scale: 1:1,800



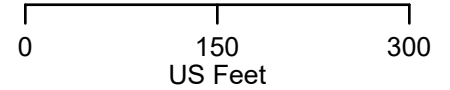


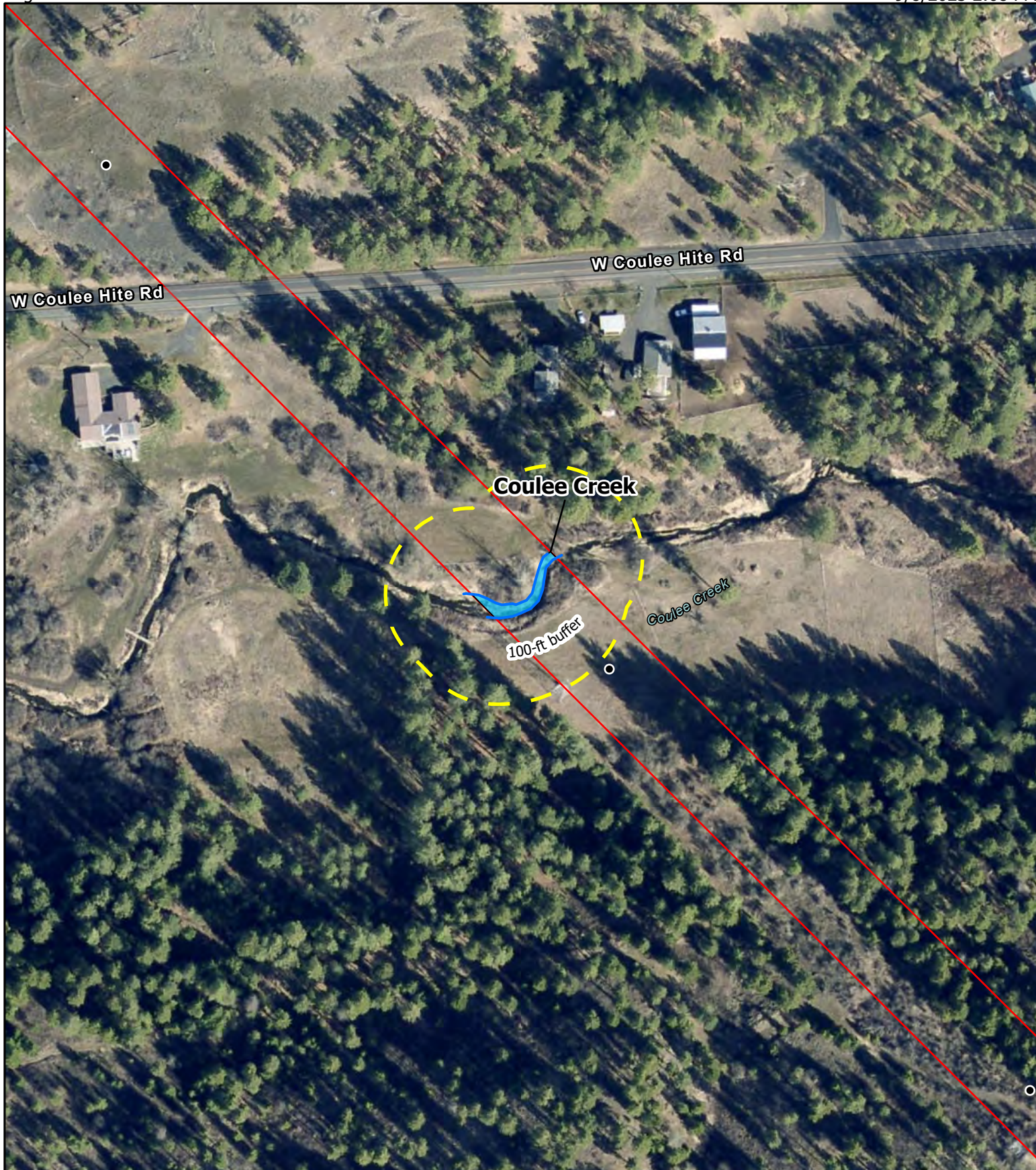
**Legend**

- Study Area
- Proposed Steel Monopole Structures

- Aquatic Resource**
- Unnamed Drainage
- Aquatic Resource Buffer

Scale: 1:1,800



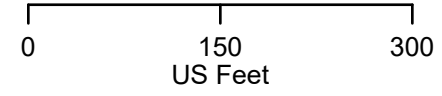


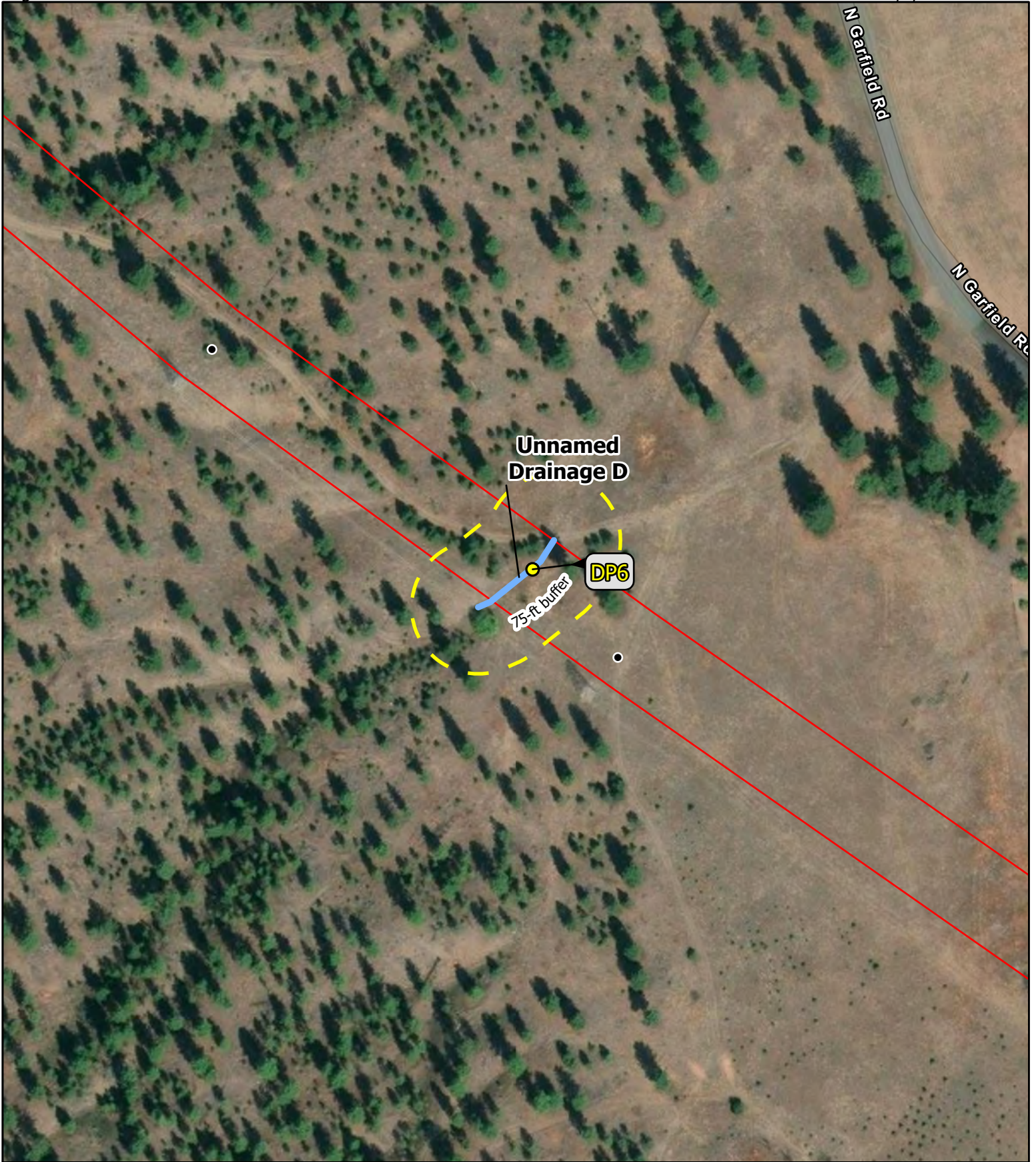
**Legend**

- Study Area
- OHWM
- Proposed Steel Monopole Structures

- Aquatic Resource**
- Named Creek
  - Aquatic Resource Buffer

Scale: 1:1,800





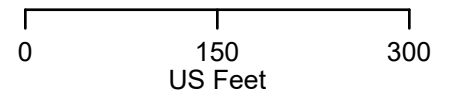
**Legend**

- Study Area
- Proposed Steel Monopole Structures

- Data Points
- Upland

- Aquatic Resource
- Unnamed Drainage
- Aquatic Resource Buffer

Scale: 1:1,800





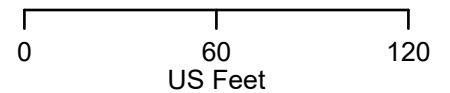
**Legend**

- Study Area
- Proposed Steel Structures

- Data Points**
- Upland
  - Wetland
  - OHWM

- Aquatic Resource**
- Wetland
  - Named Creek
  - Aquatic Resource Buffer

Scale: 1:720



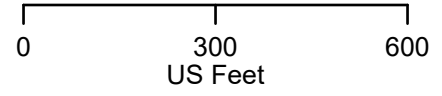


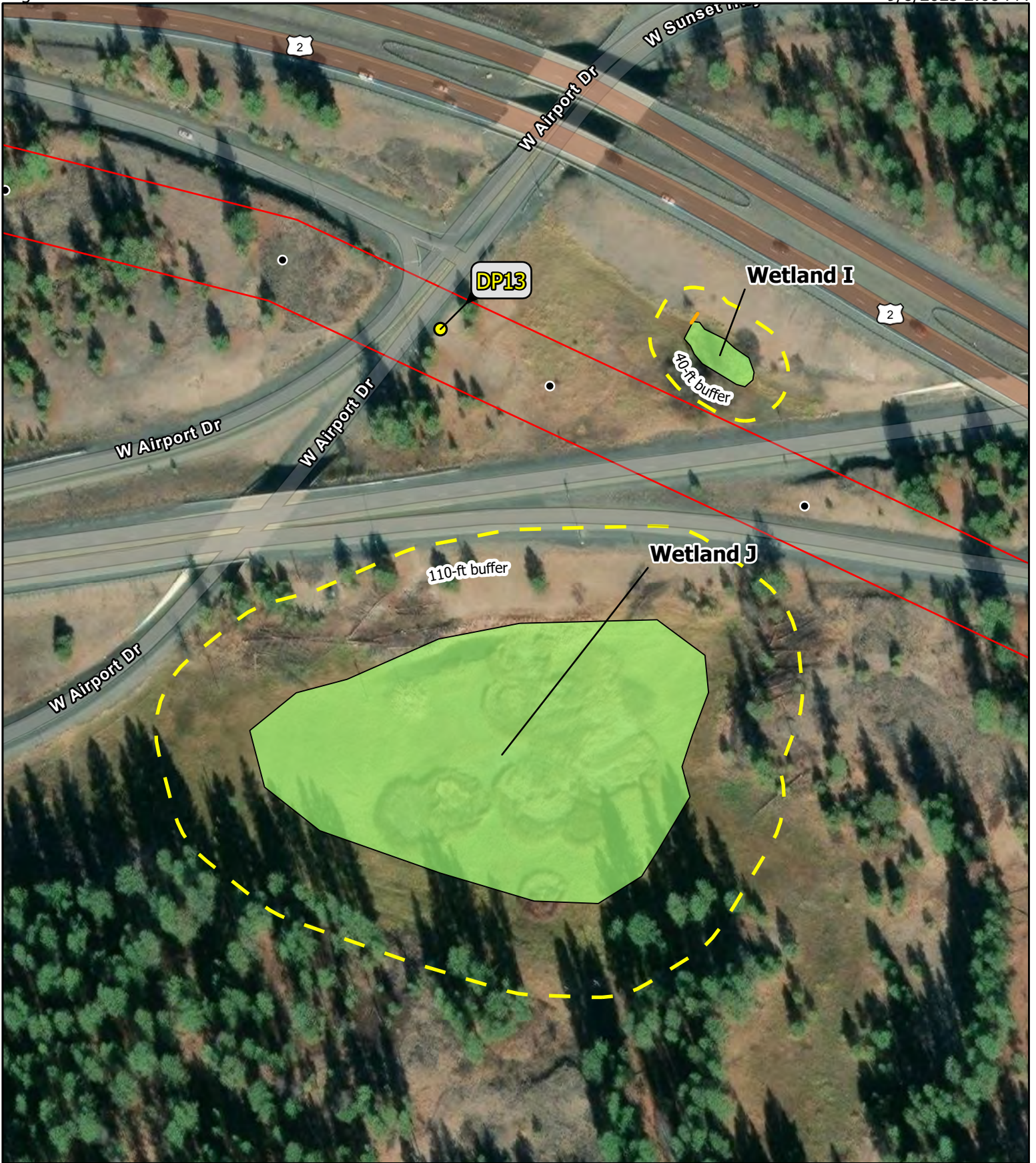
**Legend**

- Study Area
- Culvert
- OHWM
- Monopole Structures

- Aquatic Resource**
- Named Creek
  - Unnamed Drainage
  - Aquatic Resource Buffer

Scale: 1:3,600





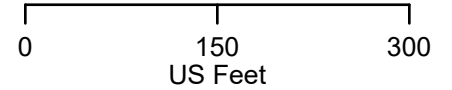
**Legend**

- Study Area
- Proposed Steel Monopole Structures

- Data Points**
- Upland
- Culvert

- Aquatic Resource**
- Wetland
- Aquatic Resource Buffer

Scale: 1:1,800





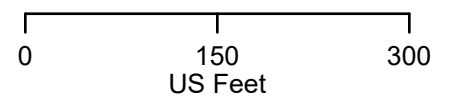
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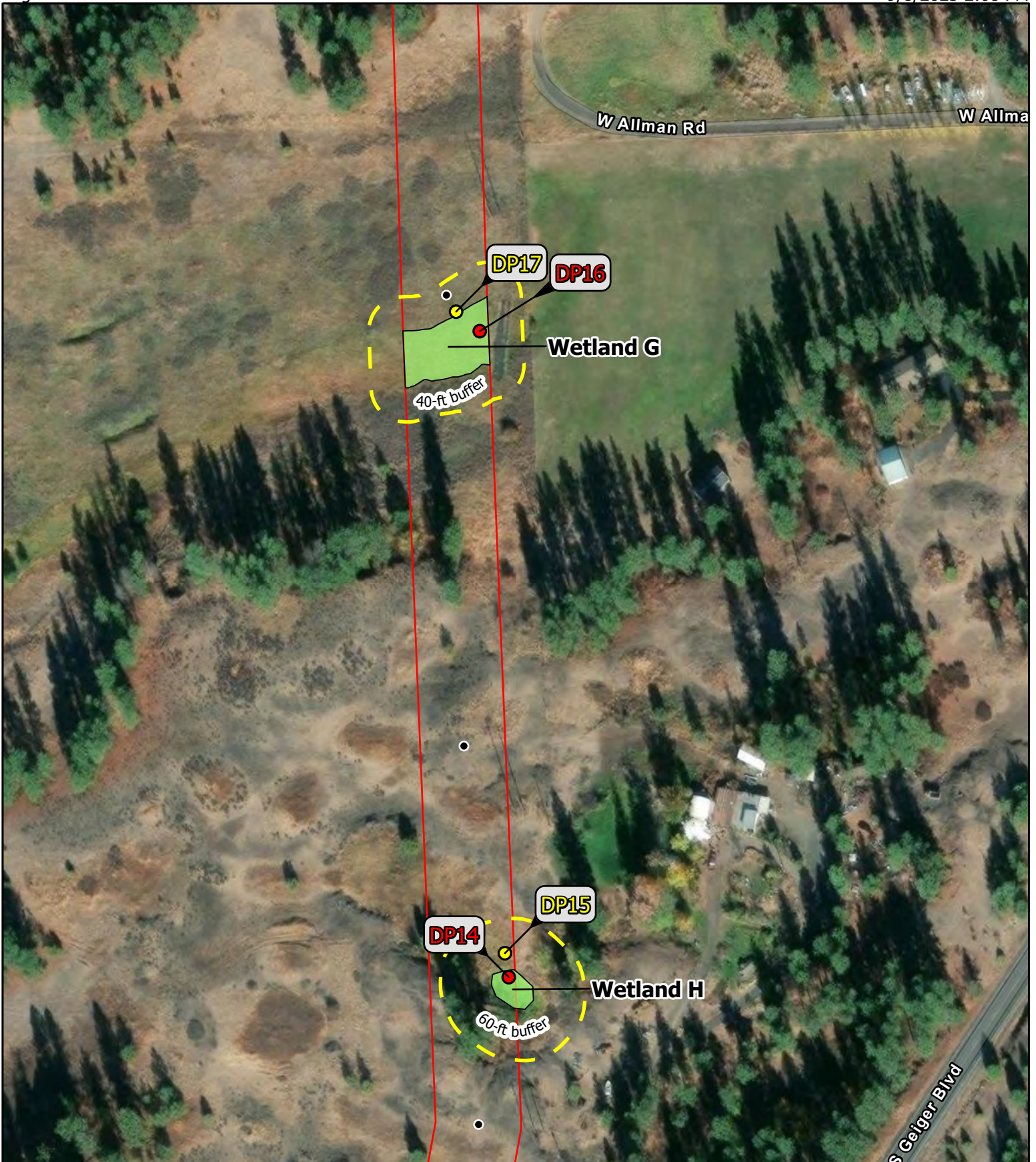
- Study Area
- Proposed Steel Structures
- Monopole Structures

- Data Points**
- Upland
  - Wetland

- Aquatic Resource**
- Wetland
  - Aquatic Resource Buffer

Scale: 1:1,800





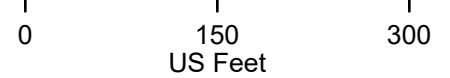
**Legend**

- Study Area
- Proposed Steel Monopole Structures

- Data Points**
- Upland
  - Wetland

- Aquatic Resource**
- Wetland
  - Aquatic Resource Buffer

Scale: 1:1,800



## ATTACHMENT B. NOAA WEATHER DATA



Latitude	Longitude	Date	PDSI Value	PDSI Class	Season	Antecedent Precip Score
47.67916	-117.56575	4/16/2025	-1.15	Mild drought	Dry Season	13
47.67916	-117.56575	4/22/2025	-1.15	Mild drought	Dry Season	11
47.67916	-117.56575	4/23/2025	-1.15	Mild drought	Dry Season	11
47.67916	-117.56575	4/24/2025	-1.15	Mild drought	Dry Season	10
47.67916	-117.56575	5/8/2025	-1.39	Mild drought	Dry Season	11
47.67916	-117.56575	7/31/2025	-2.36	Moderate drought (2025-06)	Dry Season	13

Antecedent Precip Condition

Normal Conditions

Normal Conditions

Normal Conditions

Normal Conditions

Normal Conditions

Normal Conditions

## **ATTACHMENT C. WETLAND DETERMINATION FORMS**



Project/Site: Bluebird Transmission Line City/County: Spokane Sampling Date: 04/09/2025  
 Applicant/Owner: Avista State: WA Sampling Point: DP1  
 Investigator(s): Brady Staples, Steven Hutchinson Section, Township, Range: T26N R41E Sec 20  
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Slope Slope (%): 2  
 Subregion (LRR): LRR B Lat: 47.7424770 Long: -117.6514185 Datum: NAD83  
 Soil Map Unit Name: Rockly-Fourmound complex, 0 to 15 percent slopes NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "IX" Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling p<sub>1</sub> X**

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: DP1 located approximately 4ft from the edge of pond.	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. <u>Salix scouleriana</u>	10	Yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
2. <u>Populus tremuloides</u>	5	Yes	FACU																	
3. _____																				
4. _____																				
	15	=Total Cover		<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>50</u></td> <td>x 2 = <u>100</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>63</u></td> <td>x 4 = <u>252</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>123</u> (A)</td> <td><u>382</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.11</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>50</u>	x 2 = <u>100</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>63</u>	x 4 = <u>252</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>123</u> (A)	<u>382</u> (B)	Prevalence Index = B/A = <u>3.11</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>50</u>	x 2 = <u>100</u>																			
FAC species <u>10</u>	x 3 = <u>30</u>																			
FACU species <u>63</u>	x 4 = <u>252</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>123</u> (A)	<u>382</u> (B)																			
Prevalence Index = B/A = <u>3.11</u>																				
<b>Sapling/Shrub Stratum (Plot size: <u>5'</u>)</b>																				
1. <u>Symphoricarpos albus</u>	50	Yes	FACU																	
2. <u>Cornus sericea</u>	10	No	FACW																	
3. <u>Amelanchier arborea</u>	2	No	FACU																	
4. <u>Rosa woodsii</u>	1	No	FACU																	
5. _____																				
	63	=Total Cover																		
<b>Herb Stratum (Plot size: <u>5'</u>)</b>																				
1. <u>Phalaris arundinacea</u>	40	Yes	FACW																	
2. <u>Hypericum perforatum</u>	5	No	FACU																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
	45	=Total Cover																		
<b>Woody Vine Stratum (Plot size: _____)</b>																				
1. _____																				
2. _____																				
		=Total Cover																		
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____																		

**Hydrophytic Vegetation Indicators:**  
 Dominance Test is >50%  
 Prevalence Index is ≤3.0<sup>1</sup>  
 Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes  No

Remarks:

**SOIL**

Sampling Point: DP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 2/2	100					Loamy/Clayey	
4-20	10YR 4/2	100					Loamy/Clayey	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)			Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)			
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____ No <u>X</u>
Remarks:	

**HYDROLOGY**

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present?    Yes _____ No <u>x</u> Depth (inches): _____ Water Table Present?      Yes _____ No <u>x</u> Depth (inches): _____ Saturation Present?        Yes _____ No <u>x</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Project/Site: Bluebird Transmission Line City/County: Spokane Sampling Date: 04/16/2025  
 Applicant/Owner: Avista State: WA Sampling Point: DP3  
 Investigator(s): Brady Staples, Steven Hutchinson Section, Township, Range: S20, T26N, R41E  
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2%  
 Subregion (LRR): LRR B Lat: 47.741883° Long: -117.648940° Datum: \_\_\_\_\_  
 Soil Map Unit Name: Speigle-Rock outcrop complex, 15 to 30 percent slopes NWI classification: PEM1C  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "IX" Yes x No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil x, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling p<sub>1</sub> x**

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

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. <u>Populus balsamifera</u>	40	Yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B)																
2. <u>Pinus ponderosa</u>	10	No	FACU																	
3. <u>Populus tremuloides</u>	10	No	FACU																	
4. <u>Betula papyrifera</u>	5	No	FAC																	
	65 =Total Cover			<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>107</u></td> <td>x 3 = <u>321</u></td> </tr> <tr> <td>FACU species <u>65</u></td> <td>x 4 = <u>260</u></td> </tr> <tr> <td>UPL species <u>15</u></td> <td>x 5 = <u>75</u></td> </tr> <tr> <td>Column Totals: <u>187</u> (A)</td> <td><u>656</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.51</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>107</u>	x 3 = <u>321</u>	FACU species <u>65</u>	x 4 = <u>260</u>	UPL species <u>15</u>	x 5 = <u>75</u>	Column Totals: <u>187</u> (A)	<u>656</u> (B)	Prevalence Index = B/A = <u>3.51</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>107</u>	x 3 = <u>321</u>																			
FACU species <u>65</u>	x 4 = <u>260</u>																			
UPL species <u>15</u>	x 5 = <u>75</u>																			
Column Totals: <u>187</u> (A)	<u>656</u> (B)																			
Prevalence Index = B/A = <u>3.51</u>																				
<b>Sapling/Shrub Stratum (Plot size: <u>5'</u>)</b>																				
1. <u>Prunus virginiana</u>	60	Yes	FAC																	
2. <u>Symphoricarpos albus</u>	40	Yes	FACU																	
3. <u>Berberis aquifolium</u>	15	No	UPL																	
4. <u>Rosa nutkana</u>	5	No	FACU																	
5. _____																				
	120 =Total Cover																			
<b>Herb Stratum (Plot size: <u>5'</u>)</b>																				
1. <u>Agrostis capillaris</u>	2	No	FAC																	
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
	2 =Total Cover																			
<b>Woody Vine Stratum (Plot size: _____)</b>																				
1. _____																				
2. _____																				
	=Total Cover																			
% Bare Ground in Herb Stratum <u>10</u> % Cover of Biotic Crust _____																				

**Hydrophytic Vegetation Indicators:**  
 Dominance Test is >50%  
 Prevalence Index is ≤3.0<sup>1</sup>  
 Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes X No \_\_\_\_\_

Remarks:

**SOIL**

Sampling Point: DP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 2/2	100					Loamy/Clayey	1" ribbon
2-8	10YR 3/2	100					Loamy/Clayey	
8-22	10YR 3/3	100					Muck	saturation at 9"

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)			Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)			
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/>	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)					

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks:	

**HYDROLOGY**

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present?      Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>10</u> Saturation Present?        Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>9</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
 Saturation at 10", water table at 10". DP approximately 20" from standing water.

Project/Site: Bluebird Transmission Line City/County: Spokane Sampling Date: 04/16/2025  
 Applicant/Owner: Avista State: WA Sampling Point: DP4  
 Investigator(s): Brady Staples, Steven Hutchinson Section, Township, Range: S20, T26N, R41E  
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2%  
 Subregion (LRR): LRR B Lat: 47.741834° Long: -117.649035° Datum: \_\_\_\_\_  
 Soil Map Unit Name: Speigle-Rock outcrop complex, 15 to 30 percent slopes NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "IX" Yes x No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil X, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling p<sub>1</sub> X**

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

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Populus deltoides</u>	70	Yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B)
2. <u>Populus tremuloides</u>	8	No	FACU	
3. <u>Alnus incana</u>	2	No	FACW	
4. _____				
	80 =Total Cover			
Sapling/Shrub Stratum (Plot size: <u>5'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Cornus sericea</u>	80	Yes	FACW	Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2. <u>Symphoricarpos albus</u>	18	No	FACU	
3. <u>Berberis aquifolium</u>	1	No	UPL	
4. <u>Rosa nutkana</u>	1	No	FACU	
5. _____				
	100 =Total Cover			
Herb Stratum (Plot size: <u>5'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Leaf litter</u>	100	Yes		<u>X</u> Dominance Test is >50% _____ Prevalence Index is ≤3.0 <sup>1</sup> _____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
	100 =Total Cover			
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____				Yes <u>X</u> No _____
2. _____				
	=Total Cover			
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				

Remarks:

**SOIL**

Sampling Point: DP4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 2/2	100					Loamy/Clayey	2cm muck near surface
5-9	10YR 3/2	100					Loamy/Clayey	
9-13	10YR 3/2	100					Muck	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)			Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input checked="" type="checkbox"/> 2 cm Muck (A10) (LRR B)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)			
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/>	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)					

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ roots _____ Depth (inches): _____ 13 _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No _____
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Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)	
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> ? Shallow Aquitard (D3)	
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	

<b>Field Observations:</b> Surface Water Present?    Yes _____    No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present?      Yes <input checked="" type="checkbox"/> No _____      Depth (inches): 6 Saturation Present?        Yes <input checked="" type="checkbox"/> No _____        Depth (inches): 4 (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
Saturation at 4", water table at 6". DP approximately 8' from standing water.

Project/Site: Bluebird Transmission Line City/County: Spokane Sampling Date: 04/23/2025  
 Applicant/Owner: Avista State: WA Sampling Point: DP5  
 Investigator(s): Brady Staples, Steven Hutchinson Section, Township, Range: S35, T26N, R41E  
 Landform (hillside, terrace, etc.): Bottom of slope Local relief (concave, convex, none): Concave Slope (%): 6%  
 Subregion (LRR): LRR B Lat: 47.706674° Long: -117.602278° Datum: \_\_\_\_\_  
 Soil Map Unit Name: Marble loamy sand, 15 to 30 percent slopes NWI classification: R45BC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "IX" Yes x No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling p<sub>1</sub> x**

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: Pit dug in NWI drainage at lowest point on terrain	

**VEGETATION – Use scientific names of plants.**

Tree Stratum	(Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
_____ =Total Cover					
Sapling/Shrub Stratum	(Plot size: <u>5'</u> )				
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
_____ =Total Cover					
Herb Stratum	(Plot size: <u>5'</u> )				
1.	<u>Poa pratensis</u>	<u>70</u>	<u>Yes</u>	<u>FAC</u>	
2.	<u>Bromus japonicus</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	
3.	<u>Sisymbrium altissimum</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	
4.	<u>Bromus tectorum</u>	<u>5</u>	<u>No</u>	<u>UPL</u>	
5.	<u>Leymus triticoides</u>	<u>3</u>	<u>No</u>	<u>FAC</u>	
6.	<u>Taraxacum officinale</u>	<u>1</u>	<u>No</u>	<u>FACU</u>	
7.	<u>Eriogonum ovalifolium</u>	<u>1</u>	<u>No</u>	<u>FACU</u>	
8.	_____	_____	_____	_____	
_____ =Total Cover					
Woody Vine Stratum	(Plot size: _____)				
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
_____ =Total Cover					
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____			

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  
 Total Number of Dominant Species Across All Strata: 1 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

**Prevalence Index worksheet:**  
 Total % Cover of: \_\_\_\_\_ Multiply by:  
 OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_  
 FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
 FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_  
 FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_  
 UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
 Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)  
 Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**  
 Dominance Test is >50%  
 Prevalence Index is ≤3.0<sup>1</sup>  
 Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes X No \_\_\_\_\_

Remarks:

**SOIL**

Sampling Point: DP5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10YR 3/4	100					Loamy/Clayey	
16-20	2.5YR 3/3	100					Sandy	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)
	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____ No <u>X</u>
---	---

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input checked="" type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present?    Yes _____    No <u>x</u> Depth (inches): _____ Water Table Present?      Yes _____    No <u>x</u> Depth (inches): _____ Saturation Present?        Yes _____    No <u>x</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____    No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
Site may convey water during snowmelt/spring runoff. No water observed at time of site visit.

Project/Site: Bluebird Transmission Line City/County: Spokane Sampling Date: 04/23/25  
 Applicant/Owner: Avista State: WA Sampling Point: DP6  
 Investigator(s): Brady Staples, Steven Hutchinson Section, Township, Range: S20, T26N, R41E  
 Landform (hillside, terrace, etc.): Drainage Local relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): LRR B Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Marble loamy sand, 0 to 8 percent slopes NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes x No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

**VEGETATION – Use scientific names of plants.**

Tree Stratum	(Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
_____ =Total Cover					
Sapling/Shrub Stratum	(Plot size: <u>5'</u> )				
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
_____ =Total Cover					
Herb Stratum	(Plot size: <u>5'</u> )				
1.	<u>Poa pratensis</u>	80	Yes	FAC	
2.	<u>Bromus japonicus</u>	10	No	FACU	
3.	<u>Sisymbrium altissimum</u>	5	No	FACU	
4.	<u>Phalaris arundinacea</u>	3	No	FACW	
5.	_____	_____	_____	_____	
6.	_____	_____	_____	_____	
7.	_____	_____	_____	_____	
8.	_____	_____	_____	_____	
98 =Total Cover					
Woody Vine Stratum	(Plot size: _____)				
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
_____ =Total Cover					
% Bare Ground in Herb Stratum <u>2</u>		% Cover of Biotic Crust _____			

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  
 Total Number of Dominant Species Across All Strata: 1 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

**Prevalence Index worksheet:**  
 Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_  
 OBL species 0 x 1 = 0  
 FACW species 3 x 2 = 6  
 FAC species 80 x 3 = 240  
 FACU species 15 x 4 = 60  
 UPL species 0 x 5 = 0  
 Column Totals: 98 (A) 306 (B)  
 Prevalence Index = B/A = 3.12

**Hydrophytic Vegetation Indicators:**  
 Dominance Test is >50%  
 Prevalence Index is ≤3.0<sup>1</sup>  
 Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes X No \_\_\_\_\_

Remarks:

**SOIL**

Sampling Point: DP6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-20	10YR 3/3	100					Sandy	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____ No <u>X</u>
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Remarks:  
Some organic wood material at 5". Soil does not stay in a ball when squeezed

**HYDROLOGY**

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present?    Yes _____    No <u>x</u> Depth (inches): _____ Water Table Present?      Yes _____    No <u>x</u> Depth (inches): _____ Saturation Present?        Yes _____    No <u>x</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____    No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Project/Site: Bluebird Transmission Line City/County: Spokane Sampling Date: 04/24/25  
 Applicant/Owner: Avista State: WA Sampling Point: DP7  
 Investigator(s): Brady Staples, Steven Hutchinson Section, Township, Range: S35, T26N, R41E  
 Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): LRR B Lat: 47.698912° Long: -117.587934° Datum: \_\_\_\_\_  
 Soil Map Unit Name: Haploxerolls ashy silt loam, channeled, 0 to 8 percent slopes NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "IX" Yes x No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Salix lucida</u>	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
=Total Cover				
<b>Sapling/Shrub Stratum (Plot size: <u>5'</u>)</b>				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>30</u> x 2 = <u>60</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>30</u> (A) <u>60</u> (B) Prevalence Index = B/A = <u>2.00</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
=Total Cover				
<b>Herb Stratum (Plot size: <u>5'</u>)</b>				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> _____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Phalaris arundinacea</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
=Total Cover				
<b>Woody Vine Stratum (Plot size: <u>70'</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
=Total Cover				
% Bare Ground in Herb Stratum <u>2</u>		% Cover of Biotic Crust _____		

Remarks:  
 Narrow floodplain contains reed canarygrass from the OHWM to a slight slope at which uplant plans begin growing

**SOIL**

Sampling Point: DP7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 2/1	100					Loamy/Clayey	
6-15	10YR 2/2	100					Sandy	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)			Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)			
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input checked="" type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				

<b>Restrictive Layer (if observed):</b>	<b>Hydric Soil Present?</b>
Type: _____ Rock _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): _____ 15 _____	

Remarks:  
Best professional judgment indicates that the area is a wetland despite a lack of hydric soil indicators. Water moves and replaces soil too often for redox to form

**HYDROLOGY**

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b>
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>11</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>10</u> (includes capillary fringe)	

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

Remarks:  
Deep Creek is approximately 2' to the east of the DP. Wetland receives hydrology from over bank flows and water table. Slopes to the west may provide water.

Project/Site: Bluebird Transmission Line City/County: Spokane Sampling Date: 04/24/25  
 Applicant/Owner: Avista State: WA Sampling Point: DP8  
 Investigator(s): Brady Staples, Steven Hutchinson Section, Township, Range: S35, T26N, R41E  
 Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 5  
 Subregion (LRR): LRR B Lat: 47.698960° Long: -117.587936° Datum: \_\_\_\_\_  
 Soil Map Unit Name: Haploxerolls ashy silt loam, channeled, 0 to 8 percent slopes NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "IX" Yes x No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: DP dug on slope above wetland DP7. Many roots in soil from shrubs and willow tree	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Salix lucida</u>	60	Yes		Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25.0%</u> (A/B)
2. <u>Pseudotsuga menziesii</u>	20	Yes	FACU	
3. <u>Pinus ponderosa</u>	10	No	FACU	
4. _____				
	90 =Total Cover			
Sapling/Shrub Stratum (Plot size: <u>5'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Symphoricarpos albus</u>	40	Yes	FACU	Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2. <u>Ribes aureum</u>	30	Yes	FAC	
3. _____				
4. _____				
5. _____				
	70 =Total Cover			
Herb Stratum (Plot size: <u>5'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. _____				_____ Dominance Test is >50% _____ Prevalence Index is ≤3.0 <sup>1</sup> _____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
	_____ =Total Cover			
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____				Yes _____ No <u>X</u>
2. _____				
	_____ =Total Cover			
% Bare Ground in Herb Stratum <u>30</u> % Cover of Biotic Crust _____				

Remarks:

**SOIL**

Sampling Point: DP8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-24	10YR 2/2	100					Loamy/Clayey	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b>	<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Type: <u>                    </u> Rock <u>                    </u> Depth (inches): <u>                    </u> 15	

Remarks:  
Many roots in soil pit. No soil profile picture available due to roots

**HYDROLOGY**

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Surface Water Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>                    </u> Water Table Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>                    </u> Saturation Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>                    </u> (includes capillary fringe)	

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

Remarks:

Project/Site: Bluebird Transmission Line City/County: Spokane Sampling Date: 04/24/25  
 Applicant/Owner: Avista State: WA Sampling Point: DP9  
 Investigator(s): Brady Staples, Steven Hutchinson Section, Township, Range: S35, T26N, R41E  
 Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): LRR B Lat: 47.698855° Long: -117.587849° Datum: \_\_\_\_\_  
 Soil Map Unit Name: Haploxerolls ashy silt loam, channeled, 0 to 8 percent slopes NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "IX" Yes x No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____
Remarks: DP dug on slope above wetland DP7. Many roots in soil from shrubs and willow tree	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Salix lucida</u>	50	Yes		Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75.0%</u> (A/B)
4. _____				
	50	=Total Cover		
Sapling/Shrub Stratum (Plot size: <u>5'</u> )				Prevalence Index worksheet:
1. <u>Prunus virginiana</u>	10	Yes	FAC	Total % Cover of: _____ Multiply by: _____
2. <u>Salix scouleriana</u>	5	Yes	FAC	OBL species _____ x 1 = _____
3. <u>Symphoricarpos albus</u>	3	No	FACU	FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
	18	=Total Cover		UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>5'</u> )				Hydrophytic Vegetation Indicators:
1. <u>Phalaris arundinacea</u>	70	Yes	FACW	<u>X</u> Dominance Test is >50%
2. <u>Taraxacum officinale</u>	2	No	FACU	____ Prevalence Index is ≤3.0 <sup>1</sup>
3. _____				____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
4. _____				____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
6. _____				
7. _____				
8. _____				
	72	=Total Cover		
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present?
1. _____				Yes <u>X</u> No _____
2. _____				
% Bare Ground in Herb Stratum <u>28</u>				
% Cover of Biotic Crust _____				

Remarks:  
 Skunk cabbage approximately 25' from the DP, identified after DP location was chosen

**SOIL**

Sampling Point: DP9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 2/2	100					Sandy	
6-14	10YR 2/2	98	2.5YR 3/6	2	C		Sandy	Prominent redox concentrations
14-20	10YR 2/2	90	2.5YR 3/6	10	C		Sandy	Prominent redox concentrations

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input checked="" type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:	

**HYDROLOGY**

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input checked="" type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input checked="" type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present?        Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
Wetland receives hydrology from stream overflows

Project/Site: Bluebird Transmission Line City/County: Spokane Sampling Date: 05/08/25  
 Applicant/Owner: Avista State: WA Sampling Point: DP10  
 Investigator(s): Brady Staples, Steven Hutchinson Section, Township, Range: S35, T26N, R41E  
 Landform (hillside, terrace, etc.): Bottom of slope Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): LRR B Lat: 47.651312° Long: -117.527446° Datum: \_\_\_\_\_  
 Soil Map Unit Name: Northstar-Rock outcrop-Rockly complex, 0 to 15 percent slopes NWI classification: R5UBH  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "IX" Yes x No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: NWI shows ephemeral stream at the DP location. Hole was dug at lowest elevation on landscape. Landform looks like it may have been a channel in the past but does not hold water any longer.	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Pinus ponderosa</u>	30	Yes	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
30 = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>50</u> x 2 = <u>100</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>30</u> x 4 = <u>120</u> UPL species <u>6</u> x 5 = <u>30</u> Column Totals: <u>86</u> (A) <u>250</u> (B) Prevalence Index = B/A = <u>2.91</u>
Sapling/Shrub Stratum (Plot size: <u>5'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	10	Yes	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
10 = Total Cover				
Herb Stratum (Plot size: <u>5'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 <sup>1</sup> ___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Phalaris arundinacea</u>	50	Yes	FACW	
2. <u>Centaurea stoebe</u>	5	No	UPL	
3. <u>Lupinus sericeus</u>	1	No	UPL	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
56 = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>44</u> % Cover of Biotic Crust _____				

Remarks:

**SOIL**

Sampling Point: DP10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	10YR 2/2	100					Loamy/Clayey	
10-17	10YR 2/2	100					Sandy	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)			Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)			
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)					

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____ No <u>X</u>
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Remarks:  
No mottles or depletions observed

**HYDROLOGY**

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present?    Yes _____    No <u>x</u> Depth (inches): _____ Water Table Present?      Yes _____    No <u>x</u> Depth (inches): _____ Saturation Present?        Yes _____    No <u>x</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____    No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
Appears to be a historic drainage but no longer receives or conveys water.

Project/Site: Bluebird Transmission Line City/County: Spokane Sampling Date: 07/31/2025  
 Applicant/Owner: Avista State: WA Sampling Point: DP11  
 Investigator(s): Brady Staples, Steven Hutchinson Section, Township, Range: S28, T26N, R42E  
 Landform (hillside, terrace, etc.): Scabland Local relief (concave, convex, none): Convex Slope (%): 1  
 Subregion (LRR): LRR B Lat: 47.642597° Long: -117.511968° Datum: \_\_\_\_\_  
 Soil Map Unit Name: Rockly-Deno complex, 0 to 15 percent slopes NWI classification: R5UBH

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "IX" Yes x No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)
1. <u>Pinus ponderosa</u>	50	Yes	FACU	
2. _____				
3. _____				
4. _____				
	50	=Total Cover		
Sapling/Shrub Stratum (Plot size: <u>5'</u> )				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>99</u> x 4 = <u>396</u> UPL species <u>25</u> x 5 = <u>125</u> Column Totals: <u>124</u> (A) <u>521</u> (B) Prevalence Index = B/A = <u>4.20</u>
1. <u>Rosa woodsii</u>	2	No	FACU	
2. _____				
3. _____				
4. _____				
5. _____				
	2	=Total Cover		
Herb Stratum (Plot size: <u>5'</u> )				<b>Hydrophytic Vegetation Indicators:</b> _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0 <sup>1</sup> _____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Festuca idahoensis</u>	45	Yes	FACU	
2. <u>Centaurea stoebe</u>	25	Yes	UPL	
3. <u>Hypericum perforatum</u>	2	No	FACU	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
	72	=Total Cover		
Woody Vine Stratum (Plot size: _____)				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>
1. _____				
2. _____				
% Bare Ground in Herb Stratum <u>28</u> % Cover of Biotic Crust _____				

Remarks:

**SOIL**

Sampling Point: DP11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-19	10YR 2/2	100					Loamy/Clayey	ashy components

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)			Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)			
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)					

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____ No <u>X</u>
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Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present?    Yes _____    No <u>x</u> Depth (inches): _____ Water Table Present?      Yes _____    No <u>x</u> Depth (inches): _____ Saturation Present?        Yes _____    No <u>x</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____    No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Project/Site: Avista Blue Bird Transmission Line City/County: Spokane Sampling Date: 07/31/2025  
 Applicant/Owner: Avista State: WA Sampling Point: DP12  
 Investigator(s): Brady Staples, Steven Hutchinson Section, Township, Range: S28, T25N, R42E  
 Landform (hillside, terrace, etc.): Prairie Local relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): LRR B Lat: 47.642669° Long: -117.514336° Datum: \_\_\_\_\_  
 Soil Map Unit Name: Rockly-Deno complex, 0 to 15 percent slopes NWI classification: PEM1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes x No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

**VEGETATION – Use scientific names of plants.**

Tree Stratum	(Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1.	_____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
=Total Cover					
Sapling/Shrub Stratum	(Plot size: <u>5'</u> )				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>5</u> x 2 = <u>10</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>2</u> x 4 = <u>8</u> UPL species <u>10</u> x 5 = <u>50</u> Column Totals: <u>17</u> (A) <u>68</u> (B) Prevalence Index = B/A = <u>4.00</u>
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
Herb Stratum	(Plot size: <u>5'</u> )				<b>Hydrophytic Vegetation Indicators:</b> ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 <sup>1</sup> ___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.	<u>Bromus tectorum</u>	<u>8</u>	<u>Yes</u>	<u>UPL</u>	
2.	<u>Equisetum hyemale</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>	
3.	<u>Bromus japonicus</u>	<u>2</u>	<u>No</u>	<u>FACU</u>	
4.	<u>Centaurea stoebe</u>	<u>1</u>	<u>No</u>	<u>UPL</u>	
5.	<u>Convolvulus arvensis</u>	<u>1</u>	<u>No</u>	<u>UPL</u>	
6.	_____	_____	_____	_____	
7.	_____	_____	_____	_____	
8.	_____	_____	_____	_____	
17 =Total Cover					
Woody Vine Stratum	(Plot size: <u>5'</u> )				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
=Total Cover					
% Bare Ground in Herb Stratum <u>83</u>		% Cover of Biotic Crust _____			

Remarks:

**SOIL**

Sampling Point: DP12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10YR 3/2	100					Loamy/Clayey	
12-18	10YR 3/4	100					Loamy/Clayey	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)			Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)			
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)					

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____ No <u>X</u>
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Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present?    Yes _____    No <u>x</u> Depth (inches): _____ Water Table Present?      Yes _____    No <u>x</u> Depth (inches): _____ Saturation Present?        Yes _____    No <u>x</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____    No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Project/Site: Avista Blue Bird Transmission Line City/County: Spokane Sampling Date: 07/31/2025  
 Applicant/Owner: Avista State: WA Sampling Point: DP13  
 Investigator(s): Brady Staples, Steven Hutchinson Section, Township, Range: S28, T25N, R42E  
 Landform (hillside, terrace, etc.): Prairie Local relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): LRR B Lat: 47.641871° Long: -117.501365° Datum: \_\_\_\_\_  
 Soil Map Unit Name: Northstar-Rock outcrop-Rockly complex, 0 to 15 percent slopes NWI classification: N/A  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "IX" Yes x No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling points**

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

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Pinus ponderosa</u>	3	No	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
3 = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>5'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>3</u> x 3 = <u>9</u> FACU species <u>3</u> x 4 = <u>12</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>6</u> (A) <u>21</u> (B) Prevalence Index = B/A = <u>3.50</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>5'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 <sup>1</sup> ___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Bassia scoparia</u>	3	No	FAC	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
3 = Total Cover				
Woody Vine Stratum (Plot size: <u>5'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>97</u> % Cover of Biotic Crust _____				

Remarks:

**SOIL**

Sampling Point: DP13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 3/2	100					Loamy/Clayey	
2-12	2.5Y 5/3	100					Loamy/Clayey	very clayey

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)			Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)			
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				

<b>Restrictive Layer (if observed):</b>	<b>Hydric Soil Present?</b>	<b>Yes</b> <input type="checkbox"/> <b>No</b> <input checked="" type="checkbox"/>
Type: <u>Clay</u>		
Depth (inches): <u>12</u>		

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b>	<b>Yes</b> <input type="checkbox"/> <b>No</b> <input checked="" type="checkbox"/>
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>        </u>		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>        </u>		
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u>		
(includes capillary fringe)		

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

Remarks:  
Sandy clay loam layer that is difficult to dig in, likley an aquitard. Rained within the previous 24hrs.

Project/Site: Avista Blue Bird Transmission Line City/County: Spokane Sampling Date: 07/31/2025  
 Applicant/Owner: Avista State: WA Sampling Point: DP14  
 Investigator(s): Brady Staples, Steven Hutchinson Section, Township, Range: S28, T25N, R42E  
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): LRR B Lat: 47.632791° Long: -117.497276° Datum: \_\_\_\_\_  
 Soil Map Unit Name: Northstar-Rock outcrop-Rockly complex, 0 to 15 percent slopes NWI classification: N/A  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "IX" Yes x No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling p<sub>i</sub> x**

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

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
=Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>70</u> x 2 = <u>140</u> FAC species <u>4</u> x 3 = <u>12</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>74</u> (A) <u>152</u> (B) Prevalence Index = B/A = <u>2.05</u>
Sapling/Shrub Stratum (Plot size: <u>5'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
=Total Cover				
Herb Stratum (Plot size: <u>5'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Phalaris arundinacea</u>	<u>70</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Asclepias speciosa</u>	<u>4</u>	<u>No</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>74</u> =Total Cover				
Woody Vine Stratum (Plot size: <u>5'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
=Total Cover				
% Bare Ground in Herb Stratum <u>97</u>		% Cover of Biotic Crust _____		

Remarks:  
 Showy milkweed present

**SOIL**

Sampling Point: DP14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-9	10YR 2/2	100					Loamy/Clayey	
9-20	10YR 5/2	98	10YR 3/6	2	C		Loamy/Clayey	Prominent redox concentrations

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

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

Wetland Hydrology Present? Yes  No

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

Remarks:

Project/Site: Avista Blue Bird Transmission Line City/County: Spokane Sampling Date: 07/31/2025  
 Applicant/Owner: Avista State: WA Sampling Point: DP15  
 Investigator(s): Brady Staples, Steven Hutchinson Section, Township, Range: S28, T25N, R42E  
 Landform (hillside, terrace, etc.): Prairie Local relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): LRR B Lat: 47.633043° Long: -117.497375° Datum: \_\_\_\_\_  
 Soil Map Unit Name: Northstar-Rock outcrop-Rockly complex, 0 to 15 percent slopes NWI classification: upland  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "IX" Yes x No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling p<sub>1</sub> x**

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

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
=Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>30</u> x 2 = <u>60</u> FAC species <u>2</u> x 3 = <u>6</u> FACU species <u>65</u> x 4 = <u>260</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>97</u> (A) <u>326</u> (B) Prevalence Index = B/A = <u>3.36</u>
Sapling/Shrub Stratum (Plot size: <u>5'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
=Total Cover				
Herb Stratum (Plot size: <u>5'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Bromus inermis</u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Phalaris arundinacea</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>	
3. <u>Verbascum thapsus</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	
4. <u>Cirsium arvense</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
5. <u>Asclepias speciosa</u>	<u>2</u>	<u>No</u>	<u>FAC</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>97</u> =Total Cover				
Woody Vine Stratum (Plot size: <u>5'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
=Total Cover				
% Bare Ground in Herb Stratum <u>3</u> % Cover of Biotic Crust _____				

**Hydrophytic Vegetation Indicators:**  
 \_\_\_ Dominance Test is >50%  
 \_\_\_ Prevalence Index is ≤3.0<sup>1</sup>  
 \_\_\_ Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 \_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No X

Remarks:  
 Showy milkweed present

**SOIL**

Sampling Point: DP15

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10YR 3/2	100					Loamy/Clayey	
12-18	10YR 4/2	100					Loamy/Clayey	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)			Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)			
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)					

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____ No <u>X</u>
Remarks:	

**HYDROLOGY**

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present?    Yes _____ No <u>x</u> Depth (inches): _____ Water Table Present?      Yes _____ No <u>x</u> Depth (inches): _____ Saturation Present?        Yes _____ No <u>x</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Project/Site: Avista Blue Bird Transmission Line City/County: Spokane Sampling Date: 07/31/2025  
 Applicant/Owner: Avista State: WA Sampling Point: DP16  
 Investigator(s): Brady Staples, Steven Hutchinson Section, Township, Range: S28, T25N, R42E  
 Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): LRR B Lat: 47.634906° Long: -117.497244° Datum: \_\_\_\_\_  
 Soil Map Unit Name: Brincken ashy silt loam, 0 to 8 percent slopes NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "IX" Yes x No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling p<sub>1</sub> x**

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

**VEGETATION – Use scientific names of plants.**

Tree Stratum	(Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1.	_____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
		_____	=Total Cover		
Sapling/Shrub Stratum	(Plot size: <u>5'</u> )				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
Herb Stratum	(Plot size: <u>5'</u> )				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.	<u>Phalaris arundinacea</u>	<u>100</u>	<u>Yes</u>	<u>FACW</u>	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
6.	_____	_____	_____	_____	
7.	_____	_____	_____	_____	
Woody Vine Stratum	(Plot size: <u>5'</u> )				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
		_____	=Total Cover		
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust _____					

Remarks:  
 DP dug within a mapped NWI drainage.

**SOIL**

Sampling Point: DP16

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 2/1	100					Loamy/Clayey	
8-20	10YR 2/1	75	10YR 3/6	25	C		Loamy/Clayey	Prominent redox concentrations

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:	

**HYDROLOGY**

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present?        Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>16</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
 NWI drainage

Project/Site: Avista Blue Bird Transmission Line City/County: Spokane Sampling Date: 07/31/2025  
 Applicant/Owner: Avista State: WA Sampling Point: DP17  
 Investigator(s): Brady Staples, Steven Hutchinson Section, Township, Range: S28, T25N, R42E  
 Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR): LRR B Lat: 47.635071° Long: -117.497304° Datum: \_\_\_\_\_  
 Soil Map Unit Name: Brincken ashy silt loam, 0 to 8 percent slopes NWI classification: upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "IX" Yes x No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling points**

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

**VEGETATION – Use scientific names of plants.**

Tree Stratum	(Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1.	_____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
		_____	=Total Cover		
Sapling/Shrub Stratum	(Plot size: <u>5'</u> )				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>100</u> x 2 = <u>200</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>100</u> (A) <u>200</u> (B) Prevalence Index = B/A = <u>2.00</u>
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
Herb Stratum	(Plot size: <u>5'</u> )				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.	<u>Agrostis stolonifera</u>	<u>80</u>	<u>Yes</u>	<u>FACW</u>	
2.	<u>Phalaris arundinacea</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
6.	_____	_____	_____	_____	
7.	_____	_____	_____	_____	
8.	_____	_____	_____	_____	
		<u>100</u>	=Total Cover		
Woody Vine Stratum	(Plot size: <u>5'</u> )				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
		_____	=Total Cover		
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust _____			

Remarks:

**SOIL**

Sampling Point: DP17

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 3/2	100					Loamy/Clayey	
8-20	10YR 4/3	100					Loamy/Clayey	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)			Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)			
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)					

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____ No <u>X</u>
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Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present?    Yes _____ No <u>x</u> Depth (inches): _____ Water Table Present?      Yes _____ No <u>x</u> Depth (inches): _____ Saturation Present?        Yes _____ No <u>x</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Project/Site: Avista Blue Bird Transmission Line City/County: Spokane Sampling Date: 07/31/2025  
 Applicant/Owner: Avista State: WA Sampling Point: DP18  
 Investigator(s): Brady Staples, Steven Hutchinson Section, Township, Range: S28, T25N, R42E  
 Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): LRR B Lat: 47.639681° Long: -117.497343° Datum: \_\_\_\_\_  
 Soil Map Unit Name: Northstar-Rock outcrop-Rockly complex, 0 to 15 percent slopes NWI classification: upland  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "IX" Yes x No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling p<sub>i</sub> x**

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

**VEGETATION – Use scientific names of plants.**

Tree Stratum	(Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____					Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
2. _____					
3. _____					
4. _____					
_____ =Total Cover					
Sapling/Shrub Stratum	(Plot size: <u>5'</u> )				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>98</u> x 2 = <u>196</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>98</u> (A) <u>196</u> (B) Prevalence Index = B/A = <u>2.00</u>
1. _____					
2. _____					
3. _____					
4. _____					
_____ =Total Cover					
Herb Stratum	(Plot size: <u>5'</u> )				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> _____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Juncus balticus</u>		<u>98</u>	<u>Yes</u>	<u>FACW</u>	
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
<u>98</u> =Total Cover					
Woody Vine Stratum	(Plot size: <u>5'</u> )				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
1. _____					
2. _____					
_____ =Total Cover					
% Bare Ground in Herb Stratum <u>2</u>		% Cover of Biotic Crust _____			

Remarks:

**SOIL**

Sampling Point: DP18

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 2/1	100					Loamy/Clayey	Many roots
8-23	5Y 5/1	90	10YR 3/6	10	C		Loamy/Clayey	Prominent redox concentrations

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:	

**HYDROLOGY**

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present?        Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>10</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
 DP is located between two cattail stands within a swale that likely has subsurface water connection

Project/Site: Avista Blue Bird Transmission Line City/County: Spokane Sampling Date: 07/31/2025  
 Applicant/Owner: Avista State: WA Sampling Point: DP19  
 Investigator(s): Brady Staples, Steven Hutchinson Section, Township, Range: S28, T25N, R42E  
 Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): Convex Slope (%): 2  
 Subregion (LRR): LRR B Lat: 47.639708° Long: -117.497100° Datum: \_\_\_\_\_  
 Soil Map Unit Name: Northstar-Rock outcrop-Rockly complex, 0 to 15 percent slopes NWI classification: upland  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "IX" Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling p<sub>1</sub> x**

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

**VEGETATION – Use scientific names of plants.**

Tree Stratum	(Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
_____ =Total Cover					
Sapling/Shrub Stratum	(Plot size: <u>5'</u> )				
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
_____ =Total Cover					
Herb Stratum	(Plot size: <u>5'</u> )				
1.	<u>Elymus repens</u>	<u>50</u>	<u>Yes</u>	<u>FAC</u>	
2.	<u>Artemisia absinthium</u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>	
3.	<u>Agrostis gigantea</u>	<u>15</u>	<u>No</u>	<u>FACW</u>	
4.	<u>Plantago major</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	
5.	_____	_____	_____	_____	
6.	_____	_____	_____	_____	
7.	_____	_____	_____	_____	
8.	_____	_____	_____	_____	
<u>95</u> =Total Cover					
Woody Vine Stratum	(Plot size: <u>5'</u> )				
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
_____ =Total Cover					
% Bare Ground in Herb Stratum <u>5</u>		% Cover of Biotic Crust _____			

**Dominance Test worksheet:**

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>15</u>	x 2 = <u>30</u>
FAC species <u>60</u>	x 3 = <u>180</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>20</u>	x 5 = <u>100</u>
Column Totals: <u>95</u> (A)	<u>310</u> (B)
Prevalence Index = B/A = <u>3.26</u>	

**Hydrophytic Vegetation Indicators:**

\_\_\_ Dominance Test is >50%

\_\_\_ Prevalence Index is ≤3.0<sup>1</sup>

\_\_\_ Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No X

Remarks:

**SOIL**

Sampling Point: DP19

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 2/1	100					Loamy/Clayey	
8-22	10YR 4/2	100					Loamy/Clayey	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)			Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)			
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Iron Monosulfide (A18)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)					

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____ No <u>X</u>
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Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present?    Yes _____ No <u>x</u> Depth (inches): _____ Water Table Present?      Yes _____ No <u>x</u> Depth (inches): _____ Saturation Present?        Yes _____ No <u>x</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
---	---

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

Remarks:

## **ATTACHMENT D. WETLAND FUNCTIONAL ASSESSMENT RATING FORMS**



Wetland name or number: Wetland A

# RATING SUMMARY - Eastern Washington

Name of wetland (or ID#): Wetland A Date of site visit: 04/16/2025

Rated By: Steven Hutchinson Trained by Ecology? Yes  No  Date of Training: 05/30/2025

HGM Class used for rating: Depressional

Wetland has multiple HGM classes? Yes  No

NOTE: Form is not complete without the figures requested (figures can be combined).

Source of base aerial photo/map:

OVERALL WETLAND CATEGORY: **Category I** (based on functions  or special characteristics )

## 1. Category of wetland based on FUNCTIONS

Category I - Total score = 22 - 27

Category II - Total score = 19 - 21

Category III - Total score = 16 - 18

Category IV - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Site Potential	M	M	M	
Landscape Potential	L	L	H	
Value	H	L	H	Total
Score Based on Ratings	6	4	8	18

Score for each function based on three ratings (order of ratings is not important)

9 = H,H,H

8 = H,H,M

7 = H,H,L

7 = H,M,M

6 = H,M,L

6 = M,M,M

5 = H,L,L

5 = M,M,L

4 = M,L,L

3 = L,L,L

## 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Vernal Pool	
Alkali	
Wetland of High Conservation Value	
Bog	
Calcareous Fen	
Forested	Category I
None of the above	

**Wetland name or number:** Wetland A

**Maps and figures required to answer questions correctly for Eastern Washington**

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	D 1.3, H 1.1, H 1.5	1
Hydroperiods (including area of open water for H 1.3)	D 1.4, H 1.2, H 1.3	2
Location of outlet ( <i>can be added to map of hydroperiods</i> )	D 1.1, D 4.1	8
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	D 2.2, D 5.2	7
Map of the contributing basin	D 5.3	3
1km Polygon: Area that extends 1km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	6
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	5

Wetland name or number: Wetland A

## DEPRESSIONAL WETLANDS

### Water Quality Functions - Indicators that the site functions to improve water quality

**D 1.0 Does the site have the potential to improve water quality?**

**D 1.1** What are the characteristics of surface water outflows from the wetland?

Wetland has no surface water outlet	points = 5	
Wetland has an intermittently flowing outlet	points = 3	
Wetland has a highly constricted permanently flowing outlet	points = 3	
Wetland has a permanently flowing, unconstricted surface outlet	points = 1	<b>Score: 3</b>

**D 1.2** Is the soil 2 in. below the surface a true clay or organic soil?

Mapped as true clay or organic	points = 3	
Soil texture identified as clay or organic in field	points = 3	
Soil texture identified as clay or organic by laboratory test	points = 3	
None of the above	points = 0	<b>Score: 0</b>

**D 1.3** What are the characteristics and distribution of persistent plants?

Wetland has persistent, ungrazed, vegetation for >66% of the wetland area	points = 5	
Wetland has persistent, ungrazed, vegetation from 33%-66% of the wetland area	points = 3	
Wetland has persistent, ungrazed vegetation from 10%-33% of the wetland area	points = 1	
Wetland has persistent, ungrazed vegetation <10% of the wetland area	points = 0	<b>Score: 5</b>

**D 1.4** What are the characteristics of seasonal ponding or inundation in the wetland area?

Area seasonally ponded is >50% total area of wetland	points = 3	
Area seasonally ponded is 25%-50% total area of wetland	points = 1	
Area seasonally ponded is <25% total area of wetland	points = 0	<b>Score: 1</b>

**Total for D 1:** **9**

**Rating of Site Potential**

[ ] 12-16 = H [X] 6-11 = M [ ] 0-5 = L

*Record the rating on the first page*

**D 2.0 Does the landscape have the potential to support the water quality function of the site?**

**D 2.1** Does the wetland unit receive stormwater discharges?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

**D 2.2** Is >10% of the area within 150ft of the wetland in land uses that generate pollutants?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

**D 2.3** Are there septic systems within 250ft of the wetland?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

**D 2.4** Are the other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

Wetland name or number: Wetland A

D 2.5 What are the other sources of pollutants coming into the wetland?	
<b>Total for D 2:</b>	<b>0</b>

Rating of Landscape Potential

3-4 = H  1-2 = M  0 = L

Record the rating on the first page

<b>D 3.0 Is the water quality improvement provided by the site valuable to society?</b>	
<b>D 3.1 Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, or lake that is on the 303(d) list?</b>	
Yes	points = 1
No	points = 0
<b>Score: 0</b>	
<b>D 3.2 Is the wetland in a basin or sub-basin where water quality is an issue in some aquatic resource [303(d) list, eutrophic lakes, problems with nuisance and toxic algae]?</b>	
Yes	points = 1
No	points = 0
<b>Score: 0</b>	
<b>D 3.3 Has the site been identified in a watershed or local plan as important for maintaining water quality?</b>	
Yes	points = 2
No	points = 0
<b>Score: 2</b>	
<b>Total for D 3:</b>	
<b>2</b>	

Rating of Value

2-4 = H  1 = M  0 = L

Record the rating on the first page

<b><u>DEPRESSIONAL WETLANDS</u></b>	
<b>Hydrologic Functions</b> - Indicators that the site functions to reduce flooding and stream degradation	
<b>D 4.0 Does the site have the potential to reduce flooding and erosion?</b>	
<b>D 4.1 What are the characteristics of surface water outflows from the wetland?</b>	
Wetland has no surface water outlet	points = 8
Wetland has an intermittently flowing outlet	points = 4
Wetland has a highly constricted permanently flowing outlet	points = 4
Wetland has a permanently flowing unconfined surface outlet	points = 0
<b>Score: 4</b>	

**Wetland name or number:** Wetland A

<b>D 4.2</b> <u>What is the depth of storage during the wet periods?</u>		
Seasonal ponding: 3ft or more above the lowest point in the wetland or the surface of permanent ponding	points = 8	
Seasonal ponding: 2ft-<3ft above the lowest point in the wetland or the surface of permanent ponding	points = 6	
The wetland is a headwater wetland	points = 4	
Seasonal ponding: 1ft - <2ft	points = 4	
Seasonal ponding: 0.5ft - <1ft	points = 2	
Seasonal ponding: <0.5ft (6in) or only saturated soils	points = 0	<b>Score: 6</b>
<b>Total for D 4:</b>		<b>10</b>

**Rating of Site Potential**

12-16 = H  6-11 = M  0-5 = L

*Record the rating on the first page*

<b>D 5.0</b> <u>Does the landscape have the potential to support hydrologic functions of the site?</u>		
<b>D 5.1</b> <u>Does the wetland unit receive stormwater discharges?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 0</b>
<b>D 5.2</b> <u>Is &gt;10% of the area within 150ft of the wetland in a land use that generates runoff?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 0</b>
<b>D 5.3</b> <u>Is more than 25% of the contributing basin of the wetland covered with intensive human land uses?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 0</b>
<b>Total for D 5:</b>		<b>0</b>

**Rating of Landscape Potential**

3 = H  1-2 = M  0 = L

*Record the rating on the first page*

<b>D 6.0</b> <u>Are the hydrologic functions provided by the site valuable to society?</u>		
<b>D 6.1</b> <u>Is the wetland in a landscape that has flooding problems?</u>		
Flooding occurs in a sub-basin that is immediately down-gradient of the wetland	points = 2	
Surface flooding problems are in a sub-basin farther down-gradient	points = 1	
The existing or potential outflow from the wetland is so constrained that water cannot reach areas that flood	points = 0	
There are no problems with flooding downstream of the wetland	points = 0	<b>Score: 0</b>
<b>D 6.2</b> <u>Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</u>		
Yes	points = 2	
No	points = 0	<b>Score: 0</b>
<b>Total for D 6:</b>		<b>0</b>

**Rating of Value**

2-4 = H  1 = M  0 = L

*Record the rating on the first page*

Wetland name or number: Wetland A

## HABITAT FUNCTIONS

These questions apply to wetlands of all HGM classes - Indicators that the site functions to provide important habitat

### H 1.0 Does the wetland have the potential to provide habitat for many species?

#### H 1.1 What is the structure of the plant community?

Aquatic Bed

Emergent plants 0-12in (0-30cm) high are the highest layer and have >30% cover

Emergent plants >12-40in (>30-100cm) high are the highest layer with >30% cover

Emergent plants >40in (>100cm) high are the highest layer with >30% cover

Scrub-shrub (areas where shrubs have >30% cover)

Forested (areas where trees have >30% cover)

4 structures or more

points = 3

3 structures

points = 2

2 structures

points = 1

1 structure

points = 0

No structures

points = 0

**Score: 3**

#### H 1.2 Is one of the vegetation types Aquatic Bed?

Yes

points = 1

No

points = 0

**Score: 0**

#### H 1.3 What is the surface water potential?

The wetland has areas of open water (without emergent or shrub plants) that meet the scoring threshold during March to early June OR in August to the end of September

The wetland has an intermittent or permanent, and unvegetated stream within its boundaries, or along one side

The wetland is along the side of a stream or river with an unvegetated area that is at least 16ft (5m) wide

The wetland is a Lake Fringe wetland

The wetland meets at least one of these criteria

points = 3

No surface water that meets criteria

points = 0

**Score: 3**

#### H 1.4 What is the richness of plant species in the wetland?

>9 species

points = 2

4-9 species

points = 1

<4 species

points = 0

**Score: 1**

Wetland name or number: Wetland A

<b>H 1.5</b> <u>What is the interspersions of habitats within the wetland?</u>	
High	points = 3
Moderate	points = 2
Low	points = 1
None	points = 0
<b>Score: 2</b>	
<b>H 1.6</b> <u>What are the special habitat features within the wetland?</u>	
<input type="checkbox"/> Loose rocks larger than 4in OR large, downed, woody debris (>4in in diameter) within the area of surface ponding or in a stream.	
<input checked="" type="checkbox"/> Cattails or bulrushes are present within the wetland.	
<input type="checkbox"/> Standing snags (diameter at the bottom >4in) in the wetland or within 30m (100ft) of the edge.	
<input type="checkbox"/> Emergent or shrub vegetation in areas that are permanently inundated/ponded	
<input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) or signs of recent beaver activity.	
<input type="checkbox"/> Invasive species cover less than 20% in each stratum of vegetation (canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)	
6 habitat features selected	points = 6
5 habitat features selected	points = 5
4 habitat features selected	points = 4
3 habitat features selected	points = 3
2 habitat features selected	points = 2
1 habitat feature selected	points = 1
No habitat features selected	points = 0
<b>Score: 1</b>	
<b>Total for H 1:</b>	
<b>10</b>	

**Rating of Site Potential**

[ ] 15-18 = H [X] 7-14 = M [ ] 0-6 = L

*Record the rating on the first page*

**H 2.0** Does the landscape have the potential to support the habitat functions of the site?

<b>H 2.1</b> <u>What is the percentage of accessible habitat within 1km of the wetland?</u>	
>33% of 1km Polygon is accessible habitat	points = 3
20-30% of 1km Polygon is accessible habitat	points = 2
10-19% of 1km Polygon is accessible habitat	points = 1
<10% of 1km Polygon is accessible habitat	points = 0
<b>Score: 3</b>	
<b>H 2.2</b> <u>What is the total habitat in a 1km polygon around the wetland?</u>	
Total habitat is >50% of the 1km polygon	points = 3
Total habitat is 10-50% of the 1km polygon and in 1-3 patches	points = 2
Total habitat is 10-50% of the 1km polygon and in >3 patches	points = 1
Total habitat is <10% of the 1km polygon	points = 0
<b>Score: 1</b>	

Wetland name or number: Wetland A

<b>H 2.3</b> <u>What is the land use intensity in a 1km polygon within the wetland?</u>		
>50% of the polygon is high intensity land use	points = -2	
<50% of the polygon is high intensity land use	points = 0	<b>Score: 0</b>
<b>H 2.4</b> <u>Is the wetland is in an area where annual rainfall is less than 12in, and its water regime is not influenced by irrigation practices, dams, or water control structures?</u>		
Yes	points = 3	
No	points = 0	<b>Score: 0</b>
<b>Total for H 2:</b>		<b>4</b>

**Rating of Landscape Potential**

[X] 4-9 = H [ ] 1-3 = M [ ] 0 = L

*Record the rating on the first page*

**H 3.0** Is the habitat provided by the site valuable to society?

<b>H 3.1</b> <u>Does the site provide habitat for species valued in laws, regulations, or policies?</u>		
<input checked="" type="checkbox"/> Aspen Stands		
<input checked="" type="checkbox"/> Biodiversity Areas and Corridors		
<input type="checkbox"/> Eastside Steppe		
<input type="checkbox"/> Inland Dunes		
<input type="checkbox"/> Juniper Savannah		
<input type="checkbox"/> Old-growth/Mature Forests		
<input type="checkbox"/> Oregon White Oak		
<input type="checkbox"/> Riparian		
<input type="checkbox"/> Shrubsteppe		
<input type="checkbox"/> Fresh Deepwater		
<input type="checkbox"/> Instream		
<input type="checkbox"/> Caves		
<input type="checkbox"/> Cliffs		
<input type="checkbox"/> Snags and Logs		
<input type="checkbox"/> Talus		
<b>The following criteria automatically score 2 points:</b>		
<input type="checkbox"/> The wetland provides habitat for Threatened or Endangered species		
<input checked="" type="checkbox"/> The wetland is mapped as a location for an individual WDFW priority species		
<input type="checkbox"/> The wetland is a Wetland of High Conservation Value (WHCV)		
<input type="checkbox"/> The wetland has been categorized as an important habitat site in a local plan		
The wetland has 3 or more WDFW priority habitats within 100m, or meets the criteria for societal value	points = 2	
The site has 1 or 2 WDFW priority habitats within 100m	points = 1	
The site does not meet any of the criteria for societal value	points = 0	<b>Score: 2</b>
<b>Total for H 3:</b>		<b>2</b>

**Rating of Value**

[X] 2 = H [ ] 1 = M [ ] 0 = L

*Record the rating on the first page*

Wetland name or number: Wetland A

## CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

### SC 1.0 Vernal Pools

**SC 1.1** Is the wetland less than 4000sqft and it meets at least two of the follow criteria?

It's only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input.

Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals (if you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool.)

The soil in the wetland is shallow [ $<1\text{ft}$  (30cm) deep] and is underlain by an impermeable layer such as basalt or clay

Surface water is present for less than 120 days during the wet season.

Yes - Go to SC 1.2

No - Not a Special Characteristic Vernal Pool

**Result: Not a Special  
Characteristic Vernal  
Pool**

**SC 1.2** Is the vernal pool relatively undisturbed in February and March?

Yes - Go to SC 1.3

No - Not a Special Characteristic Vernal Pool

**Result:**

**SC 1.3** Is the vernal pool in an area where there are at least 3 separate aquatic resources (other wetlands, rivers, lakes, etc.) within 0.5 mi?

Yes - Category II Vernal Pool

No - Category III Vernal Pool

**Result:**

### SC 2.0 Alkali Wetlands

**SC 2.1** Does the wetland meet any of the following criteria for Alkali Wetlands?

The wetland has a conductivity  $>3.0$  mS/cm

The wetland has a conductivity between 2.0 and 3.0 mS, and more than 50% of the plant cover is the wetland can be classified as "alkali" species

If the wetland is dry at the time of your field visit, the central part of the area is covered with a layer of salt.

Yes - Category I Alkali Wetland

No - Go to SC 2.2

**Result: Go to SC 2.2**

**SC 2.2** Does the wetland meet two of the following criteria for Alkali Wetlands?

Salt encrustations around more than 75% of the edge of the wetland

more than 75% of the plant cover consists of alkali (salt tolerant) species

A pH above 9.0

Yes - Category I Alkali Wetland

No - Not a Special Characteristic Alkali Wetland

**Result: Not a Special  
Characteristic Alkali  
Wetland**

Wetland name or number: Wetland A

### SC 3.0 Wetlands of High Conservation Value

<p><b>SC 3.1</b> <u>Is the wetland listed by Washington Natural Heritage Program (WNHP) as a Wetland of High Conservation Value (WHVC)?</u></p> <p>Yes - Category I Wetland of High Conservation Value No - Go to SC 3.2</p>	<p><b>Result: Go to SC 3.2</b></p>
<p><b>SC 3.2</b> <u>Does the wetland have a rare plant species, rare plant community, or high-quality plant community that may qualify the site as a WHCV?</u></p> <p>Yes - Category I Wetland of High Conservation Value No - Not a Special Characteristic Wetland of High Conservation Value</p>	<p><b>Result: Not a Special Characteristic Wetland of High Conservation Value</b></p>

### SC 4.0 Bogs and Calcareous Fens

<p><b>SC 4.1</b> <u>Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16in or more of the first 32in of the soil profile?</u></p> <p>Yes - Go to SC 4.3 No - Go to SC 4.2</p>	<p><b>Result: Go to SC 4.2</b></p>
<p><b>SC 4.2</b> <u>Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16in deep over debrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pong?</u></p> <p>Yes - Go to SC 4.3 No - Not a Special Characteristic Bog</p>	<p><b>Result: Not a Special Characteristic Bog</b></p>
<p><b>SC 4.3</b> <u>Does an area with peats or mucks have more than 70% cover of mosses at gorund level, AND at least 30% cover of plant species listed?</u></p> <p>Yes - Category I Bog No - Go to SC 4.4</p>	<p><b>Result:</b></p>
<p><b>SC 4.4</b> <u>Is an area with peats or mucks forested (&gt;30% cover) with subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine AND any of the species (or combination of species) listed provide more than 30% of the cover under the canopy?</u></p> <p>Yes - Category I Bog No - Go to SC 4.5</p>	<p><b>Result:</b></p>
<p><b>SC 4.5</b> <u>Do the species listed comprise at least 20% of the total plant cover within an area of peats and mucks?</u></p> <p>Yes - Category I Calcareous Fen No - Go to SC 4.6</p>	<p><b>Result:</b></p>

**Wetland name or number:** Wetland A

**SC 4.6** Do the species listed comprise at least 10% of the total plant cover in an area of peats and mucks, AND one of the two following conditions is met?

Marl deposits [calcium carbonate (CaCO<sub>3</sub>) precipitate] occur on the soil surface or plant stems

The pH of free water is  $\geq 6.8$  AND electrical conductivity is  $\geq 200$  uS/cm at multiple locations within the wetland

Yes - Category I Calcareous Fen

No - Not a Special Characteristic Calcareous Fen

**Result:**

### SC 5.0 Forested Wetlands

**SC 5.1** Does the wetland have an area of forest rooted within its boundary that meets at least one of the following criteria?

The wetland is within the 100 year floodplain of a river or stream

Aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species

There is at least 0.25ac of trees (even in wetlands smaller than 2.5ac) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW

Yes - Go to SC 5.2

No - Not a Special Characteristic Forested Wetland

**Result: Go to SC 5.2**

**SC 5.2** Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees?

Yes - Category I Forested Wetland

No - Go to SC 5.3

**Result: Go to SC 5.3**

**SC 5.3** Does the wetland have areas where aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species?

Yes - Category I Forested Wetland

No - Go to SC 5.4

**Result: Category I Forested Wetland**

**SC 5.4** Does the wetland have at least 0.25ac with a forest canopy where more than 50% of the tree species (by cover) are fast growing species?

Yes - Category II Forested Wetland

No - Go to SC 5.5

**Result:**

**Wetland name or number:** Wetland A

**SC 5.5** Is the forested component of the wetland within the 100 year floodplain of a river or stream?

Yes - Category II Forested Wetland

No - Not a Special Characteristic Forested Wetland

**Result:**

**Category of wetland based on Special Characteristics**

If you answered No for all types, enter "Not Applicable" on Summary Form

**Special Characteristics**

**Category: Category I**



Figure 1. Cowardin Class.

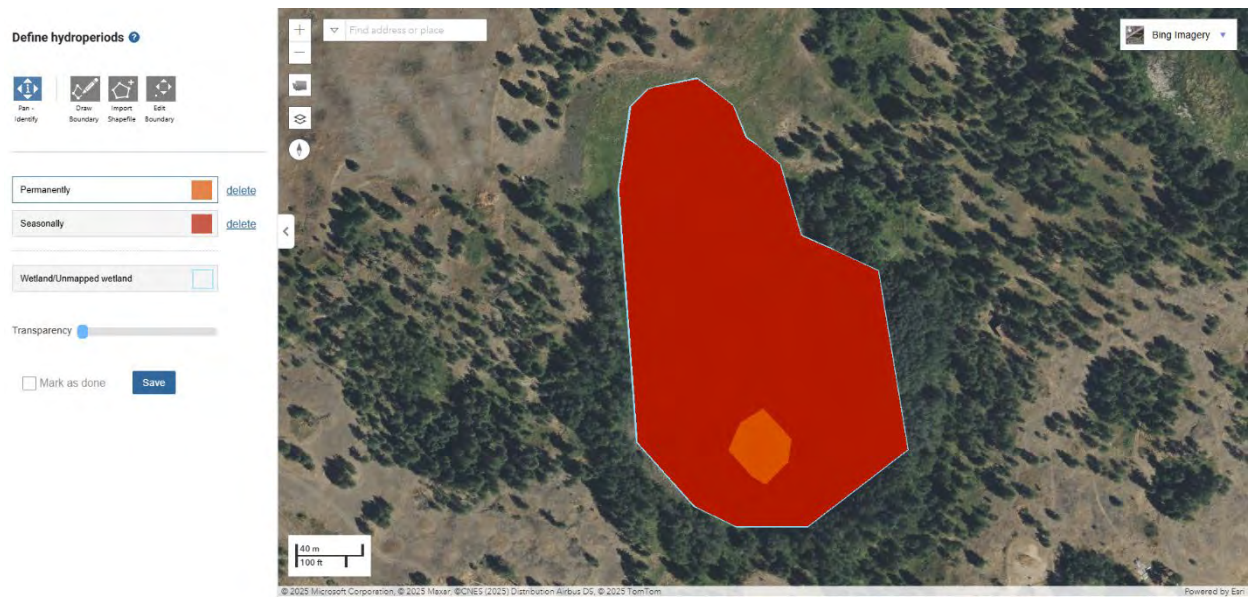


Figure 2. Hydroperiods.

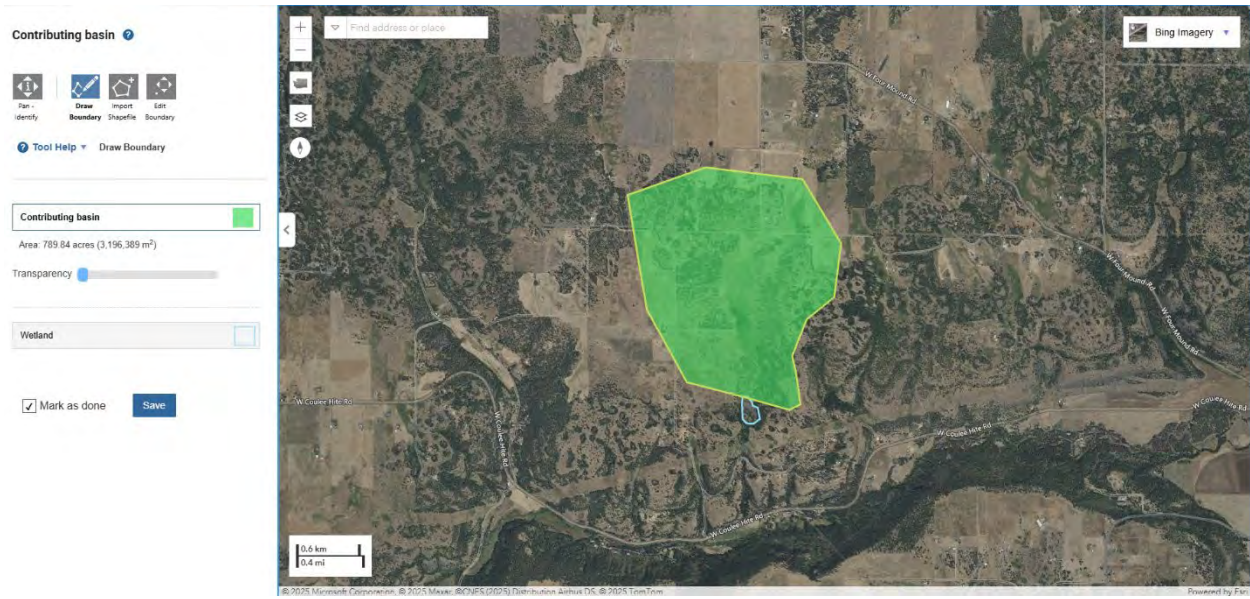


Figure 3. Contributing basin.



Figure 4. 1 km habitat polygon.



Figure 5. TDML.

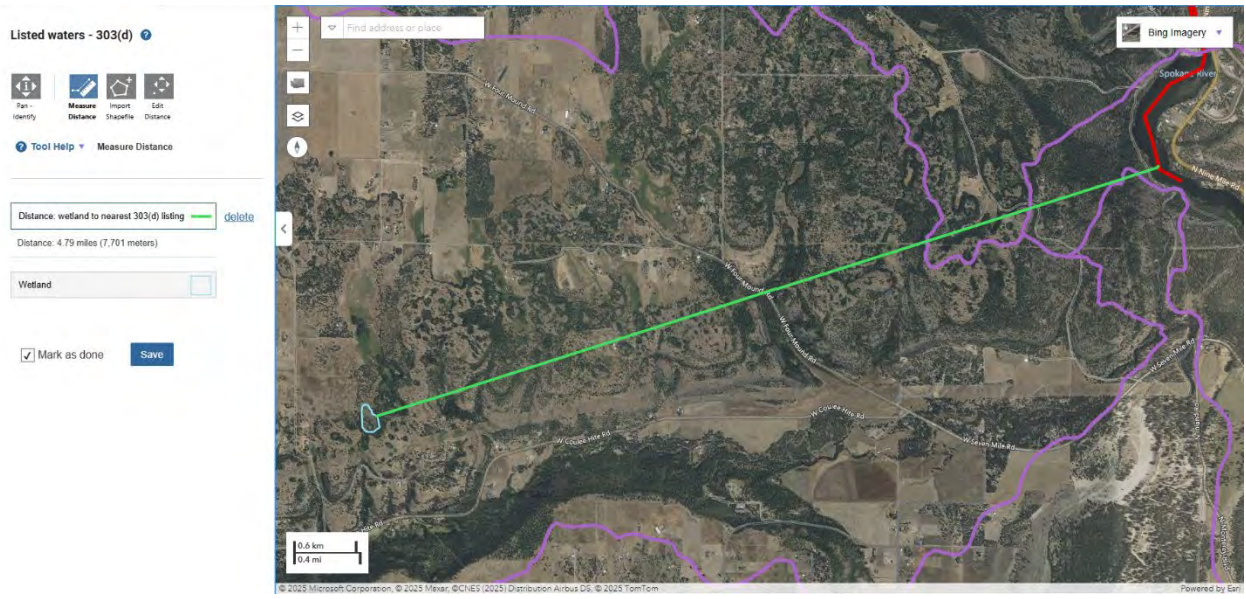


Figure 6. 303 (d).



Figure 7. 150 foot land use buffer.

Wetland name or number: Wetland B

# RATING SUMMARY - Eastern Washington

Name of wetland (or ID#): Wetland B Date of site visit: 04/16/2025

Rated By: Steven Hutchinson Trained by Ecology? Yes  No  Date of Training: 05/30/2025

HGM Class used for rating: Depressional

Wetland has multiple HGM classes? Yes  No

NOTE: Form is not complete without the figures requested (figures can be combined).

Source of base aerial photo/map: Bing Maps

OVERALL WETLAND CATEGORY: **[Category III]** (based on functions  or special characteristics )

## 1. Category of wetland based on FUNCTIONS

Category I - Total score = 22 - 27

Category II - Total score = 19 - 21

Category III - Total score = 16 - 18

Category IV - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Site Potential	H	H	L	
Landscape Potential	L	L	H	
Value	L	L	M	Total
Score Based on Ratings	5	5	6	16

Score for each function based on three ratings (order of ratings is not important)

9 = H,H,H

8 = H,H,M

7 = H,H,L

7 = H,M,M

6 = H,M,L

6 = M,M,M

5 = H,L,L

5 = M,M,L

4 = M,L,L

3 = L,L,L

## 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Vernal Pool	
Alkali	
Wetland of High Conservation Value	
Bog	
Calcareous Fen	
Forested	
None of the above	Not Applicable

**Wetland name or number:** Wetland B

**Maps and figures required to answer questions correctly for Eastern Washington**

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	D 1.3, H 1.1, H 1.5	1
Hydroperiods (including area of open water for H 1.3)	D 1.4, H 1.2, H 1.3	2
Location of outlet ( <i>can be added to map of hydroperiods</i> )	D 1.1, D 4.1	N/A
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	D 2.2, D 5.2	7
Map of the contributing basin	D 5.3	3
1km Polygon: Area that extends 1km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	6
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	5

Wetland name or number: Wetland B

## DEPRESSIONAL WETLANDS

### Water Quality Functions - Indicators that the site functions to improve water quality

**D 1.0 Does the site have the potential to improve water quality?**

**D 1.1** What are the characteristics of surface water outflows from the wetland?

Wetland has no surface water outlet	points = 5	
Wetland has an intermittently flowing outlet	points = 3	
Wetland has a highly constricted permanently flowing outlet	points = 3	
Wetland has a permanently flowing, unconstricted surface outlet	points = 1	<b>Score: 5</b>

**D 1.2** Is the soil 2 in. below the surface a true clay or organic soil?

Mapped as true clay or organic	points = 3	
Soil texture identified as clay or organic in field	points = 3	
Soil texture identified as clay or organic by laboratory test	points = 3	
None of the above	points = 0	<b>Score: 0</b>

**D 1.3** What are the characteristics and distribution of persistent plants?

Wetland has persistent, ungrazed, vegetation for >66% of the wetland area	points = 5	
Wetland has persistent, ungrazed, vegetation from 33%-66% of the wetland area	points = 3	
Wetland has persistent, ungrazed vegetation from 10%-33% of the wetland area	points = 1	
Wetland has persistent, ungrazed vegetation <10% of the wetland area	points = 0	<b>Score: 5</b>

**D 1.4** What are the characteristics of seasonal ponding or inundation in the wetland area?

Area seasonally ponded is >50% total area of wetland	points = 3	
Area seasonally ponded is 25%-50% total area of wetland	points = 1	
Area seasonally ponded is <25% total area of wetland	points = 0	<b>Score: 3</b>

**Total for D 1:** **13**

**Rating of Site Potential**

12-16 = H  6-11 = M  0-5 = L

*Record the rating on the first page*

**D 2.0 Does the landscape have the potential to support the water quality function of the site?**

**D 2.1** Does the wetland unit receive stormwater discharges?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

**D 2.2** Is >10% of the area within 150ft of the wetland in land uses that generate pollutants?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

**D 2.3** Are there septic systems within 250ft of the wetland?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

**D 2.4** Are the other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

Wetland name or number: Wetland B

<b>D 2.5</b> What are the other sources of pollutants coming into the wetland?	
<b>Total for D 2:</b>	<b>0</b>

**Rating of Landscape Potential**                       3-4 = H  1-2 = M  0 = L                      *Record the rating on the first page*

<b>D 3.0</b> Is the water quality improvement provided by the site valuable to society?		
<b>D 3.1</b> Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, or lake that is on the 303(d) list?		
Yes	points = 1	
No	points = 0 <b>Score: 0</b>	
<b>D 3.2</b> Is the wetland in a basin or sub-basin where water quality is an issue in some aquatic resource [303(d) list, eutrophic lakes, problems with nuisance and toxic algae]?		
Yes	points = 1	
No	points = 0 <b>Score: 0</b>	
<b>D 3.3</b> Has the site been identified in a watershed or local plan as important for maintaining water quality?		
Yes	points = 2	
No	points = 0 <b>Score: 0</b>	
<b>Total for D 3:</b>		<b>0</b>

**Rating of Value**     2-4 = H  1 = M  0 = L    *Record the rating on the first page*

<h2><u>DEPRESSIONAL WETLANDS</u></h2> <p><b>Hydrologic Functions</b> - Indicators that the site functions to reduce flooding and stream degradation</p>
---

<b>D 4.0</b> Does the site have the potential to reduce flooding and erosion?	
<b>D 4.1</b> What are the characteristics of surface water outflows from the wetland?	
Wetland has no surface water outlet	points = 8
Wetland has an intermittently flowing outlet	points = 4
Wetland has a highly constricted permanently flowing outlet	points = 4
Wetland has a permanently flowing unconfined surface outlet	points = 0 <b>Score: 8</b>

**Wetland name or number:** Wetland B

<b>D 4.2</b> <u>What is the depth of storage during the wet periods?</u>		
Seasonal ponding: 3ft or more above the lowest point in the wetland or the surface of permanent ponding	points = 8	
Seasonal ponding: 2ft-<3ft above the lowest point in the wetland or the surface of permanent ponding	points = 6	
The wetland is a headwater wetland	points = 4	
Seasonal ponding: 1ft - <2ft	points = 4	
Seasonal ponding: 0.5ft - <1ft	points = 2	
Seasonal ponding: <0.5ft (6in) or only saturated soils	points = 0	<b>Score: 6</b>
<b>Total for D 4:</b>		<b>14</b>

**Rating of Site Potential**

12-16 = H  6-11 = M  0-5 = L

*Record the rating on the first page*

<b>D 5.0</b> <u>Does the landscape have the potential to support hydrologic functions of the site?</u>		
<b>D 5.1</b> <u>Does the wetland unit receive stormwater discharges?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 0</b>
<b>D 5.2</b> <u>Is &gt;10% of the area within 150ft of the wetland in a land use that generates runoff?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 0</b>
<b>D 5.3</b> <u>Is more than 25% of the contributing basin of the wetland covered with intensive human land uses?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 0</b>
<b>Total for D 5:</b>		<b>0</b>

**Rating of Landscape Potential**

3 = H  1-2 = M  0 = L

*Record the rating on the first page*

<b>D 6.0</b> <u>Are the hydrologic functions provided by the site valuable to society?</u>		
<b>D 6.1</b> <u>Is the wetland in a landscape that has flooding problems?</u>		
Flooding occurs in a sub-basin that is immediately down-gradient of the wetland	points = 2	
Surface flooding problems are in a sub-basin farther down-gradient	points = 1	
The existing or potential outflow from the wetland is so constrained that water cannot reach areas that flood	points = 0	
There are no problems with flooding downstream of the wetland	points = 0	<b>Score: 0</b>
<b>D 6.2</b> <u>Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</u>		
Yes	points = 2	
No	points = 0	<b>Score: 0</b>
<b>Total for D 6:</b>		<b>0</b>

**Rating of Value**

2-4 = H  1 = M  0 = L

*Record the rating on the first page*

Wetland name or number: Wetland B

## HABITAT FUNCTIONS

These questions apply to wetlands of all HGM classes - Indicators that the site functions to provide important habitat

### H 1.0 Does the wetland have the potential to provide habitat for many species?

#### H 1.1 What is the structure of the plant community?

- Aquatic Bed
- Emergent plants 0-12in (0-30cm) high are the highest layer and have >30% cover
- Emergent plants >12-40in (>30-100cm) high are the highest layer with >30% cover
- cover
- Emergent plants >40in (>100cm) high are the highest layer with >30% cover
- Scrub-shrub (areas where shrubs have >30% cover)
- Forested (areas where trees have >30% cover)

4 structures or more	points = 3	
3 structures	points = 2	
2 structures	points = 1	
1 structure	points = 0	
No structures	points = 0	<b>Score: 1</b>

#### H 1.2 Is one of the vegetation types Aquatic Bed?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

#### H 1.3 What is the surface water potential?

- The wetland has areas of open water (without emergent or shrub plants) that meet the scoring threshold during March to early June OR in August to the end of September
- The wetland has an intermittent or permanent, and unvegetated stream within its boundaries, or along one side
- The wetland is along the side of a stream or river with an unvegetated area that is at least 16ft (5m) wide
- The wetland is a Lake Fringe wetland

The wetland meets at least one of these criteria	points = 3	
No surface water that meets criteria	points = 0	<b>Score: 3</b>

#### H 1.4 What is the richness of plant species in the wetland?

>9 species	points = 2	
4-9 species	points = 1	
<4 species	points = 0	<b>Score: 0</b>

**Wetland name or number:** Wetland B

<b>H 1.5</b> <u>What is the interspersions of habitats within the wetland?</u>	
High	points = 3
Moderate	points = 2
Low	points = 1
None	points = 0
<b>Score: 1</b>	
<b>H 1.6</b> <u>What are the special habitat features within the wetland?</u>	
<input checked="" type="checkbox"/> Loose rocks larger than 4in OR large, downed, woody debris (>4in in diameter) within the area of surface ponding or in a stream.	
<input type="checkbox"/> Cattails or bulrushes are present within the wetland.	
<input type="checkbox"/> Standing snags (diameter at the bottom >4in) in the wetland or within 30m (100ft) of the edge.	
<input type="checkbox"/> Emergent or shrub vegetation in areas that are permanently inundated/ponded	
<input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) or signs of recent beaver activity.	
<input type="checkbox"/> Invasive species cover less than 20% in each stratum of vegetation (canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)	
6 habitat features selected	points = 6
5 habitat features selected	points = 5
4 habitat features selected	points = 4
3 habitat features selected	points = 3
2 habitat features selected	points = 2
1 habitat feature selected	points = 1
No habitat features selected	points = 0
<b>Score: 1</b>	
<b>Total for H 1:</b>	
<b>6</b>	

**Rating of Site Potential**

[ ] 15-18 = H [ ] 7-14 = M [X] 0-6 = L

*Record the rating on the first page*

**H 2.0 Does the landscape have the potential to support the habitat functions of the site?**

<b>H 2.1</b> <u>What is the percentage of accessible habitat within 1km of the wetland?</u>	
>33% of 1km Polygon is accessible habitat	points = 3
20-30% of 1km Polygon is accessible habitat	points = 2
10-19% of 1km Polygon is accessible habitat	points = 1
<10% of 1km Polygon is accessible habitat	points = 0
<b>Score: 3</b>	
<b>H 2.2</b> <u>What is the total habitat in a 1km polygon around the wetland?</u>	
Total habitat is >50% of the 1km polygon	points = 3
Total habitat is 10-50% of the 1km polygon and in 1-3 patches	points = 2
Total habitat is 10-50% of the 1km polygon and in >3 patches	points = 1
Total habitat is <10% of the 1km polygon	points = 0
<b>Score: 3</b>	

Wetland name or number: Wetland B

<b>H 2.3</b> <u>What is the land use intensity in a 1km polygon within the wetland?</u>		
>50% of the polygon is high intensity land use	points = -2	
<50% of the polygon is high intensity land use	points = 0	<b>Score: 0</b>
<b>H 2.4</b> <u>Is the wetland is in an area where annual rainfall is less than 12in, and its water regime is not influenced by irrigation practices, dams, or water control structures?</u>		
Yes	points = 3	
No	points = 0	<b>Score: 0</b>
<b>Total for H 2:</b>		<b>6</b>

Rating of Landscape Potential

[X] 4-9 = H [ ] 1-3 = M [ ] 0 = L

Record the rating on the first page

**H 3.0** Is the habitat provided by the site valuable to society?

<b>H 3.1</b> <u>Does the site provide habitat for species valued in laws, regulations, or policies?</u>		
<input type="checkbox"/> Aspen Stands		
<input checked="" type="checkbox"/> Biodiversity Areas and Corridors		
<input type="checkbox"/> Eastside Steppe		
<input type="checkbox"/> Inland Dunes		
<input type="checkbox"/> Juniper Savannah		
<input type="checkbox"/> Old-growth/Mature Forests		
<input type="checkbox"/> Oregon White Oak		
<input type="checkbox"/> Riparian		
<input type="checkbox"/> Shrubsteppe		
<input type="checkbox"/> Fresh Deepwater		
<input type="checkbox"/> Instream		
<input type="checkbox"/> Caves		
<input type="checkbox"/> Cliffs		
<input type="checkbox"/> Snags and Logs		
<input type="checkbox"/> Talus		
<b>The following criteria automatically score 2 points:</b>		
<input type="checkbox"/> The wetland provides habitat for Threatened or Endangered species		
<input type="checkbox"/> The wetland is mapped as a location for an individual WDFW priority species		
<input type="checkbox"/> The wetland is a Wetland of High Conservation Value (WHCV)		
<input type="checkbox"/> The wetland has been categorized as an important habitat site in a local plan		
The wetland has 3 or more WDFW priority habitats within 100m, or meets the criteria for societal value	points = 2	
The site has 1 or 2 WDFW priority habitats within 100m	points = 1	
The site does not meet any of the criteria for societal value	points = 0	<b>Score: 1</b>
<b>Total for H 3:</b>		<b>1</b>

Rating of Value

[ ] 2 = H [X] 1 = M [ ] 0 = L

Record the rating on the first page

Wetland name or number: Wetland B

## CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

### SC 1.0 Vernal Pools

**SC 1.1** Is the wetland less than 4000sqft and it meets at least two of the follow criteria?

It's only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input.

Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals (if you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool.)

The soil in the wetland is shallow [ $<1\text{ft}$  (30cm) deep] and is underlain by an impermeable layer such as basalt or clay

Surface water is present for less than 120 days during the wet season.

Yes - Go to SC 1.2

No - Not a Special Characteristic Vernal Pool

**Result: Not a Special Characteristic Vernal Pool**

**SC 1.2** Is the vernal pool relatively undisturbed in February and March?

Yes - Go to SC 1.3

No - Not a Special Characteristic Vernal Pool

**Result:**

**SC 1.3** Is the vernal pool in an area where there are at least 3 separate aquatic resources (other wetlands, rivers, lakes, etc.) within 0.5 mi?

Yes - Category II Vernal Pool

No - Category III Vernal Pool

**Result:**

### SC 2.0 Alkali Wetlands

**SC 2.1** Does the wetland meet any of the following criteria for Alkali Wetlands?

The wetland has a conductivity  $>3.0$  mS/cm

The wetland has a conductivity between 2.0 and 3.0 mS, and more than 50% of the plant cover is the wetland can be classified as "alkali" species

If the wetland is dry at the time of your field visit, the central part of the area is covered with a layer of salt.

Yes - Category I Alkali Wetland

No - Go to SC 2.2

**Result: Go to SC 2.2**

**SC 2.2** Does the wetland meet two of the following criteria for Alkali Wetlands?

Salt encrustations around more than 75% of the edge of the wetland

more than 75% of the plant cover consists of alkali (salt tolerant) species

A pH above 9.0

Yes - Category I Alkali Wetland

No - Not a Special Characteristic Alkali Wetland

**Result: Not a Special  
Characteristic Alkali  
Wetland**

Wetland name or number: Wetland B

**SC 3.0 Wetlands of High Conservation Value**

<p><b>SC 3.1</b> <u>Is the wetland listed by Washington Natural Heritage Program (WNHP) as a Wetland of High Conservation Value (WHVC)?</u></p> <p>Yes - Category I Wetland of High Conservation Value No - Go to SC 3.2</p>	<p><b>Result: Go to SC 3.2</b></p>
<p><b>SC 3.2</b> <u>Does the wetland have a rare plant species, rare plant community, or high-quality plant community that may qualify the site as a WHCV?</u></p> <p>Yes - Category I Wetland of High Conservation Value No - Not a Special Characteristic Wetland of High Conservation Value</p>	<p><b>Result: Not a Special Characteristic Wetland of High Conservation Value</b></p>

**SC 4.0 Bogs and Calcareous Fens**

<p><b>SC 4.1</b> <u>Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16in or more of the first 32in of the soil profile?</u></p> <p>Yes - Go to SC 4.3 No - Go to SC 4.2</p>	<p><b>Result: Go to SC 4.2</b></p>
<p><b>SC 4.2</b> <u>Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16in deep over debrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pong?</u></p> <p>Yes - Go to SC 4.3 No - Not a Special Characteristic Bog</p>	<p><b>Result: Not a Special Characteristic Bog</b></p>
<p><b>SC 4.3</b> <u>Does an area with peats or mucks have more than 70% cover of mosses at gorund level, AND at least 30% cover of plant species listed?</u></p> <p>Yes - Category I Bog No - Go to SC 4.4</p>	<p><b>Result:</b></p>
<p><b>SC 4.4</b> <u>Is an area with peats or mucks forested (&gt;30% cover) with subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine AND any of the species (or combination of species) listed provide more than 30% of the cover under the canopy?</u></p> <p>Yes - Category I Bog No - Go to SC 4.5</p>	<p><b>Result:</b></p>
<p><b>SC 4.5</b> <u>Do the species listed comprise at least 20% of the total plant cover within an area of peats and mucks?</u></p> <p>Yes - Category I Calcareous Fen No - Go to SC 4.6</p>	<p><b>Result:</b></p>

**Wetland name or number:** Wetland B

**SC 4.6** Do the species listed comprise at least 10% of the total plant cover in an area of peats and mucks, AND one of the two following conditions is met?

Marl deposits [calcium carbonate (CaCO<sub>3</sub>) precipitate] occur on the soil surface or plant stems

The pH of free water is  $\geq 6.8$  AND electrical conductivity is  $\geq 200$  uS/cm at multiple locations within the wetland

Yes - Category I Calcareous Fen

No - Not a Special Characteristic Calcareous Fen

**Result:**

### SC 5.0 Forested Wetlands

**SC 5.1** Does the wetland have an area of forest rooted within its boundary that meets at least one of the following criteria?

The wetland is within the 100 year floodplain of a river or stream

Aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species

There is at least 0.25ac of trees (even in wetlands smaller than 2.5ac) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW

Yes - Go to SC 5.2

No - Not a Special Characteristic Forested Wetland

**Result: Not a Special  
Characteristic Forested  
Wetland**

**SC 5.2** Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees?

Yes - Category I Forested Wetland

No - Go to SC 5.3

**Result:**

**SC 5.3** Does the wetland have areas where aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species?

Yes - Category I Forested Wetland

No - Go to SC 5.4

**Result:**

**SC 5.4** Does the wetland have at least 0.25ac with a forest canopy where more than 50% of the tree species (by cover) are fast growing species?

Yes - Category II Forested Wetland

No - Go to SC 5.5

**Result:**

**Wetland name or number:** Wetland B

**SC 5.5** Is the forested component of the wetland within the 100 year floodplain of a river or stream?

Yes - Category II Forested Wetland

No - Not a Special Characteristic Forested Wetland

**Result:**

**Category of wetland based on Special Characteristics**

If you answered No for all types, enter "Not Applicable" on Summary Form

**Special Characteristics**

**Category: Not**

**Applicable**



Figure 1. Cowardin Class.

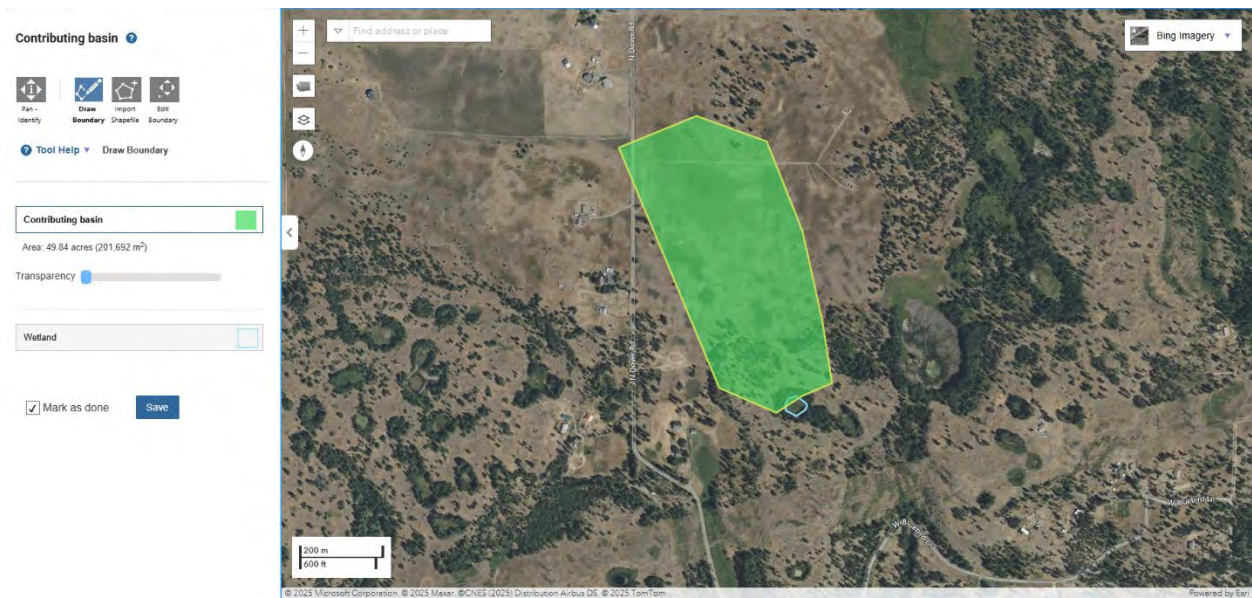


Figure 2. Contributing basin.

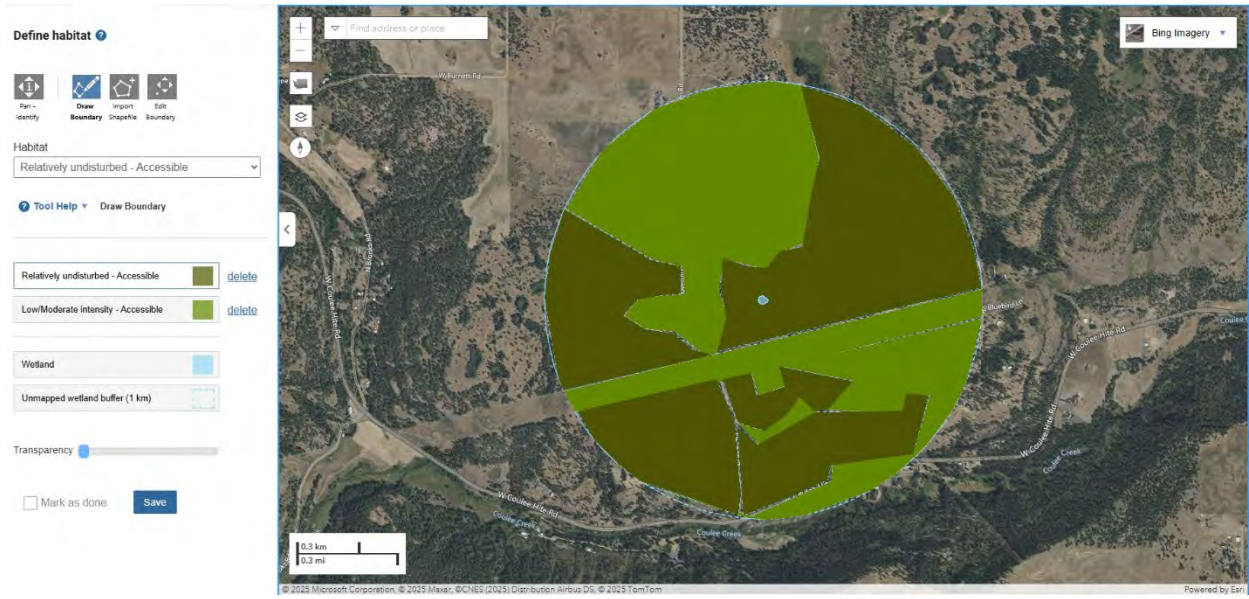


Figure 3. 1 km habitat polygon.



Figure 4. TDML.

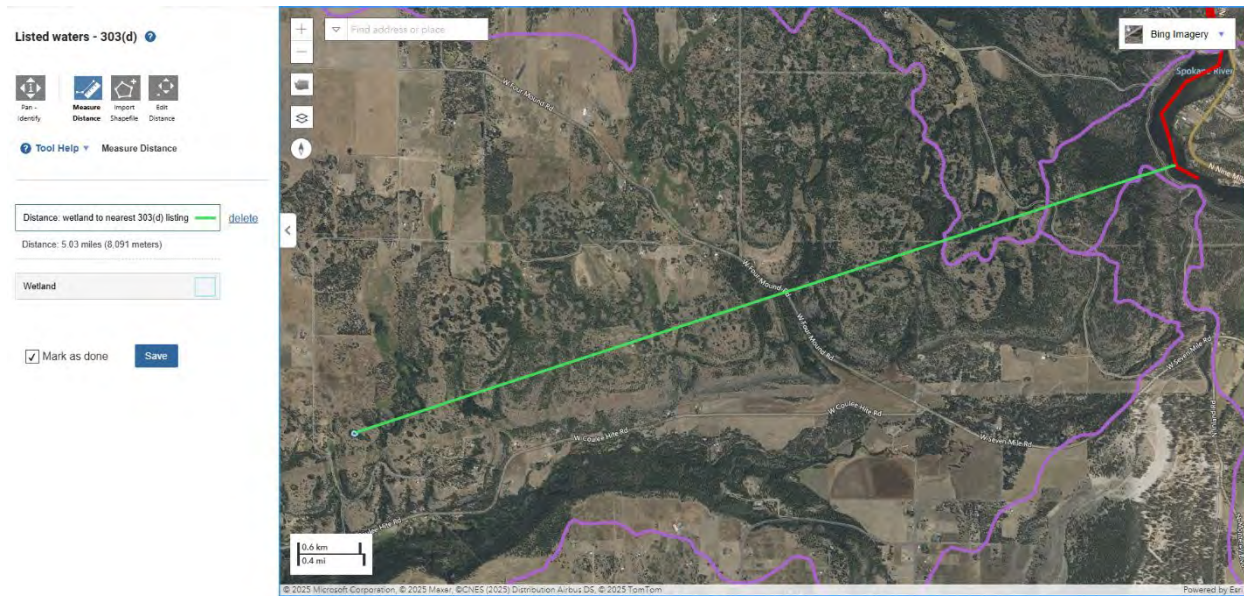


Figure 5. 303 (d).



Figure 6. 150 foot land use buffer.

Wetland name or number: Wetland C

# RATING SUMMARY - Eastern Washington

Name of wetland (or ID#): Wetland C Date of site visit: 04/22/2025

Rated By: Steven Hutchinson Trained by Ecology? Yes  No  Date of Training: 05/30/2025

HGM Class used for rating: Slope

Wetland has multiple HGM classes? Yes  No

NOTE: Form is not complete without the figures requested (figures can be combined).

Source of base aerial photo/map: Bing Maps/Google Earth

OVERALL WETLAND CATEGORY: [Category IV] (based on functions ) or special characteristics [  ]

## 1. Category of wetland based on FUNCTIONS

Category I - Total score = 22 - 27

Category II - Total score = 19 - 21

Category III - Total score = 16 - 18

Category IV - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Site Potential	L	L	L	
Landscape Potential	L	L	H	
Value	L	L	M	Total
Score Based on Ratings	3	3	6	12

Score for each function based on three ratings (order of ratings is not important)

9 = H,H,H

8 = H,H,M

7 = H,H,L

7 = H,M,M

6 = H,M,L

6 = M,M,M

5 = H,L,L

5 = M,M,L

4 = M,L,L

3 = L,L,L

## 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Vernal Pool	
Alkali	
Wetland of High Conservation Value	
Bog	
Calcareous Fen	
Forested	
None of the above	Not Applicable

**Wetland name or number:** Wetland C

**Maps and figures required to answer questions correctly for Eastern Washington**

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.5	1
Hydroperiods	H 1.2, H 1.3	2
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	3
Plant cover of dense, rigid trees, shrubs, and herbaceous plants ( <i>can be added to figure above</i> )	S 4.1	3
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	S 2.1, S 5.1	7
1km Polygon: Area that extends 1km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	6
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	5

Wetland name or number: Wetland C

## SLOPE WETLANDS

### Water Quality Functions - Indicators that the site functions to improve water quality

**S 1.0 Does the site have the potential to improve water quality?**

**S 1.1** What are the characteristics of the average slope of the wetland?

Slope is 1% or less	points = 3	
Slope is >1% - 2%	points = 2	
Slope is >2%-5%	points = 1	
Slope is >5%	points = 0	<b>Score: 2</b>

**S 1.2** Is the soil 2in below the surface true clay or true organic soil?

Mapped as true clay or organic (muck or peat)	points = 3	
Soil texture identified as clay or organic in field	points = 3	
Soil texture identified as clay or organic by laboratory test	points = 3	
None of the above	points = 0	<b>Score: 0</b>

**S 1.3** What are the characteristics of the plants in the wetland that trap sediments and pollutants?

Dense, uncut, herbaceous plants cover >90% of the wetland area	points = 6	
Dense, uncut, herbaceous plants cover >50% of the wetland area	points = 3	
Dense, woody, plants cover >50% of the wetland area	points = 2	
Dense, uncut, herbaceous plants cover >25% of the wetland area	points = 1	
Does not meet any of the criteria above for plants	points = 0	<b>Score: 2</b>

**Total for S 1:** **4**

**Rating of Site Potential**

12 = H  6-11 = M  0-5 = L

*Record the rating on the first page*

**S 2.0 Does the landscape have the potential to support the water quality function at the site?**

**S 2.1** Is >10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

**S 2.2** Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

**S 2.3** What are the other sources of pollutants coming into the wetland?

**Total for S 2:** **0**

**Rating of Landscape Potential**

1-2 = M  0 = L

*Record the rating on the first page*

Wetland name or number: Wetland C

<b>S 3.0 Is the water quality improvement provided by the site valuable to society?</b>		
<b>S 3.1</b> <u>Does the wetland discharge directly to a stream, river, or lake that is on the 303(d) list (within 1 mi)?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 0</b>
<b>S 3.2</b> <u>Is the wetland in a basin or sub-basin where water quality is an issue?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 0</b>
<b>S 3.3</b> <u>Has the site been identified in a watershed or local plan as important for maintaining water quality.</u>		
Yes	points = 2	
No	points = 0	<b>Score: 0</b>
		<b>Total for S 3:</b> <b>0</b>

Rating of Value

2-4 = H  1 = M  0 = L

Record the rating on the first page

**SLOPE WETLANDS**

**Hydrologic Functions** - Indicators that the site functions to reduce flooding and stream degradation

<b>S 4.0</b> <u>Does the site have the potential to reduce flooding and erosion?</u>		
<b>S 4.1</b> <u>Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland</u>		
Dense, uncut, rigid plants cover > 90% of the area of the wetland	points = 1	
All other conditions	points = 0	<b>Score: 0</b>
		<b>Total for S 4:</b> <b>0</b>

Rating of Site Potential

1 = M  0 = L

Record the rating on the first page

<b>S 5.0</b> <u>Does the landscape have the potential to support the hydrologic functions of the site?</u>		
<b>S 5.1</b> <u>Is more than 25% of the area within 150 ft upslope of wetland in land uses that generate excess surface runoff?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 0</b>
		<b>Total for S 5:</b> <b>0</b>

Rating of Landscape Potential

1 = M  0 = L

Record the rating on the first page

Wetland name or number: Wetland C

<b>S 6.0 Are the hydrologic functions provided by the site valueable to society?</b>		
<b>S 6.1</b> <u>Is the wetland in a landscape that has flooding problems?</u>		
Flooding occurs in a sub-basin that is immediately down-gradient of the wetland	points = 2	
Surface flooding problems are in a sub-basin farther down-gradient	points = 1	
There are no problems with flooding downstream of the wetland	points = 0	<b>Score: 0</b>
<b>S 6.2</b> <u>Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</u>		
Yes	points = 2	
No	points = 0	<b>Score: 0</b>
		<b>Total for S 6: 0</b>

Rating of Value

2-4 = H  1 = M  0 = L

Record the rating on the first page

Wetland name or number: Wetland C

## HABITAT FUNCTIONS

These questions apply to wetlands of all HGM classes - Indicators that the site functions to provide important habitat

### H 1.0 Does the wetland have the potential to provide habitat for many species?

#### H 1.1 What is the structure of the plant community?

- Aquatic Bed
- Emergent plants 0-12in (0-30cm) high are the highest layer and have >30% cover
- Emergent plants >12-40in (>30-100cm) high are the highest layer with >30% cover
- Emergent plants >40in (>100cm) high are the highest layer with >30% cover
- Scrub-shrub (areas where shrubs have >30% cover)
- Forested (areas where trees have >30% cover)

4 structures or more	points = 3	
3 structures	points = 2	
2 structures	points = 1	
1 structure	points = 0	
No structures	points = 0	<b>Score: 0</b>

#### H 1.2 Is one of the vegetation types Aquatic Bed?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

#### H 1.3 What is the surface water potential?

- The wetland has areas of open water (without emergent or shrub plants) that meet the scoring threshold during March to early June OR in August to the end of September
- The wetland has an intermittent or permanent, and unvegetated stream within its boundaries, or along one side
- The wetland is along the side of a stream or river with an unvegetated area that is at least 16ft (5m) wide
- The wetland is a Lake Fringe wetland

The wetland meets at least one of these criteria	points = 3	
No surface water that meets criteria	points = 0	<b>Score: 0</b>

#### H 1.4 What is the richness of plant species in the wetland?

>9 species	points = 2	
4-9 species	points = 1	
<4 species	points = 0	<b>Score: 1</b>

**Wetland name or number:** Wetland C

<b>H 1.5</b> <u>What is the interspersion of habitats within the wetland?</u>	
High	points = 3
Moderate	points = 2
Low	points = 1
None	points = 0
<b>Score: 1</b>	
<b>H 1.6</b> <u>What are the special habitat features within the wetland?</u>	
<input type="checkbox"/> Loose rocks larger than 4in OR large, downed, woody debris (>4in in diameter) within the area of surface ponding or in a stream.	
<input type="checkbox"/> Cattails or bulrushes are present within the wetland.	
<input checked="" type="checkbox"/> Standing snags (diameter at the bottom >4in) in the wetland or within 30m (100ft) of the edge.	
<input type="checkbox"/> Emergent or shrub vegetation in areas that are permanently inundated/ponded	
<input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) or signs of recent beaver activity.	
<input type="checkbox"/> Invasive species cover less than 20% in each stratum of vegetation (canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)	
6 habitat features selected	points = 6
5 habitat features selected	points = 5
4 habitat features selected	points = 4
3 habitat features selected	points = 3
2 habitat features selected	points = 2
1 habitat feature selected	points = 1
No habitat features selected	points = 0
<b>Score: 1</b>	
<b>Total for H 1:</b>	
<b>3</b>	

**Rating of Site Potential**

[ ] 15-18 = H [ ] 7-14 = M [X] 0-6 = L

*Record the rating on the first page*

**H 2.0 Does the landscape have the potential to support the habitat functions of the site?**

<b>H 2.1</b> <u>What is the percentage of accessible habitat within 1km of the wetland?</u>	
>33% of 1km Polygon is accessible habitat	points = 3
20-30% of 1km Polygon is accessible habitat	points = 2
10-19% of 1km Polygon is accessible habitat	points = 1
<10% of 1km Polygon is accessible habitat	points = 0
<b>Score: 3</b>	
<b>H 2.2</b> <u>What is the total habitat in a 1km polygon around the wetland?</u>	
Total habitat is >50% of the 1km polygon	points = 3
Total habitat is 10-50% of the 1km polygon and in 1-3 patches	points = 2
Total habitat is 10-50% of the 1km polygon and in >3 patches	points = 1
Total habitat is <10% of the 1km polygon	points = 0
<b>Score: 3</b>	

Wetland name or number: Wetland C

<b>H 2.3</b> <u>What is the land use intensity in a 1km polygon within the wetland?</u>		
>50% of the polygon is high intensity land use	points = -2	
<50% of the polygon is high intensity land use	points = 0	<b>Score: 0</b>
<b>H 2.4</b> <u>Is the wetland is in an area where annual rainfall is less than 12in, and its water regime is not influenced by irrigation practices, dams, or water control structures?</u>		
Yes	points = 3	
No	points = 0	<b>Score: 0</b>
<b>Total for H 2:</b>		<b>6</b>

Rating of Landscape Potential

[X] 4-9 = H [ ] 1-3 = M [ ] 0 = L

Record the rating on the first page

**H 3.0** Is the habitat provided by the site valuable to society?

<b>H 3.1</b> <u>Does the site provide habitat for species valued in laws, regulations, or policies?</u>		
<input type="checkbox"/> Aspen Stands		
<input type="checkbox"/> Biodiversity Areas and Corridors		
<input type="checkbox"/> Eastside Steppe		
<input type="checkbox"/> Inland Dunes		
<input type="checkbox"/> Juniper Savannah		
<input type="checkbox"/> Old-growth/Mature Forests		
<input type="checkbox"/> Oregon White Oak		
<input type="checkbox"/> Riparian		
<input type="checkbox"/> Shrubsteppe		
<input type="checkbox"/> Fresh Deepwater		
<input type="checkbox"/> Instream		
<input type="checkbox"/> Caves		
<input type="checkbox"/> Cliffs		
<input checked="" type="checkbox"/> Snags and Logs		
<input type="checkbox"/> Talus		
<b>The following criteria automatically score 2 points:</b>		
<input type="checkbox"/> The wetland provides habitat for Threatened or Endangered species		
<input type="checkbox"/> The wetland is mapped as a location for an individual WDFW priority species		
<input type="checkbox"/> The wetland is a Wetland of High Conservation Value (WHCV)		
<input type="checkbox"/> The wetland has been categorized as an important habitat site in a local plan		
The wetland has 3 or more WDFW priority habitats within 100m, or meets the criteria for societal value	points = 2	
The site has 1 or 2 WDFW priority habitats within 100m	points = 1	
The site does not meet any of the criteria for societal value	points = 0	<b>Score: 1</b>
<b>Total for H 3:</b>		<b>1</b>

Rating of Value

[ ] 2 = H [X] 1 = M [ ] 0 = L

Record the rating on the first page

## CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

### SC 1.0 Vernal Pools

**SC 1.1** Is the wetland less than 4000sqft and it meets at least two of the follow criteria?

- It's only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input.
- Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals (if you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool.)
- The soil in the wetland is shallow [ $<1\text{ft}$  (30cm) deep] and is underlain by an impermeable layer such as basalt or clay
- Surface water is present for less than 120 days during the wet season.

Yes - Go to SC 1.2

No - Not a Special Characteristic Vernal Pool

**Result: Not a Special Characteristic Vernal Pool**

**SC 1.2** Is the vernal pool relatively undisturbed in February and March?

Yes - Go to SC 1.3

No - Not a Special Characteristic Vernal Pool

**Result:**

**SC 1.3** Is the vernal pool in an area where there are at least 3 separate aquatic resources (other wetlands, rivers, lakes, etc.) within 0.5 mi?

Yes - Category II Vernal Pool

No - Category III Vernal Pool

**Result:**

### SC 2.0 Alkali Wetlands

**SC 2.1** Does the wetland meet any of the following criteria for Alkali Wetlands?

- The wetland has a conductivity  $>3.0$  mS/cm
- The wetland has a conductivity between 2.0 and 3.0 mS, and more than 50% of the plant cover is the wetland can be classified as "alkali" species
- If the wetland is dry at the time of your field visit, the central part of the area is covered with a layer of salt.

Yes - Category I Alkali Wetland

No - Go to SC 2.2

**Result: Go to SC 2.2**

**SC 2.2** Does the wetland meet two of the following criteria for Alkali Wetlands?

- Salt encrustations around more than 75% of the edge of the wetland
- more than 75% of the plant cover consists of alkali (salt tolerant) species
- A pH above 9.0

Yes - Category I Alkali Wetland

No - Not a Special Characteristic Alkali Wetland

**Result: Not a Special  
Characteristic Alkali  
Wetland**

**Wetland name or number:** Wetland C

**SC 3.0 Wetlands of High Conservation Value**

**SC 3.1** Is the wetland listed by Washington Natural Heritage Program (WNHP) as a Wetland of High Conservation Value (WHVC)?

Yes - Category I Wetland of High Conservation Value

No - Go to SC 3.2

**Result: Go to SC 3.2**

**SC 3.2** Does the wetland have a rare plant species, rare plant community, or high-quality plant community that may qualify the site as a WHCV?

Yes - Category I Wetland of High Conservation Value

No - Not a Special Characteristic Wetland of High Conservation Value

**Result:**

**SC 4.0 Bogs and Calcareous Fens**

**SC 4.1** Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16in or more of the first 32in of the soil profile?

Yes - Go to SC 4.3

No - Go to SC 4.2

**Result: Go to SC 4.2**

**SC 4.2** Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16in deep over debrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pong?

Yes - Go to SC 4.3

No - Not a Special Characteristic Bog

**Result: Not a Special Characteristic Bog**

**SC 4.3** Does an area with peats or mucks have more than 70% cover of mosses at gorund level, AND at least 30% cover of plant species listed?

Yes - Category I Bog

No - Go to SC 4.4

**Result:**

**SC 4.4** Is an area with peats or mucks forested (>30% cover) with subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine AND any of the species (or combination of species) listed provide more than 30% of the cover under the canopy?

Yes - Category I Bog

No - Go to SC 4.5

**Result:**

**SC 4.5** Do the species listed comprise at least 20% of the total plant cover within an area of peats and mucks?

Yes - Category I Calcareous Fen

No - Go to SC 4.6

**Result:**

**Wetland name or number:** Wetland C

**SC 4.6** Do the species listed comprise at least 10% of the total plant cover in an area of peats and mucks, AND one of the two following conditions is met?

Marl deposits [calcium carbonate (CaCO<sub>3</sub>) precipitate] occur on the soil surface or plant stems

The pH of free water is  $\geq 6.8$  AND electrical conductivity is  $\geq 200$  uS/cm at multiple locations within the wetland

Yes - Category I Calcareous Fen

No - Not a Special Characteristic Calcareous Fen

**Result:**

### SC 5.0 Forested Wetlands

**SC 5.1** Does the wetland have an area of forest rooted within its boundary that meets at least one of the following criteria?

The wetland is within the 100 year floodplain of a river or stream

Aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species

There is at least 0.25ac of trees (even in wetlands smaller than 2.5ac) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW

Yes - Go to SC 5.2

No - Not a Special Characteristic Forested Wetland

**Result: Not a Special  
Characteristic Forested  
Wetland**

**SC 5.2** Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees?

Yes - Category I Forested Wetland

No - Go to SC 5.3

**Result:**

**SC 5.3** Does the wetland have areas where aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species?

Yes - Category I Forested Wetland

No - Go to SC 5.4

**Result:**

**SC 5.4** Does the wetland have at least 0.25ac with a forest canopy where more than 50% of the tree species (by cover) are fast growing species?

Yes - Category II Forested Wetland

No - Go to SC 5.5

**Result:**

**Wetland name or number:** Wetland C

**SC 5.5** Is the forested component of the wetland within the 100 year floodplain of a river or stream?

Yes - Category II Forested Wetland

No - Not a Special Characteristic Forested Wetland

**Result:**

**Category of wetland based on Special Characteristics**

If you answered No for all types, enter "Not Applicable" on Summary Form

**Special Characteristics**

**Category: Not**

**Applicable**

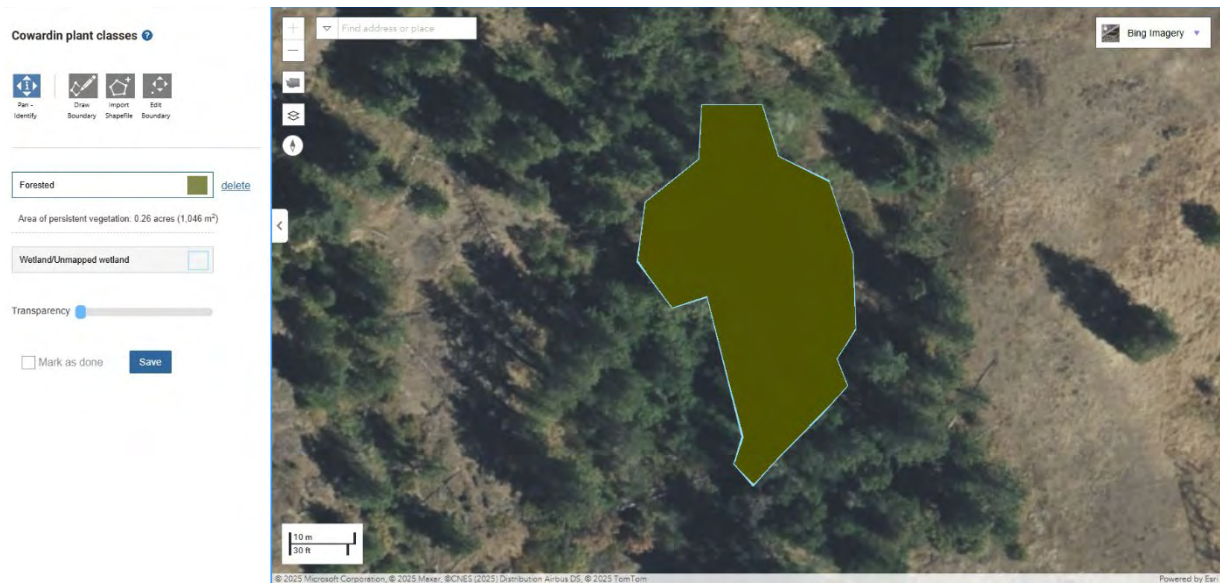


Figure 1. Cowardin Class.



Figure 2. Hydroperiods.



Figure 3. Plant cover.

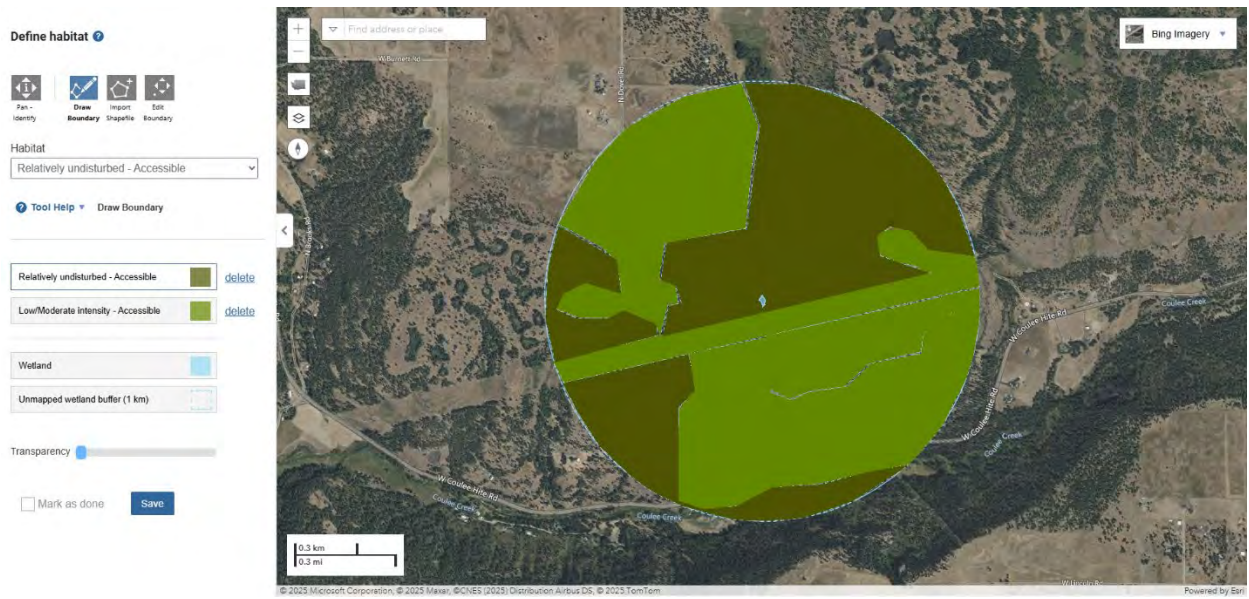


Figure 4. 1 km habitat polygon.



Figure 5. TDML.

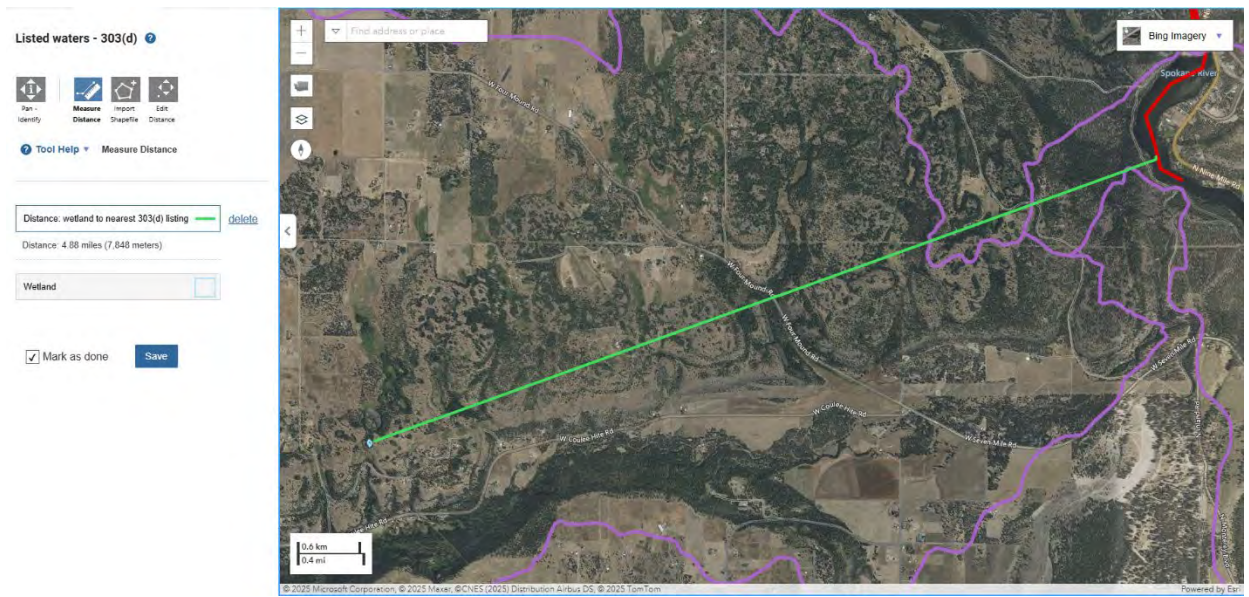


Figure 6. 303 (d).



Figure 7. 150 foot land use buffer.

Wetland name or number: Wetland D

# RATING SUMMARY - Eastern Washington

Name of wetland (or ID#): Wetland D Date of site visit: 04/24/2025

Rated By: Steven Hutchinson Trained by Ecology? Yes  No  Date of Training: 05/30/2025

HGM Class used for rating: Riverine

Wetland has multiple HGM classes? Yes  No

NOTE: Form is not complete without the figures requested (*figures can be combined*).

Source of base aerial photo/map: Bing Maps

OVERALL WETLAND CATEGORY: [Category III] (based on functions  or special characteristics )

## 1. Category of wetland based on FUNCTIONS

Category I - Total score = 22 - 27

Category II - Total score = 19 - 21

Category III - Total score = 16 - 18

Category IV - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Site Potential	L	M	L	
Landscape Potential	L	M	H	
Value	H	L	M	Total
Score Based on Ratings	5	5	6	16

Score for each function based on three ratings (order of ratings is not important)

9 = H,H,H

8 = H,H,M

7 = H,H,L

7 = H,M,M

6 = H,M,L

6 = M,M,M

5 = H,L,L

5 = M,M,L

4 = M,L,L

3 = L,L,L

## 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Vernal Pool	
Alkali	
Wetland of High Conservation Value	
Bog	
Calcareous Fen	
Forested	
None of the above	Not Applicable

**Wetland name or number:** Wetland D

**Maps and figures required to answer questions correctly for Eastern Washington**

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.5	1
Hydroperiods	H 1.2, H 1.3	2
Ponded depressions	R 1.1	2
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	R 2.4	7
Map of the contributing basin	R 2.2, R 2.3, R 5.2	3
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	8
Width of wetland vs. width of stream ( <i>can be added to another figure</i> )	R 4.1	9
1km Polygon: Area that extends 1km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	6
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	5

Wetland name or number: Wetland D

## RIVERINE WETLANDS

### Water Quality Functions - Indicators that the site functions to improve water quality

**R 1.0 Does the site have the potential to improve water quality?**

**R 1.1** Area of surface depressions within the Riverine wetland that can trap sediments during a flooding event

Depressions cover >33% of the wetland area	points = 6	
Depressions cover >10% of the wetland area	points = 3	
Depressions present but cover <10% of the wetland area	points = 1	
No depressions present	points = 0	<b>Score: 0</b>

**R 1.2** Structure of plants in the wetland (areas with >90% cover at person height; not Cowardin classes).

Forest or shrub vegetation covers >66% of the area in the wetland	points = 10	
Forest or shrub vegetation covers 33% – 66% of the area in the wetland	points = 5	
Ungrazed, herbaceous plant vegetation covers >66% of the area in the wetland	points = 5	
Ungrazed herbaceous plant vegetation covers 33% – 66% of the area in the wetland	points = 2	
Forest, shrub, and ungrazed herbaceous vegetation covers <33% of the area in the wetland	points = 0	<b>Score: 5</b>

**Total for R 1:** **5**

**Rating of Site Potential**

[ ] 12-16 = H [ ] 6-11 = M [X] 0-5 = L

*Record the rating on the first page*

**R 2.0 Does the landscape have the potential to support the water quality function of the site?**

**R 2.1** Is the wetland within an incorporated city or within its UGA?

Yes	points = 2	
No	points = 0	<b>Score: 0</b>

**R 2.2** Does the contributing basin include a UGA or incorporated area?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

**R 2.3** Does at least 10% of the contributing basin contain tilled fields, pastures, or forests that have been clearcut within the last 5 years?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

**R 2.4** Is > 10% of the area within 150 ft of wetland in land uses that generate pollutants

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

**R 2.5** Are there other sources of pollutants coming into the wetland that are not listed in questions R 2.1 - R 2.4?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

Wetland name or number: Wetland D

<b>R 2.6</b> What are the other sources of pollutants coming into the wetland?	
<b>Total for R 2:</b>	<b>0</b>

**Rating of Landscape Potential**                       3-6 = H  1-2 = M  0 = L                      *Record the rating on the first page*

<b>R 3.0</b> Is the water quality improvement provided by the site valuable to society?	
<b>R 3.1</b> Is the wetland along a stream or river that is on the 303(d) list or on a tributary that drains to one within 1 mi?	
Yes	points = 1
No	points = 0
<b>Score: 1</b>	
<b>R 3.2</b> Does the river or stream have TMDL limits for nutrients, toxics, or pathogens?	
Yes	points = 1
No	points = 0
<b>Score: 1</b>	
<b>R 3.3</b> Has the site been identified in a watershed or local plan as important for maintaining water quality?	
Yes	points = 2
No	points = 0
<b>Score: 2</b>	
<b>Total for R 3:</b>	
<b>4</b>	

**Rating of Value**     2-4 = H  1 = M  0 = L                      *Record the rating on the first page*

<b><u>RIVERINE WETLANDS</u></b>	
<b>Hydrologic Functions</b> - Indicators that the site functions to reduce flooding and stream degradation	
<b>R 4.0</b> Does the stie have the potential to reduce flooding and erosion?	
<b>R 4.1</b> What are the characteristics of the overbank storage the wetland provides?	
If the ratio is more than 2	points = 10
If the ratio is 1-2	points = 8
If the ratio is 0.50 - <1	points = 4
If the ratio is 0.25 - < 0.50	points = 2
If the ratio is < 0.25	points = 1
<b>Score: 2</b>	
<b>R 4.2</b> What are the characteristics of the plants that slow down water velocities during floods?	
Forest or shrub vegetation covers >66% the area of the wetland	points = 6
Forest or shrub vegetation covers >33% of the area OR emergent plant vegetation covers > 66% of the area in the wetland	points = 4
Forest or shrub vegetation covers >10% of the area OR emergent plant vegetation covers >33% of the area in the wetland	points = 2
Plants do not meet above criteria	points = 0
<b>Score: 4</b>	
<b>Total for R 4:</b>	
<b>6</b>	

**Rating of Site Potential**     12-16 = H  6-11 = M  0-5 = L                      *Record the rating on the first page*

Wetland name or number: Wetland D

<b>R 5.0 Does the landscape have the potential to support the hydrologic functions of the site?</b>		
<b>R 5.1 <u>Is the stream or river adjacent to the wetland downcut?</u></b>		
Yes	points = 0	
No	points = 1	<b>Score: 1</b>
<b>R 5.2 <u>Does the up-gradient watershed include a UGA or incorporated area?</u></b>		
Yes	points = 1	
No	points = 0	<b>Score: 0</b>
<b>R 5.3 <u>Is the up-gradient stream or river controlled by dams?</u></b>		
Yes	points = 0	
No	points = 1	<b>Score: 1</b>
<b>Total for R 5:</b>		<b>2</b>

**Rating of Landscape Potential**

3 = H  1-2 = M  0 = L

*Record the rating on the first page*

<b>R 6.0 Are the hydrologic functions provided by the site valuable to society?</b>		
<b>R 6.1 <u>What is the distance to the nearest areas downstream that have flooding problems?</u></b>		
The sub-basin immediately down-gradient of the wetland has flooding problems	points = 2	
Surface flooding problems are in a sub-basin farther down-gradient	points = 1	
No flooding problems anywhere downstream	points = 0	<b>Score: 0</b>
<b>R 6.2 <u>Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</u></b>		
Yes	points = 2	
No	points = 0	<b>Score: 0</b>
<b>Total for R 6:</b>		<b>0</b>

**Rating of Value**

2-4 = H  1 = M  0 = L

*Record the rating on the first page*

Wetland name or number: Wetland D

## HABITAT FUNCTIONS

These questions apply to wetlands of all HGM classes - Indicators that the site functions to provide important habitat

### H 1.0 Does the wetland have the potential to provide habitat for many species?

#### H 1.1 What is the structure of the plant community?

- Aquatic Bed
- Emergent plants 0-12in (0-30cm) high are the highest layer and have >30% cover
- Emergent plants >12-40in (>30-100cm) high are the highest layer with >30% cover
- cover
- Emergent plants >40in (>100cm) high are the highest layer with >30% cover
- Scrub-shrub (areas where shrubs have >30% cover)
- Forested (areas where trees have >30% cover)

4 structures or more	points = 3	
3 structures	points = 2	
2 structures	points = 1	
1 structure	points = 0	
No structures	points = 0	<b>Score: 0</b>

#### H 1.2 Is one of the vegetation types Aquatic Bed?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

#### H 1.3 What is the surface water potential?

- The wetland has areas of open water (without emergent or shrub plants) that meet the scoring threshold during March to early June OR in August to the end of September
- The wetland has an intermittent or permanent, and unvegetated stream within its boundaries, or along one side
- The wetland is along the side of a stream or river with an unvegetated area that is at least 16ft (5m) wide
- The wetland is a Lake Fringe wetland

The wetland meets at least one of these criteria	points = 3	
No surface water that meets criteria	points = 0	<b>Score: 0</b>

#### H 1.4 What is the richness of plant species in the wetland?

>9 species	points = 2	
4-9 species	points = 1	
<4 species	points = 0	<b>Score: 0</b>

**Wetland name or number:** Wetland D

<b>H 1.5</b> <u>What is the interspersion of habitats within the wetland?</u>		
High	points = 3	
Moderate	points = 2	
Low	points = 1	
None	points = 0	<b>Score: 0</b>
<b>H 1.6</b> <u>What are the special habitat features within the wetland?</u>		
<input type="checkbox"/> Loose rocks larger than 4in OR large, downed, woody debris (>4in in diameter) within the area of surface ponding or in a stream.		
<input type="checkbox"/> Cattails or bulrushes are present within the wetland.		
<input type="checkbox"/> Standing snags (diameter at the bottom >4in) in the wetland or within 30m (100ft) of the edge.		
<input type="checkbox"/> Emergent or shrub vegetation in areas that are permanently inundated/ponded		
<input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) or signs of recent beaver activity.		
<input type="checkbox"/> Invasive species cover less than 20% in each stratum of vegetation (canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)		
6 habitat features selected	points = 6	
5 habitat features selected	points = 5	
4 habitat features selected	points = 4	
3 habitat features selected	points = 3	
2 habitat features selected	points = 2	
1 habitat feature selected	points = 1	
No habitat features selected	points = 0	<b>Score: 0</b>
<b>Total for H 1:</b>		<b>0</b>

**Rating of Site Potential**

[ ] 15-18 = H [ ] 7-14 = M [X] 0-6 = L

*Record the rating on the first page*

**H 2.0 Does the landscape have the potential to support the habitat functions of the site?**

<b>H 2.1</b> <u>What is the percentage of accessible habitat within 1km of the wetland?</u>		
>33% of 1km Polygon is accessible habitat	points = 3	
20-30% of 1km Polygon is accessible habitat	points = 2	
10-19% of 1km Polygon is accessible habitat	points = 1	
<10% of 1km Polygon is accessible habitat	points = 0	<b>Score: 3</b>
<b>H 2.2</b> <u>What is the total habitat in a 1km polygon around the wetland?</u>		
Total habitat is >50% of the 1km polygon	points = 3	
Total habitat is 10-50% of the 1km polygon and in 1-3 patches	points = 2	
Total habitat is 10-50% of the 1km polygon and in >3 patches	points = 1	
Total habitat is <10% of the 1km polygon	points = 0	<b>Score: 3</b>

Wetland name or number: Wetland D

<b>H 2.3</b> <u>What is the land use intensity in a 1km polygon within the wetland?</u>		
>50% of the polygon is high intensity land use	points = -2	
<50% of the polygon is high intensity land use	points = 0	<b>Score: 0</b>
<b>H 2.4</b> <u>Is the wetland is in an area where annual rainfall is less than 12in, and its water regime is not influenced by irrigation practices, dams, or water control structures?</u>		
Yes	points = 3	
No	points = 0	<b>Score: 0</b>
<b>Total for H 2:</b>		<b>6</b>

Rating of Landscape Potential

[X] 4-9 = H [ ] 1-3 = M [ ] 0 = L

Record the rating on the first page

**H 3.0** Is the habitat provided by the site valuable to society?

<b>H 3.1</b> <u>Does the site provide habitat for species valued in laws, regulations, or policies?</u>		
<input type="checkbox"/> Aspen Stands		
<input type="checkbox"/> Biodiversity Areas and Corridors		
<input type="checkbox"/> Eastside Steppe		
<input type="checkbox"/> Inland Dunes		
<input type="checkbox"/> Juniper Savannah		
<input type="checkbox"/> Old-growth/Mature Forests		
<input type="checkbox"/> Oregon White Oak		
<input checked="" type="checkbox"/> Riparian		
<input type="checkbox"/> Shrubsteppe		
<input type="checkbox"/> Fresh Deepwater		
<input type="checkbox"/> Instream		
<input type="checkbox"/> Caves		
<input type="checkbox"/> Cliffs		
<input type="checkbox"/> Snags and Logs		
<input type="checkbox"/> Talus		
<b>The following criteria automatically score 2 points:</b>		
<input type="checkbox"/> The wetland provides habitat for Threatened or Endangered species		
<input type="checkbox"/> The wetland is mapped as a location for an individual WDFW priority species		
<input type="checkbox"/> The wetland is a Wetland of High Conservation Value (WHCV)		
<input type="checkbox"/> The wetland has been categorized as an important habitat site in a local plan		
The wetland has 3 or more WDFW priority habitats within 100m, or meets the criteria for societal value	points = 2	
The site has 1 or 2 WDFW priority habitats within 100m	points = 1	
The site does not meet any of the criteria for societal value	points = 0	<b>Score: 1</b>
<b>Total for H 3:</b>		<b>1</b>

Rating of Value

[ ] 2 = H [X] 1 = M [ ] 0 = L

Record the rating on the first page

Wetland name or number: Wetland D

## CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

### SC 1.0 Vernal Pools

**SC 1.1** Is the wetland less than 4000sqft and it meets at least two of the follow criteria?

- It's only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input.
- Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals (if you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool.)
- The soil in the wetland is shallow [ $<1\text{ft}$  (30cm) deep] and is underlain by an impermeable layer such as basalt or clay
- Surface water is present for less than 120 days during the wet season.

Yes - Go to SC 1.2

No - Not a Special Characteristic Vernal Pool

**Result: Not a Special Characteristic Vernal Pool**

**SC 1.2** Is the vernal pool relatively undisturbed in February and March?

Yes - Go to SC 1.3

No - Not a Special Characteristic Vernal Pool

**Result:**

**SC 1.3** Is the vernal pool in an area where there are at least 3 separate aquatic resources (other wetlands, rivers, lakes, etc.) within 0.5 mi?

Yes - Category II Vernal Pool

No - Category III Vernal Pool

**Result:**

### SC 2.0 Alkali Wetlands

**SC 2.1** Does the wetland meet any of the following criteria for Alkali Wetlands?

- The wetland has a conductivity  $>3.0$  mS/cm
- The wetland has a conductivity between 2.0 and 3.0 mS, and more than 50% of the plant cover is the wetland can be classified as "alkali" species
- If the wetland is dry at the time of your field visit, the central part of the area is covered with a layer of salt.

Yes - Category I Alkali Wetland

No - Go to SC 2.2

**Result: Go to SC 2.2**

**SC 2.2** Does the wetland meet two of the following criteria for Alkali Wetlands?

- Salt encrustations around more than 75% of the edge of the wetland
- more than 75% of the plant cover consists of alkali (salt tolerant) species
- A pH above 9.0

Yes - Category I Alkali Wetland

No - Not a Special Characteristic Alkali Wetland

**Result: Not a Special  
Characteristic Alkali  
Wetland**

Wetland name or number: Wetland D

### SC 3.0 Wetlands of High Conservation Value

**SC 3.1** Is the wetland listed by Washington Natural Heritage Program (WNHP) as a Wetland of High Conservation Value (WHVC)?

Yes - Category I Wetland of High Conservation Value

No - Go to SC 3.2

**Result: Go to SC 3.2**

**SC 3.2** Does the wetland have a rare plant species, rare plant community, or high-quality plant community that may qualify the site as a WHCV?

Yes - Category I Wetland of High Conservation Value

No - Not a Special Characteristic Wetland of High Conservation Value

**Result:**

### SC 4.0 Bogs and Calcareous Fens

**SC 4.1** Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16in or more of the first 32in of the soil profile?

Yes - Go to SC 4.3

No - Go to SC 4.2

**Result: Go to SC 4.2**

**SC 4.2** Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16in deep over debrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pong?

Yes - Go to SC 4.3

No - Not a Special Characteristic Bog

**Result: Not a Special Characteristic Bog**

**SC 4.3** Does an area with peats or mucks have more than 70% cover of mosses at gorund level, AND at least 30% cover of plant species listed?

Yes - Category I Bog

No - Go to SC 4.4

**Result:**

**SC 4.4** Is an area with peats or mucks forested (>30% cover) with subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine AND any of the species (or combination of species) listed provide more than 30% of the cover under the canopy?

Yes - Category I Bog

No - Go to SC 4.5

**Result:**

**SC 4.5** Do the species listed comprise at least 20% of the total plant cover within an area of peats and mucks?

Yes - Category I Calcareous Fen

No - Go to SC 4.6

**Result:**

**Wetland name or number:** Wetland D

**SC 4.6** Do the species listed comprise at least 10% of the total plant cover in an area of peats and mucks, AND one of the two following conditions is met?

Marl deposits [calcium carbonate (CaCO<sub>3</sub>) precipitate] occur on the soil surface or plant stems

The pH of free water is  $\geq 6.8$  AND electrical conductivity is  $\geq 200$  uS/cm at multiple locations within the wetland

Yes - Category I Calcareous Fen

No - Not a Special Characteristic Calcareous Fen

**Result:**

### SC 5.0 Forested Wetlands

**SC 5.1** Does the wetland have an area of forest rooted within its boundary that meets at least one of the following criteria?

The wetland is within the 100 year floodplain of a river or stream

Aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species

There is at least 0.25ac of trees (even in wetlands smaller than 2.5ac) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW

Yes - Go to SC 5.2

No - Not a Special Characteristic Forested Wetland

**Result: Not a Special  
Characteristic Forested  
Wetland**

**SC 5.2** Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees?

Yes - Category I Forested Wetland

No - Go to SC 5.3

**Result:**

**SC 5.3** Does the wetland have areas where aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species?

Yes - Category I Forested Wetland

No - Go to SC 5.4

**Result:**

**SC 5.4** Does the wetland have at least 0.25ac with a forest canopy where more than 50% of the tree species (by cover) are fast growing species?

Yes - Category II Forested Wetland

No - Go to SC 5.5

**Result:**

**Wetland name or number:** Wetland D

<b>SC 5.5</b> <u>Is the forested component of the wetland within the 100 year floodplain of a river or stream?</u>	
Yes - Category II Forested Wetland	
No - Not a Special Characteristic Forested Wetland	<b>Result:</b>
<b>Category of wetland based on Special Characteristics</b>	
If you answered No for all types, enter "Not Applicable" on Summary Form	<b>Special Characteristics Category: Not Applicable</b>



Figure 1. Cowardin Class.



Figure 2. Hydroperiods and ponded depressions.

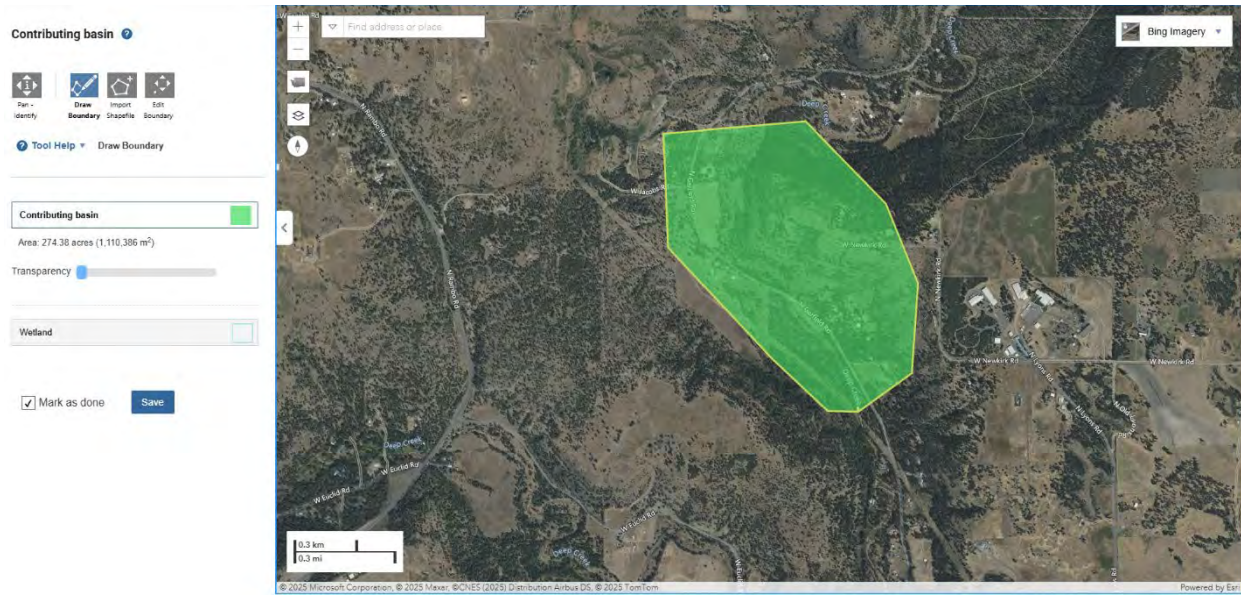


Figure 3. Contributing basin.

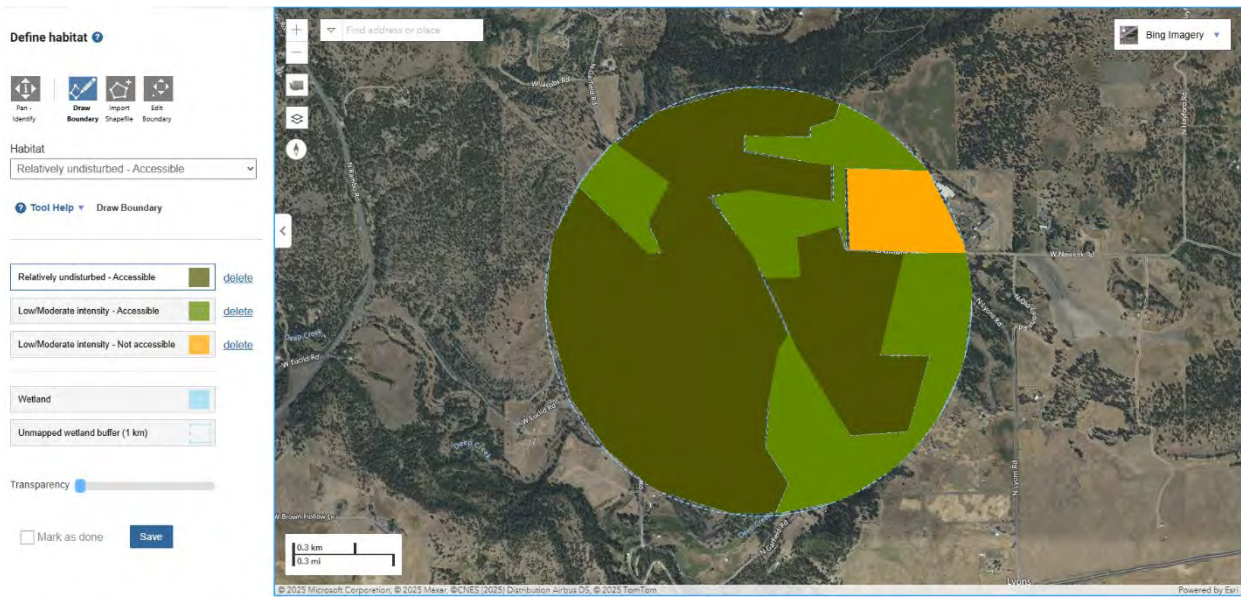


Figure 4. 1 km habitat polygon.



Figure 5. TDML.



Figure 6. 303 (d).



Figure 7. 150 foot land use buffer.



Figure 8. Plant cover.



Figure 9. Wetland and stream width.

Wetland name or number: Wetland E

# RATING SUMMARY - Eastern Washington

Name of wetland (or ID#): Wetland E Date of site visit: 04/24/2025

Rated By: Steven Hutchinson Trained by Ecology? Yes  No  Date of Training: 05/30/2025

HGM Class used for rating: Riverine

Wetland has multiple HGM classes? Yes  No

NOTE: Form is not complete without the figures requested (figures can be combined).

Source of base aerial photo/map: Bing Maps

OVERALL WETLAND CATEGORY: [Category III] (based on functions  or special characteristics )

## 1. Category of wetland based on FUNCTIONS

Category I - Total score = 22 - 27

Category II - Total score = 19 - 21

Category III - Total score = 16 - 18

Category IV - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Site Potential	L	M	L	
Landscape Potential	L	M	H	
Value	H	L	M	Total
Score Based on Ratings	5	5	6	16

Score for each function based on three ratings (order of ratings is not important)

9 = H,H,H

8 = H,H,M

7 = H,H,L

7 = H,M,M

6 = H,M,L

6 = M,M,M

5 = H,L,L

5 = M,M,L

4 = M,L,L

3 = L,L,L

## 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Vernal Pool	
Alkali	
Wetland of High Conservation Value	
Bog	
Calcareous Fen	
Forested	
None of the above	Not Applicable

**Wetland name or number:** Wetland E

**Maps and figures required to answer questions correctly for Eastern Washington**

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.5	1
Hydroperiods	H 1.2, H 1.3	2
Ponded depressions	R 1.1	2
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	R 2.4	7
Map of the contributing basin	R 2.2, R 2.3, R 5.2	3
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	8
Width of wetland vs. width of stream ( <i>can be added to another figure</i> )	R 4.1	9
1km Polygon: Area that extends 1km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	6
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	5

Wetland name or number: Wetland E

## RIVERINE WETLANDS

### Water Quality Functions - Indicators that the site functions to improve water quality

**R 1.0 Does the site have the potential to improve water quality?**

**R 1.1** Area of surface depressions within the Riverine wetland that can trap sediments during a flooding event

Depressions cover >33% of the wetland area	points = 6	
Depressions cover >10% of the wetland area	points = 3	
Depressions present but cover <10% of the wetland area	points = 1	
No depressions present	points = 0	<b>Score: 0</b>

**R 1.2** Structure of plants in the wetland (areas with >90% cover at person height; not Cowardin classes).

Forest or shrub vegetation covers >66% of the area in the wetland	points = 10	
Forest or shrub vegetation covers 33% – 66% of the area in the wetland	points = 5	
Ungrazed, herbaceous plant vegetation covers >66% of the area in the wetland	points = 5	
Ungrazed herbaceous plant vegetation covers 33% – 66% of the area in the wetland	points = 2	
Forest, shrub, and ungrazed herbaceous vegetation covers <33% of the area in the wetland	points = 0	<b>Score: 5</b>

**Total for R 1:** **5**

**Rating of Site Potential**

[ ] 12-16 = H [ ] 6-11 = M [X] 0-5 = L

*Record the rating on the first page*

**R 2.0 Does the landscape have the potential to support the water quality function of the site?**

**R 2.1** Is the wetland within an incorporated city or within its UGA?

Yes	points = 2	
No	points = 0	<b>Score: 0</b>

**R 2.2** Does the contributing basin include a UGA or incorporated area?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

**R 2.3** Does at least 10% of the contributing basin contain tilled fields, pastures, or forests that have been clearcut within the last 5 years?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

**R 2.4** Is > 10% of the area within 150 ft of wetland in land uses that generate pollutants

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

**R 2.5** Are there other sources of pollutants coming into the wetland that are not listed in questions R 2.1 - R 2.4?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

Wetland name or number: Wetland E

<b>R 2.6</b> What are the other sources of pollutants coming into the wetland?	
<b>Total for R 2:</b>	<b>0</b>

**Rating of Landscape Potential**                       3-6 = H  1-2 = M  0 = L                      *Record the rating on the first page*

<b>R 3.0</b> Is the water quality improvement provided by the site valuable to society?	
<b>R 3.1</b> Is the wetland along a stream or river that is on the 303(d) list or on a tributary that drains to one within 1 mi?	
Yes	points = 1
No	points = 0
<b>Score: 1</b>	
<b>R 3.2</b> Does the river or stream have TMDL limits for nutrients, toxics, or pathogens?	
Yes	points = 1
No	points = 0
<b>Score: 1</b>	
<b>R 3.3</b> Has the site been identified in a watershed or local plan as important for maintaining water quality?	
Yes	points = 2
No	points = 0
<b>Score: 2</b>	
<b>Total for R 3:</b>	
<b>4</b>	

**Rating of Value**     2-4 = H  1 = M  0 = L    *Record the rating on the first page*

<b><u>RIVERINE WETLANDS</u></b>	
<b>Hydrologic Functions</b> - Indicators that the site functions to reduce flooding and stream degradation	
<b>R 4.0</b> Does the stie have the potential to reduce flooding and erosion?	
<b>R 4.1</b> What are the characteristics of the overbank storage the wetland provides?	
If the ratio is more than 2	points = 10
If the ratio is 1-2	points = 8
If the ratio is 0.50 - <1	points = 4
If the ratio is 0.25 - < 0.50	points = 2
If the ratio is < 0.25	points = 1
<b>Score: 4</b>	
<b>R 4.2</b> What are the characteristics of the plants that slow down water velocities during floods?	
Forest or shrub vegetation covers >66% the area of the wetland	points = 6
Forest or shrub vegetation covers >33% of the area OR emergent plant vegetation covers > 66% of the area in the wetland	points = 4
Forest or shrub vegetation covers >10% of the area OR emergent plant vegetation covers >33% of the area in the wetland	points = 2
Plants do not meet above criteria	points = 0
<b>Score: 4</b>	
<b>Total for R 4:</b>	
<b>8</b>	

**Rating of Site Potential**     12-16 = H  6-11 = M  0-5 = L    *Record the rating on the first page*

Wetland name or number: Wetland E

<b>R 5.0 Does the landscape have the potential to support the hydrologic functions of the site?</b>		
<b>R 5.1</b> <u>Is the stream or river adjacent to the wetland downcut?</u>		
Yes	points = 0	
No	points = 1	<b>Score: 1</b>
<b>R 5.2</b> <u>Does the up-gradient watershed include a UGA or incorporated area?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 0</b>
<b>R 5.3</b> <u>Is the up-gradient stream or river controlled by dams?</u>		
Yes	points = 0	
No	points = 1	<b>Score: 1</b>
<b>Total for R 5:</b>		<b>2</b>

Rating of Landscape Potential

3 = H  1-2 = M  0 = L

Record the rating on the first page

<b>R 6.0 Are the hydrologic functions provided by the site valuable to society?</b>		
<b>R 6.1</b> <u>What is the distance to the nearest areas downstream that have flooding problems?</u>		
The sub-basin immediately down-gradient of the wetland has flooding problems	points = 2	
Surface flooding problems are in a sub-basin farther down-gradient	points = 1	
No flooding problems anywhere downstream	points = 0	<b>Score: 0</b>
<b>R 6.2</b> <u>Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</u>		
Yes	points = 2	
No	points = 0	<b>Score: 0</b>
<b>Total for R 6:</b>		<b>0</b>

Rating of Value

2-4 = H  1 = M  0 = L

Record the rating on the first page

Wetland name or number: Wetland E

## HABITAT FUNCTIONS

These questions apply to wetlands of all HGM classes - Indicators that the site functions to provide important habitat

### H 1.0 Does the wetland have the potential to provide habitat for many species?

#### H 1.1 What is the structure of the plant community?

- Aquatic Bed
- Emergent plants 0-12in (0-30cm) high are the highest layer and have >30% cover
- Emergent plants >12-40in (>30-100cm) high are the highest layer with >30% cover
- cover
- Emergent plants >40in (>100cm) high are the highest layer with >30% cover
- Scrub-shrub (areas where shrubs have >30% cover)
- Forested (areas where trees have >30% cover)

4 structures or more	points = 3	
3 structures	points = 2	
2 structures	points = 1	
1 structure	points = 0	
No structures	points = 0	<b>Score: 1</b>

#### H 1.2 Is one of the vegetation types Aquatic Bed?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

#### H 1.3 What is the surface water potential?

- The wetland has areas of open water (without emergent or shrub plants) that meet the scoring threshold during March to early June OR in August to the end of September
- The wetland has an intermittent or permanent, and unvegetated stream within its boundaries, or along one side
- The wetland is along the side of a stream or river with an unvegetated area that is at least 16ft (5m) wide
- The wetland is a Lake Fringe wetland

The wetland meets at least one of these criteria	points = 3	
No surface water that meets criteria	points = 0	<b>Score: 0</b>

#### H 1.4 What is the richness of plant species in the wetland?

>9 species	points = 2	
4-9 species	points = 1	
<4 species	points = 0	<b>Score: 0</b>

Wetland name or number: Wetland E

<b>H 1.5</b> <u>What is the interspersions of habitats within the wetland?</u>	
High	points = 3
Moderate	points = 2
Low	points = 1
None	points = 0
<b>Score: 0</b>	
<b>H 1.6</b> <u>What are the special habitat features within the wetland?</u>	
<input type="checkbox"/> Loose rocks larger than 4in OR large, downed, woody debris (>4in in diameter) within the area of surface ponding or in a stream.	
<input type="checkbox"/> Cattails or bulrushes are present within the wetland.	
<input type="checkbox"/> Standing snags (diameter at the bottom >4in) in the wetland or within 30m (100ft) of the edge.	
<input type="checkbox"/> Emergent or shrub vegetation in areas that are permanently inundated/ponded	
<input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) or signs of recent beaver activity.	
<input type="checkbox"/> Invasive species cover less than 20% in each stratum of vegetation (canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)	
6 habitat features selected	points = 6
5 habitat features selected	points = 5
4 habitat features selected	points = 4
3 habitat features selected	points = 3
2 habitat features selected	points = 2
1 habitat feature selected	points = 1
No habitat features selected	points = 0
<b>Score: 0</b>	
<b>Total for H 1:</b>	
<b>1</b>	

**Rating of Site Potential**

[ ] 15-18 = H [ ] 7-14 = M [X] 0-6 = L

*Record the rating on the first page*

**H 2.0** Does the landscape have the potential to support the habitat functions of the site?

<b>H 2.1</b> <u>What is the percentage of accessible habitat within 1km of the wetland?</u>	
>33% of 1km Polygon is accessible habitat	points = 3
20-30% of 1km Polygon is accessible habitat	points = 2
10-19% of 1km Polygon is accessible habitat	points = 1
<10% of 1km Polygon is accessible habitat	points = 0
<b>Score: 3</b>	
<b>H 2.2</b> <u>What is the total habitat in a 1km polygon around the wetland?</u>	
Total habitat is >50% of the 1km polygon	points = 3
Total habitat is 10-50% of the 1km polygon and in 1-3 patches	points = 2
Total habitat is 10-50% of the 1km polygon and in >3 patches	points = 1
Total habitat is <10% of the 1km polygon	points = 0
<b>Score: 3</b>	

Wetland name or number: Wetland E

<b>H 2.3</b> <u>What is the land use intensity in a 1km polygon within the wetland?</u>		
>50% of the polygon is high intensity land use	points = -2	
<50% of the polygon is high intensity land use	points = 0	<b>Score: 0</b>
<b>H 2.4</b> <u>Is the wetland is in an area where annual rainfall is less than 12in, and its water regime is not influenced by irrigation practices, dams, or water control structures?</u>		
Yes	points = 3	
No	points = 0	<b>Score: 0</b>
<b>Total for H 2:</b>		<b>6</b>

Rating of Landscape Potential

[X] 4-9 = H [ ] 1-3 = M [ ] 0 = L

Record the rating on the first page

**H 3.0** Is the habitat provided by the site valuable to society?

<b>H 3.1</b> <u>Does the site provide habitat for species valued in laws, regulations, or policies?</u>		
<input type="checkbox"/> Aspen Stands		
<input type="checkbox"/> Biodiversity Areas and Corridors		
<input type="checkbox"/> Eastside Steppe		
<input type="checkbox"/> Inland Dunes		
<input type="checkbox"/> Juniper Savannah		
<input type="checkbox"/> Old-growth/Mature Forests		
<input type="checkbox"/> Oregon White Oak		
<input checked="" type="checkbox"/> Riparian		
<input type="checkbox"/> Shrubsteppe		
<input type="checkbox"/> Fresh Deepwater		
<input type="checkbox"/> Instream		
<input type="checkbox"/> Caves		
<input type="checkbox"/> Cliffs		
<input type="checkbox"/> Snags and Logs		
<input type="checkbox"/> Talus		
<b>The following criteria automatically score 2 points:</b>		
<input type="checkbox"/> The wetland provides habitat for Threatened or Endangered species		
<input type="checkbox"/> The wetland is mapped as a location for an individual WDFW priority species		
<input type="checkbox"/> The wetland is a Wetland of High Conservation Value (WHCV)		
<input type="checkbox"/> The wetland has been categorized as an important habitat site in a local plan		
The wetland has 3 or more WDFW priority habitats within 100m, or meets the criteria for societal value	points = 2	
The site has 1 or 2 WDFW priority habitats within 100m	points = 1	
The site does not meet any of the criteria for societal value	points = 0	<b>Score: 1</b>
<b>Total for H 3:</b>		<b>1</b>

Rating of Value

[ ] 2 = H [X] 1 = M [ ] 0 = L

Record the rating on the first page

Wetland name or number: Wetland E

## CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

### SC 1.0 Vernal Pools

**SC 1.1** Is the wetland less than 4000sqft and it meets at least two of the follow criteria?

It's only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input.

Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals (if you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool.)

The soil in the wetland is shallow [ $<1\text{ft}$  (30cm) deep] and is underlain by an impermeable layer such as basalt or clay

Surface water is present for less than 120 days during the wet season.

Yes - Go to SC 1.2

No - Not a Special Characteristic Vernal Pool

**Result: Not a Special  
Characteristic Vernal  
Pool**

**SC 1.2** Is the vernal pool relatively undisturbed in February and March?

Yes - Go to SC 1.3

No - Not a Special Characteristic Vernal Pool

**Result:**

**SC 1.3** Is the vernal pool in an area where there are at least 3 separate aquatic resources (other wetlands, rivers, lakes, etc.) within 0.5 mi?

Yes - Category II Vernal Pool

No - Category III Vernal Pool

**Result:**

### SC 2.0 Alkali Wetlands

**SC 2.1** Does the wetland meet any of the following criteria for Alkali Wetlands?

The wetland has a conductivity  $>3.0$  mS/cm

The wetland has a conductivity between 2.0 and 3.0 mS, and more than 50% of the plant cover is the wetland can be classified as "alkali" species

If the wetland is dry at the time of your field visit, the central part of the area is covered with a layer of salt.

Yes - Category I Alkali Wetland

No - Go to SC 2.2

**Result: Go to SC 2.2**

**SC 2.2** Does the wetland meet two of the following criteria for Alkali Wetlands?

Salt encrustations around more than 75% of the edge of the wetland

more than 75% of the plant cover consists of alkali (salt tolerant) species

A pH above 9.0

Yes - Category I Alkali Wetland

No - Not a Special Characteristic Alkali Wetland

**Result: Not a Special  
Characteristic Alkali  
Wetland**

Wetland name or number: Wetland E

### SC 3.0 Wetlands of High Conservation Value

<p><b>SC 3.1</b> <u>Is the wetland listed by Washington Natural Heritage Program (WNHP) as a Wetland of High Conservation Value (WHVC)?</u></p> <p>Yes - Category I Wetland of High Conservation Value No - Go to SC 3.2</p>	<p><b>Result: Go to SC 3.2</b></p>
<p><b>SC 3.2</b> <u>Does the wetland have a rare plant species, rare plant community, or high-quality plant community that may qualify the site as a WHCV?</u></p> <p>Yes - Category I Wetland of High Conservation Value No - Not a Special Characteristic Wetland of High Conservation Value</p>	<p><b>Result: Not a Special Characteristic Wetland of High Conservation Value</b></p>

### SC 4.0 Bogs and Calcareous Fens

<p><b>SC 4.1</b> <u>Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16in or more of the first 32in of the soil profile?</u></p> <p>Yes - Go to SC 4.3 No - Go to SC 4.2</p>	<p><b>Result: Go to SC 4.2</b></p>
<p><b>SC 4.2</b> <u>Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16in deep over debrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pong?</u></p> <p>Yes - Go to SC 4.3 No - Not a Special Characteristic Bog</p>	<p><b>Result: Not a Special Characteristic Bog</b></p>
<p><b>SC 4.3</b> <u>Does an area with peats or mucks have more than 70% cover of mosses at gorund level, AND at least 30% cover of plant species listed?</u></p> <p>Yes - Category I Bog No - Go to SC 4.4</p>	<p><b>Result:</b></p>
<p><b>SC 4.4</b> <u>Is an area with peats or mucks forested (&gt;30% cover) with subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine AND any of the species (or combination of species) listed provide more than 30% of the cover under the canopy?</u></p> <p>Yes - Category I Bog No - Go to SC 4.5</p>	<p><b>Result:</b></p>
<p><b>SC 4.5</b> <u>Do the species listed comprise at least 20% of the total plant cover within an area of peats and mucks?</u></p> <p>Yes - Category I Calcareous Fen No - Go to SC 4.6</p>	<p><b>Result:</b></p>

**Wetland name or number:** Wetland E

**SC 4.6** Do the species listed comprise at least 10% of the total plant cover in an area of peats and mucks, AND one of the two following conditions is met?

Marl deposits [calcium carbonate (CaCO<sub>3</sub>) precipitate] occur on the soil surface or plant stems

The pH of free water is  $\geq 6.8$  AND electrical conductivity is  $\geq 200$  uS/cm at multiple locations within the wetland

Yes - Category I Calcareous Fen

No - Not a Special Characteristic Calcareous Fen

**Result:**

### SC 5.0 Forested Wetlands

**SC 5.1** Does the wetland have an area of forest rooted within its boundary that meets at least one of the following criteria?

The wetland is within the 100 year floodplain of a river or stream

Aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species

There is at least 0.25ac of trees (even in wetlands smaller than 2.5ac) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW

Yes - Go to SC 5.2

No - Not a Special Characteristic Forested Wetland

**Result: Go to SC 5.2**

**SC 5.2** Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees?

Yes - Category I Forested Wetland

No - Go to SC 5.3

**Result: Go to SC 5.3**

**SC 5.3** Does the wetland have areas where aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species?

Yes - Category I Forested Wetland

No - Go to SC 5.4

**Result: Go to SC 5.4**

**SC 5.4** Does the wetland have at least 0.25ac with a forest canopy where more than 50% of the tree species (by cover) are fast growing species?

Yes - Category II Forested Wetland

No - Go to SC 5.5

**Result: Go to SC 5.5**

**Wetland name or number:** Wetland E

**SC 5.5** Is the forested component of the wetland within the 100 year floodplain of a river or stream?

Yes - Category II Forested Wetland

No - Not a Special Characteristic Forested Wetland

**Result: Not a Special  
Characteristic Forested  
Wetland**

**Category of wetland based on Special Characteristics**

If you answered No for all types, enter "Not Applicable" on Summary Form

**Special Characteristics  
Category: Not  
Applicable**

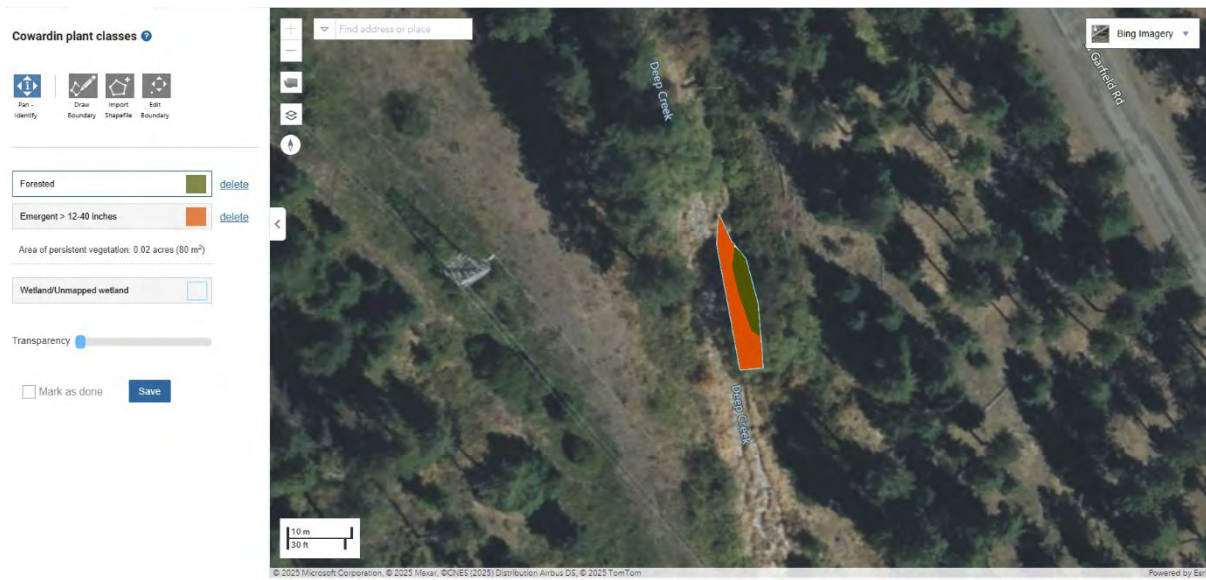


Figure 1. Cowardin Class.



Figure 2. Hydroperiods and ponded depressions.

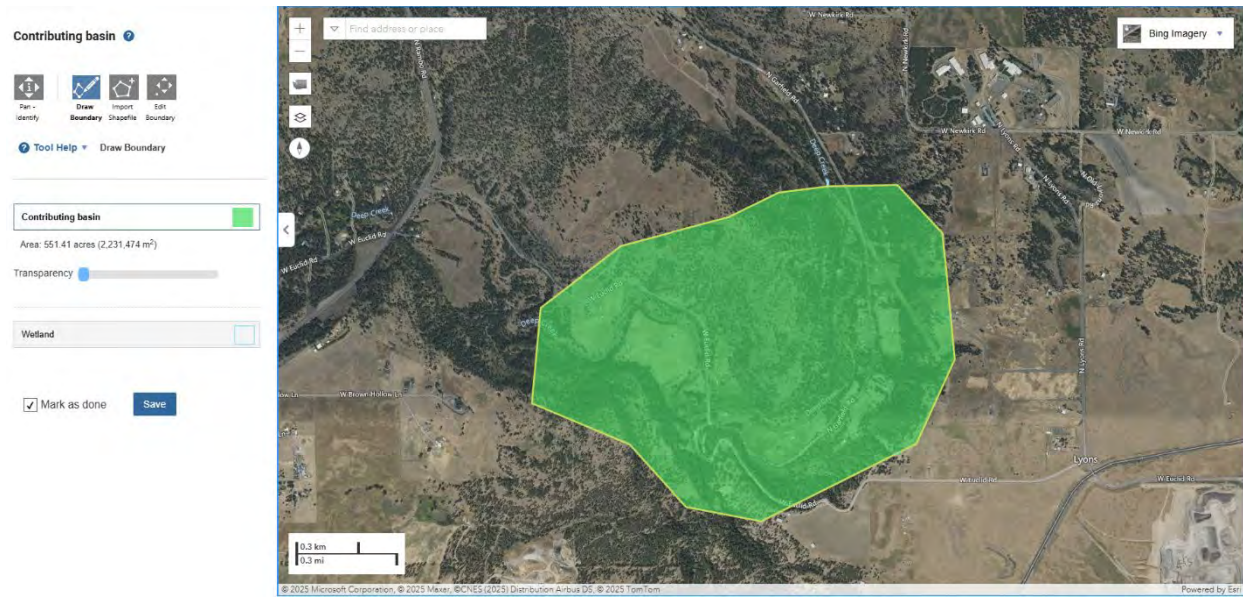


Figure 3. Contributing basin.

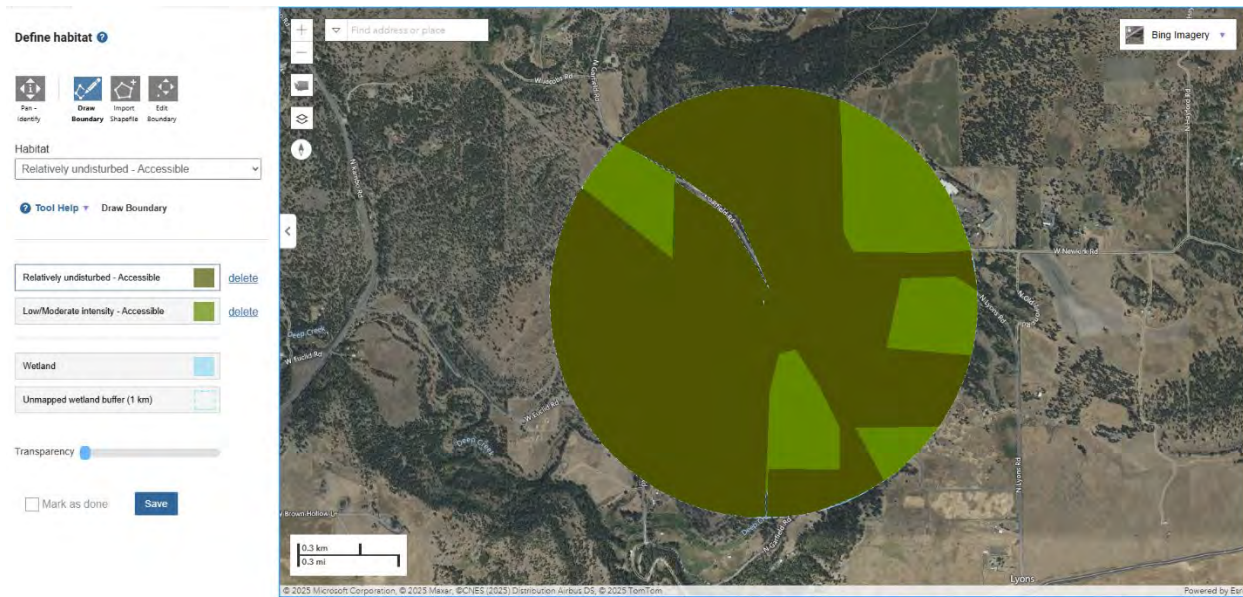


Figure 4. 1 km habitat polygon.



Figure 5. TDML.



Figure 6. 303 (d).



Figure 7. 150 foot land use buffer.



Figure 8. Plant cover.



Figure 9. Wetland and stream width.

Wetland name or number: Wetland F

# RATING SUMMARY - Eastern Washington

Name of wetland (or ID#): Wetland F Date of site visit: 07/31/2025

Rated By: Steven Hutchinson Trained by Ecology? Yes  No  Date of Training: 07/31/2025

HGM Class used for rating: Depressional

Wetland has multiple HGM classes? Yes  No

NOTE: Form is not complete without the figures requested (*figures can be combined*).

Source of base aerial photo/map: Bing Maps

OVERALL WETLAND CATEGORY: **[Category III]** (based on functions  or special characteristics )

## 1. Category of wetland based on FUNCTIONS

Category I - Total score = 22 - 27

Category II - Total score = 19 - 21

Category III - Total score = 16 - 18

Category IV - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Site Potential	M	H	L	
Landscape Potential	M	H	L	
Value	M	L	H	Total
Score Based on Ratings	6	7	5	18

Score for each function based on three ratings (order of ratings is not important)

9 = H,H,H

8 = H,H,M

7 = H,H,L

7 = H,M,M

6 = H,M,L

6 = M,M,M

5 = H,L,L

5 = M,M,L

4 = M,L,L

3 = L,L,L

## 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Vernal Pool	
Alkali	
Wetland of High Conservation Value	
Bog	
Calcareous Fen	
Forested	
None of the above	Not Applicable

**Wetland name or number:** Wetland F

**Maps and figures required to answer questions correctly for Eastern Washington**

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	D 1.3, H 1.1, H 1.5	1
Hydroperiods (including area of open water for H 1.3)	D 1.4, H 1.2, H 1.3	2
Location of outlet ( <i>can be added to map of hydroperiods</i> )	D 1.1, D 4.1	N/A
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	D 2.2, D 5.2	7
Map of the contributing basin	D 5.3	3
1km Polygon: Area that extends 1km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	6
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	5

Wetland name or number: Wetland F

## DEPRESSIONAL WETLANDS

### Water Quality Functions - Indicators that the site functions to improve water quality

**D 1.0 Does the site have the potential to improve water quality?**

**D 1.1** What are the characteristics of surface water outflows from the wetland?

Wetland has no surface water outlet	points = 5	
Wetland has an intermittently flowing outlet	points = 3	
Wetland has a highly constricted permanently flowing outlet	points = 3	
Wetland has a permanently flowing, unconstricted surface outlet	points = 1	<b>Score: 5</b>

**D 1.2** Is the soil 2 in. below the surface a true clay or organic soil?

Mapped as true clay or organic	points = 3	
Soil texture identified as clay or organic in field	points = 3	
Soil texture identified as clay or organic by laboratory test	points = 3	
None of the above	points = 0	<b>Score: 0</b>

**D 1.3** What are the characteristics and distribution of persistent plants?

Wetland has persistent, ungrazed, vegetation for >66% of the wetland area	points = 5	
Wetland has persistent, ungrazed, vegetation from 33%-66% of the wetland area	points = 3	
Wetland has persistent, ungrazed vegetation from 10%-33% of the wetland area	points = 1	
Wetland has persistent, ungrazed vegetation <10% of the wetland area	points = 0	<b>Score: 5</b>

**D 1.4** What are the characteristics of seasonal ponding or inundation in the wetland area?

Area seasonally ponded is >50% total area of wetland	points = 3	
Area seasonally ponded is 25%-50% total area of wetland	points = 1	
Area seasonally ponded is <25% total area of wetland	points = 0	<b>Score: 1</b>

**Total for D 1:** **11**

**Rating of Site Potential**

[ ] 12-16 = H [X] 6-11 = M [ ] 0-5 = L

*Record the rating on the first page*

**D 2.0 Does the landscape have the potential to support the water quality function of the site?**

**D 2.1** Does the wetland unit receive stormwater discharges?

Yes	points = 1	
No	points = 0	<b>Score: 1</b>

**D 2.2** Is >10% of the area within 150ft of the wetland in land uses that generate pollutants?

Yes	points = 1	
No	points = 0	<b>Score: 1</b>

**D 2.3** Are there septic systems within 250ft of the wetland?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

**D 2.4** Are the other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

Wetland name or number: Wetland F

D 2.5 What are the other sources of pollutants coming into the wetland?	
<b>Total for D 2:</b>	<b>2</b>

Rating of Landscape Potential

3-4 = H  1-2 = M  0 = L

Record the rating on the first page

<b>D 3.0 Is the water quality improvement provided by the site valuable to society?</b>		
<b>D 3.1 Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, or lake that is on the 303(d) list?</b>		
Yes	points = 1	
No	points = 0	
<b>Score: 0</b>		
<b>D 3.2 Is the wetland in a basin or sub-basin where water quality is an issue in some aquatic resource [303(d) list, eutrophic lakes, problems with nuisance and toxic algae]?</b>		
Yes	points = 1	
No	points = 0	
<b>Score: 1</b>		
<b>D 3.3 Has the site been identified in a watershed or local plan as important for maintaining water quality?</b>		
Yes	points = 2	
No	points = 0	
<b>Score: 0</b>		
<b>Total for D 3:</b>		<b>1</b>

Rating of Value

2-4 = H  1 = M  0 = L

Record the rating on the first page

<b><u>DEPRESSIONAL WETLANDS</u></b>	
<b>Hydrologic Functions</b> - Indicators that the site functions to reduce flooding and stream degradation	
<b>D 4.0 Does the site have the potential to reduce flooding and erosion?</b>	
<b>D 4.1 What are the characteristics of surface water outflows from the wetland?</b>	
Wetland has no surface water outlet	points = 8
Wetland has an intermittently flowing outlet	points = 4
Wetland has a highly constricted permanently flowing outlet	points = 4
Wetland has a permanently flowing unconfined surface outlet	points = 0
<b>Score: 8</b>	

**Wetland name or number:** Wetland F

<b>D 4.2</b> <u>What is the depth of storage during the wet periods?</u>		
Seasonal ponding: 3ft or more above the lowest point in the wetland or the surface of permanent ponding	points = 8	
Seasonal ponding: 2ft-<3ft above the lowest point in the wetland or the surface of permanent ponding	points = 6	
The wetland is a headwater wetland	points = 4	
Seasonal ponding: 1ft - <2ft	points = 4	
Seasonal ponding: 0.5ft - <1ft	points = 2	
Seasonal ponding: <0.5ft (6in) or only saturated soils	points = 0	<b>Score: 4</b>
<b>Total for D 4:</b>		<b>12</b>

**Rating of Site Potential**

12-16 = H  6-11 = M  0-5 = L

*Record the rating on the first page*

<b>D 5.0</b> <u>Does the landscape have the potential to support hydrologic functions of the site?</u>		
<b>D 5.1</b> <u>Does the wetland unit receive stormwater discharges?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 1</b>
<b>D 5.2</b> <u>Is &gt;10% of the area within 150ft of the wetland in a land use that generates runoff?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 1</b>
<b>D 5.3</b> <u>Is more than 25% of the contributing basin of the wetland covered with intensive human land uses?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 1</b>
<b>Total for D 5:</b>		<b>3</b>

**Rating of Landscape Potential**

3 = H  1-2 = M  0 = L

*Record the rating on the first page*

<b>D 6.0</b> <u>Are the hydrologic functions provided by the site valuable to society?</u>		
<b>D 6.1</b> <u>Is the wetland in a landscape that has flooding problems?</u>		
Flooding occurs in a sub-basin that is immediately down-gradient of the wetland	points = 2	
Surface flooding problems are in a sub-basin farther down-gradient	points = 1	
The existing or potential outflow from the wetland is so constrained that water cannot reach areas that flood	points = 0	
There are no problems with flooding downstream of the wetland	points = 0	<b>Score: 0</b>
<b>D 6.2</b> <u>Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</u>		
Yes	points = 2	
No	points = 0	<b>Score: 0</b>
<b>Total for D 6:</b>		<b>0</b>

**Rating of Value**

2-4 = H  1 = M  0 = L

*Record the rating on the first page*

Wetland name or number: Wetland F

## HABITAT FUNCTIONS

These questions apply to wetlands of all HGM classes - Indicators that the site functions to provide important habitat

### H 1.0 Does the wetland have the potential to provide habitat for many species?

#### H 1.1 What is the structure of the plant community?

- Aquatic Bed
- Emergent plants 0-12in (0-30cm) high are the highest layer and have >30% cover
- Emergent plants >12-40in (>30-100cm) high are the highest layer with >30% cover
- cover
- Emergent plants >40in (>100cm) high are the highest layer with >30% cover
- Scrub-shrub (areas where shrubs have >30% cover)
- Forested (areas where trees have >30% cover)

4 structures or more	points = 3	
3 structures	points = 2	
2 structures	points = 1	
1 structure	points = 0	
No structures	points = 0	<b>Score: 1</b>

#### H 1.2 Is one of the vegetation types Aquatic Bed?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

#### H 1.3 What is the surface water potential?

- The wetland has areas of open water (without emergent or shrub plants) that meet the scoring threshold during March to early June OR in August to the end of September
- The wetland has an intermittent or permanent, and unvegetated stream within its boundaries, or along one side
- The wetland is along the side of a stream or river with an unvegetated area that is at least 16ft (5m) wide
- The wetland is a Lake Fringe wetland

The wetland meets at least one of these criteria	points = 3	
No surface water that meets criteria	points = 0	<b>Score: 0</b>

#### H 1.4 What is the richness of plant species in the wetland?

>9 species	points = 2	
4-9 species	points = 1	
<4 species	points = 0	<b>Score: 0</b>

Wetland name or number: Wetland F

<b>H 1.5</b> <u>What is the interspersions of habitats within the wetland?</u>	
High	points = 3
Moderate	points = 2
Low	points = 1
None	points = 0
<b>Score: 1</b>	
<b>H 1.6</b> <u>What are the special habitat features within the wetland?</u>	
<input type="checkbox"/> Loose rocks larger than 4in OR large, downed, woody debris (>4in in diameter) within the area of surface ponding or in a stream.	
<input checked="" type="checkbox"/> Cattails or bulrushes are present within the wetland.	
<input type="checkbox"/> Standing snags (diameter at the bottom >4in) in the wetland or within 30m (100ft) of the edge.	
<input type="checkbox"/> Emergent or shrub vegetation in areas that are permanently inundated/ponded	
<input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) or signs of recent beaver activity.	
<input type="checkbox"/> Invasive species cover less than 20% in each stratum of vegetation (canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)	
6 habitat features selected	points = 6
5 habitat features selected	points = 5
4 habitat features selected	points = 4
3 habitat features selected	points = 3
2 habitat features selected	points = 2
1 habitat feature selected	points = 1
No habitat features selected	points = 0
<b>Score: 1</b>	
<b>Total for H 1:</b>	
<b>3</b>	

Rating of Site Potential

[ ] 15-18 = H [ ] 7-14 = M [X] 0-6 = L

Record the rating on the first page

**H 2.0** Does the landscape have the potential to support the habitat functions of the site?

<b>H 2.1</b> <u>What is the percentage of accessible habitat within 1km of the wetland?</u>	
>33% of 1km Polygon is accessible habitat	points = 3
20-30% of 1km Polygon is accessible habitat	points = 2
10-19% of 1km Polygon is accessible habitat	points = 1
<10% of 1km Polygon is accessible habitat	points = 0
<b>Score: 0</b>	
<b>H 2.2</b> <u>What is the total habitat in a 1km polygon around the wetland?</u>	
Total habitat is >50% of the 1km polygon	points = 3
Total habitat is 10-50% of the 1km polygon and in 1-3 patches	points = 2
Total habitat is 10-50% of the 1km polygon and in >3 patches	points = 1
Total habitat is <10% of the 1km polygon	points = 0
<b>Score: 2</b>	

Wetland name or number: Wetland F

<b>H 2.3</b> <u>What is the land use intensity in a 1km polygon within the wetland?</u>		
>50% of the polygon is high intensity land use	points = -2	
<50% of the polygon is high intensity land use	points = 0	<b>Score: -2</b>
<b>H 2.4</b> <u>Is the wetland is in an area where annual rainfall is less than 12in, and its water regime is not influenced by irrigation practices, dams, or water control structures?</u>		
Yes	points = 3	
No	points = 0	<b>Score: 0</b>
<b>Total for H 2:</b>		<b>0</b>

Rating of Landscape Potential

[ ] 4-9 = H [ ] 1-3 = M [X] 0 = L

Record the rating on the first page

**H 3.0** Is the habitat provided by the site valuable to society?

<b>H 3.1</b> <u>Does the site provide habitat for species valued in laws, regulations, or policies?</u>		
<input type="checkbox"/> Aspen Stands		
<input type="checkbox"/> Biodiversity Areas and Corridors		
<input type="checkbox"/> Eastside Steppe		
<input type="checkbox"/> Inland Dunes		
<input type="checkbox"/> Juniper Savannah		
<input type="checkbox"/> Old-growth/Mature Forests		
<input type="checkbox"/> Oregon White Oak		
<input type="checkbox"/> Riparian		
<input type="checkbox"/> Shrubsteppe		
<input type="checkbox"/> Fresh Deepwater		
<input type="checkbox"/> Instream		
<input type="checkbox"/> Caves		
<input type="checkbox"/> Cliffs		
<input type="checkbox"/> Snags and Logs		
<input type="checkbox"/> Talus		
<b>The following criteria automatically score 2 points:</b>		
<input type="checkbox"/> The wetland provides habitat for Threatened or Endangered species		
<input checked="" type="checkbox"/> The wetland is mapped as a location for an individual WDFW priority species		
<input type="checkbox"/> The wetland is a Wetland of High Conservation Value (WHCV)		
<input type="checkbox"/> The wetland has been categorized as an important habitat site in a local plan		
The wetland has 3 or more WDFW priority habitats within 100m, or meets the criteria for societal value	points = 2	
The site has 1 or 2 WDFW priority habitats within 100m	points = 1	
The site does not meet any of the criteria for societal value	points = 0	<b>Score: 2</b>
<b>Total for H 3:</b>		<b>2</b>

Rating of Value

[X] 2 = H [ ] 1 = M [ ] 0 = L

Record the rating on the first page

Wetland name or number: Wetland F

## CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

### SC 1.0 Vernal Pools

**SC 1.1** Is the wetland less than 4000sqft and it meets at least two of the follow criteria?

It's only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input.

Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals (if you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool.)

The soil in the wetland is shallow [ $<1\text{ft}$  (30cm) deep] and is underlain by an impermeable layer such as basalt or clay

Surface water is present for less than 120 days during the wet season.

Yes - Go to SC 1.2

No - Not a Special Characteristic Vernal Pool

**Result: Not a Special  
Characteristic Vernal  
Pool**

**SC 1.2** Is the vernal pool relatively undisturbed in February and March?

Yes - Go to SC 1.3

No - Not a Special Characteristic Vernal Pool

**Result:**

**SC 1.3** Is the vernal pool in an area where there are at least 3 separate aquatic resources (other wetlands, rivers, lakes, etc.) within 0.5 mi?

Yes - Category II Vernal Pool

No - Category III Vernal Pool

**Result:**

### SC 2.0 Alkali Wetlands

**SC 2.1** Does the wetland meet any of the following criteria for Alkali Wetlands?

The wetland has a conductivity  $>3.0$  mS/cm

The wetland has a conductivity between 2.0 and 3.0 mS, and more than 50% of the plant cover is the wetland can be classified as "alkali" species

If the wetland is dry at the time of your field visit, the central part of the area is covered with a layer of salt.

Yes - Category I Alkali Wetland

No - Go to SC 2.2

**Result: Go to SC 2.2**

**SC 2.2** Does the wetland meet two of the following criteria for Alkali Wetlands?

Salt encrustations around more than 75% of the edge of the wetland

more than 75% of the plant cover consists of alkali (salt tolerant) species

A pH above 9.0

Yes - Category I Alkali Wetland

No - Not a Special Characteristic Alkali Wetland

**Result: Not a Special  
Characteristic Alkali  
Wetland**

Wetland name or number: Wetland F

### SC 3.0 Wetlands of High Conservation Value

<p><b>SC 3.1</b> <u>Is the wetland listed by Washington Natural Heritage Program (WNHP) as a Wetland of High Conservation Value (WHVC)?</u></p> <p>Yes - Category I Wetland of High Conservation Value No - Go to SC 3.2</p>	<p><b>Result: Go to SC 3.2</b></p>
<p><b>SC 3.2</b> <u>Does the wetland have a rare plant species, rare plant community, or high-quality plant community that may qualify the site as a WHCV?</u></p> <p>Yes - Category I Wetland of High Conservation Value No - Not a Special Characteristic Wetland of High Conservation Value</p>	<p><b>Result: Not a Special Characteristic Wetland of High Conservation Value</b></p>

### SC 4.0 Bogs and Calcareous Fens

<p><b>SC 4.1</b> <u>Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16in or more of the first 32in of the soil profile?</u></p> <p>Yes - Go to SC 4.3 No - Go to SC 4.2</p>	<p><b>Result: Go to SC 4.2</b></p>
<p><b>SC 4.2</b> <u>Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16in deep over debrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pong?</u></p> <p>Yes - Go to SC 4.3 No - Not a Special Characteristic Bog</p>	<p><b>Result: Not a Special Characteristic Bog</b></p>
<p><b>SC 4.3</b> <u>Does an area with peats or mucks have more than 70% cover of mosses at gorund level, AND at least 30% cover of plant species listed?</u></p> <p>Yes - Category I Bog No - Go to SC 4.4</p>	<p><b>Result:</b></p>
<p><b>SC 4.4</b> <u>Is an area with peats or mucks forested (&gt;30% cover) with subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine AND any of the species (or combination of species) listed provide more than 30% of the cover under the canopy?</u></p> <p>Yes - Category I Bog No - Go to SC 4.5</p>	<p><b>Result:</b></p>
<p><b>SC 4.5</b> <u>Do the species listed comprise at least 20% of the total plant cover within an area of peats and mucks?</u></p> <p>Yes - Category I Calcareous Fen No - Go to SC 4.6</p>	<p><b>Result:</b></p>

**Wetland name or number:** Wetland F

**SC 4.6** Do the species listed comprise at least 10% of the total plant cover in an area of peats and mucks, AND one of the two following conditions is met?

Marl deposits [calcium carbonate (CaCO<sub>3</sub>) precipitate] occur on the soil surface or plant stems

The pH of free water is  $\geq 6.8$  AND electrical conductivity is  $\geq 200$  uS/cm at multiple locations within the wetland

Yes - Category I Calcareous Fen

No - Not a Special Characteristic Calcareous Fen

**Result:**

### SC 5.0 Forested Wetlands

**SC 5.1** Does the wetland have an area of forest rooted within its boundary that meets at least one of the following criteria?

The wetland is within the 100 year floodplain of a river or stream

Aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species

There is at least 0.25ac of trees (even in wetlands smaller than 2.5ac) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW

Yes - Go to SC 5.2

No - Not a Special Characteristic Forested Wetland

**Result: Not a Special  
Characteristic Forested  
Wetland**

**SC 5.2** Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees?

Yes - Category I Forested Wetland

No - Go to SC 5.3

**Result:**

**SC 5.3** Does the wetland have areas where aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species?

Yes - Category I Forested Wetland

No - Go to SC 5.4

**Result:**

**SC 5.4** Does the wetland have at least 0.25ac with a forest canopy where more than 50% of the tree species (by cover) are fast growing species?

Yes - Category II Forested Wetland

No - Go to SC 5.5

**Result:**

**Wetland name or number:** Wetland F

**SC 5.5** Is the forested component of the wetland within the 100 year floodplain of a river or stream?

Yes - Category II Forested Wetland

No - Not a Special Characteristic Forested Wetland

**Result:**

**Category of wetland based on Special Characteristics**

If you answered No for all types, enter "Not Applicable" on Summary Form

**Special Characteristics**

**Category: Not**

**Applicable**

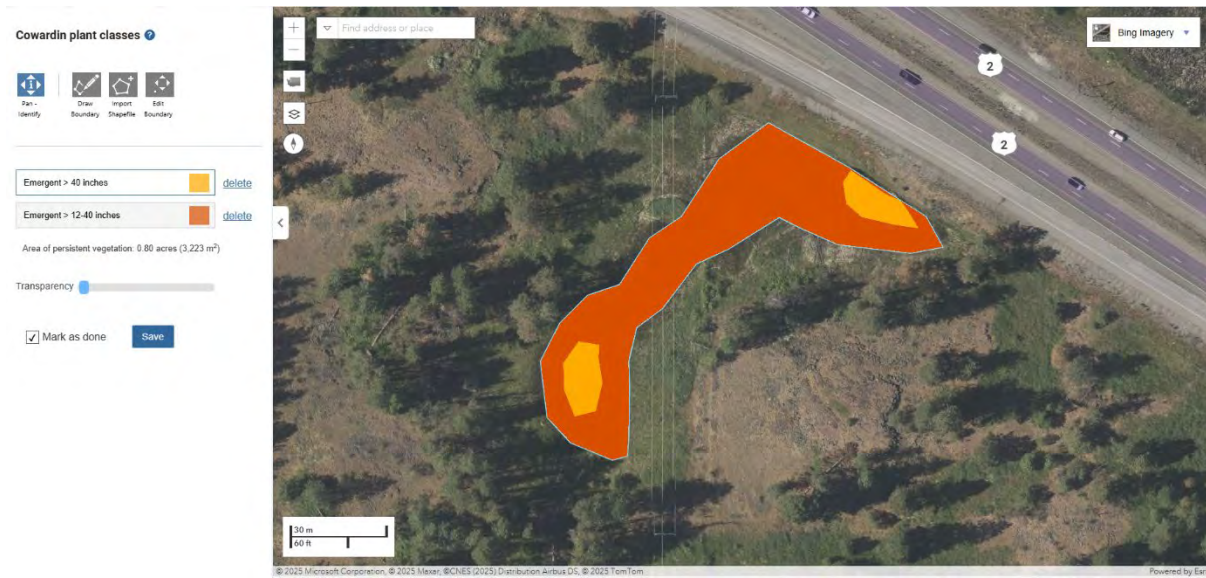


Figure 1. Cowardin Class.

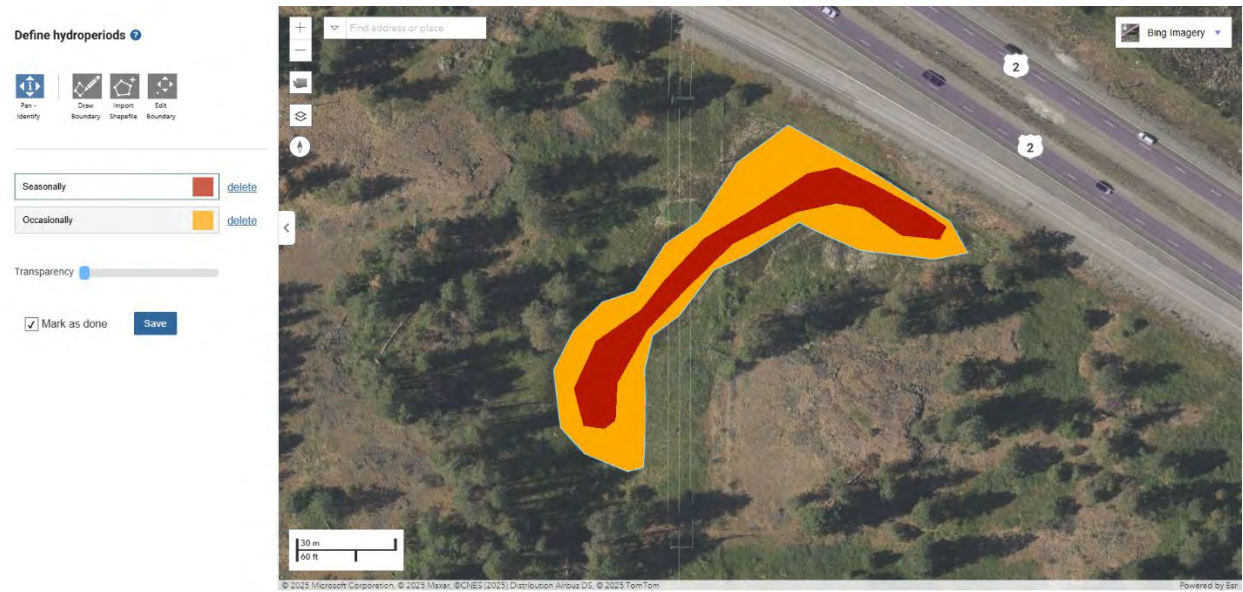


Figure 2. Hydroperiods.

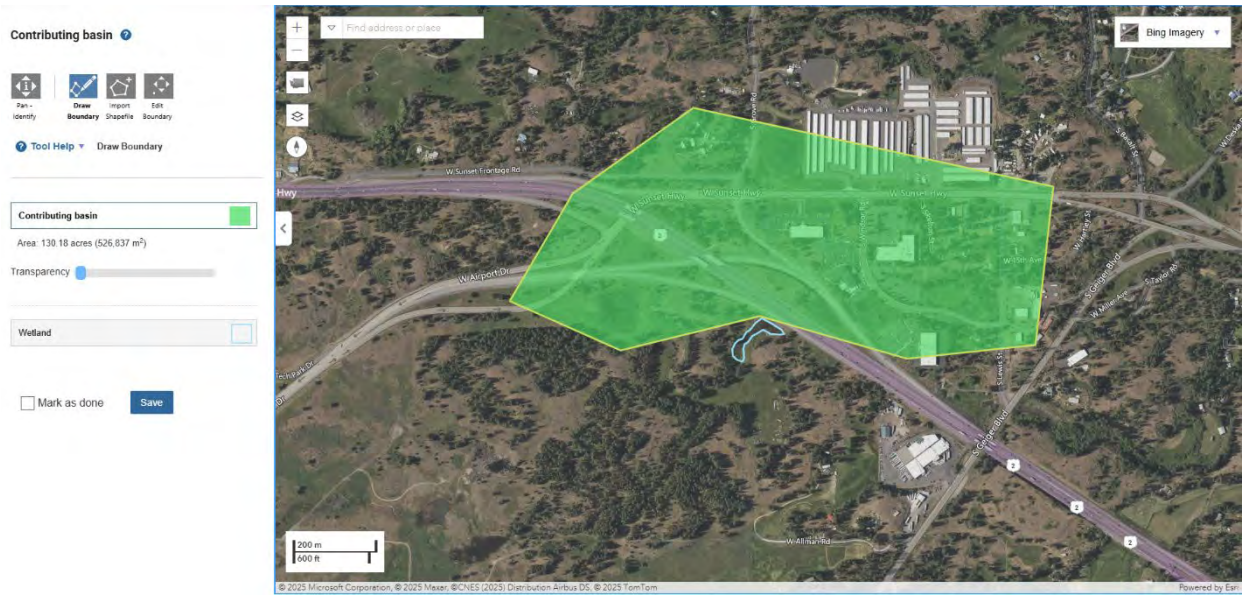


Figure 3. Contributing basin.

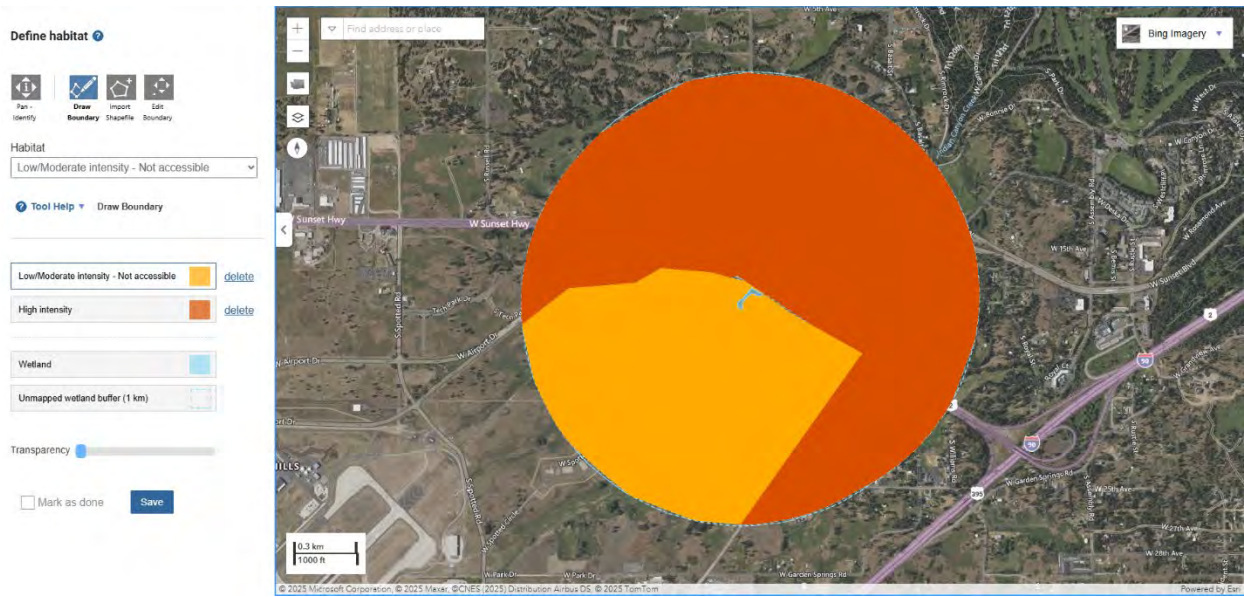


Figure 4. 1 km habitat polygon.



Figure 5. TDML.

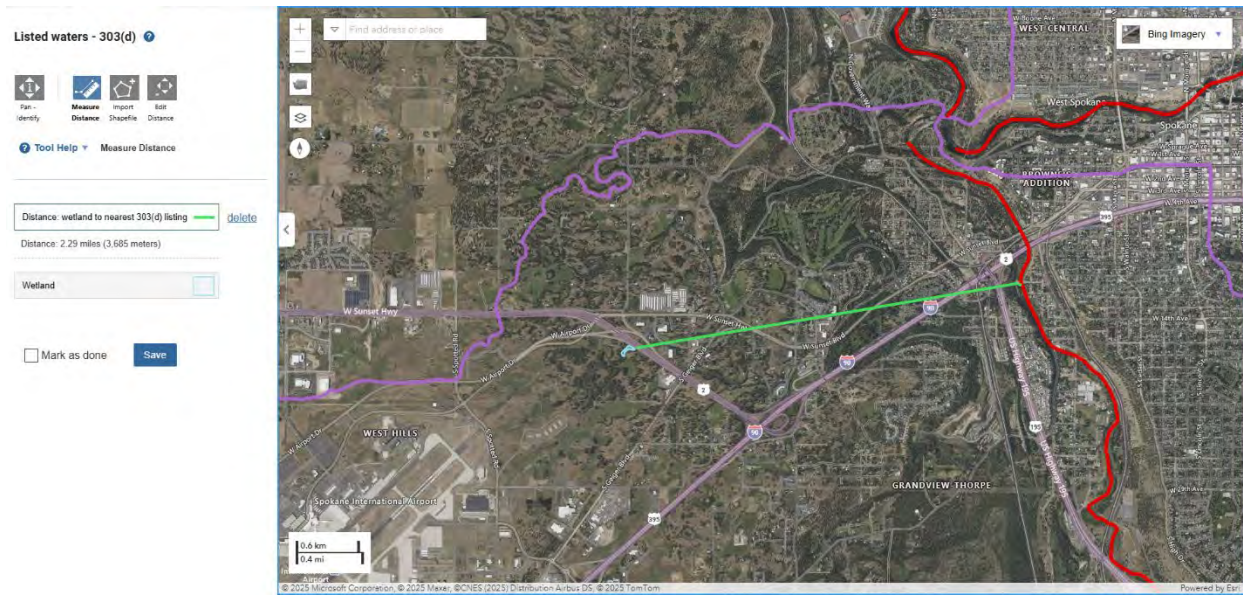


Figure 6. 303 (d).



Figure 7. 150 foot land use buffer.

Wetland name or number: Wetland G

# RATING SUMMARY - Eastern Washington

Name of wetland (or ID#): Wetland G Date of site visit: 07/31/2025

Rated By: Steven Hutchinson Trained by Ecology? Yes  No  Date of Training: 05/30/2025

HGM Class used for rating: Slope

Wetland has multiple HGM classes? Yes  No

NOTE: Form is not complete without the figures requested (figures can be combined).

Source of base aerial photo/map: Bing Maps/Google Earth

OVERALL WETLAND CATEGORY: **[Category IV]** (based on functions  or special characteristics )

## 1. Category of wetland based on FUNCTIONS

Category I - Total score = 22 - 27

Category II - Total score = 19 - 21

Category III - Total score = 16 - 18

Category IV - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Site Potential	M	L	L	
Landscape Potential	L	L	L	
Value	H	L	L	Total
Score Based on Ratings	6	3	3	12

Score for each function based on three ratings (order of ratings is not important)

9 = H,H,H

8 = H,H,M

7 = H,H,L

7 = H,M,M

6 = H,M,L

6 = M,M,M

5 = H,L,L

5 = M,M,L

4 = M,L,L

3 = L,L,L

## 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Vernal Pool	
Alkali	
Wetland of High Conservation Value	
Bog	
Calcareous Fen	
Forested	
None of the above	Not Applicable

**Wetland name or number:** Wetland G

**Maps and figures required to answer questions correctly for Eastern Washington**

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.5	1
Hydroperiods	H 1.2, H 1.3	2
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	3
Plant cover of dense, rigid trees, shrubs, and herbaceous plants ( <i>can be added to figure above</i> )	S 4.1	3
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	S 2.1, S 5.1	7
1km Polygon: Area that extends 1km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	6
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	5

Wetland name or number: Wetland G

## SLOPE WETLANDS

### Water Quality Functions - Indicators that the site functions to improve water quality

**S 1.0 Does the site have the potential to improve water quality?**

**S 1.1** What are the characteristics of the average slope of the wetland?

Slope is 1% or less	points = 3	
Slope is >1% - 2%	points = 2	
Slope is >2%-5%	points = 1	
Slope is >5%	points = 0	<b>Score: 2</b>

**S 1.2** Is the soil 2in below the surface true clay or true organic soil?

Mapped as true clay or organic (muck or peat)	points = 3	
Soil texture identified as clay or organic in field	points = 3	
Soil texture identified as clay or organic by laboratory test	points = 3	
None of the above	points = 0	<b>Score: 0</b>

**S 1.3** What are the characteristics of the plants in the wetland that trap sediments and pollutants?

Dense, uncut, herbaceous plants cover >90% of the wetland area	points = 6	
Dense, uncut, herbaceous plants cover >50% of the wetland area	points = 3	
Dense, woody, plants cover >50% of the wetland area	points = 2	
Dense, uncut, herbaceous plants cover >25% of the wetland area	points = 1	
Does not meet any of the criteria above for plants	points = 0	<b>Score: 6</b>

**Total for S 1:** **8**

**Rating of Site Potential**

12 = H  6-11 = M  0-5 = L

*Record the rating on the first page*

**S 2.0 Does the landscape have the potential to support the water quality function at the site?**

**S 2.1** Is >10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

**S 2.2** Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

**S 2.3** What are the other sources of pollutants coming into the wetland?

**Total for S 2:** **0**

**Rating of Landscape Potential**

1-2 = M  0 = L

*Record the rating on the first page*

Wetland name or number: Wetland G

<b>S 3.0 Is the water quality improvement provided by the site valuable to society?</b>		
<b>S 3.1</b> <u>Does the wetland discharge directly to a stream, river, or lake that is on the 303(d) list (within 1 mi)?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 0</b>
<b>S 3.2</b> <u>Is the wetland in a basin or sub-basin where water quality is an issue?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 1</b>
<b>S 3.3</b> <u>Has the site been identified in a watershed or local plan as important for maintaining water quality.</u>		
Yes	points = 2	
No	points = 0	<b>Score: 2</b>
<b>Total for S 3:</b>		<b>3</b>

Rating of Value

2-4 = H  1 = M  0 = L

Record the rating on the first page

<b><u>SLOPE WETLANDS</u></b>		
<b>Hydrologic Functions</b> - Indicators that the site functions to reduce flooding and stream degradation		
<b>S 4.0</b> <u>Does the site have the potential to reduce flooding and erosion?</u>		
<b>S 4.1</b> <u>Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland</u>		
Dense, uncut, rigid plants cover > 90% of the area of the wetland	points = 1	
All other conditions	points = 0	<b>Score: 0</b>
<b>Total for S 4:</b>		<b>0</b>

Rating of Site Potential

1 = M  0 = L

Record the rating on the first page

<b>S 5.0</b> <u>Does the landscape have the potential to support the hydrologic functions of the site?</u>		
<b>S 5.1</b> <u>Is more than 25% of the area within 150 ft upslope of wetland in land uses that generate excess surface runoff?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 0</b>
<b>Total for S 5:</b>		<b>0</b>

Rating of Landscape Potential

1 = M  0 = L

Record the rating on the first page

Wetland name or number: Wetland G

<b>S 6.0 Are the hydrologic functions provided by the site valueable to society?</b>		
<b>S 6.1</b> <u>Is the wetland in a landscape that has flooding problems?</u>		
Flooding occurs in a sub-basin that is immediately down-gradient of the wetland	points = 2	
Surface flooding problems are in a sub-basin farther down-gradient	points = 1	
There are no problems with flooding downstream of the wetland	points = 0	<b>Score: 0</b>
<b>S 6.2</b> <u>Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</u>		
Yes	points = 2	
No	points = 0	<b>Score: 0</b>
<b>Total for S 6:</b>		<b>0</b>

Rating of Value

2-4 = H  1 = M  0 = L

Record the rating on the first page

Wetland name or number: Wetland G

## HABITAT FUNCTIONS

**These questions apply to wetlands of all HGM classes - Indicators that the site functions to provide important habitat**

### **H 1.0 Does the wetland have the potential to provide habitat for many species?**

#### **H 1.1 What is the structure of the plant community?**

- Aquatic Bed
- Emergent plants 0-12in (0-30cm) high are the highest layer and have >30% cover
- Emergent plants >12-40in (>30-100cm) high are the highest layer with >30% cover
- Emergent plants >40in (>100cm) high are the highest layer with >30% cover
- Scrub-shrub (areas where shrubs have >30% cover)
- Forested (areas where trees have >30% cover)

4 structures or more	points = 3	
3 structures	points = 2	
2 structures	points = 1	
1 structure	points = 0	
No structures	points = 0	<b>Score: 0</b>

#### **H 1.2 Is one of the vegetation types Aquatic Bed?**

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

#### **H 1.3 What is the surface water potential?**

- The wetland has areas of open water (without emergent or shrub plants) that meet the scoring threshold during March to early June OR in August to the end of September
- The wetland has an intermittent or permanent, and unvegetated stream within its boundaries, or along one side
- The wetland is along the side of a stream or river with an unvegetated area that is at least 16ft (5m) wide
- The wetland is a Lake Fringe wetland

The wetland meets at least one of these criteria	points = 3	
No surface water that meets criteria	points = 0	<b>Score: 0</b>

#### **H 1.4 What is the richness of plant species in the wetland?**

>9 species	points = 2	
4-9 species	points = 1	
<4 species	points = 0	<b>Score: 0</b>

**Wetland name or number:** Wetland G

<b>H 1.5</b> <u>What is the interspersion of habitats within the wetland?</u>		
High	points = 3	
Moderate	points = 2	
Low	points = 1	
None	points = 0	<b>Score: 0</b>
<b>H 1.6</b> <u>What are the special habitat features within the wetland?</u>		
<input type="checkbox"/> Loose rocks larger than 4in OR large, downed, woody debris (>4in in diameter) within the area of surface ponding or in a stream.		
<input type="checkbox"/> Cattails or bulrushes are present within the wetland.		
<input type="checkbox"/> Standing snags (diameter at the bottom >4in) in the wetland or within 30m (100ft) of the edge.		
<input type="checkbox"/> Emergent or shrub vegetation in areas that are permanently inundated/ponded		
<input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) or signs of recent beaver activity.		
<input type="checkbox"/> Invasive species cover less than 20% in each stratum of vegetation (canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)		
6 habitat features selected	points = 6	
5 habitat features selected	points = 5	
4 habitat features selected	points = 4	
3 habitat features selected	points = 3	
2 habitat features selected	points = 2	
1 habitat feature selected	points = 1	
No habitat features selected	points = 0	<b>Score: 0</b>
<b>Total for H 1:</b>		<b>0</b>

**Rating of Site Potential**

[ ] 15-18 = H [ ] 7-14 = M [X] 0-6 = L

*Record the rating on the first page*

**H 2.0 Does the landscape have the potential to support the habitat functions of the site?**

<b>H 2.1</b> <u>What is the percentage of accessible habitat within 1km of the wetland?</u>		
>33% of 1km Polygon is accessible habitat	points = 3	
20-30% of 1km Polygon is accessible habitat	points = 2	
10-19% of 1km Polygon is accessible habitat	points = 1	
<10% of 1km Polygon is accessible habitat	points = 0	<b>Score: 0</b>
<b>H 2.2</b> <u>What is the total habitat in a 1km polygon around the wetland?</u>		
Total habitat is >50% of the 1km polygon	points = 3	
Total habitat is 10-50% of the 1km polygon and in 1-3 patches	points = 2	
Total habitat is 10-50% of the 1km polygon and in >3 patches	points = 1	
Total habitat is <10% of the 1km polygon	points = 0	<b>Score: 1</b>

Wetland name or number: Wetland G

<b>H 2.3</b> <u>What is the land use intensity in a 1km polygon within the wetland?</u>		
>50% of the polygon is high intensity land use	points = -2	
<50% of the polygon is high intensity land use	points = 0	<b>Score: -2</b>
<b>H 2.4</b> <u>Is the wetland is in an area where annual rainfall is less than 12in, and its water regime is not influenced by irrigation practices, dams, or water control structures?</u>		
Yes	points = 3	
No	points = 0	<b>Score: 0</b>
<b>Total for H 2:</b>		<b>-1</b>

Rating of Landscape Potential

[ ] 4-9 = H [ ] 1-3 = M [X] 0 = L

Record the rating on the first page

**H 3.0** Is the habitat provided by the site valuable to society?

<b>H 3.1</b> <u>Does the site provide habitat for species valued in laws, regulations, or policies?</u>		
<input type="checkbox"/> Aspen Stands		
<input type="checkbox"/> Biodiversity Areas and Corridors		
<input type="checkbox"/> Eastside Steppe		
<input type="checkbox"/> Inland Dunes		
<input type="checkbox"/> Juniper Savannah		
<input type="checkbox"/> Old-growth/Mature Forests		
<input type="checkbox"/> Oregon White Oak		
<input type="checkbox"/> Riparian		
<input type="checkbox"/> Shrubsteppe		
<input type="checkbox"/> Fresh Deepwater		
<input type="checkbox"/> Instream		
<input type="checkbox"/> Caves		
<input type="checkbox"/> Cliffs		
<input type="checkbox"/> Snags and Logs		
<input type="checkbox"/> Talus		
<b>The following criteria automatically score 2 points:</b>		
<input type="checkbox"/> The wetland provides habitat for Threatened or Endangered species		
<input type="checkbox"/> The wetland is mapped as a location for an individual WDFW priority species		
<input type="checkbox"/> The wetland is a Wetland of High Conservation Value (WHCV)		
<input type="checkbox"/> The wetland has been categorized as an important habitat site in a local plan		
The wetland has 3 or more WDFW priority habitats within 100m, or meets the criteria for societal value	points = 2	
The site has 1 or 2 WDFW priority habitats within 100m	points = 1	
The site does not meet any of the criteria for societal value	points = 0	<b>Score: 0</b>
<b>Total for H 3:</b>		<b>0</b>

Rating of Value

[ ] 2 = H [ ] 1 = M [X] 0 = L

Record the rating on the first page

## CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

### SC 1.0 Vernal Pools

**SC 1.1** Is the wetland less than 4000sqft and it meets at least two of the follow criteria?

- It's only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input.
- Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals (if you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool.)
- The soil in the wetland is shallow [ $<1\text{ft}$  (30cm) deep] and is underlain by an impermeable layer such as basalt or clay
- Surface water is present for less than 120 days during the wet season.

Yes - Go to SC 1.2

No - Not a Special Characteristic Vernal Pool

**Result: Not a Special Characteristic Vernal Pool**

**SC 1.2** Is the vernal pool relatively undisturbed in February and March?

Yes - Go to SC 1.3

No - Not a Special Characteristic Vernal Pool

**Result:**

**SC 1.3** Is the vernal pool in an area where there are at least 3 separate aquatic resources (other wetlands, rivers, lakes, etc.) within 0.5 mi?

Yes - Category II Vernal Pool

No - Category III Vernal Pool

**Result:**

### SC 2.0 Alkali Wetlands

**SC 2.1** Does the wetland meet any of the following criteria for Alkali Wetlands?

- The wetland has a conductivity  $>3.0$  mS/cm
- The wetland has a conductivity between 2.0 and 3.0 mS, and more than 50% of the plant cover is the wetland can be classified as "alkali" species
- If the wetland is dry at the time of your field visit, the central part of the area is covered with a layer of salt.

Yes - Category I Alkali Wetland

No - Go to SC 2.2

**Result: Go to SC 2.2**

**SC 2.2** Does the wetland meet two of the following criteria for Alkali Wetlands?

- Salt encrustations around more than 75% of the edge of the wetland
- more than 75% of the plant cover consists of alkali (salt tolerant) species
- A pH above 9.0

Yes - Category I Alkali Wetland

No - Not a Special Characteristic Alkali Wetland

**Result: Not a Special  
Characteristic Alkali  
Wetland**

**Wetland name or number:** Wetland G

**SC 3.0 Wetlands of High Conservation Value**

<p><b>SC 3.1</b> <u>Is the wetland listed by Washington Natural Heritage Program (WNHP) as a Wetland of High Conservation Value (WHVC)?</u></p> <p>Yes - Category I Wetland of High Conservation Value No - Go to SC 3.2</p>	<p><b>Result: Go to SC 3.2</b></p>
<p><b>SC 3.2</b> <u>Does the wetland have a rare plant species, rare plant community, or high-quality plant community that may qualify the site as a WHCV?</u></p> <p>Yes - Category I Wetland of High Conservation Value No - Not a Special Characteristic Wetland of High Conservation Value</p>	<p><b>Result: Not a Special Characteristic Wetland of High Conservation Value</b></p>

**SC 4.0 Bogs and Calcareous Fens**

<p><b>SC 4.1</b> <u>Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16in or more of the first 32in of the soil profile?</u></p> <p>Yes - Go to SC 4.3 No - Go to SC 4.2</p>	<p><b>Result: Go to SC 4.2</b></p>
<p><b>SC 4.2</b> <u>Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16in deep over debrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pong?</u></p> <p>Yes - Go to SC 4.3 No - Not a Special Characteristic Bog</p>	<p><b>Result: Not a Special Characteristic Bog</b></p>
<p><b>SC 4.3</b> <u>Does an area with peats or mucks have more than 70% cover of mosses at gorund level, AND at least 30% cover of plant species listed?</u></p> <p>Yes - Category I Bog No - Go to SC 4.4</p>	<p><b>Result:</b></p>
<p><b>SC 4.4</b> <u>Is an area with peats or mucks forested (&gt;30% cover) with subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine AND any of the species (or combination of species) listed provide more than 30% of the cover under the canopy?</u></p> <p>Yes - Category I Bog No - Go to SC 4.5</p>	<p><b>Result:</b></p>
<p><b>SC 4.5</b> <u>Do the species listed comprise at least 20% of the total plant cover within an area of peats and mucks?</u></p> <p>Yes - Category I Calcareous Fen No - Go to SC 4.6</p>	<p><b>Result:</b></p>

**Wetland name or number:** Wetland G

**SC 4.6** Do the species listed comprise at least 10% of the total plant cover in an area of peats and mucks, AND one of the two following conditions is met?

Marl deposits [calcium carbonate (CaCO<sub>3</sub>) precipitate] occur on the soil surface or plant stems

The pH of free water is  $\geq 6.8$  AND electrical conductivity is  $\geq 200$  uS/cm at multiple locations within the wetland

Yes - Category I Calcareous Fen

No - Not a Special Characteristic Calcareous Fen

**Result:**

### SC 5.0 Forested Wetlands

**SC 5.1** Does the wetland have an area of forest rooted within its boundary that meets at least one of the following criteria?

The wetland is within the 100 year floodplain of a river or stream

Aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species

There is at least 0.25ac of trees (even in wetlands smaller than 2.5ac) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW

Yes - Go to SC 5.2

No - Not a Special Characteristic Forested Wetland

**Result: Not a Special  
Characteristic Forested  
Wetland**

**SC 5.2** Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees?

Yes - Category I Forested Wetland

No - Go to SC 5.3

**Result:**

**SC 5.3** Does the wetland have areas where aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species?

Yes - Category I Forested Wetland

No - Go to SC 5.4

**Result:**

**SC 5.4** Does the wetland have at least 0.25ac with a forest canopy where more than 50% of the tree species (by cover) are fast growing species?

Yes - Category II Forested Wetland

No - Go to SC 5.5

**Result:**

**Wetland name or number:** Wetland G

**SC 5.5** Is the forested component of the wetland within the 100 year floodplain of a river or stream?

Yes - Category II Forested Wetland

No - Not a Special Characteristic Forested Wetland

**Result:**

**Category of wetland based on Special Characteristics**

If you answered No for all types, enter "Not Applicable" on Summary Form

**Special Characteristics**

**Category: Not**

**Applicable**



Figure 1. Cowardin Class.



Figure 2. Plant cover.

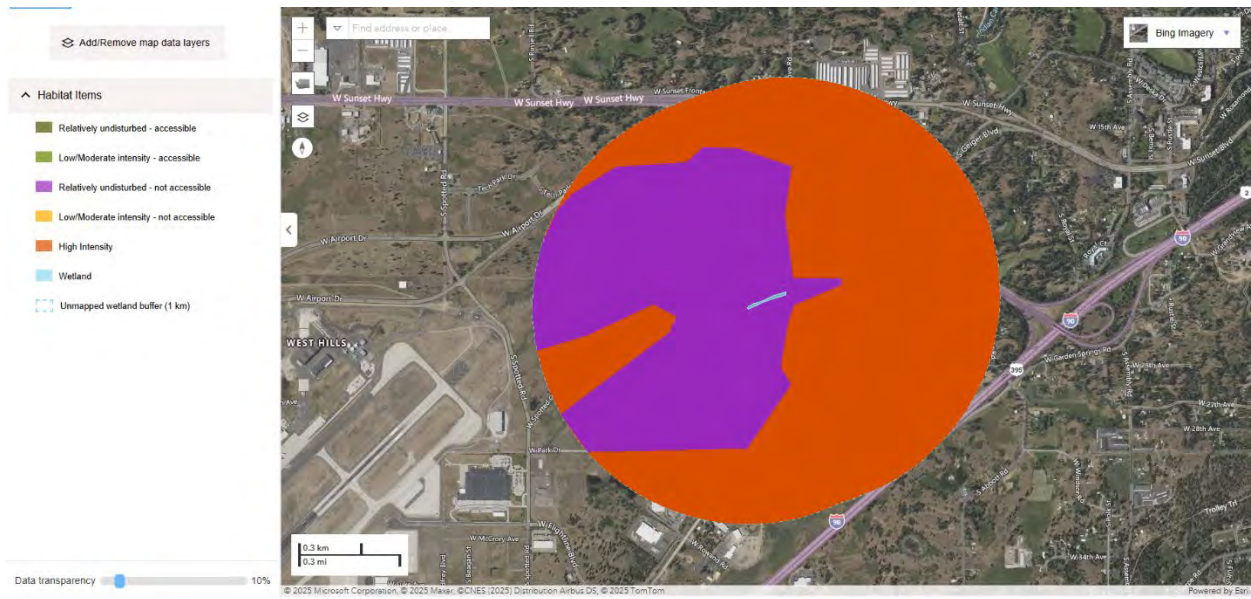


Figure 3. 1 km habitat polygon.

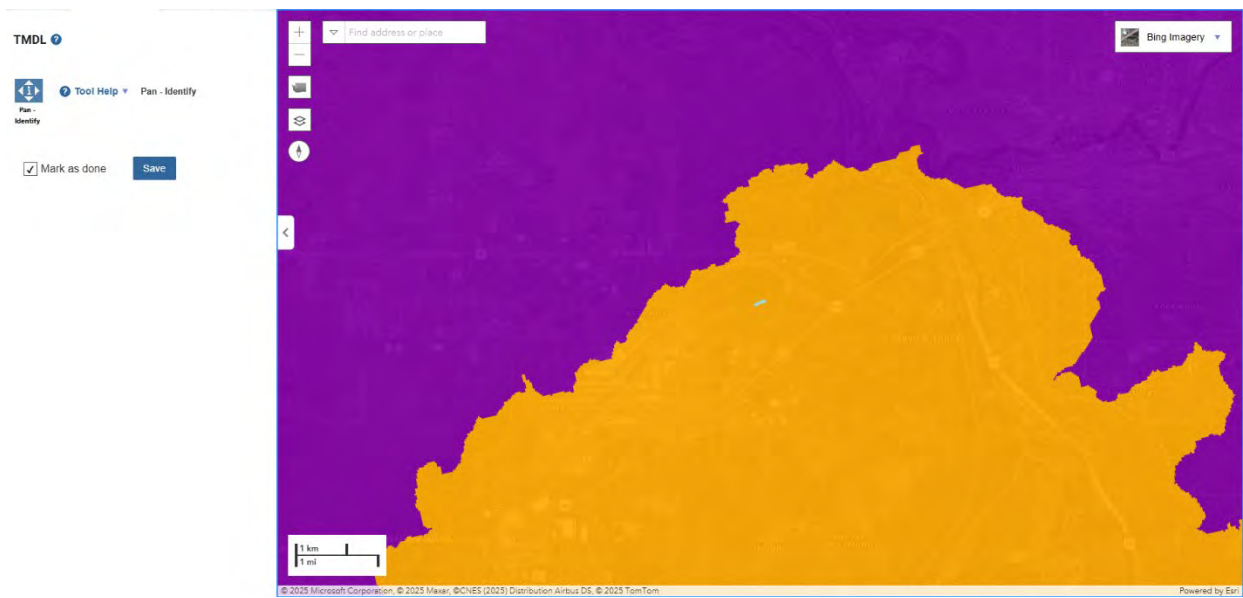


Figure 4. TMDL.



Figure 5. 303 (d).



Figure 6. 150 foot land use buffer.

Wetland name or number: Wetland H

# RATING SUMMARY - Eastern Washington

Name of wetland (or ID#): Wetland H Date of site visit: 07/31/2025

Rated By: Steven Hutchinson Trained by Ecology? Yes  No  Date of Training: 05/30/2025

HGM Class used for rating: Depressional

Wetland has multiple HGM classes? Yes  No

NOTE: Form is not complete without the figures requested (*figures can be combined*).

Source of base aerial photo/map: Bing Maps

OVERALL WETLAND CATEGORY: [Category III] (based on functions  or special characteristics )

## 1. Category of wetland based on FUNCTIONS

Category I - Total score = 22 - 27

Category II - Total score = 19 - 21

Category III - Total score = 16 - 18

Category IV - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Site Potential	H	H	L	
Landscape Potential	M	L	L	
Value	M	L	M	Total
Score Based on Ratings	7	5	4	16

Score for each function based on three ratings (order of ratings is not important)

9 = H,H,H

8 = H,H,M

7 = H,H,L

7 = H,M,M

6 = H,M,L

6 = M,M,M

5 = H,L,L

5 = M,M,L

4 = M,L,L

3 = L,L,L

## 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Vernal Pool	
Alkali	
Wetland of High Conservation Value	
Bog	
Calcareous Fen	
Forested	
None of the above	Not Applicable

**Wetland name or number:** Wetland H

**Maps and figures required to answer questions correctly for Eastern Washington**

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	D 1.3, H 1.1, H 1.5	1
Hydroperiods (including area of open water for H 1.3)	D 1.4, H 1.2, H 1.3	2
Location of outlet ( <i>can be added to map of hydroperiods</i> )	D 1.1, D 4.1	N/A
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	D 2.2, D 5.2	7
Map of the contributing basin	D 5.3	3
1km Polygon: Area that extends 1km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	6
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	5

Wetland name or number: Wetland H

## DEPRESSIONAL WETLANDS

### Water Quality Functions - Indicators that the site functions to improve water quality

**D 1.0 Does the site have the potential to improve water quality?**

**D 1.1** What are the characteristics of surface water outflows from the wetland?

Wetland has no surface water outlet	points = 5	
Wetland has an intermittently flowing outlet	points = 3	
Wetland has a highly constricted permanently flowing outlet	points = 3	
Wetland has a permanently flowing, unconstricted surface outlet	points = 1	<b>Score: 5</b>

**D 1.2** Is the soil 2 in. below the surface a true clay or organic soil?

Mapped as true clay or organic	points = 3	
Soil texture identified as clay or organic in field	points = 3	
Soil texture identified as clay or organic by laboratory test	points = 3	
None of the above	points = 0	<b>Score: 0</b>

**D 1.3** What are the characteristics and distribution of persistent plants?

Wetland has persistent, ungrazed, vegetation for >66% of the wetland area	points = 5	
Wetland has persistent, ungrazed, vegetation from 33%-66% of the wetland area	points = 3	
Wetland has persistent, ungrazed vegetation from 10%-33% of the wetland area	points = 1	
Wetland has persistent, ungrazed vegetation <10% of the wetland area	points = 0	<b>Score: 5</b>

**D 1.4** What are the characteristics of seasonal ponding or inundation in the wetland area?

Area seasonally ponded is >50% total area of wetland	points = 3	
Area seasonally ponded is 25%-50% total area of wetland	points = 1	
Area seasonally ponded is <25% total area of wetland	points = 0	<b>Score: 3</b>

**Total for D 1:** **13**

**Rating of Site Potential**

12-16 = H  6-11 = M  0-5 = L

*Record the rating on the first page*

**D 2.0 Does the landscape have the potential to support the water quality function of the site?**

**D 2.1** Does the wetland unit receive stormwater discharges?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

**D 2.2** Is >10% of the area within 150ft of the wetland in land uses that generate pollutants?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

**D 2.3** Are there septic systems within 250ft of the wetland?

Yes	points = 1	
No	points = 0	<b>Score: 1</b>

**D 2.4** Are the other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

Wetland name or number: Wetland H

D 2.5 What are the other sources of pollutants coming into the wetland?	
<b>Total for D 2:</b>	<b>1</b>

Rating of Landscape Potential

3-4 = H  1-2 = M  0 = L

Record the rating on the first page

<b>D 3.0 Is the water quality improvement provided by the site valuable to society?</b>	
<b>D 3.1 Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, or lake that is on the 303(d) list?</b>	
Yes	points = 1
No	points = 0
<b>Score: 0</b>	
<b>D 3.2 Is the wetland in a basin or sub-basin where water quality is an issue in some aquatic resource [303(d) list, eutrophic lakes, problems with nuisance and toxic algae]?</b>	
Yes	points = 1
No	points = 0
<b>Score: 1</b>	
<b>D 3.3 Has the site been identified in a watershed or local plan as important for maintaining water quality?</b>	
Yes	points = 2
No	points = 0
<b>Score: 0</b>	
<b>Total for D 3:</b>	
<b>1</b>	

Rating of Value

2-4 = H  1 = M  0 = L

Record the rating on the first page

<b><u>DEPRESSIONAL WETLANDS</u></b>	
<b>Hydrologic Functions</b> - Indicators that the site functions to reduce flooding and stream degradation	
<b>D 4.0 Does the site have the potential to reduce flooding and erosion?</b>	
<b>D 4.1 What are the characteristics of surface water outflows from the wetland?</b>	
Wetland has no surface water outlet	points = 8
Wetland has an intermittently flowing outlet	points = 4
Wetland has a highly constricted permanently flowing outlet	points = 4
Wetland has a permanently flowing unconfined surface outlet	points = 0
<b>Score: 8</b>	

Wetland name or number: Wetland H

<b>D 4.2</b> <u>What is the depth of storage during the wet periods?</u>		
Seasonal ponding: 3ft or more above the lowest point in the wetland or the surface of permanent ponding	points = 8	
Seasonal ponding: 2ft-<3ft above the lowest point in the wetland or the surface of permanent ponding	points = 6	
The wetland is a headwater wetland	points = 4	
Seasonal ponding: 1ft - <2ft	points = 4	
Seasonal ponding: 0.5ft - <1ft	points = 2	
Seasonal ponding: <0.5ft (6in) or only saturated soils	points = 0	<b>Score: 8</b>
<b>Total for D 4:</b>		<b>16</b>

**Rating of Site Potential**

12-16 = H  6-11 = M  0-5 = L

*Record the rating on the first page*

<b>D 5.0</b> <u>Does the landscape have the potential to support hydrologic functions of the site?</u>		
<b>D 5.1</b> <u>Does the wetland unit receive stormwater discharges?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 0</b>
<b>D 5.2</b> <u>Is &gt;10% of the area within 150ft of the wetland in a land use that generates runoff?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 0</b>
<b>D 5.3</b> <u>Is more than 25% of the contributing basin of the wetland covered with intensive human land uses?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 0</b>
<b>Total for D 5:</b>		<b>0</b>

**Rating of Landscape Potential**

3 = H  1-2 = M  0 = L

*Record the rating on the first page*

<b>D 6.0</b> <u>Are the hydrologic functions provided by the site valuable to society?</u>		
<b>D 6.1</b> <u>Is the wetland in a landscape that has flooding problems?</u>		
Flooding occurs in a sub-basin that is immediately down-gradient of the wetland	points = 2	
Surface flooding problems are in a sub-basin farther down-gradient	points = 1	
The existing or potential outflow from the wetland is so constrained that water cannot reach areas that flood	points = 0	
There are no problems with flooding downstream of the wetland	points = 0	<b>Score: 0</b>
<b>D 6.2</b> <u>Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</u>		
Yes	points = 2	
No	points = 0	<b>Score: 0</b>
<b>Total for D 6:</b>		<b>0</b>

**Rating of Value**

2-4 = H  1 = M  0 = L

*Record the rating on the first page*

Wetland name or number: Wetland H

## HABITAT FUNCTIONS

**These questions apply to wetlands of all HGM classes - Indicators that the site functions to provide important habitat**

### **H 1.0 Does the wetland have the potential to provide habitat for many species?**

#### **H 1.1 What is the structure of the plant community?**

- Aquatic Bed
- Emergent plants 0-12in (0-30cm) high are the highest layer and have >30% cover
- Emergent plants >12-40in (>30-100cm) high are the highest layer with >30% cover
- cover
- Emergent plants >40in (>100cm) high are the highest layer with >30% cover
- Scrub-shrub (areas where shrubs have >30% cover)
- Forested (areas where trees have >30% cover)

4 structures or more	points = 3	
3 structures	points = 2	
2 structures	points = 1	
1 structure	points = 0	
No structures	points = 0	<b>Score: 0</b>

#### **H 1.2 Is one of the vegetation types Aquatic Bed?**

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

#### **H 1.3 What is the surface water potential?**

- The wetland has areas of open water (without emergent or shrub plants) that meet the scoring threshold during March to early June OR in August to the end of September
- The wetland has an intermittent or permanent, and unvegetated stream within its boundaries, or along one side
- The wetland is along the side of a stream or river with an unvegetated area that is at least 16ft (5m) wide
- The wetland is a Lake Fringe wetland

The wetland meets at least one of these criteria	points = 3	
No surface water that meets criteria	points = 0	<b>Score: 0</b>

#### **H 1.4 What is the richness of plant species in the wetland?**

>9 species	points = 2	
4-9 species	points = 1	
<4 species	points = 0	<b>Score: 0</b>

**Wetland name or number:** Wetland H

<b>H 1.5</b> <u>What is the interspersion of habitats within the wetland?</u>	
High	points = 3
Moderate	points = 2
Low	points = 1
None	points = 0
<b>Score: 1</b>	
<b>H 1.6</b> <u>What are the special habitat features within the wetland?</u>	
<input type="checkbox"/> Loose rocks larger than 4in OR large, downed, woody debris (>4in in diameter) within the area of surface ponding or in a stream.	
<input type="checkbox"/> Cattails or bulrushes are present within the wetland.	
<input checked="" type="checkbox"/> Standing snags (diameter at the bottom >4in) in the wetland or within 30m (100ft) of the edge.	
<input type="checkbox"/> Emergent or shrub vegetation in areas that are permanently inundated/ponded	
<input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) or signs of recent beaver activity.	
<input type="checkbox"/> Invasive species cover less than 20% in each stratum of vegetation (canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)	
6 habitat features selected	points = 6
5 habitat features selected	points = 5
4 habitat features selected	points = 4
3 habitat features selected	points = 3
2 habitat features selected	points = 2
1 habitat feature selected	points = 1
No habitat features selected	points = 0
<b>Score: 1</b>	
<b>Total for H 1:</b>	
<b>2</b>	

**Rating of Site Potential**

[ ] 15-18 = H [ ] 7-14 = M [X] 0-6 = L

*Record the rating on the first page*

**H 2.0** Does the landscape have the potential to support the habitat functions of the site?

<b>H 2.1</b> <u>What is the percentage of accessible habitat within 1km of the wetland?</u>	
>33% of 1km Polygon is accessible habitat	points = 3
20-30% of 1km Polygon is accessible habitat	points = 2
10-19% of 1km Polygon is accessible habitat	points = 1
<10% of 1km Polygon is accessible habitat	points = 0
<b>Score: 0</b>	
<b>H 2.2</b> <u>What is the total habitat in a 1km polygon around the wetland?</u>	
Total habitat is >50% of the 1km polygon	points = 3
Total habitat is 10-50% of the 1km polygon and in 1-3 patches	points = 2
Total habitat is 10-50% of the 1km polygon and in >3 patches	points = 1
Total habitat is <10% of the 1km polygon	points = 0
<b>Score: 2</b>	

Wetland name or number: Wetland H

<b>H 2.3</b> <u>What is the land use intensity in a 1km polygon within the wetland?</u>		
>50% of the polygon is high intensity land use	points = -2	
<50% of the polygon is high intensity land use	points = 0	<b>Score: -2</b>
<b>H 2.4</b> <u>Is the wetland is in an area where annual rainfall is less than 12in, and its water regime is not influenced by irrigation practices, dams, or water control structures?</u>		
Yes	points = 3	
No	points = 0	<b>Score: 0</b>
<b>Total for H 2:</b>		<b>0</b>

Rating of Landscape Potential

[ ] 4-9 = H [ ] 1-3 = M [X] 0 = L

Record the rating on the first page

**H 3.0** Is the habitat provided by the site valuable to society?

<b>H 3.1</b> <u>Does the site provide habitat for species valued in laws, regulations, or policies?</u>		
<input type="checkbox"/> Aspen Stands		
<input type="checkbox"/> Biodiversity Areas and Corridors		
<input type="checkbox"/> Eastside Steppe		
<input type="checkbox"/> Inland Dunes		
<input type="checkbox"/> Juniper Savannah		
<input type="checkbox"/> Old-growth/Mature Forests		
<input type="checkbox"/> Oregon White Oak		
<input type="checkbox"/> Riparian		
<input type="checkbox"/> Shrubsteppe		
<input type="checkbox"/> Fresh Deepwater		
<input type="checkbox"/> Instream		
<input type="checkbox"/> Caves		
<input type="checkbox"/> Cliffs		
<input checked="" type="checkbox"/> Snags and Logs		
<input type="checkbox"/> Talus		
<b>The following criteria automatically score 2 points:</b>		
<input type="checkbox"/> The wetland provides habitat for Threatened or Endangered species		
<input type="checkbox"/> The wetland is mapped as a location for an individual WDFW priority species		
<input type="checkbox"/> The wetland is a Wetland of High Conservation Value (WHCV)		
<input type="checkbox"/> The wetland has been categorized as an important habitat site in a local plan		
The wetland has 3 or more WDFW priority habitats within 100m, or meets the criteria for societal value	points = 2	
The site has 1 or 2 WDFW priority habitats within 100m	points = 1	
The site does not meet any of the criteria for societal value	points = 0	<b>Score: 1</b>
<b>Total for H 3:</b>		<b>1</b>

Rating of Value

[ ] 2 = H [X] 1 = M [ ] 0 = L

Record the rating on the first page

Wetland name or number: Wetland H

## CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

### SC 1.0 Vernal Pools

**SC 1.1** Is the wetland less than 4000sqft and it meets at least two of the follow criteria?

It's only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input.

Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals (if you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool.)

The soil in the wetland is shallow [ $<1\text{ft}$  (30cm) deep] and is underlain by an impermeable layer such as basalt or clay

Surface water is present for less than 120 days during the wet season.

Yes - Go to SC 1.2

No - Not a Special Characteristic Vernal Pool

**Result: Not a Special  
Characteristic Vernal  
Pool**

**SC 1.2** Is the vernal pool relatively undisturbed in February and March?

Yes - Go to SC 1.3

No - Not a Special Characteristic Vernal Pool

**Result:**

**SC 1.3** Is the vernal pool in an area where there are at least 3 separate aquatic resources (other wetlands, rivers, lakes, etc.) within 0.5 mi?

Yes - Category II Vernal Pool

No - Category III Vernal Pool

**Result:**

### SC 2.0 Alkali Wetlands

**SC 2.1** Does the wetland meet any of the following criteria for Alkali Wetlands?

The wetland has a conductivity  $>3.0$  mS/cm

The wetland has a conductivity between 2.0 and 3.0 mS, and more than 50% of the plant cover is the wetland can be classified as "alkali" species

If the wetland is dry at the time of your field visit, the central part of the area is covered with a layer of salt.

Yes - Category I Alkali Wetland

No - Go to SC 2.2

**Result: Go to SC 2.2**

**SC 2.2** Does the wetland meet two of the following criteria for Alkali Wetlands?

Salt encrustations around more than 75% of the edge of the wetland

more than 75% of the plant cover consists of alkali (salt tolerant) species

A pH above 9.0

Yes - Category I Alkali Wetland

No - Not a Special Characteristic Alkali Wetland

**Result: Not a Special  
Characteristic Alkali  
Wetland**

Wetland name or number: Wetland H

### SC 3.0 Wetlands of High Conservation Value

**SC 3.1** Is the wetland listed by Washington Natural Heritage Program (WNHP) as a Wetland of High Conservation Value (WHVC)?

Yes - Category I Wetland of High Conservation Value

No - Go to SC 3.2

**Result: Go to SC 3.2**

**SC 3.2** Does the wetland have a rare plant species, rare plant community, or high-quality plant community that may qualify the site as a WHCV?

Yes - Category I Wetland of High Conservation Value

No - Not a Special Characteristic Wetland of High Conservation Value

**Result: Not a Special Characteristic Wetland of High Conservation Value**

### SC 4.0 Bogs and Calcareous Fens

**SC 4.1** Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16in or more of the first 32in of the soil profile?

Yes - Go to SC 4.3

No - Go to SC 4.2

**Result: Go to SC 4.2**

**SC 4.2** Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16in deep over debrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pong?

Yes - Go to SC 4.3

No - Not a Special Characteristic Bog

**Result: Not a Special Characteristic Bog**

**SC 4.3** Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least 30% cover of plant species listed?

Yes - Category I Bog

No - Go to SC 4.4

**Result:**

**SC 4.4** Is an area with peats or mucks forested (>30% cover) with subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine AND any of the species (or combination of species) listed provide more than 30% of the cover under the canopy?

Yes - Category I Bog

No - Go to SC 4.5

**Result:**

**SC 4.5** Do the species listed comprise at least 20% of the total plant cover within an area of peats and mucks?

Yes - Category I Calcareous Fen

No - Go to SC 4.6

**Result:**

**Wetland name or number:** Wetland H

**SC 4.6** Do the species listed comprise at least 10% of the total plant cover in an area of peats and mucks, AND one of the two following conditions is met?

Marl deposits [calcium carbonate (CaCO<sub>3</sub>) precipitate] occur on the soil surface or plant stems

The pH of free water is  $\geq 6.8$  AND electrical conductivity is  $\geq 200$  uS/cm at multiple locations within the wetland

Yes - Category I Calcareous Fen

No - Not a Special Characteristic Calcareous Fen

**Result:**

### SC 5.0 Forested Wetlands

**SC 5.1** Does the wetland have an area of forest rooted within its boundary that meets at least one of the following criteria?

The wetland is within the 100 year floodplain of a river or stream

Aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species

There is at least 0.25ac of trees (even in wetlands smaller than 2.5ac) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW

Yes - Go to SC 5.2

No - Not a Special Characteristic Forested Wetland

**Result: Not a Special  
Characteristic Forested  
Wetland**

**SC 5.2** Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees?

Yes - Category I Forested Wetland

No - Go to SC 5.3

**Result:**

**SC 5.3** Does the wetland have areas where aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species?

Yes - Category I Forested Wetland

No - Go to SC 5.4

**Result:**

**SC 5.4** Does the wetland have at least 0.25ac with a forest canopy where more than 50% of the tree species (by cover) are fast growing species?

Yes - Category II Forested Wetland

No - Go to SC 5.5

**Result:**

**Wetland name or number:** Wetland H

<b>SC 5.5</b> <u>Is the forested component of the wetland within the 100 year floodplain of a river or stream?</u>	
Yes - Category II Forested Wetland	
No - Not a Special Characteristic Forested Wetland	<b>Result:</b>
<b>Category of wetland based on Special Characteristics</b>	
If you answered No for all types, enter "Not Applicable" on Summary Form	<b>Special Characteristics Category: Not Applicable</b>

Cowardin plant classes



Emergent > 12-40 inches ■ delete

Area of persistent vegetation: 0.04 acres (173 m<sup>2</sup>)

Transparency

Mark as done Save



Figure 1. Cowardin Class.

Define hydroperiods



Seasonally ■ delete

Transparency

Mark as done Save



Figure 2. Hydroperiods.

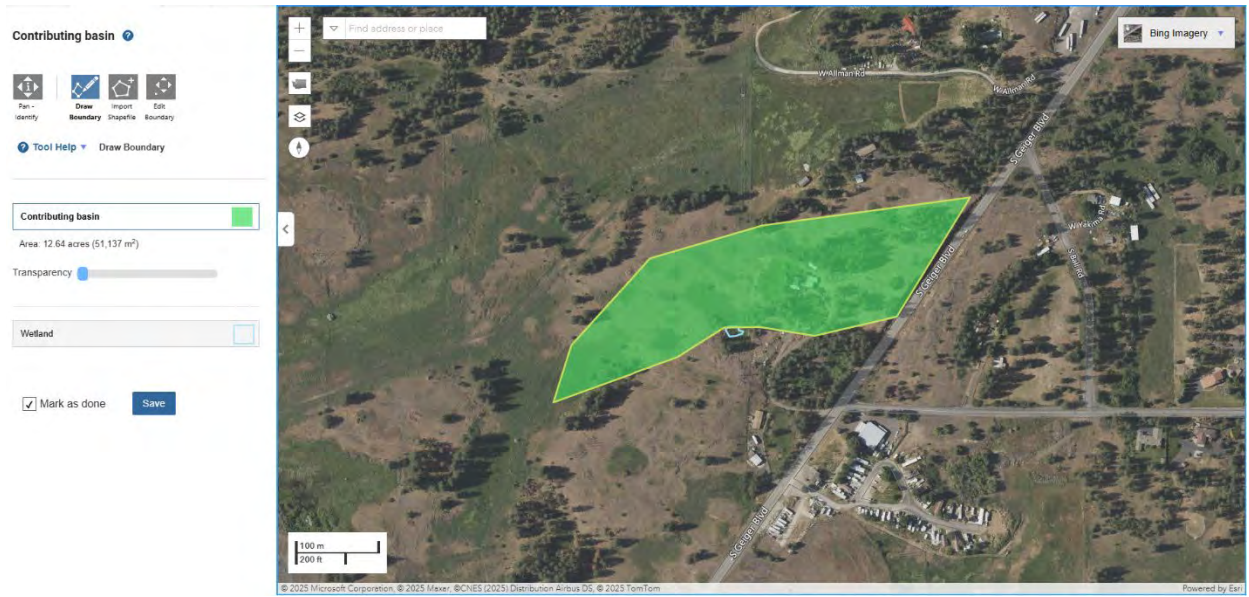


Figure 3. Contributing basin.

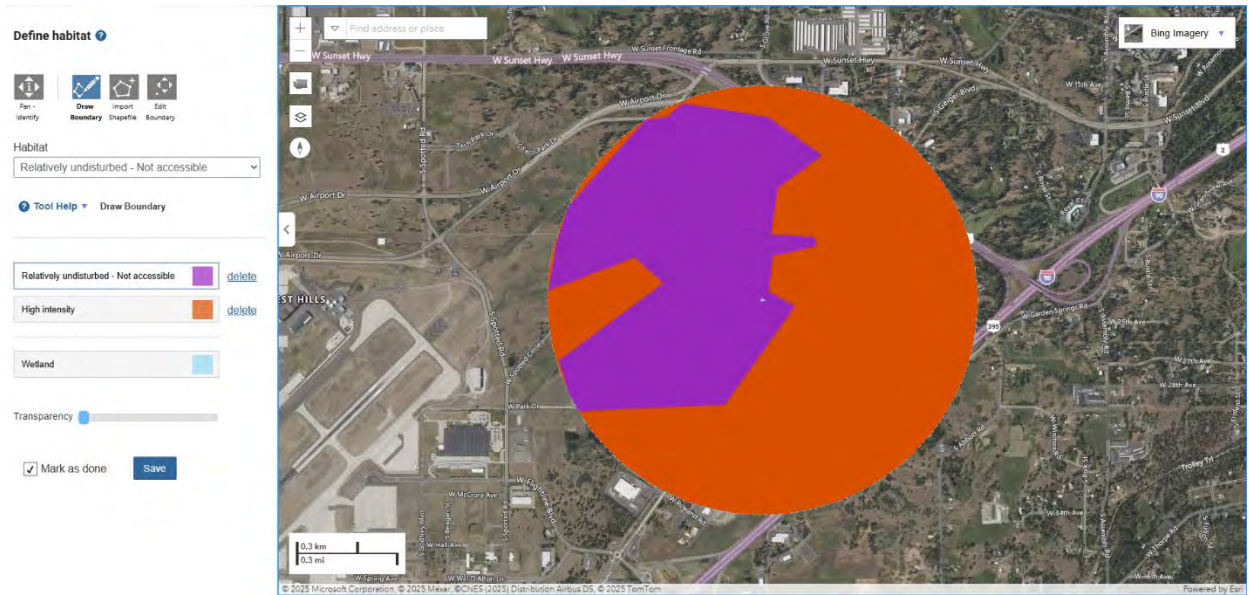


Figure 4. 1 km habitat polygon.



Figure 5. TDML.



Figure 6. 303 (d).



Figure 7. 150 foot land use buffer.

Wetland name or number: Wetland I

# RATING SUMMARY - Eastern Washington

Name of wetland (or ID#): Wetland I Date of site visit: 07/31/2025

Rated By: Steven Hutchinson Trained by Ecology? Yes  No  Date of Training: 05/30/2025

HGM Class used for rating: Depressional

Wetland has multiple HGM classes? Yes  No

NOTE: Form is not complete without the figures requested (*figures can be combined*).

Source of base aerial photo/map: Bing Maps

OVERALL WETLAND CATEGORY: [Category IV] (based on functions  or special characteristics )

## 1. Category of wetland based on FUNCTIONS

Category I - Total score = 22 - 27

Category II - Total score = 19 - 21

Category III - Total score = 16 - 18

Category IV - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Site Potential	M	M	L	
Landscape Potential	M	H	L	
Value	M	L	L	Total
Score Based on Ratings	6	6	3	15

Score for each function based on three ratings (order of ratings is not important)

9 = H,H,H

8 = H,H,M

7 = H,H,L

7 = H,M,M

6 = H,M,L

6 = M,M,M

5 = H,L,L

5 = M,M,L

4 = M,L,L

3 = L,L,L

## 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Vernal Pool	
Alkali	
Wetland of High Conservation Value	
Bog	
Calcareous Fen	
Forested	
None of the above	Not Applicable

**Wetland name or number:** Wetland I

**Maps and figures required to answer questions correctly for Eastern Washington**

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	D 1.3, H 1.1, H 1.5	1
Hydroperiods (including area of open water for H 1.3)	D 1.4, H 1.2, H 1.3	2
Location of outlet ( <i>can be added to map of hydroperiods</i> )	D 1.1, D 4.1	N/A
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	D 2.2, D 5.2	7
Map of the contributing basin	D 5.3	3
1km Polygon: Area that extends 1km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	6
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	5

Wetland name or number: Wetland I

## DEPRESSIONAL WETLANDS

### Water Quality Functions - Indicators that the site functions to improve water quality

**D 1.0 Does the site have the potential to improve water quality?**

**D 1.1** What are the characteristics of surface water outflows from the wetland?

Wetland has no surface water outlet	points = 5	
Wetland has an intermittently flowing outlet	points = 3	
Wetland has a highly constricted permanently flowing outlet	points = 3	
Wetland has a permanently flowing, unconstricted surface outlet	points = 1	<b>Score: 3</b>

**D 1.2** Is the soil 2 in. below the surface a true clay or organic soil?

Mapped as true clay or organic	points = 3	
Soil texture identified as clay or organic in field	points = 3	
Soil texture identified as clay or organic by laboratory test	points = 3	
None of the above	points = 0	<b>Score: 0</b>

**D 1.3** What are the characteristics and distribution of persistent plants?

Wetland has persistent, ungrazed, vegetation for >66% of the wetland area	points = 5	
Wetland has persistent, ungrazed, vegetation from 33%-66% of the wetland area	points = 3	
Wetland has persistent, ungrazed vegetation from 10%-33% of the wetland area	points = 1	
Wetland has persistent, ungrazed vegetation <10% of the wetland area	points = 0	<b>Score: 5</b>

**D 1.4** What are the characteristics of seasonal ponding or inundation in the wetland area?

Area seasonally ponded is >50% total area of wetland	points = 3	
Area seasonally ponded is 25%-50% total area of wetland	points = 1	
Area seasonally ponded is <25% total area of wetland	points = 0	<b>Score: 3</b>

**Total for D 1: 11**

**Rating of Site Potential**

[ ] 12-16 = H [X] 6-11 = M [ ] 0-5 = L

*Record the rating on the first page*

**D 2.0 Does the landscape have the potential to support the water quality function of the site?**

**D 2.1** Does the wetland unit receive stormwater discharges?

Yes	points = 1	
No	points = 0	<b>Score: 1</b>

**D 2.2** Is >10% of the area within 150ft of the wetland in land uses that generate pollutants?

Yes	points = 1	
No	points = 0	<b>Score: 1</b>

**D 2.3** Are there septic systems within 250ft of the wetland?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

**D 2.4** Are the other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

Wetland name or number: Wetland I

D 2.5 What are the other sources of pollutants coming into the wetland?	
<b>Total for D 2:</b>	<b>2</b>

Rating of Landscape Potential

3-4 = H  1-2 = M  0 = L

Record the rating on the first page

<b>D 3.0 Is the water quality improvement provided by the site valuable to society?</b>	
<b>D 3.1 Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, or lake that is on the 303(d) list?</b>	
Yes	points = 1
No	points = 0
<b>Score: 0</b>	
<b>D 3.2 Is the wetland in a basin or sub-basin where water quality is an issue in some aquatic resource [303(d) list, eutrophic lakes, problems with nuisance and toxic algae]?</b>	
Yes	points = 1
No	points = 0
<b>Score: 1</b>	
<b>D 3.3 Has the site been identified in a watershed or local plan as important for maintaining water quality?</b>	
Yes	points = 2
No	points = 0
<b>Score: 0</b>	
<b>Total for D 3:</b>	
<b>1</b>	

Rating of Value

2-4 = H  1 = M  0 = L

Record the rating on the first page

<b><u>DEPRESSIONAL WETLANDS</u></b>	
<b>Hydrologic Functions</b> - Indicators that the site functions to reduce flooding and stream degradation	
<b>D 4.0 Does the site have the potential to reduce flooding and erosion?</b>	
<b>D 4.1 What are the characteristics of surface water outflows from the wetland?</b>	
Wetland has no surface water outlet	points = 8
Wetland has an intermittently flowing outlet	points = 4
Wetland has a highly constricted permanently flowing outlet	points = 4
Wetland has a permanently flowing unconfined surface outlet	points = 0
<b>Score: 4</b>	

**Wetland name or number:** Wetland I

<b>D 4.2</b> <u>What is the depth of storage during the wet periods?</u>		
Seasonal ponding: 3ft or more above the lowest point in the wetland or the surface of permanent ponding	points = 8	
Seasonal ponding: 2ft-<3ft above the lowest point in the wetland or the surface of permanent ponding	points = 6	
The wetland is a headwater wetland	points = 4	
Seasonal ponding: 1ft - <2ft	points = 4	
Seasonal ponding: 0.5ft - <1ft	points = 2	
Seasonal ponding: <0.5ft (6in) or only saturated soils	points = 0	<b>Score: 2</b>
<b>Total for D 4:</b>		<b>6</b>

**Rating of Site Potential**

12-16 = H  6-11 = M  0-5 = L

*Record the rating on the first page*

<b>D 5.0</b> <u>Does the landscape have the potential to support hydrologic functions of the site?</u>		
<b>D 5.1</b> <u>Does the wetland unit receive stormwater discharges?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 1</b>
<b>D 5.2</b> <u>Is &gt;10% of the area within 150ft of the wetland in a land use that generates runoff?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 1</b>
<b>D 5.3</b> <u>Is more than 25% of the contributing basin of the wetland covered with intensive human land uses?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 1</b>
<b>Total for D 5:</b>		<b>3</b>

**Rating of Landscape Potential**

3 = H  1-2 = M  0 = L

*Record the rating on the first page*

<b>D 6.0</b> <u>Are the hydrologic functions provided by the site valuable to society?</u>		
<b>D 6.1</b> <u>Is the wetland in a landscape that has flooding problems?</u>		
Flooding occurs in a sub-basin that is immediately down-gradient of the wetland	points = 2	
Surface flooding problems are in a sub-basin farther down-gradient	points = 1	
The existing or potential outflow from the wetland is so constrained that water cannot reach areas that flood	points = 0	
There are no problems with flooding downstream of the wetland	points = 0	<b>Score: 0</b>
<b>D 6.2</b> <u>Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</u>		
Yes	points = 2	
No	points = 0	<b>Score: 0</b>
<b>Total for D 6:</b>		<b>0</b>

**Rating of Value**

2-4 = H  1 = M  0 = L

*Record the rating on the first page*

Wetland name or number: Wetland I

## HABITAT FUNCTIONS

**These questions apply to wetlands of all HGM classes - Indicators that the site functions to provide important habitat**

### **H 1.0 Does the wetland have the potential to provide habitat for many species?**

#### **H 1.1 What is the structure of the plant community?**

- Aquatic Bed
- Emergent plants 0-12in (0-30cm) high are the highest layer and have >30% cover
- Emergent plants >12-40in (>30-100cm) high are the highest layer with >30% cover
- cover
- Emergent plants >40in (>100cm) high are the highest layer with >30% cover
- Scrub-shrub (areas where shrubs have >30% cover)
- Forested (areas where trees have >30% cover)

4 structures or more	points = 3	
3 structures	points = 2	
2 structures	points = 1	
1 structure	points = 0	
No structures	points = 0	<b>Score: 0</b>

#### **H 1.2 Is one of the vegetation types Aquatic Bed?**

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

#### **H 1.3 What is the surface water potential?**

- The wetland has areas of open water (without emergent or shrub plants) that meet the scoring threshold during March to early June OR in August to the end of September
- The wetland has an intermittent or permanent, and unvegetated stream within its boundaries, or along one side
- The wetland is along the side of a stream or river with an unvegetated area that is at least 16ft (5m) wide
- The wetland is a Lake Fringe wetland

The wetland meets at least one of these criteria	points = 3	
No surface water that meets criteria	points = 0	<b>Score: 0</b>

#### **H 1.4 What is the richness of plant species in the wetland?**

>9 species	points = 2	
4-9 species	points = 1	
<4 species	points = 0	<b>Score: 0</b>

Wetland name or number: Wetland I

<b>H 1.5</b> <u>What is the interspersions of habitats within the wetland?</u>	
High	points = 3
Moderate	points = 2
Low	points = 1
None	points = 0
<b>Score: 1</b>	
<b>H 1.6</b> <u>What are the special habitat features within the wetland?</u>	
<input type="checkbox"/> Loose rocks larger than 4in OR large, downed, woody debris (>4in in diameter) within the area of surface ponding or in a stream.	
<input checked="" type="checkbox"/> Cattails or bulrushes are present within the wetland.	
<input type="checkbox"/> Standing snags (diameter at the bottom >4in) in the wetland or within 30m (100ft) of the edge.	
<input type="checkbox"/> Emergent or shrub vegetation in areas that are permanently inundated/ponded	
<input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) or signs of recent beaver activity.	
<input type="checkbox"/> Invasive species cover less than 20% in each stratum of vegetation (canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)	
6 habitat features selected	points = 6
5 habitat features selected	points = 5
4 habitat features selected	points = 4
3 habitat features selected	points = 3
2 habitat features selected	points = 2
1 habitat feature selected	points = 1
No habitat features selected	points = 0
<b>Score: 1</b>	
<b>Total for H 1:</b>	
<b>2</b>	

**Rating of Site Potential**

[ ] 15-18 = H [ ] 7-14 = M [X] 0-6 = L

*Record the rating on the first page*

**H 2.0** Does the landscape have the potential to support the habitat functions of the site?

<b>H 2.1</b> <u>What is the percentage of accessible habitat within 1km of the wetland?</u>	
>33% of 1km Polygon is accessible habitat	points = 3
20-30% of 1km Polygon is accessible habitat	points = 2
10-19% of 1km Polygon is accessible habitat	points = 1
<10% of 1km Polygon is accessible habitat	points = 0
<b>Score: 0</b>	
<b>H 2.2</b> <u>What is the total habitat in a 1km polygon around the wetland?</u>	
Total habitat is >50% of the 1km polygon	points = 3
Total habitat is 10-50% of the 1km polygon and in 1-3 patches	points = 2
Total habitat is 10-50% of the 1km polygon and in >3 patches	points = 1
Total habitat is <10% of the 1km polygon	points = 0
<b>Score: 1</b>	

Wetland name or number: Wetland I

<b>H 2.3</b> <u>What is the land use intensity in a 1km polygon within the wetland?</u>		
>50% of the polygon is high intensity land use	points = -2	
<50% of the polygon is high intensity land use	points = 0	<b>Score: -2</b>
<b>H 2.4</b> <u>Is the wetland is in an area where annual rainfall is less than 12in, and its water regime is not influenced by irrigation practices, dams, or water control structures?</u>		
Yes	points = 3	
No	points = 0	<b>Score: 0</b>
<b>Total for H 2:</b>		<b>-1</b>

Rating of Landscape Potential

[ ] 4-9 = H [ ] 1-3 = M [X] 0 = L

Record the rating on the first page

**H 3.0** Is the habitat provided by the site valuable to society?

<b>H 3.1</b> <u>Does the site provide habitat for species valued in laws, regulations, or policies?</u>		
<input type="checkbox"/> Aspen Stands		
<input type="checkbox"/> Biodiversity Areas and Corridors		
<input type="checkbox"/> Eastside Steppe		
<input type="checkbox"/> Inland Dunes		
<input type="checkbox"/> Juniper Savannah		
<input type="checkbox"/> Old-growth/Mature Forests		
<input type="checkbox"/> Oregon White Oak		
<input type="checkbox"/> Riparian		
<input type="checkbox"/> Shrubsteppe		
<input type="checkbox"/> Fresh Deepwater		
<input type="checkbox"/> Instream		
<input type="checkbox"/> Caves		
<input type="checkbox"/> Cliffs		
<input type="checkbox"/> Snags and Logs		
<input type="checkbox"/> Talus		
<b>The following criteria automatically score 2 points:</b>		
<input type="checkbox"/> The wetland provides habitat for Threatened or Endangered species		
<input type="checkbox"/> The wetland is mapped as a location for an individual WDFW priority species		
<input type="checkbox"/> The wetland is a Wetland of High Conservation Value (WHCV)		
<input type="checkbox"/> The wetland has been categorized as an important habitat site in a local plan		
The wetland has 3 or more WDFW priority habitats within 100m, or meets the criteria for societal value	points = 2	
The site has 1 or 2 WDFW priority habitats within 100m	points = 1	
The site does not meet any of the criteria for societal value	points = 0	<b>Score: 0</b>
<b>Total for H 3:</b>		<b>0</b>

Rating of Value

[ ] 2 = H [ ] 1 = M [X] 0 = L

Record the rating on the first page

Wetland name or number: Wetland I

## CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

### SC 1.0 Vernal Pools

**SC 1.1** Is the wetland less than 4000sqft and it meets at least two of the follow criteria?

It's only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input.

Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals (if you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool.)

The soil in the wetland is shallow [ $<1\text{ft}$  (30cm) deep] and is underlain by an impermeable layer such as basalt or clay

Surface water is present for less than 120 days during the wet season.

Yes - Go to SC 1.2

No - Not a Special Characteristic Vernal Pool

**Result: Not a Special  
Characteristic Vernal  
Pool**

**SC 1.2** Is the vernal pool relatively undisturbed in February and March?

Yes - Go to SC 1.3

No - Not a Special Characteristic Vernal Pool

**Result:**

**SC 1.3** Is the vernal pool in an area where there are at least 3 separate aquatic resources (other wetlands, rivers, lakes, etc.) within 0.5 mi?

Yes - Category II Vernal Pool

No - Category III Vernal Pool

**Result:**

### SC 2.0 Alkali Wetlands

**SC 2.1** Does the wetland meet any of the following criteria for Alkali Wetlands?

The wetland has a conductivity  $>3.0$  mS/cm

The wetland has a conductivity between 2.0 and 3.0 mS, and more than 50% of the plant cover is the wetland can be classified as "alkali" species

If the wetland is dry at the time of your field visit, the central part of the area is covered with a layer of salt.

Yes - Category I Alkali Wetland

No - Go to SC 2.2

**Result: Go to SC 2.2**

**SC 2.2** Does the wetland meet two of the following criteria for Alkali Wetlands?

Salt encrustations around more than 75% of the edge of the wetland

more than 75% of the plant cover consists of alkali (salt tolerant) species

A pH above 9.0

Yes - Category I Alkali Wetland

No - Not a Special Characteristic Alkali Wetland

**Result: Not a Special  
Characteristic Alkali  
Wetland**

Wetland name or number: Wetland I

### SC 3.0 Wetlands of High Conservation Value

<p><b>SC 3.1</b> <u>Is the wetland listed by Washington Natural Heritage Program (WNHP) as a Wetland of High Conservation Value (WHVC)?</u></p> <p>Yes - Category I Wetland of High Conservation Value No - Go to SC 3.2</p>	<p><b>Result: Go to SC 3.2</b></p>
<p><b>SC 3.2</b> <u>Does the wetland have a rare plant species, rare plant community, or high-quality plant community that may qualify the site as a WHCV?</u></p> <p>Yes - Category I Wetland of High Conservation Value No - Not a Special Characteristic Wetland of High Conservation Value</p>	<p><b>Result: Not a Special Characteristic Wetland of High Conservation Value</b></p>

### SC 4.0 Bogs and Calcareous Fens

<p><b>SC 4.1</b> <u>Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16in or more of the first 32in of the soil profile?</u></p> <p>Yes - Go to SC 4.3 No - Go to SC 4.2</p>	<p><b>Result: Go to SC 4.2</b></p>
<p><b>SC 4.2</b> <u>Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16in deep over debrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pong?</u></p> <p>Yes - Go to SC 4.3 No - Not a Special Characteristic Bog</p>	<p><b>Result: Not a Special Characteristic Bog</b></p>
<p><b>SC 4.3</b> <u>Does an area with peats or mucks have more than 70% cover of mosses at gorund level, AND at least 30% cover of plant species listed?</u></p> <p>Yes - Category I Bog No - Go to SC 4.4</p>	<p><b>Result:</b></p>
<p><b>SC 4.4</b> <u>Is an area with peats or mucks forested (&gt;30% cover) with subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine AND any of the species (or combination of species) listed provide more than 30% of the cover under the canopy?</u></p> <p>Yes - Category I Bog No - Go to SC 4.5</p>	<p><b>Result:</b></p>
<p><b>SC 4.5</b> <u>Do the species listed comprise at least 20% of the total plant cover within an area of peats and mucks?</u></p> <p>Yes - Category I Calcareous Fen No - Go to SC 4.6</p>	<p><b>Result:</b></p>

**Wetland name or number:** Wetland I

**SC 4.6** Do the species listed comprise at least 10% of the total plant cover in an area of peats and mucks, AND one of the two following conditions is met?

Marl deposits [calcium carbonate (CaCO<sub>3</sub>) precipitate] occur on the soil surface or plant stems

The pH of free water is  $\geq 6.8$  AND electrical conductivity is  $\geq 200$  uS/cm at multiple locations within the wetland

Yes - Category I Calcareous Fen

No - Not a Special Characteristic Calcareous Fen

**Result:**

### SC 5.0 Forested Wetlands

**SC 5.1** Does the wetland have an area of forest rooted within its boundary that meets at least one of the following criteria?

The wetland is within the 100 year floodplain of a river or stream

Aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species

There is at least 0.25ac of trees (even in wetlands smaller than 2.5ac) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW

Yes - Go to SC 5.2

No - Not a Special Characteristic Forested Wetland

**Result: Not a Special  
Characteristic Forested  
Wetland**

**SC 5.2** Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees?

Yes - Category I Forested Wetland

No - Go to SC 5.3

**Result:**

**SC 5.3** Does the wetland have areas where aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species?

Yes - Category I Forested Wetland

No - Go to SC 5.4

**Result:**

**SC 5.4** Does the wetland have at least 0.25ac with a forest canopy where more than 50% of the tree species (by cover) are fast growing species?

Yes - Category II Forested Wetland

No - Go to SC 5.5

**Result:**

**Wetland name or number:** Wetland I

**SC 5.5** Is the forested component of the wetland within the 100 year floodplain of a river or stream?

Yes - Category II Forested Wetland

No - Not a Special Characteristic Forested Wetland

**Result:**

**Category of wetland based on Special Characteristics**

If you answered No for all types, enter "Not Applicable" on Summary Form

**Special Characteristics**

**Category: Not**

**Applicable**

### Cowardin plant classes



Emergent > 12-40 inches ■ delete

Area of persistent vegetation: 0.13 acres (528 m<sup>2</sup>)

Wetland/Unmapped wetland ■

Transparency

Mark as done Save



Figure 1. Cowardin Class.

### Define hydroperiods



Seasonally ■ delete

Transparency

Mark as done Save



Figure 2. Hydroperiods.



Figure 3. Contributing basin.

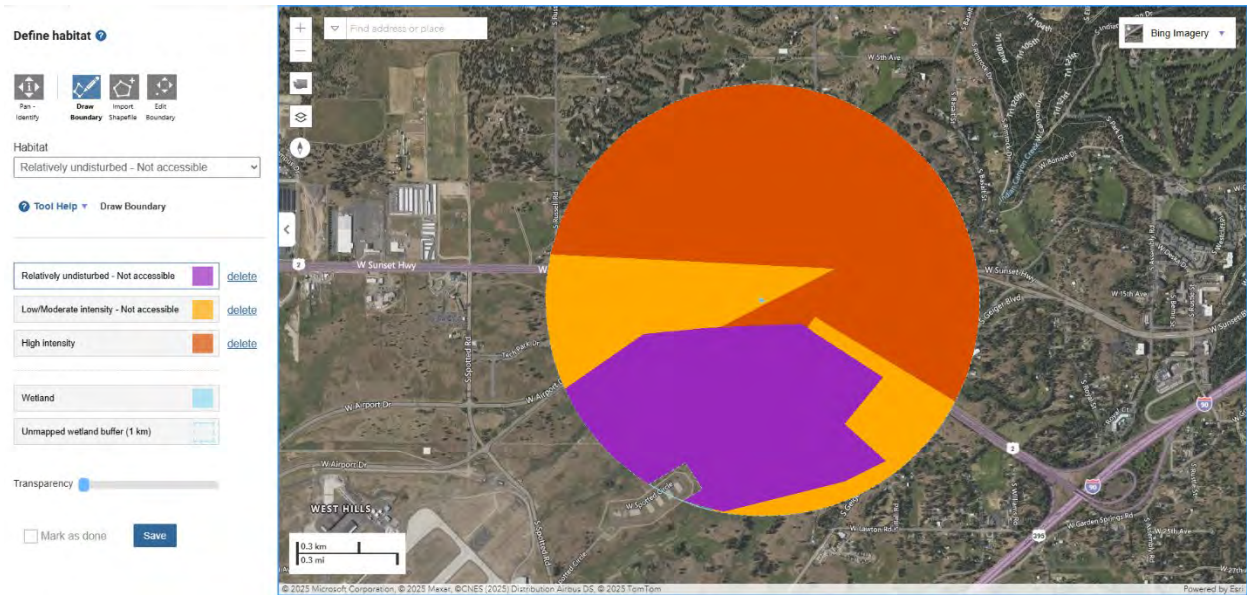


Figure 4. 1 km habitat polygon.



Figure 5. TDML.

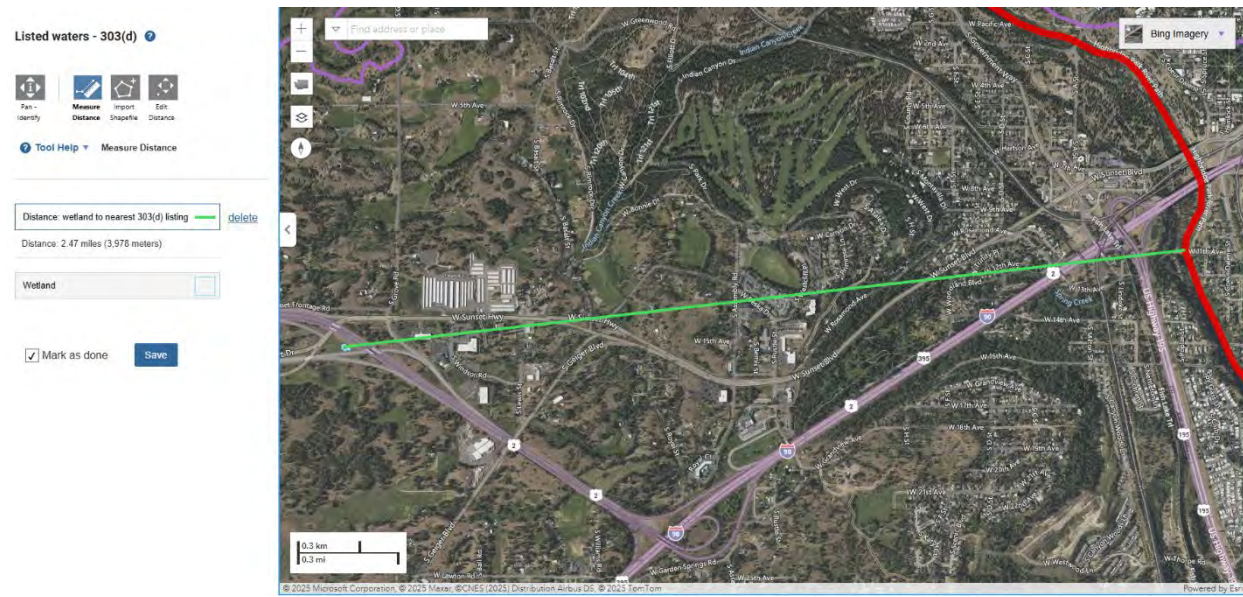


Figure 6. 303 (d).

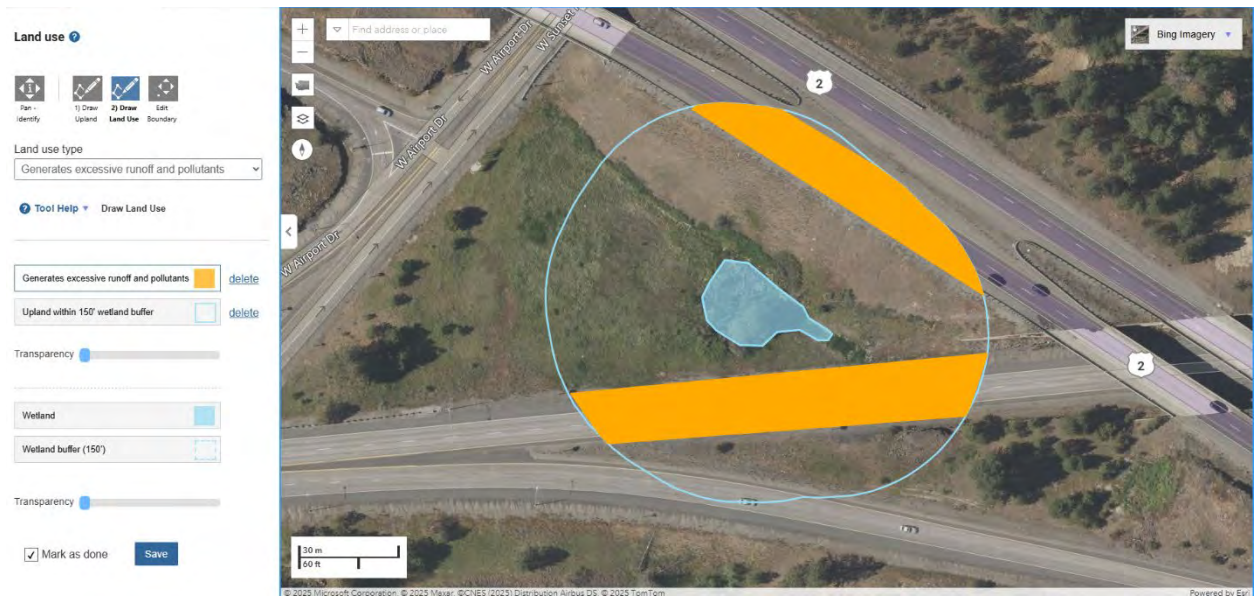


Figure 7. 150 foot land use buffer.

Wetland name or number: Wetland J

# RATING SUMMARY - Eastern Washington

Name of wetland (or ID#): Wetland J Date of site visit: 07/31/2025

Rated By: Steven Hutchinson Trained by Ecology? Yes  No  Date of Training: 05/30/2025

HGM Class used for rating: Depressional

Wetland has multiple HGM classes? Yes  No

NOTE: Form is not complete without the figures requested (figures can be combined).

Source of base aerial photo/map: Bing Maps

OVERALL WETLAND CATEGORY: [Category III] (based on functions  or special characteristics )

## 1. Category of wetland based on FUNCTIONS

Category I - Total score = 22 - 27

Category II - Total score = 19 - 21

Category III - Total score = 16 - 18

Category IV - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Site Potential	H	H	L	
Landscape Potential	M	M	M	
Value	M	L	L	Total
Score Based on Ratings	7	6	4	17

Score for each function based on three ratings (order of ratings is not important)

9 = H,H,H

8 = H,H,M

7 = H,H,L

7 = H,M,M

6 = H,M,L

6 = M,M,M

5 = H,L,L

5 = M,M,L

4 = M,L,L

3 = L,L,L

## 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Vernal Pool	
Alkali	
Wetland of High Conservation Value	
Bog	
Calcareous Fen	
Forested	
None of the above	Not Applicable

**Wetland name or number:** Wetland J

**Maps and figures required to answer questions correctly for Eastern Washington**

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	D 1.3, H 1.1, H 1.5	1
Hydroperiods (including area of open water for H 1.3)	D 1.4, H 1.2, H 1.3	2
Location of outlet ( <i>can be added to map of hydroperiods</i> )	D 1.1, D 4.1	N/A
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	D 2.2, D 5.2	7
Map of the contributing basin	D 5.3	3
1km Polygon: Area that extends 1km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	6
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	5

Wetland name or number: Wetland J

## DEPRESSIONAL WETLANDS

### Water Quality Functions - Indicators that the site functions to improve water quality

**D 1.0 Does the site have the potential to improve water quality?**

**D 1.1** What are the characteristics of surface water outflows from the wetland?

Wetland has no surface water outlet	points = 5	
Wetland has an intermittently flowing outlet	points = 3	
Wetland has a highly constricted permanently flowing outlet	points = 3	
Wetland has a permanently flowing, unconstricted surface outlet	points = 1	<b>Score: 5</b>

**D 1.2** Is the soil 2 in. below the surface a true clay or organic soil?

Mapped as true clay or organic	points = 3	
Soil texture identified as clay or organic in field	points = 3	
Soil texture identified as clay or organic by laboratory test	points = 3	
None of the above	points = 0	<b>Score: 0</b>

**D 1.3** What are the characteristics and distribution of persistent plants?

Wetland has persistent, ungrazed, vegetation for >66% of the wetland area	points = 5	
Wetland has persistent, ungrazed, vegetation from 33%-66% of the wetland area	points = 3	
Wetland has persistent, ungrazed vegetation from 10%-33% of the wetland area	points = 1	
Wetland has persistent, ungrazed vegetation <10% of the wetland area	points = 0	<b>Score: 5</b>

**D 1.4** What are the characteristics of seasonal ponding or inundation in the wetland area?

Area seasonally ponded is >50% total area of wetland	points = 3	
Area seasonally ponded is 25%-50% total area of wetland	points = 1	
Area seasonally ponded is <25% total area of wetland	points = 0	<b>Score: 3</b>

**Total for D 1:** **13**

**Rating of Site Potential**

12-16 = H  6-11 = M  0-5 = L

*Record the rating on the first page*

**D 2.0 Does the landscape have the potential to support the water quality function of the site?**

**D 2.1** Does the wetland unit receive stormwater discharges?

Yes	points = 1	
No	points = 0	<b>Score: 1</b>

**D 2.2** Is >10% of the area within 150ft of the wetland in land uses that generate pollutants?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

**D 2.3** Are there septic systems within 250ft of the wetland?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

**D 2.4** Are the other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

Wetland name or number: Wetland J

D 2.5 What are the other sources of pollutants coming into the wetland?	
<b>Total for D 2:</b>	<b>1</b>

Rating of Landscape Potential

3-4 = H  1-2 = M  0 = L

Record the rating on the first page

<b>D 3.0 Is the water quality improvement provided by the site valuable to society?</b>		
<b>D 3.1 Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, or lake that is on the 303(d) list?</b>		
Yes	points = 1	
No	points = 0	
<b>Score: 0</b>		
<b>D 3.2 Is the wetland in a basin or sub-basin where water quality is an issue in some aquatic resource [303(d) list, eutrophic lakes, problems with nuisance and toxic algae]?</b>		
Yes	points = 1	
No	points = 0	
<b>Score: 1</b>		
<b>D 3.3 Has the site been identified in a watershed or local plan as important for maintaining water quality?</b>		
Yes	points = 2	
No	points = 0	
<b>Score: 0</b>		
<b>Total for D 3:</b>		<b>1</b>

Rating of Value

2-4 = H  1 = M  0 = L

Record the rating on the first page

<b><u>DEPRESSIONAL WETLANDS</u></b>	
<b>Hydrologic Functions</b> - Indicators that the site functions to reduce flooding and stream degradation	
<b>D 4.0 Does the site have the potential to reduce flooding and erosion?</b>	
<b>D 4.1 What are the characteristics of surface water outflows from the wetland?</b>	
Wetland has no surface water outlet	points = 8
Wetland has an intermittently flowing outlet	points = 4
Wetland has a highly constricted permanently flowing outlet	points = 4
Wetland has a permanently flowing unconfined surface outlet	points = 0
<b>Score: 8</b>	

Wetland name or number: Wetland J

<b>D 4.2</b> <u>What is the depth of storage during the wet periods?</u>		
Seasonal ponding: 3ft or more above the lowest point in the wetland or the surface of permanent ponding	points = 8	
Seasonal ponding: 2ft-<3ft above the lowest point in the wetland or the surface of permanent ponding	points = 6	
The wetland is a headwater wetland	points = 4	
Seasonal ponding: 1ft - <2ft	points = 4	
Seasonal ponding: 0.5ft - <1ft	points = 2	
Seasonal ponding: <0.5ft (6in) or only saturated soils	points = 0	<b>Score: 4</b>
<b>Total for D 4:</b>		<b>12</b>

**Rating of Site Potential**

12-16 = H  6-11 = M  0-5 = L

*Record the rating on the first page*

<b>D 5.0</b> <u>Does the landscape have the potential to support hydrologic functions of the site?</u>		
<b>D 5.1</b> <u>Does the wetland unit receive stormwater discharges?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 1</b>
<b>D 5.2</b> <u>Is &gt;10% of the area within 150ft of the wetland in a land use that generates runoff?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 0</b>
<b>D 5.3</b> <u>Is more than 25% of the contributing basin of the wetland covered with intensive human land uses?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 0</b>
<b>Total for D 5:</b>		<b>1</b>

**Rating of Landscape Potential**

3 = H  1-2 = M  0 = L

*Record the rating on the first page*

<b>D 6.0</b> <u>Are the hydrologic functions provided by the site valuable to society?</u>		
<b>D 6.1</b> <u>Is the wetland in a landscape that has flooding problems?</u>		
Flooding occurs in a sub-basin that is immediately down-gradient of the wetland	points = 2	
Surface flooding problems are in a sub-basin farther down-gradient	points = 1	
The existing or potential outflow from the wetland is so constrained that water cannot reach areas that flood	points = 0	
There are no problems with flooding downstream of the wetland	points = 0	<b>Score: 0</b>
<b>D 6.2</b> <u>Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</u>		
Yes	points = 2	
No	points = 0	<b>Score: 0</b>
<b>Total for D 6:</b>		<b>0</b>

**Rating of Value**

2-4 = H  1 = M  0 = L

*Record the rating on the first page*

Wetland name or number: Wetland J

## HABITAT FUNCTIONS

**These questions apply to wetlands of all HGM classes - Indicators that the site functions to provide important habitat**

### **H 1.0 Does the wetland have the potential to provide habitat for many species?**

#### **H 1.1 What is the structure of the plant community?**

- Aquatic Bed
- Emergent plants 0-12in (0-30cm) high are the highest layer and have >30% cover
- Emergent plants >12-40in (>30-100cm) high are the highest layer with >30% cover
- cover
- Emergent plants >40in (>100cm) high are the highest layer with >30% cover
- Scrub-shrub (areas where shrubs have >30% cover)
- Forested (areas where trees have >30% cover)
- 4 structures or more points = 3
- 3 structures points = 2
- 2 structures points = 1
- 1 structure points = 0
- No structures points = 0 **Score: 1**

#### **H 1.2 Is one of the vegetation types Aquatic Bed?**

- Yes points = 1
- No points = 0 **Score: 0**

#### **H 1.3 What is the surface water potential?**

- The wetland has areas of open water (without emergent or shrub plants) that meet the scoring threshold during March to early June OR in August to the end of September
- The wetland has an intermittent or permanent, and unvegetated stream within its boundaries, or along one side
- The wetland is along the side of a stream or river with an unvegetated area that is at least 16ft (5m) wide
- The wetland is a Lake Fringe wetland
- The wetland meets at least one of these criteria points = 3
- No surface water that meets criteria points = 0 **Score: 0**

#### **H 1.4 What is the richness of plant species in the wetland?**

- >9 species points = 2
- 4-9 species points = 1
- <4 species points = 0 **Score: 1**

Wetland name or number: Wetland J

<b>H 1.5</b> <u>What is the interspersation of habitats within the wetland?</u>	
High	points = 3
Moderate	points = 2
Low	points = 1
None	points = 0
<b>Score: 2</b>	
<b>H 1.6</b> <u>What are the special habitat features within the wetland?</u>	
<input type="checkbox"/> Loose rocks larger than 4in OR large, downed, woody debris (>4in in diameter) within the area of surface ponding or in a stream.	
<input checked="" type="checkbox"/> Cattails or bulrushes are present within the wetland.	
<input type="checkbox"/> Standing snags (diameter at the bottom >4in) in the wetland or within 30m (100ft) of the edge.	
<input type="checkbox"/> Emergent or shrub vegetation in areas that are permanently inundated/ponded	
<input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) or signs of recent beaver activity.	
<input type="checkbox"/> Invasive species cover less than 20% in each stratum of vegetation (canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)	
6 habitat features selected	points = 6
5 habitat features selected	points = 5
4 habitat features selected	points = 4
3 habitat features selected	points = 3
2 habitat features selected	points = 2
1 habitat feature selected	points = 1
No habitat features selected	points = 0
<b>Score: 1</b>	
<b>Total for H 1:</b>	
<b>5</b>	

**Rating of Site Potential**

[ ] 15-18 = H [ ] 7-14 = M [X] 0-6 = L

*Record the rating on the first page*

**H 2.0 Does the landscape have the potential to support the habitat functions of the site?**

<b>H 2.1</b> <u>What is the percentage of accessible habitat within 1km of the wetland?</u>	
>33% of 1km Polygon is accessible habitat	points = 3
20-30% of 1km Polygon is accessible habitat	points = 2
10-19% of 1km Polygon is accessible habitat	points = 1
<10% of 1km Polygon is accessible habitat	points = 0
<b>Score: 0</b>	
<b>H 2.2</b> <u>What is the total habitat in a 1km polygon around the wetland?</u>	
Total habitat is >50% of the 1km polygon	points = 3
Total habitat is 10-50% of the 1km polygon and in 1-3 patches	points = 2
Total habitat is 10-50% of the 1km polygon and in >3 patches	points = 1
Total habitat is <10% of the 1km polygon	points = 0
<b>Score: 2</b>	

Wetland name or number: Wetland J

<b>H 2.3</b> <u>What is the land use intensity in a 1km polygon within the wetland?</u>		
>50% of the polygon is high intensity land use	points = -2	
<50% of the polygon is high intensity land use	points = 0	<b>Score: 0</b>
<b>H 2.4</b> <u>Is the wetland is in an area where annual rainfall is less than 12in, and its water regime is not influenced by irrigation practices, dams, or water control structures?</u>		
Yes	points = 3	
No	points = 0	<b>Score: 0</b>
<b>Total for H 2:</b>		<b>2</b>

Rating of Landscape Potential

[ ] 4-9 = H [X] 1-3 = M [ ] 0 = L

Record the rating on the first page

**H 3.0** Is the habitat provided by the site valuable to society?

<b>H 3.1</b> <u>Does the site provide habitat for species valued in laws, regulations, or policies?</u>		
<input type="checkbox"/> Aspen Stands		
<input type="checkbox"/> Biodiversity Areas and Corridors		
<input type="checkbox"/> Eastside Steppe		
<input type="checkbox"/> Inland Dunes		
<input type="checkbox"/> Juniper Savannah		
<input type="checkbox"/> Old-growth/Mature Forests		
<input type="checkbox"/> Oregon White Oak		
<input type="checkbox"/> Riparian		
<input type="checkbox"/> Shrubsteppe		
<input type="checkbox"/> Fresh Deepwater		
<input type="checkbox"/> Instream		
<input type="checkbox"/> Caves		
<input type="checkbox"/> Cliffs		
<input type="checkbox"/> Snags and Logs		
<input type="checkbox"/> Talus		
<b>The following criteria automatically score 2 points:</b>		
<input type="checkbox"/> The wetland provides habitat for Threatened or Endangered species		
<input type="checkbox"/> The wetland is mapped as a location for an individual WDFW priority species		
<input type="checkbox"/> The wetland is a Wetland of High Conservation Value (WHCV)		
<input type="checkbox"/> The wetland has been categorized as an important habitat site in a local plan		
The wetland has 3 or more WDFW priority habitats within 100m, or meets the criteria for societal value	points = 2	
The site has 1 or 2 WDFW priority habitats within 100m	points = 1	
The site does not meet any of the criteria for societal value	points = 0	<b>Score: 0</b>
<b>Total for H 3:</b>		<b>0</b>

Rating of Value

[ ] 2 = H [ ] 1 = M [X] 0 = L

Record the rating on the first page

## CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

### SC 1.0 Vernal Pools

**SC 1.1** Is the wetland less than 4000sqft and it meets at least two of the follow criteria?

- It's only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input.
- Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals (if you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool.)
- The soil in the wetland is shallow [ $<1\text{ft}$  (30cm) deep] and is underlain by an impermeable layer such as basalt or clay
- Surface water is present for less than 120 days during the wet season.

Yes - Go to SC 1.2

No - Not a Special Characteristic Vernal Pool

**Result: Not a Special Characteristic Vernal Pool**

**SC 1.2** Is the vernal pool relatively undisturbed in February and March?

Yes - Go to SC 1.3

No - Not a Special Characteristic Vernal Pool

**Result:**

**SC 1.3** Is the vernal pool in an area where there are at least 3 separate aquatic resources (other wetlands, rivers, lakes, etc.) within 0.5 mi?

Yes - Category II Vernal Pool

No - Category III Vernal Pool

**Result:**

### SC 2.0 Alkali Wetlands

**SC 2.1** Does the wetland meet any of the following criteria for Alkali Wetlands?

- The wetland has a conductivity  $>3.0$  mS/cm
- The wetland has a conductivity between 2.0 and 3.0 mS, and more than 50% of the plant cover is the wetland can be classified as "alkali" species
- If the wetland is dry at the time of your field visit, the central part of the area is covered with a layer of salt.

Yes - Category I Alkali Wetland

No - Go to SC 2.2

**Result: Go to SC 2.2**

**SC 2.2** Does the wetland meet two of the following criteria for Alkali Wetlands?

- Salt encrustations around more than 75% of the edge of the wetland
- more than 75% of the plant cover consists of alkali (salt tolerant) species
- A pH above 9.0

Yes - Category I Alkali Wetland

No - Not a Special Characteristic Alkali Wetland

**Result: Not a Special  
Characteristic Alkali  
Wetland**

Wetland name or number: Wetland J

### SC 3.0 Wetlands of High Conservation Value

<p><b>SC 3.1</b> <u>Is the wetland listed by Washington Natural Heritage Program (WNHP) as a Wetland of High Conservation Value (WHVC)?</u></p> <p>Yes - Category I Wetland of High Conservation Value No - Go to SC 3.2</p>	<p><b>Result: Go to SC 3.2</b></p>
<p><b>SC 3.2</b> <u>Does the wetland have a rare plant species, rare plant community, or high-quality plant community that may qualify the site as a WHCV?</u></p> <p>Yes - Category I Wetland of High Conservation Value No - Not a Special Characteristic Wetland of High Conservation Value</p>	<p><b>Result: Not a Special Characteristic Wetland of High Conservation Value</b></p>

### SC 4.0 Bogs and Calcareous Fens

<p><b>SC 4.1</b> <u>Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16in or more of the first 32in of the soil profile?</u></p> <p>Yes - Go to SC 4.3 No - Go to SC 4.2</p>	<p><b>Result: Go to SC 4.2</b></p>
<p><b>SC 4.2</b> <u>Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16in deep over debrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pong?</u></p> <p>Yes - Go to SC 4.3 No - Not a Special Characteristic Bog</p>	<p><b>Result: Not a Special Characteristic Bog</b></p>
<p><b>SC 4.3</b> <u>Does an area with peats or mucks have more than 70% cover of mosses at gorund level, AND at least 30% cover of plant species listed?</u></p> <p>Yes - Category I Bog No - Go to SC 4.4</p>	<p><b>Result:</b></p>
<p><b>SC 4.4</b> <u>Is an area with peats or mucks forested (&gt;30% cover) with subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine AND any of the species (or combination of species) listed provide more than 30% of the cover under the canopy?</u></p> <p>Yes - Category I Bog No - Go to SC 4.5</p>	<p><b>Result:</b></p>
<p><b>SC 4.5</b> <u>Do the species listed comprise at least 20% of the total plant cover within an area of peats and mucks?</u></p> <p>Yes - Category I Calcareous Fen No - Go to SC 4.6</p>	<p><b>Result:</b></p>

**Wetland name or number:** Wetland J

**SC 4.6** Do the species listed comprise at least 10% of the total plant cover in an area of peats and mucks, AND one of the two following conditions is met?

Marl deposits [calcium carbonate (CaCO<sub>3</sub>) precipitate] occur on the soil surface or plant stems

The pH of free water is  $\geq 6.8$  AND electrical conductivity is  $\geq 200$  uS/cm at multiple locations within the wetland

Yes - Category I Calcareous Fen

No - Not a Special Characteristic Calcareous Fen

**Result:**

### SC 5.0 Forested Wetlands

**SC 5.1** Does the wetland have an area of forest rooted within its boundary that meets at least one of the following criteria?

The wetland is within the 100 year floodplain of a river or stream

Aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species

There is at least 0.25ac of trees (even in wetlands smaller than 2.5ac) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW

Yes - Go to SC 5.2

No - Not a Special Characteristic Forested Wetland

**Result: Not a Special  
Characteristic Forested  
Wetland**

**SC 5.2** Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees?

Yes - Category I Forested Wetland

No - Go to SC 5.3

**Result:**

**SC 5.3** Does the wetland have areas where aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species?

Yes - Category I Forested Wetland

No - Go to SC 5.4

**Result:**

**SC 5.4** Does the wetland have at least 0.25ac with a forest canopy where more than 50% of the tree species (by cover) are fast growing species?

Yes - Category II Forested Wetland

No - Go to SC 5.5

**Result:**

**Wetland name or number:** Wetland J

**SC 5.5** Is the forested component of the wetland within the 100 year floodplain of a river or stream?

Yes - Category II Forested Wetland

No - Not a Special Characteristic Forested Wetland

**Result:**

**Category of wetland based on Special Characteristics**

If you answered No for all types, enter "Not Applicable" on Summary Form

**Special Characteristics**

**Category: Not**

**Applicable**

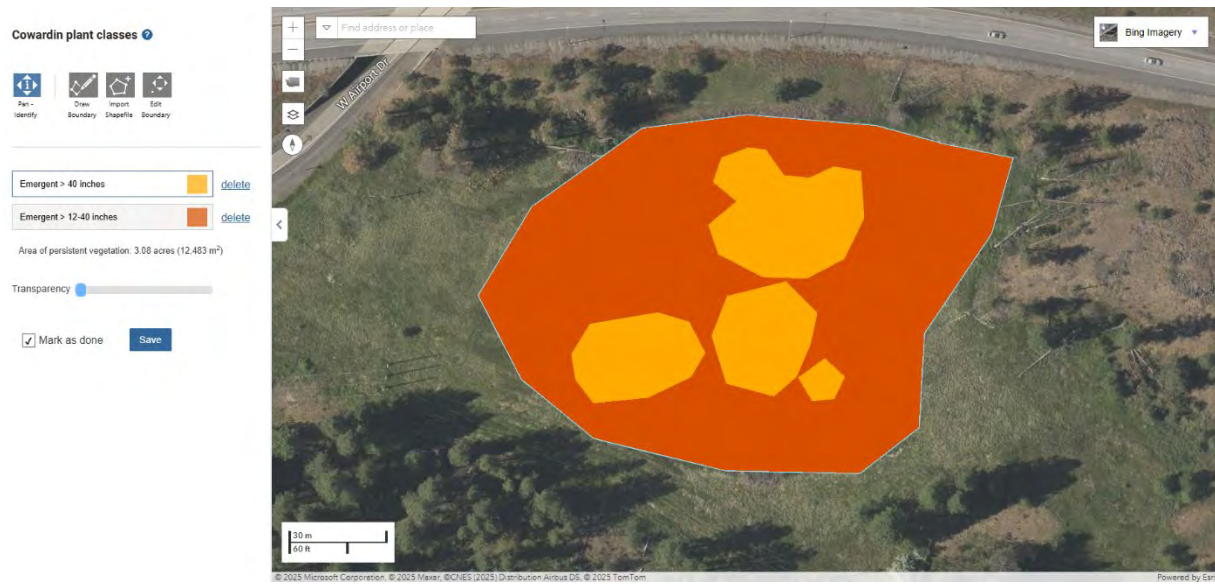


Figure 1. Cowardin Class.

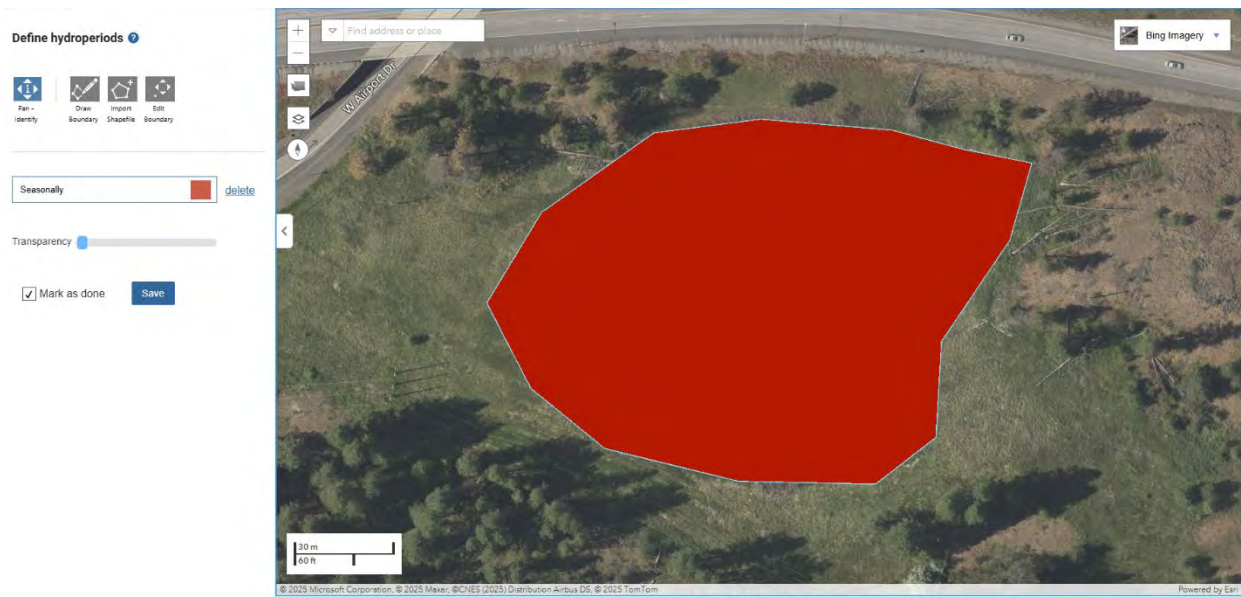


Figure 2. Hydroperiods.

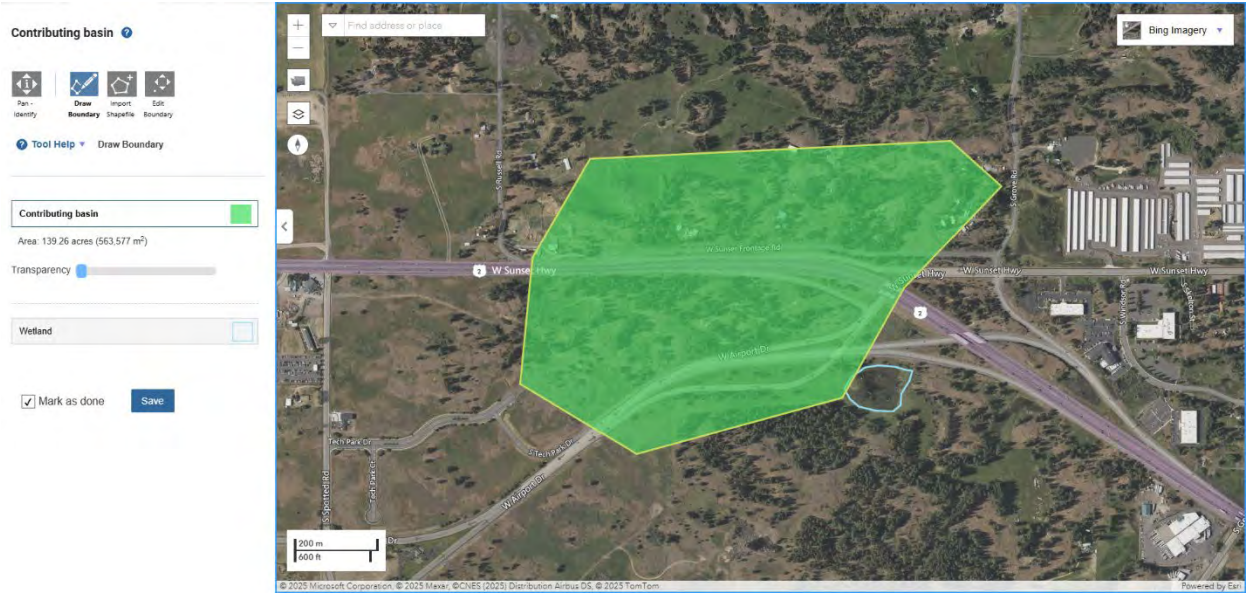


Figure 3. Contributing basin.

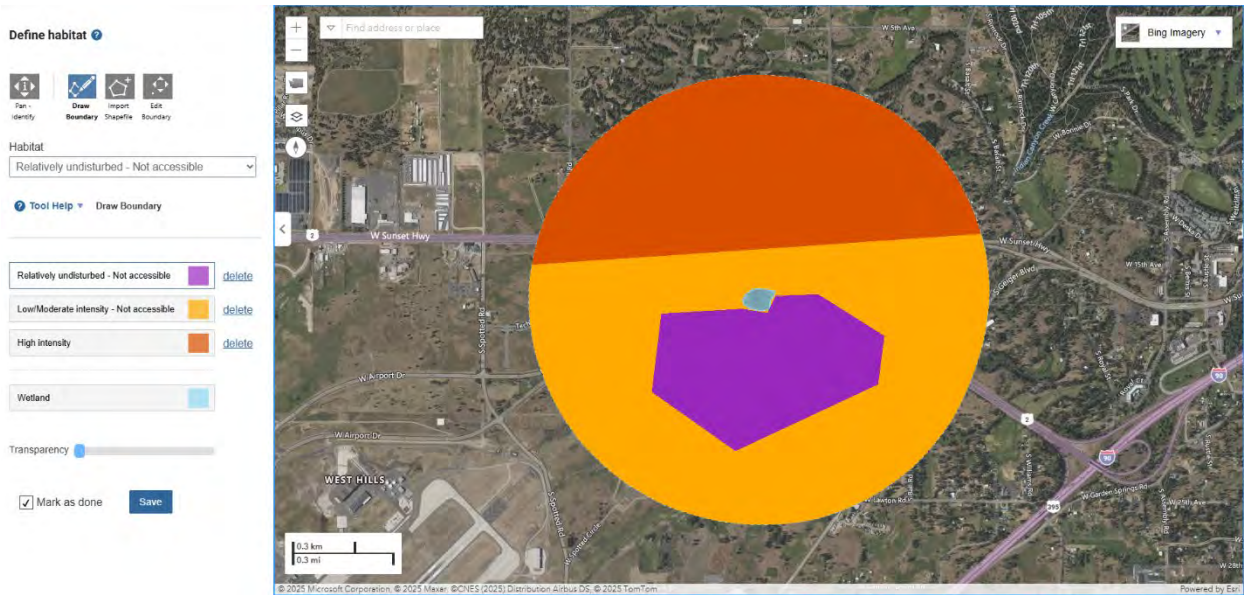


Figure 4. 1 km habitat polygon.

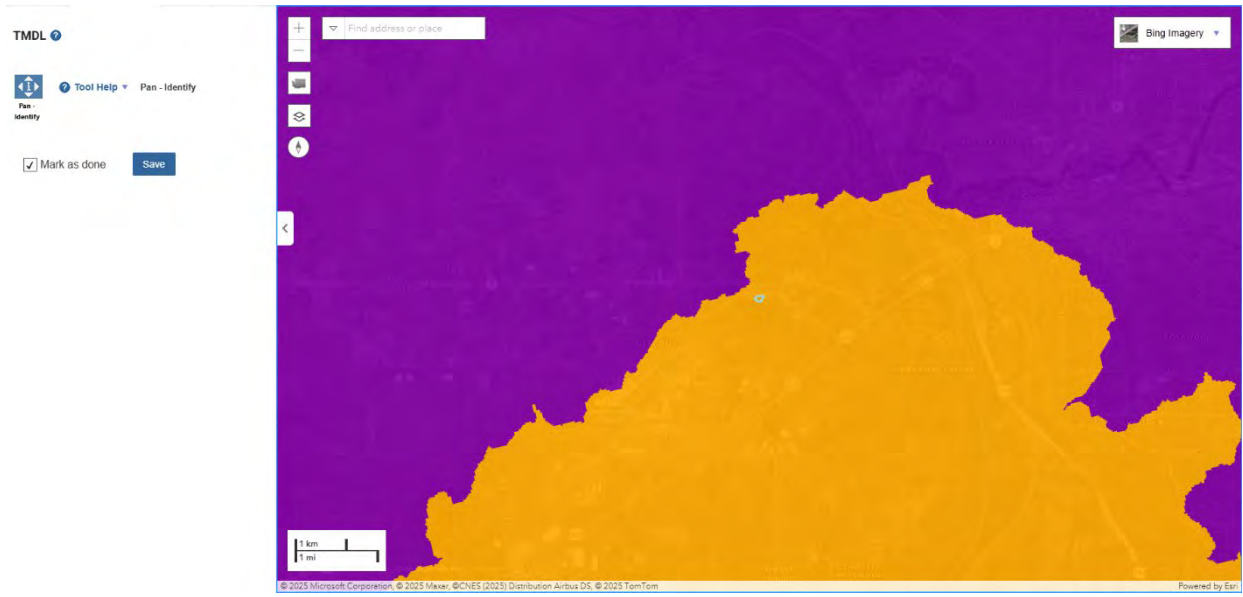


Figure 5. TDML.

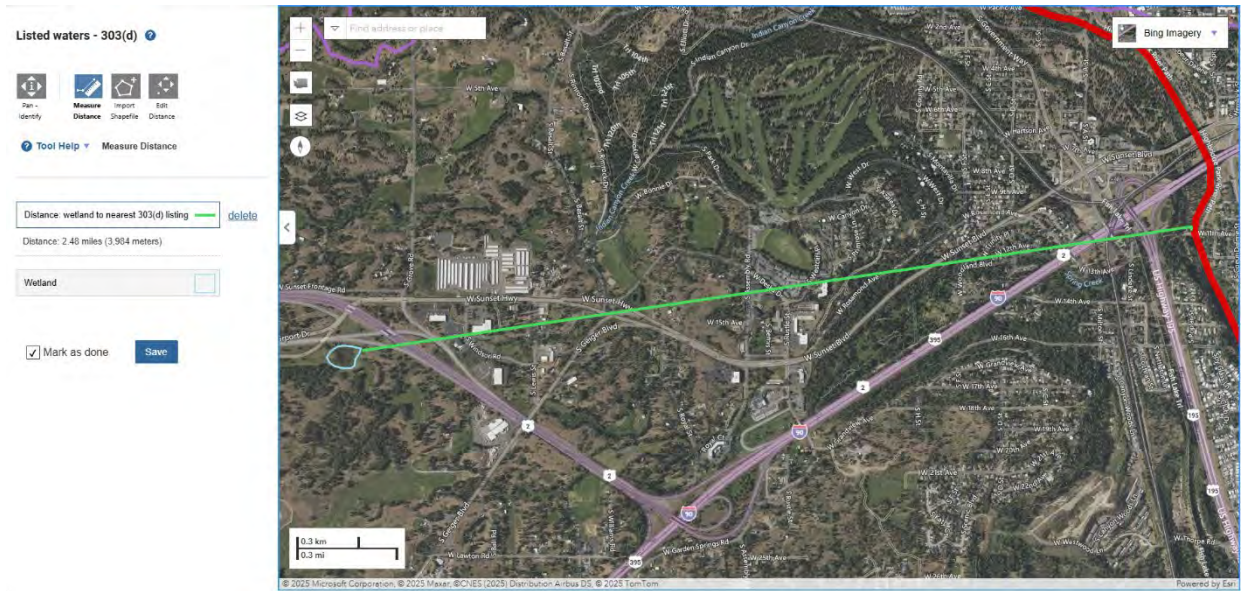


Figure 6. 303 (d).

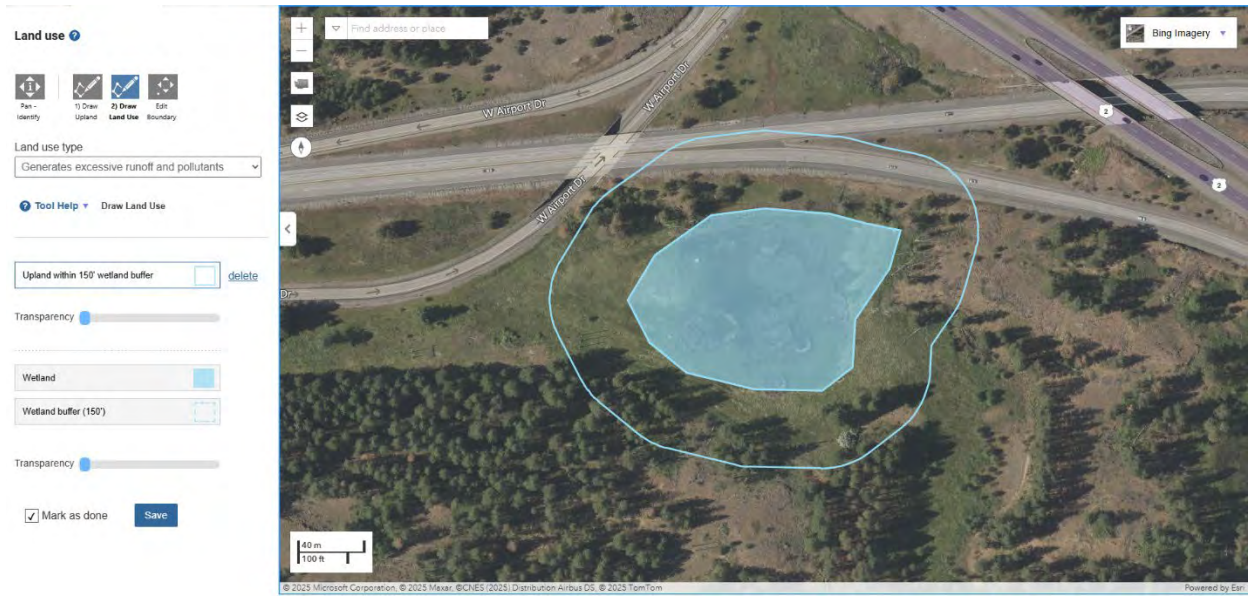


Figure 7. 150 foot land use buffer.

Wetland name or number: Wetland K

# RATING SUMMARY - Eastern Washington

Name of wetland (or ID#): Wetland K Date of site visit: 04/16/2025

Rated By: Steven Hutchinson Trained by Ecology? Yes  No  Date of Training: 05/30/2025

HGM Class used for rating: Depressional

Wetland has multiple HGM classes? Yes  No

NOTE: Form is not complete without the figures requested (*figures can be combined*).

Source of base aerial photo/map: Bing Maps

OVERALL WETLAND CATEGORY: [Category III] (based on functions  or special characteristics )

## 1. Category of wetland based on FUNCTIONS

Category I - Total score = 22 - 27

Category II - Total score = 19 - 21

Category III - Total score = 16 - 18

Category IV - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Site Potential	H	H	M	
Landscape Potential	L	L	H	
Value	L	L	L	Total
Score Based on Ratings	5	5	6	16

Score for each function based on three ratings (order of ratings is not important)

9 = H,H,H

8 = H,H,M

7 = H,H,L

7 = H,M,M

6 = H,M,L

6 = M,M,M

5 = H,L,L

5 = M,M,L

4 = M,L,L

3 = L,L,L

## 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Vernal Pool	
Alkali	
Wetland of High Conservation Value	
Bog	
Calcareous Fen	
Forested	
None of the above	Not Applicable

**Wetland name or number:** Wetland K

**Maps and figures required to answer questions correctly for Eastern Washington**

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	D 1.3, H 1.1, H 1.5	1
Hydroperiods (including area of open water for H 1.3)	D 1.4, H 1.2, H 1.3	2
Location of outlet ( <i>can be added to map of hydroperiods</i> )	D 1.1, D 4.1	N/A
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	D 2.2, D 5.2	7
Map of the contributing basin	D 5.3	3
1km Polygon: Area that extends 1km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	6
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	5

Wetland name or number: Wetland K

## DEPRESSIONAL WETLANDS

### Water Quality Functions - Indicators that the site functions to improve water quality

#### D 1.0 Does the site have the potential to improve water quality?

##### D 1.1 What are the characteristics of surface water outflows from the wetland?

Wetland has no surface water outlet	points = 5	
Wetland has an intermittently flowing outlet	points = 3	
Wetland has a highly constricted permanently flowing outlet	points = 3	
Wetland has a permanently flowing, unconstricted surface outlet	points = 1	<b>Score: 5</b>

##### D 1.2 Is the soil 2 in. below the surface a true clay or organic soil?

Mapped as true clay or organic	points = 3	
Soil texture identified as clay or organic in field	points = 3	
Soil texture identified as clay or organic by laboratory test	points = 3	
None of the above	points = 0	<b>Score: 0</b>

##### D 1.3 What are the characteristics and distribution of persistent plants?

Wetland has persistent, ungrazed, vegetation for >66% of the wetland area	points = 5	
Wetland has persistent, ungrazed, vegetation from 33%-66% of the wetland area	points = 3	
Wetland has persistent, ungrazed vegetation from 10%-33% of the wetland area	points = 1	
Wetland has persistent, ungrazed vegetation <10% of the wetland area	points = 0	<b>Score: 5</b>

##### D 1.4 What are the characteristics of seasonal ponding or inundation in the wetland area?

Area seasonally ponded is >50% total area of wetland	points = 3	
Area seasonally ponded is 25%-50% total area of wetland	points = 1	
Area seasonally ponded is <25% total area of wetland	points = 0	<b>Score: 3</b>

**Total for D 1:** **13**

**Rating of Site Potential**

12-16 = H  6-11 = M  0-5 = L

*Record the rating on the first page*

#### D 2.0 Does the landscape have the potential to support the water quality function of the site?

##### D 2.1 Does the wetland unit receive stormwater discharges?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

##### D 2.2 Is >10% of the area within 150ft of the wetland in land uses that generate pollutants?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

##### D 2.3 Are there septic systems within 250ft of the wetland?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

##### D 2.4 Are the other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?

Yes	points = 1	
No	points = 0	<b>Score: 0</b>

Wetland name or number: Wetland K

D 2.5 What are the other sources of pollutants coming into the wetland?	
<b>Total for D 2:</b>	<b>0</b>

Rating of Landscape Potential

3-4 = H  1-2 = M  0 = L

Record the rating on the first page

<b>D 3.0 Is the water quality improvement provided by the site valuable to society?</b>	
<b>D 3.1 Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, or lake that is on the 303(d) list?</b>	
Yes	points = 1
No	points = 0
<b>Score: 0</b>	
<b>D 3.2 Is the wetland in a basin or sub-basin where water quality is an issue in some aquatic resource [303(d) list, eutrophic lakes, problems with nuisance and toxic algae]?</b>	
Yes	points = 1
No	points = 0
<b>Score: 0</b>	
<b>D 3.3 Has the site been identified in a watershed or local plan as important for maintaining water quality?</b>	
Yes	points = 2
No	points = 0
<b>Score: 0</b>	
<b>Total for D 3:</b>	
<b>0</b>	

Rating of Value

2-4 = H  1 = M  0 = L

Record the rating on the first page

<b><u>DEPRESSIONAL WETLANDS</u></b>	
<b>Hydrologic Functions</b> - Indicators that the site functions to reduce flooding and stream degradation	
<b>D 4.0 Does the site have the potential to reduce flooding and erosion?</b>	
<b>D 4.1 What are the characteristics of surface water outflows from the wetland?</b>	
Wetland has no surface water outlet	points = 8
Wetland has an intermittently flowing outlet	points = 4
Wetland has a highly constricted permanently flowing outlet	points = 4
Wetland has a permanently flowing unconfined surface outlet	points = 0
<b>Score: 8</b>	

**Wetland name or number:** Wetland K

<b>D 4.2</b> <u>What is the depth of storage during the wet periods?</u>		
Seasonal ponding: 3ft or more above the lowest point in the wetland or the surface of permanent ponding	points = 8	
Seasonal ponding: 2ft-<3ft above the lowest point in the wetland or the surface of permanent ponding	points = 6	
The wetland is a headwater wetland	points = 4	
Seasonal ponding: 1ft - <2ft	points = 4	
Seasonal ponding: 0.5ft - <1ft	points = 2	
Seasonal ponding: <0.5ft (6in) or only saturated soils	points = 0	<b>Score: 6</b>
<b>Total for D 4:</b>		<b>14</b>

**Rating of Site Potential**

12-16 = H  6-11 = M  0-5 = L

*Record the rating on the first page*

<b>D 5.0</b> <u>Does the landscape have the potential to support hydrologic functions of the site?</u>		
<b>D 5.1</b> <u>Does the wetland unit receive stormwater discharges?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 0</b>
<b>D 5.2</b> <u>Is &gt;10% of the area within 150ft of the wetland in a land use that generates runoff?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 0</b>
<b>D 5.3</b> <u>Is more than 25% of the contributing basin of the wetland covered with intensive human land uses?</u>		
Yes	points = 1	
No	points = 0	<b>Score: 0</b>
<b>Total for D 5:</b>		<b>0</b>

**Rating of Landscape Potential**

3 = H  1-2 = M  0 = L

*Record the rating on the first page*

<b>D 6.0</b> <u>Are the hydrologic functions provided by the site valuable to society?</u>		
<b>D 6.1</b> <u>Is the wetland in a landscape that has flooding problems?</u>		
Flooding occurs in a sub-basin that is immediately down-gradient of the wetland	points = 2	
Surface flooding problems are in a sub-basin farther down-gradient	points = 1	
The existing or potential outflow from the wetland is so constrained that water cannot reach areas that flood	points = 0	
There are no problems with flooding downstream of the wetland	points = 0	<b>Score: 0</b>
<b>D 6.2</b> <u>Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</u>		
Yes	points = 2	
No	points = 0	<b>Score: 0</b>
<b>Total for D 6:</b>		<b>0</b>

**Rating of Value**

2-4 = H  1 = M  0 = L

*Record the rating on the first page*

Wetland name or number: Wetland K

## HABITAT FUNCTIONS

These questions apply to wetlands of all HGM classes - Indicators that the site functions to provide important habitat

### H 1.0 Does the wetland have the potential to provide habitat for many species?

#### H 1.1 What is the structure of the plant community?

Aquatic Bed

Emergent plants 0-12in (0-30cm) high are the highest layer and have >30% cover

Emergent plants >12-40in (>30-100cm) high are the highest layer with >30% cover

Emergent plants >40in (>100cm) high are the highest layer with >30% cover

Scrub-shrub (areas where shrubs have >30% cover)

Forested (areas where trees have >30% cover)

4 structures or more

points = 3

3 structures

points = 2

2 structures

points = 1

1 structure

points = 0

No structures

points = 0

**Score: 1**

#### H 1.2 Is one of the vegetation types Aquatic Bed?

Yes

points = 1

No

points = 0

**Score: 0**

#### H 1.3 What is the surface water potential?

The wetland has areas of open water (without emergent or shrub plants) that meet the scoring threshold during March to early June OR in August to the end of September

The wetland has an intermittent or permanent, and unvegetated stream within its boundaries, or along one side

The wetland is along the side of a stream or river with an unvegetated area that is at least 16ft (5m) wide

The wetland is a Lake Fringe wetland

The wetland meets at least one of these criteria

points = 3

No surface water that meets criteria

points = 0

**Score: 3**

#### H 1.4 What is the richness of plant species in the wetland?

>9 species

points = 2

4-9 species

points = 1

<4 species

points = 0

**Score: 2**

**Wetland name or number:** Wetland K

<b>H 1.5</b> <u>What is the interspersions of habitats within the wetland?</u>	
High	points = 3
Moderate	points = 2
Low	points = 1
None	points = 0
<b>Score: 1</b>	
<b>H 1.6</b> <u>What are the special habitat features within the wetland?</u>	
<input type="checkbox"/> Loose rocks larger than 4in OR large, downed, woody debris (>4in in diameter) within the area of surface ponding or in a stream.	
<input type="checkbox"/> Cattails or bulrushes are present within the wetland.	
<input type="checkbox"/> Standing snags (diameter at the bottom >4in) in the wetland or within 30m (100ft) of the edge.	
<input type="checkbox"/> Emergent or shrub vegetation in areas that are permanently inundated/ponded	
<input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (>45 degree slope) or signs of recent beaver activity.	
<input type="checkbox"/> Invasive species cover less than 20% in each stratum of vegetation (canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)	
6 habitat features selected	points = 6
5 habitat features selected	points = 5
4 habitat features selected	points = 4
3 habitat features selected	points = 3
2 habitat features selected	points = 2
1 habitat feature selected	points = 1
No habitat features selected	points = 0
<b>Score: 0</b>	
<b>Total for H 1:</b>	
<b>7</b>	

**Rating of Site Potential**

[ ] 15-18 = H [X] 7-14 = M [ ] 0-6 = L

*Record the rating on the first page*

**H 2.0 Does the landscape have the potential to support the habitat functions of the site?**

<b>H 2.1</b> <u>What is the percentage of accessible habitat within 1km of the wetland?</u>	
>33% of 1km Polygon is accessible habitat	points = 3
20-30% of 1km Polygon is accessible habitat	points = 2
10-19% of 1km Polygon is accessible habitat	points = 1
<10% of 1km Polygon is accessible habitat	points = 0
<b>Score: 3</b>	
<b>H 2.2</b> <u>What is the total habitat in a 1km polygon around the wetland?</u>	
Total habitat is >50% of the 1km polygon	points = 3
Total habitat is 10-50% of the 1km polygon and in 1-3 patches	points = 2
Total habitat is 10-50% of the 1km polygon and in >3 patches	points = 1
Total habitat is <10% of the 1km polygon	points = 0
<b>Score: 3</b>	

Wetland name or number: Wetland K

<b>H 2.3</b> <u>What is the land use intensity in a 1km polygon within the wetland?</u>		
>50% of the polygon is high intensity land use	points = -2	
<50% of the polygon is high intensity land use	points = 0	<b>Score: 0</b>
<b>H 2.4</b> <u>Is the wetland is in an area where annual rainfall is less than 12in, and its water regime is not influenced by irrigation practices, dams, or water control structures?</u>		
Yes	points = 3	
No	points = 0	<b>Score: 0</b>
<b>Total for H 2:</b>		<b>6</b>

Rating of Landscape Potential

[X] 4-9 = H [ ] 1-3 = M [ ] 0 = L

Record the rating on the first page

**H 3.0** Is the habitat provided by the site valuable to society?

<b>H 3.1</b> <u>Does the site provide habitat for species valued in laws, regulations, or policies?</u>		
<input type="checkbox"/> Aspen Stands		
<input type="checkbox"/> Biodiversity Areas and Corridors		
<input type="checkbox"/> Eastside Steppe		
<input type="checkbox"/> Inland Dunes		
<input type="checkbox"/> Juniper Savannah		
<input type="checkbox"/> Old-growth/Mature Forests		
<input type="checkbox"/> Oregon White Oak		
<input type="checkbox"/> Riparian		
<input type="checkbox"/> Shrubsteppe		
<input type="checkbox"/> Fresh Deepwater		
<input type="checkbox"/> Instream		
<input type="checkbox"/> Caves		
<input type="checkbox"/> Cliffs		
<input type="checkbox"/> Snags and Logs		
<input type="checkbox"/> Talus		
<b>The following criteria automatically score 2 points:</b>		
<input type="checkbox"/> The wetland provides habitat for Threatened or Endangered species		
<input type="checkbox"/> The wetland is mapped as a location for an individual WDFW priority species		
<input type="checkbox"/> The wetland is a Wetland of High Conservation Value (WHCV)		
<input type="checkbox"/> The wetland has been categorized as an important habitat site in a local plan		
The wetland has 3 or more WDFW priority habitats within 100m, or meets the criteria for societal value	points = 2	
The site has 1 or 2 WDFW priority habitats within 100m	points = 1	
The site does not meet any of the criteria for societal value	points = 0	<b>Score: 0</b>
<b>Total for H 3:</b>		<b>0</b>

Rating of Value

[ ] 2 = H [ ] 1 = M [X] 0 = L

Record the rating on the first page

Wetland name or number: Wetland K

## CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

### SC 1.0 Vernal Pools

**SC 1.1** Is the wetland less than 4000sqft and it meets at least two of the follow criteria?

It's only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input.

Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals (if you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool.)

The soil in the wetland is shallow [ $<1\text{ft}$  (30cm) deep] and is underlain by an impermeable layer such as basalt or clay

Surface water is present for less than 120 days during the wet season.

Yes - Go to SC 1.2

No - Not a Special Characteristic Vernal Pool

**Result: Not a Special Characteristic Vernal Pool**

**SC 1.2** Is the vernal pool relatively undisturbed in February and March?

Yes - Go to SC 1.3

No - Not a Special Characteristic Vernal Pool

**Result:**

**SC 1.3** Is the vernal pool in an area where there are at least 3 separate aquatic resources (other wetlands, rivers, lakes, etc.) within 0.5 mi?

Yes - Category II Vernal Pool

No - Category III Vernal Pool

**Result:**

### SC 2.0 Alkali Wetlands

**SC 2.1** Does the wetland meet any of the following criteria for Alkali Wetlands?

The wetland has a conductivity  $>3.0$  mS/cm

The wetland has a conductivity between 2.0 and 3.0 mS, and more than 50% of the plant cover is the wetland can be classified as "alkali" species

If the wetland is dry at the time of your field visit, the central part of the area is covered with a layer of salt.

Yes - Category I Alkali Wetland

No - Go to SC 2.2

**Result: Go to SC 2.2**

**SC 2.2** Does the wetland meet two of the following criteria for Alkali Wetlands?

Salt encrustations around more than 75% of the edge of the wetland

more than 75% of the plant cover consists of alkali (salt tolerant) species

A pH above 9.0

Yes - Category I Alkali Wetland

No - Not a Special Characteristic Alkali Wetland

**Result:**

Wetland name or number: Wetland K

### SC 3.0 Wetlands of High Conservation Value

<p><b>SC 3.1</b> <u>Is the wetland listed by Washington Natural Heritage Program (WNHP) as a Wetland of High Conservation Value (WHVC)?</u></p> <p>Yes - Category I Wetland of High Conservation Value No - Go to SC 3.2</p>	<p><b>Result: Go to SC 3.2</b></p>
<p><b>SC 3.2</b> <u>Does the wetland have a rare plant species, rare plant community, or high-quality plant community that may qualify the site as a WHCV?</u></p> <p>Yes - Category I Wetland of High Conservation Value No - Not a Special Characteristic Wetland of High Conservation Value</p>	<p><b>Result: Not a Special Characteristic Wetland of High Conservation Value</b></p>

### SC 4.0 Bogs and Calcareous Fens

<p><b>SC 4.1</b> <u>Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16in or more of the first 32in of the soil profile?</u></p> <p>Yes - Go to SC 4.3 No - Go to SC 4.2</p>	<p><b>Result: Go to SC 4.2</b></p>
<p><b>SC 4.2</b> <u>Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16in deep over debrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pong?</u></p> <p>Yes - Go to SC 4.3 No - Not a Special Characteristic Bog</p>	<p><b>Result: Not a Special Characteristic Bog</b></p>
<p><b>SC 4.3</b> <u>Does an area with peats or mucks have more than 70% cover of mosses at gorund level, AND at least 30% cover of plant species listed?</u></p> <p>Yes - Category I Bog No - Go to SC 4.4</p>	<p><b>Result:</b></p>
<p><b>SC 4.4</b> <u>Is an area with peats or mucks forested (&gt;30% cover) with subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine AND any of the species (or combination of species) listed provide more than 30% of the cover under the canopy?</u></p> <p>Yes - Category I Bog No - Go to SC 4.5</p>	<p><b>Result:</b></p>
<p><b>SC 4.5</b> <u>Do the species listed comprise at least 20% of the total plant cover within an area of peats and mucks?</u></p> <p>Yes - Category I Calcareous Fen No - Go to SC 4.6</p>	<p><b>Result:</b></p>

**Wetland name or number:** Wetland K

**SC 4.6** Do the species listed comprise at least 10% of the total plant cover in an area of peats and mucks, AND one of the two following conditions is met?

Marl deposits [calcium carbonate (CaCO<sub>3</sub>) precipitate] occur on the soil surface or plant stems

The pH of free water is  $\geq 6.8$  AND electrical conductivity is  $\geq 200$  uS/cm at multiple locations within the wetland

Yes - Category I Calcareous Fen

No - Not a Special Characteristic Calcareous Fen

**Result:**

### SC 5.0 Forested Wetlands

**SC 5.1** Does the wetland have an area of forest rooted within its boundary that meets at least one of the following criteria?

The wetland is within the 100 year floodplain of a river or stream

Aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species

There is at least 0.25ac of trees (even in wetlands smaller than 2.5ac) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW

Yes - Go to SC 5.2

No - Not a Special Characteristic Forested Wetland

**Result: Not a Special  
Characteristic Forested  
Wetland**

**SC 5.2** Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees?

Yes - Category I Forested Wetland

No - Go to SC 5.3

**Result:**

**SC 5.3** Does the wetland have areas where aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species?

Yes - Category I Forested Wetland

No - Go to SC 5.4

**Result:**

**SC 5.4** Does the wetland have at least 0.25ac with a forest canopy where more than 50% of the tree species (by cover) are fast growing species?

Yes - Category II Forested Wetland

No - Go to SC 5.5

**Result:**

**Wetland name or number:** Wetland K

<b>SC 5.5</b> <u>Is the forested component of the wetland within the 100 year floodplain of a river or stream?</u>	
Yes - Category II Forested Wetland	
No - Not a Special Characteristic Forested Wetland	<b>Result:</b>
<b>Category of wetland based on Special Characteristics</b>	
If you answered No for all types, enter "Not Applicable" on Summary Form	<b>Special Characteristics Category: Not Applicable</b>



Figure 1. Cowardin Class.



Figure 2. Hydroperiods.

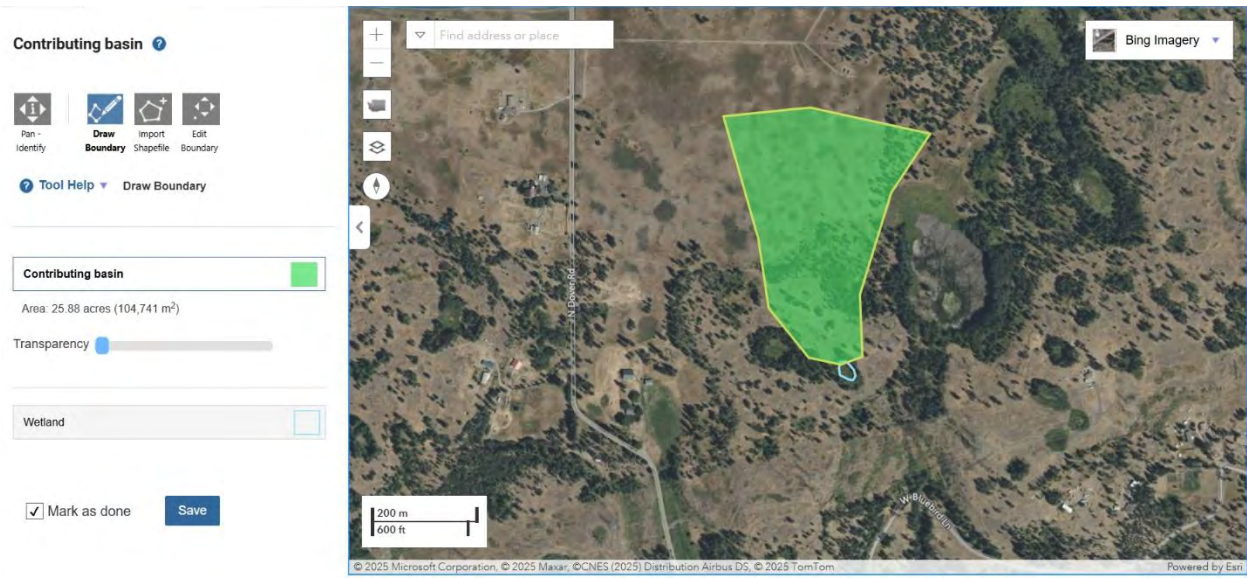


Figure 3. Contributing basin.



Figure 4. 1 km habitat polygon.



Figure 5. TDML.

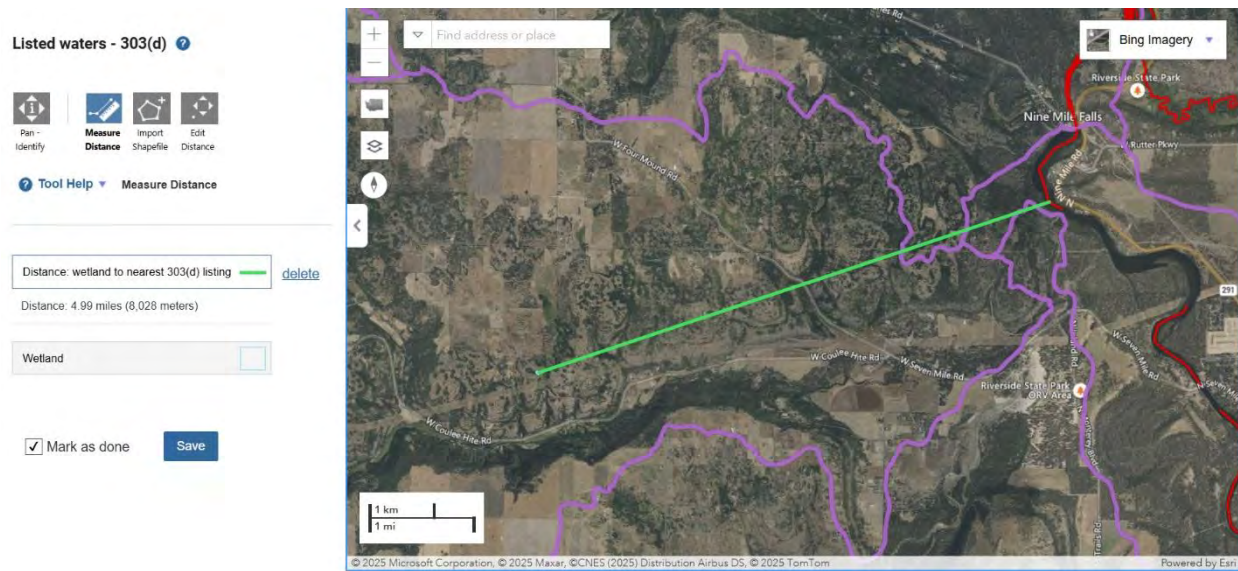


Figure 6. 303 (d).



Figure 7. 150 foot land use buffer.

## ATTACHMENT E. SUPPLEMENTAL DOCUMENTS







United States  
Department of  
Agriculture

**NRCS**

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for Spokane County, Washington



# Preface

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Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

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Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

## Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

## Custom Soil Resource Report

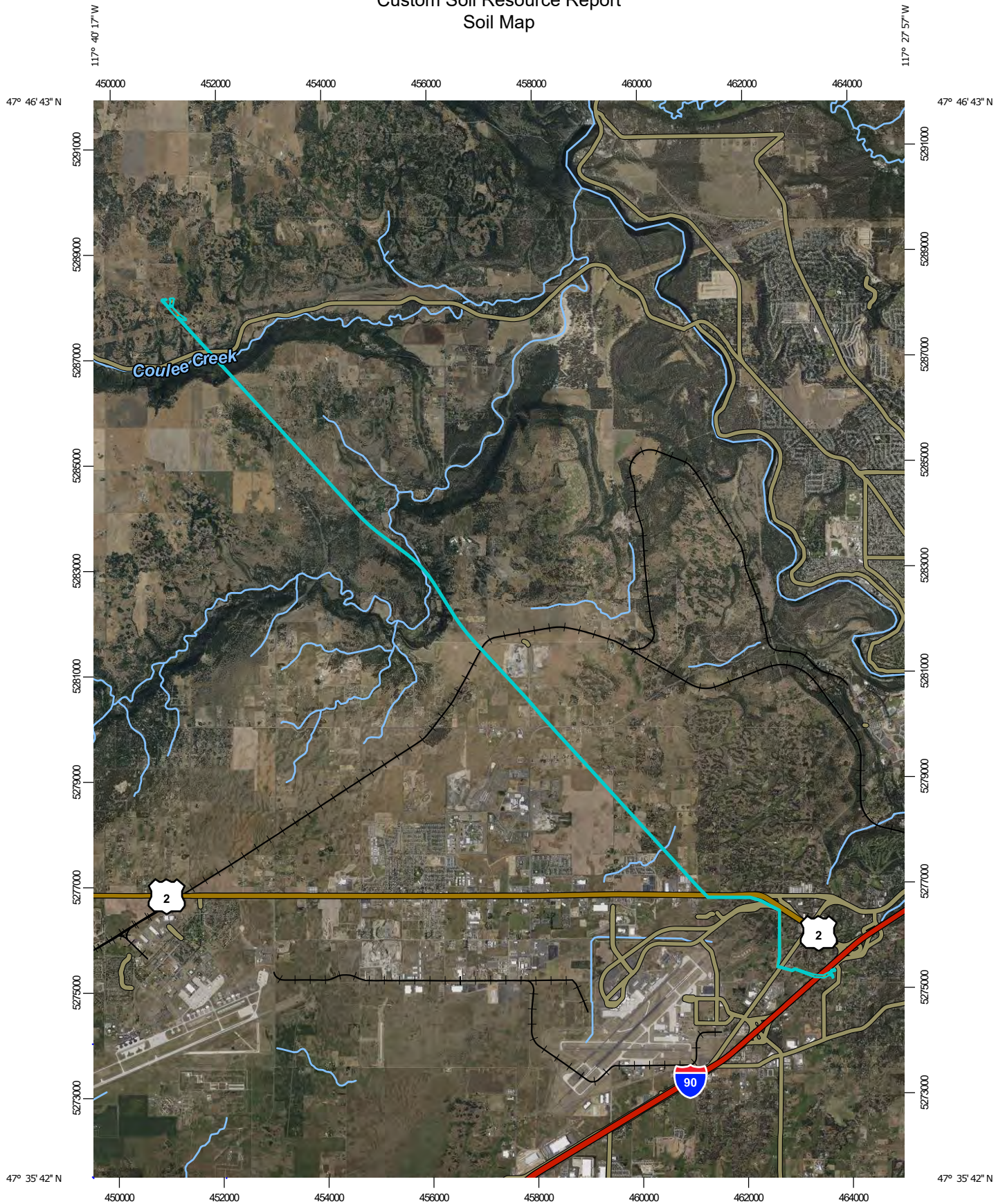
identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

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The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report Soil Map



Map Scale: 1:99,500 if printed on A portrait (8.5" x 11") sheet.

0 1000 2000 4000 6000 Meters


0 4500 9000 18000 27000 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84



### MAP LEGEND


**Area of Interest (AOI)**

 Area of Interest (AOI)




















**Soils**







 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

**Special Point Features**






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

**Water Features**

 Streams and Canals

**Transportation**

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

**Background**

 Aerial Photography

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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: Spokane County, Washington  
 Survey Area Data: Version 16, Aug 26, 2024

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

Date(s) aerial images were photographed: May 9, 2022—Aug 15, 2022

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
1020	Cocolalla ashy silt loam, 0 to 3 percent slopes	0.1	0.1%
1021	Cocolalla-Hardesty complex, 0 to 3 percent slopes	0.9	0.6%
1203	Haploxerolls ashy silt loam, channeled, 0 to 8 percent slopes	4.7	3.1%
2053	Speigle-Rock outcrop complex, 15 to 30 percent slopes	8.5	5.5%
2054	Speigle-Rubble land-Rock outcrop complex, 30 to 90 percent slopes	1.8	1.2%
3026	Phoebe, dry-Battleplain complex, 0 to 8 percent slopes	3.3	2.1%
3040	Cheney-Alecanyon complex, 0 to 8 percent slopes	16.8	10.9%
3041	Alecanyon, very stony-Cheney complex, 0 to 8 percent slopes	11.4	7.4%
3044	Cheney ashy silt loam, 0 to 8 percent slopes	13.1	8.5%
3045	Rockly-Deno complex, 0 to 15 percent slopes	5.6	3.6%
3046	Cheney-Seaboldt, dry, complex, 0 to 8 percent slopes	17.5	11.4%
3110	Fourmound-Stutler complex, 0 to 8 percent slopes	0.6	0.4%
3113	Stutler-Springdale complex, 3 to 15 percent slopes	2.1	1.4%
3114	Rockly-Fourmound complex, 0 to 15 percent slopes	19.8	12.8%
3115	Northstar-Rock outcrop complex, 3 to 15 percent slopes	3.7	2.4%
3117	Northstar-Rock outcrop-Rockly complex, 0 to 15 percent slopes	20.6	13.4%
3120	Marble loamy sand, 0 to 8 percent slopes	3.3	2.1%
3122	Marble loamy sand, 15 to 30 percent slopes	2.9	1.9%
3123	Marble loamy sand, 30 to 55 percent slopes	1.5	1.0%

## Custom Soil Resource Report

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3141	Springdale gravelly ashy coarse sandy loam, 8 to 15 percent slopes	6.3	4.1%
3143	Spens very gravelly loamy coarse sand, 30 to 65 percent slopes	1.7	1.1%
3144	Wapal gravelly ashy coarse sandy loam, 0 to 8 percent slopes	0.6	0.4%
3145	Wapal gravelly ashy coarse sandy loam, 15 to 30 percent slopes	1.8	1.1%
3146	Scoap-Wapal complex, 30 to 60 percent slopes	0.8	0.5%
3503	Uhlig ashy silt loam, dry, 0 to 8 percent slopes	4.1	2.6%
3504	Brincken ashy silt loam, 0 to 8 percent slopes	0.3	0.2%
<b>Totals for Area of Interest</b>		<b>154.3</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not

## Custom Soil Resource Report

mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## Spokane County, Washington

### 1020—Cocolalla ashy silt loam, 0 to 3 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2wfy

*Elevation:* 2,020 to 2,450 feet

*Mean annual precipitation:* 15 to 20 inches

*Mean annual air temperature:* 45 to 50 degrees F

*Frost-free period:* 100 to 140 days

*Farmland classification:* Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

#### Map Unit Composition

*Cocolalla and similar soils:* 80 percent

*Minor components:* 20 percent

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

#### Description of Cocolalla

##### Setting

*Landform:* Drainageways, depressions

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Concave

*Parent material:* Alluvium derived from volcanic ash with loess mixed in the upper part

##### Typical profile

*A1 - 0 to 11 inches:* ashy silt loam

*A2 - 11 to 28 inches:* ashy silt loam

*Cg1 - 28 to 37 inches:* ashy silt loam

*Cg2 - 37 to 43 inches:* ashy silt loam

*Ab - 43 to 54 inches:* ashy silt loam

*Cgb - 54 to 60 inches:* ashy silt loam

##### Properties and qualities

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Poorly drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)

*Depth to water table:* About 0 to 11 inches

*Frequency of flooding:* Frequent

*Frequency of ponding:* Frequent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water supply, 0 to 60 inches:* Very high (about 13.2 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 5w

*Hydrologic Soil Group:* B/D

*Ecological site:* R009XY988WA - Wetland Complex

*Hydric soil rating:* Yes

**Minor Components**

**Hardesty**

*Percent of map unit:* 10 percent  
*Landform:* Stream terraces, drainageways, depressions  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Other vegetative classification:* ponderosa pine/ninebark (CN190)  
*Hydric soil rating:* No

**Rockly**

*Percent of map unit:* 3 percent  
*Landform:* Plateaus  
*Landform position (two-dimensional):* Summit  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R009XY001WA - Very Shallow  
*Hydric soil rating:* No

**Northstar**

*Percent of map unit:* 3 percent  
*Landform:* Plateaus  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Other vegetative classification:* ponderosa pine/common snowberry (CN170)  
*Hydric soil rating:* No

**Saltese**

*Percent of map unit:* 2 percent  
*Landform:* Drainageways, depressions, flood plains  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Ecological site:* R044AY501WA - Mesic, Aquic, Organic Depressions and Seeps  
*Hydric soil rating:* Yes

**Water**

*Percent of map unit:* 2 percent

**1021—Cocolalla-Hardesty complex, 0 to 3 percent slopes**

**Map Unit Setting**

*National map unit symbol:* 2wd5  
*Elevation:* 1,950 to 2,400 feet  
*Mean annual precipitation:* 15 to 18 inches  
*Mean annual air temperature:* 45 to 50 degrees F  
*Frost-free period:* 100 to 140 days

## Custom Soil Resource Report

*Farmland classification:* Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

### Map Unit Composition

*Cocolalla and similar soils:* 50 percent

*Hardesty and similar soils:* 40 percent

*Minor components:* 10 percent

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

### Description of Cocolalla

#### Setting

*Landform:* Depressions, drainageways

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Concave

*Parent material:* Alluvium derived from volcanic ash with loess mixed in the upper part

#### Typical profile

*A1 - 0 to 11 inches:* ashy silt loam

*A2 - 11 to 28 inches:* ashy silt loam

*Cg1 - 28 to 37 inches:* ashy silt loam

*Cg2 - 37 to 43 inches:* ashy silt loam

*Ab - 43 to 54 inches:* ashy silt loam

*Cgb - 54 to 60 inches:* ashy silt loam

#### Properties and qualities

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Poorly drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)

*Depth to water table:* About 0 to 11 inches

*Frequency of flooding:* Frequent

*Frequency of ponding:* Frequent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water supply, 0 to 60 inches:* Very high (about 13.2 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 5w

*Hydrologic Soil Group:* B/D

*Ecological site:* R009XY988WA - Wetland Complex

*Hydric soil rating:* Yes

### Description of Hardesty

#### Setting

*Landform:* Stream terraces, drainageways, depressions

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear, concave

*Across-slope shape:* Linear, concave

*Parent material:* Alluvium derived from volcanic ash mixed with loess in the upper part

## Custom Soil Resource Report

### Typical profile

*A1 - 0 to 4 inches:* ashy silt loam  
*A2 - 4 to 11 inches:* ashy silt loam  
*Bw1 - 11 to 23 inches:* ashy silt loam  
*Bw2 - 23 to 32 inches:* ashy silt loam  
*C1 - 32 to 39 inches:* ashy very fine sandy loam  
*C2 - 39 to 60 inches:* ashy loamy very fine sand

### Properties and qualities

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Moderately 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:* About 23 to 30 inches  
*Frequency of flooding:* Rare  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* High (about 11.0 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 2w  
*Hydrologic Soil Group:* B/D  
*Ecological site:* F009XY001WA - Mesic Xeric Loamy Hills and Canyons  
Ponderosa Pine Moderately Warm Dry Shrub  
*Other vegetative classification:* ponderosa pine/ninebark (CN190)  
*Hydric soil rating:* No

### Minor Components

#### Rockly

*Percent of map unit:* 4 percent  
*Landform:* Plateaus  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R009XY001WA - Very Shallow  
*Hydric soil rating:* No

#### Saltese

*Percent of map unit:* 3 percent  
*Landform:* Drainageways, depressions, flood plains  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Ecological site:* R044AY501WA - Mesic, Aquic, Organic Depressions and Seeps  
*Hydric soil rating:* Yes

#### Northstar

*Percent of map unit:* 1 percent  
*Landform:* Plateaus  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear

## Custom Soil Resource Report

*Other vegetative classification:* ponderosa pine/common snowberry (CN170)  
*Hydric soil rating:* No

### **Speigle**

*Percent of map unit:* 1 percent  
*Landform:* Escarpments  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Other vegetative classification:* ponderosa pine/common snowberry (CN170)  
*Hydric soil rating:* No

### **Water**

*Percent of map unit:* 1 percent

## **1203—Haploxerolls ashy silt loam, channeled, 0 to 8 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* nvfw  
*Elevation:* 1,530 to 2,400 feet  
*Mean annual precipitation:* 17 to 21 inches  
*Mean annual air temperature:* 45 to 50 degrees F  
*Frost-free period:* 100 to 140 days  
*Farmland classification:* All areas are prime farmland

### **Map Unit Composition**

*Haploxerolls, channeled, and similar soils:* 75 percent  
*Minor components:* 25 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Haploxerolls, Channeled**

#### **Setting**

*Landform:* Stream terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Mixed alluvium

#### **Typical profile**

*A1 - 0 to 4 inches:* ashy silt loam  
*A2 - 4 to 14 inches:* ashy silt loam  
*A3 - 14 to 30 inches:* ashy silt loam  
*A4 - 30 to 40 inches:* silt loam  
*Ab1 - 40 to 57 inches:* silt loam  
*Ab2 - 57 to 60 inches:* fine sandy loam

#### **Properties and qualities**

*Slope:* 0 to 8 percent

## Custom Soil Resource Report

*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Moderately 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:* About 40 to 50 inches  
*Frequency of flooding:* Occasional  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Very high (about 12.1 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 3w  
*Hydrologic Soil Group:* B  
*Ecological site:* R009XY930WA - Loamy Bottom  
*Hydric soil rating:* No

### Minor Components

#### Mondovi

*Percent of map unit:* 10 percent  
*Landform:* Drainageways  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R009XY930WA - Loamy Bottom  
*Hydric soil rating:* No

#### Water

*Percent of map unit:* 5 percent

#### Endoaquolls

*Percent of map unit:* 5 percent  
*Landform:* Flood plains, stream terraces, drainageways  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R009XY988WA - Wetland Complex  
*Hydric soil rating:* Yes

#### Riverwash

*Percent of map unit:* 5 percent  
*Hydric soil rating:* No

## 2053—Speigle-Rock outcrop complex, 15 to 30 percent slopes

### Map Unit Setting

*National map unit symbol:* 2wcl  
*Elevation:* 1,860 to 2,600 feet  
*Mean annual precipitation:* 16 to 23 inches  
*Mean annual air temperature:* 46 to 50 degrees F  
*Frost-free period:* 100 to 140 days

## Custom Soil Resource Report

*Farmland classification:* Not prime farmland

### Map Unit Composition

*Speigle and similar soils:* 50 percent

*Rock outcrop:* 15 percent

*Minor components:* 35 percent

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

### Description of Speigle

#### Setting

*Landform:* Escarpments

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Loess mixed with minor amounts of volcanic ash over colluvium derived from basalt

#### Typical profile

*A - 0 to 6 inches:* cobbly ashy loam

*AB - 6 to 17 inches:* very gravelly ashy loam

*Bt1 - 17 to 23 inches:* very cobbly loam

*Bt2 - 23 to 35 inches:* extremely gravelly loam

*BC - 35 to 44 inches:* extremely cobbly sandy loam

*C - 44 to 65 inches:* extremely cobbly sandy loam

#### Properties and qualities

*Slope:* 15 to 30 percent

*Depth to restrictive feature:* More than 80 inches

*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 4.1 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 4e

*Hydrologic Soil Group:* B

*Ecological site:* F009XY001WA - Mesic Xeric Loamy Hills and Canyons

Ponderosa Pine Moderately Warm Dry Shrub

*Other vegetative classification:* ponderosa pine/common snowberry (CN170)

*Hydric soil rating:* No

### Description of Rock Outcrop

#### Typical profile

*R - 0 to 60 inches:* bedrock

#### Properties and qualities

*Slope:* 15 to 30 percent

*Depth to restrictive feature:* 0 inches to lithic bedrock

#### Interpretive groups

*Land capability classification (irrigated):* None specified

## Custom Soil Resource Report

*Land capability classification (nonirrigated): 8*  
*Hydric soil rating: No*

### Minor Components

#### Northstar

*Percent of map unit: 10 percent*  
*Landform: Plateaus*  
*Landform position (two-dimensional): Shoulder, backslope*  
*Landform position (three-dimensional): Side slope, base slope*  
*Down-slope shape: Linear*  
*Across-slope shape: Linear*  
*Other vegetative classification: ponderosa pine/common snowberry (CN170)*  
*Hydric soil rating: No*

#### Bobbitt

*Percent of map unit: 10 percent*  
*Landform: Escarpments*  
*Landform position (two-dimensional): Backslope*  
*Landform position (three-dimensional): Side slope*  
*Down-slope shape: Linear*  
*Across-slope shape: Convex*  
*Other vegetative classification: ponderosa pine/common snowberry (CN170)*  
*Hydric soil rating: No*

#### Rubble land

*Percent of map unit: 5 percent*  
*Hydric soil rating: No*

#### Spens

*Percent of map unit: 5 percent*  
*Landform: Outwash terraces*  
*Landform position (three-dimensional): Riser*  
*Down-slope shape: Linear*  
*Across-slope shape: Convex*  
*Other vegetative classification: ponderosa pine/Idaho fescue (CN140)*  
*Hydric soil rating: No*

#### Lacy

*Percent of map unit: 5 percent*  
*Landform: Escarpments*  
*Landform position (two-dimensional): Backslope*  
*Landform position (three-dimensional): Side slope*  
*Down-slope shape: Convex*  
*Across-slope shape: Convex*  
*Other vegetative classification: ponderosa pine/Idaho fescue (CN140)*  
*Hydric soil rating: No*

## 2054—Speigle-Rubble land-Rock outcrop complex, 30 to 90 percent slopes

### Map Unit Setting

*National map unit symbol:* nv4b  
*Elevation:* 1,750 to 2,550 feet  
*Mean annual precipitation:* 16 to 21 inches  
*Mean annual air temperature:* 42 to 50 degrees F  
*Frost-free period:* 90 to 140 days  
*Farmland classification:* Not prime farmland

### Map Unit Composition

*Speigle and similar soils:* 40 percent  
*Rubble land:* 30 percent  
*Rock outcrop:* 15 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Speigle

#### Setting

*Landform:* Escarpments  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Loess mixed with minor amounts of volcanic ash over colluvium derived from basalt

#### Typical profile

*A - 0 to 6 inches:* cobbly ashy loam  
*AB - 6 to 17 inches:* very gravelly ashy loam  
*Bt1 - 17 to 23 inches:* very cobbly loam  
*Bt2 - 23 to 35 inches:* extremely gravelly loam  
*BC - 35 to 44 inches:* extremely cobbly sandy loam  
*C - 44 to 65 inches:* extremely cobbly sandy loam

#### Properties and qualities

*Slope:* 30 to 80 percent  
*Depth to restrictive feature:* More than 80 inches  
*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 4.1 inches)

## Custom Soil Resource Report

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7e  
*Hydrologic Soil Group:* B  
*Ecological site:* F009XY001WA - Mesic Xeric Loamy Hills and Canyons  
Ponderosa Pine Moderately Warm Dry Shrub  
*Other vegetative classification:* ponderosa pine/common snowberry (CN170)  
*Hydric soil rating:* No

### Description of Rubble Land

#### Typical profile

- 0 to 60 inches: fragmental material

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 8  
*Hydric soil rating:* No

### Description of Rock Outcrop

#### Typical profile

R - 0 to 60 inches: bedrock

#### Properties and qualities

*Slope:* 60 to 90 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

### Minor Components

#### Klickson

*Percent of map unit:* 5 percent  
*Landform:* Escarpments  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Other vegetative classification:* Douglas-fir/ninebark (CN260)  
*Hydric soil rating:* No

#### Spens

*Percent of map unit:* 5 percent  
*Landform:* Outwash terraces  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Other vegetative classification:* ponderosa pine/Idaho fescue (CN140)  
*Hydric soil rating:* No

#### Lacy

*Percent of map unit:* 5 percent  
*Landform:* Escarpments  
*Landform position (two-dimensional):* Backslope

## Custom Soil Resource Report

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Other vegetative classification:* ponderosa pine/Idaho fescue (CN140)

*Hydric soil rating:* No

### **3026—Phoebe, dry-Battleplain complex, 0 to 8 percent slopes**

#### **Map Unit Setting**

*National map unit symbol:* 2kkyw

*Elevation:* 1,800 to 2,500 feet

*Mean annual precipitation:* 15 to 18 inches

*Mean annual air temperature:* 45 to 50 degrees F

*Frost-free period:* 100 to 140 days

*Farmland classification:* Prime farmland if irrigated

#### **Map Unit Composition**

*Phoebe, dry, and similar soils:* 45 percent

*Battleplain and similar soils:* 40 percent

*Minor components:* 15 percent

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

#### **Description of Phoebe, Dry**

##### **Setting**

*Landform:* Outwash plains

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Sandy glaciofluvial deposits with minor amounts of volcanic ash and loess in the upper part

##### **Typical profile**

*Ap - 0 to 8 inches:* ashy sandy loam

*A - 8 to 16 inches:* ashy sandy loam

*Bw1 - 16 to 25 inches:* fine sandy loam

*Bw2 - 25 to 34 inches:* sandy loam

*C1 - 34 to 44 inches:* loamy sand

*C2 - 44 to 60 inches:* sand

##### **Properties and qualities**

*Slope:* 0 to 8 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* High (1.98 to 5.95 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

## Custom Soil Resource Report

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Moderate (about 6.7 inches)

### Interpretive groups

*Land capability classification (irrigated):* 3e

*Land capability classification (nonirrigated):* 2e

*Hydrologic Soil Group:* A

*Ecological site:* F009XY002WA - Mesic Xeric Loamy Hills Ponderosa Pine Warm Dry Grass

*Other vegetative classification:* ponderosa pine/bluebunch wheatgrass (CN130)

*Hydric soil rating:* No

### Description of Battleplain

#### Setting

*Landform:* Outwash plains

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Sandy glaciofluvial deposits with minor amounts of volcanic ash and loess in the upper part

#### Typical profile

*Ap - 0 to 11 inches:* ashy sandy loam

*Bw - 11 to 22 inches:* sandy loam

*BC - 22 to 28 inches:* gravelly coarse sandy loam

*C - 28 to 60 inches:* coarse sand

#### Properties and qualities

*Slope:* 0 to 8 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Capacity of the most limiting layer to transmit water (Ksat):* High (1.98 to 5.95 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 4.3 inches)

### Interpretive groups

*Land capability classification (irrigated):* 3e

*Land capability classification (nonirrigated):* 3s

*Hydrologic Soil Group:* A

*Ecological site:* F009XY003WA - Warm Dry Ridges Hills and Canyons Ponderosa Pine Dry Shrub and Grass

*Other vegetative classification:* ponderosa pine/bluebunch wheatgrass (CN130)

*Hydric soil rating:* No

### Minor Components

#### Marble

*Percent of map unit:* 10 percent

*Landform:* Outwash plains

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Other vegetative classification:* ponderosa pine/Idaho fescue (CN140)

## Custom Soil Resource Report

*Hydric soil rating:* No

### **Hardesty**

*Percent of map unit:* 5 percent

*Landform:* Drainageways, depressions

*Down-slope shape:* Linear, concave

*Across-slope shape:* Linear, concave

*Other vegetative classification:* ponderosa pine/ninebark (CN190)

*Hydric soil rating:* No

## **3040—Cheney-Alecanyon complex, 0 to 8 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2wdw

*Elevation:* 1,980 to 2,550 feet

*Mean annual precipitation:* 15 to 18 inches

*Mean annual air temperature:* 46 to 50 degrees F

*Frost-free period:* 100 to 140 days

*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Cheney and similar soils:* 50 percent

*Alecanyon and similar soils:* 35 percent

*Minor components:* 15 percent

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

### **Description of Cheney**

#### **Setting**

*Landform:* Outwash plains

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Loess mixed with minor amounts of volcanic ash over sandy and gravelly glaciofluvial deposits

#### **Typical profile**

*Ap - 0 to 10 inches:* ashy silt loam

*A - 10 to 14 inches:* ashy silt loam

*Bw - 14 to 22 inches:* ashy silt loam

*Bt - 22 to 28 inches:* ashy silt loam

*2C1 - 28 to 32 inches:* very gravelly sandy loam

*2C2 - 32 to 60 inches:* extremely gravelly coarse sand

#### **Properties and qualities**

*Slope:* 0 to 8 percent

*Depth to restrictive feature:* More than 80 inches

*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)

## Custom Soil Resource Report

*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Moderate (about 6.7 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 2e  
*Hydrologic Soil Group:* B  
*Ecological site:* R009XC430WA - Loamy Bunchgrass 15-18 PZ  
*Hydric soil rating:* No

### Description of Alecanyon

#### Setting

*Landform:* Outwash plains  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Sandy and gravelly glaciofluvial deposits with minor amount of loess and volcanic ash in the upper part

#### Typical profile

*A - 0 to 7 inches:* gravelly ashy coarse sandy loam  
*BA - 7 to 11 inches:* very gravelly ashy coarse sandy loam  
*BC - 11 to 16 inches:* extremely cobbly loamy coarse sand  
*Bq - 16 to 39 inches:* extremely gravelly coarse sand  
*C - 39 to 60 inches:* very gravelly coarse sand

#### Properties and qualities

*Slope:* 0 to 8 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Somewhat excessively drained  
*Capacity of the most limiting layer to transmit water (Ksat):* High (1.98 to 3.97 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 3 percent  
*Maximum salinity:* Nonsaline (0.0 to 1.0 mmhos/cm)  
*Available water supply, 0 to 60 inches:* Very low (about 1.9 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6s  
*Hydrologic Soil Group:* A  
*Ecological site:* R009XA220WA - Stony Foothills Channeled Scabland  
*Hydric soil rating:* No

### Minor Components

#### Uhlig, dry

*Percent of map unit:* 9 percent  
*Landform:* Outwash terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear

## Custom Soil Resource Report

*Ecological site:* R009XB535WA - Loamy Dwarf Shrub 18-24 PZ  
*Hydric soil rating:* No

### **Rock outcrop**

*Percent of map unit:* 2 percent  
*Hydric soil rating:* No

### **Uhlig**

*Percent of map unit:* 2 percent  
*Landform:* Outwash terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Other vegetative classification:* ponderosa pine/bluebunch wheatgrass (CN130)  
*Hydric soil rating:* No

### **Rockly**

*Percent of map unit:* 2 percent  
*Landform:* Plateaus  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R009XB535WA - Loamy Dwarf Shrub 18-24 PZ  
*Hydric soil rating:* No

## **3041—Alecañon, very stony-Cheney complex, 0 to 8 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2wdv  
*Elevation:* 1,980 to 2,500 feet  
*Mean annual precipitation:* 15 to 18 inches  
*Mean annual air temperature:* 46 to 50 degrees F  
*Frost-free period:* 110 to 140 days  
*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Alecañon, very stony surface, and similar soils:* 65 percent  
*Cheney and similar soils:* 20 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Alecañon, Very Stony Surface**

#### **Setting**

*Landform:* Outwash plains  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear

## Custom Soil Resource Report

*Parent material:* Sandy and gravelly glaciofluvial deposits with an influence of loess and volcanic ash in the upper part

### Typical profile

*A - 0 to 7 inches:* cobbly ashy coarse sandy loam  
*BA - 7 to 11 inches:* very cobbly ashy coarse sandy loam  
*BC - 11 to 16 inches:* extremely cobbly loamy coarse sand  
*Bq - 16 to 39 inches:* extremely cobbly coarse sand  
*C - 39 to 60 inches:* very gravelly coarse sand

### Properties and qualities

*Slope:* 0 to 8 percent  
*Surface area covered with cobbles, stones or boulders:* 0.5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Somewhat excessively drained  
*Capacity of the most limiting layer to transmit water (Ksat):* High (1.98 to 5.95 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 3 percent  
*Maximum salinity:* Nonsaline (0.0 to 1.0 mmhos/cm)  
*Available water supply, 0 to 60 inches:* Very low (about 2.0 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6s  
*Hydrologic Soil Group:* A  
*Ecological site:* R009XA220WA - Stony Foothills Channeled Scabland  
*Hydric soil rating:* No

## Description of Cheney

### Setting

*Landform:* Outwash plains  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Loess mixed with minor amounts of volcanic ash over sandy and gravelly glaciofluvial deposits

### Typical profile

*Ap - 0 to 10 inches:* ashy silt loam  
*A - 10 to 14 inches:* ashy silt loam  
*Bw - 14 to 22 inches:* ashy silt loam  
*Bt - 22 to 28 inches:* ashy silt loam  
*2C1 - 28 to 32 inches:* very gravelly sandy loam  
*2C2 - 32 to 60 inches:* extremely gravelly coarse sand

### Properties and qualities

*Slope:* 0 to 8 percent  
*Depth to restrictive feature:* More than 80 inches  
*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

## Custom Soil Resource Report

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Moderate (about 6.7 inches)

### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2e

*Hydrologic Soil Group:* B

*Ecological site:* R009XC430WA - Loamy Bunchgrass 15-18 PZ

*Hydric soil rating:* No

### **Minor Components**

#### **Uhlig, dry**

*Percent of map unit:* 7 percent

*Landform:* Outwash terraces

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* R009XB535WA - Loamy Dwarf Shrub 18-24 PZ

*Hydric soil rating:* No

#### **Rockly**

*Percent of map unit:* 5 percent

*Landform:* Plateaus

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* R009XB535WA - Loamy Dwarf Shrub 18-24 PZ

*Hydric soil rating:* No

#### **Rock outcrop**

*Percent of map unit:* 3 percent

*Hydric soil rating:* No

## **3044—Cheney ashy silt loam, 0 to 8 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2wdy

*Elevation:* 1,800 to 2,550 feet

*Mean annual precipitation:* 15 to 18 inches

*Mean annual air temperature:* 46 to 52 degrees F

*Frost-free period:* 100 to 150 days

*Farmland classification:* All areas are prime farmland

### **Map Unit Composition**

*Cheney and similar soils:* 75 percent

*Minor components:* 25 percent

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

## Description of Cheney

### Setting

*Landform:* Outwash plains

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Loess mixed with minor amounts of volcanic ash over sandy and gravelly glaciofluvial deposits

### Typical profile

*Ap - 0 to 10 inches:* ashy silt loam

*A - 10 to 14 inches:* ashy silt loam

*Bw - 14 to 22 inches:* ashy silt loam

*Bt - 22 to 28 inches:* ashy silt loam

*2C1 - 28 to 32 inches:* very gravelly sandy loam

*2C2 - 32 to 60 inches:* extremely gravelly coarse sand

### Properties and qualities

*Slope:* 0 to 8 percent

*Depth to restrictive feature:* More than 80 inches

*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:* Moderate (about 6.7 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2e

*Hydrologic Soil Group:* B

*Ecological site:* R009XC430WA - Loamy Bunchgrass 15-18 PZ

*Hydric soil rating:* No

## Minor Components

### Uhlig, dry

*Percent of map unit:* 10 percent

*Landform:* Outwash terraces

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* R009XB535WA - Loamy Dwarf Shrub 18-24 PZ

*Hydric soil rating:* No

### Alecanyon

*Percent of map unit:* 5 percent

*Landform:* Outwash plains

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* R009XA220WA - Stony Foothills Channeled Scabland

*Hydric soil rating:* No

## Custom Soil Resource Report

### **Cocolalla**

*Percent of map unit:* 3 percent  
*Landform:* Depressions, drainageways  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave  
*Ecological site:* R009XB535WA - Loamy Dwarf Shrub 18-24 PZ  
*Hydric soil rating:* Yes

### **Rock outcrop**

*Percent of map unit:* 3 percent  
*Hydric soil rating:* No

### **Uhlig**

*Percent of map unit:* 2 percent  
*Landform:* Outwash terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Other vegetative classification:* ponderosa pine/bluebunch wheatgrass (CN130)  
*Hydric soil rating:* No

### **Seaboldt, dry**

*Percent of map unit:* 2 percent  
*Landform:* Outwash plains on plateaus  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R009XB535WA - Loamy Dwarf Shrub 18-24 PZ  
*Hydric soil rating:* No

## **3045—Rockly-Deno complex, 0 to 15 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2wdt  
*Elevation:* 1,820 to 2,500 feet  
*Mean annual precipitation:* 15 to 18 inches  
*Mean annual air temperature:* 46 to 52 degrees F  
*Frost-free period:* 100 to 150 days  
*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Rockly and similar soils:* 60 percent  
*Deno and similar soils:* 25 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

## Description of Rocky

### Setting

*Landform:* Plateaus

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Loess mixed with minor amounts of volcanic ash over residuum derived from basalt

### Typical profile

*A - 0 to 3 inches:* very cobbly loam

*Bw - 3 to 6 inches:* very cobbly loam

*R - 6 to 16 inches:* bedrock

### Properties and qualities

*Slope:* 0 to 15 percent

*Depth to restrictive feature:* 4 to 12 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:* Very low (about 0.5 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7s

*Hydrologic Soil Group:* D

*Ecological site:* R009XB535WA - Loamy Dwarf Shrub 18-24 PZ

*Hydric soil rating:* No

## Description of Deno

### Setting

*Landform:* Plateaus

*Landform position (three-dimensional):* Tread

*Microfeatures of landform position:* Mounds

*Down-slope shape:* Linear

*Across-slope shape:* Convex

*Parent material:* Loess mixed with minor amounts of volcanic ash over basalt residuum or glaciofluvial deposits

### Typical profile

*A1 - 0 to 4 inches:* ashy silt loam

*A2 - 4 to 14 inches:* ashy loam

*A3 - 14 to 28 inches:* ashy loam

*Bw1 - 28 to 40 inches:* loam

*Bw2 - 40 to 48 inches:* coarse sandy loam

*2R - 48 to 58 inches:* bedrock

### Properties and qualities

*Slope:* 0 to 15 percent

*Depth to restrictive feature:* 40 to 60 inches to lithic bedrock

*Drainage class:* Well drained

## Custom Soil Resource Report

*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:* Moderate (about 8.2 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3e

*Hydrologic Soil Group:* B

*Ecological site:* R009XC430WA - Loamy Bunchgrass 15-18 PZ

*Hydric soil rating:* No

### Minor Components

#### Cocolalla

*Percent of map unit:* 5 percent

*Landform:* Depressions, drainageways

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Concave

*Ecological site:* R009XB535WA - Loamy Dwarf Shrub 18-24 PZ

*Hydric soil rating:* Yes

#### Rock outcrop

*Percent of map unit:* 5 percent

*Hydric soil rating:* No

#### Cheney

*Percent of map unit:* 3 percent

*Landform:* Outwash plains

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* R009XB535WA - Loamy Dwarf Shrub 18-24 PZ

*Hydric soil rating:* No

#### Seaboldt, dry

*Percent of map unit:* 2 percent

*Landform:* Outwash plains on plateaus

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* R009XB535WA - Loamy Dwarf Shrub 18-24 PZ

*Hydric soil rating:* No

## 3046—Cheney-Seaboldt, dry, complex, 0 to 8 percent slopes

### Map Unit Setting

*National map unit symbol:* 209vt  
*Elevation:* 2,100 to 2,550 feet  
*Mean annual precipitation:* 16 to 18 inches  
*Mean annual air temperature:* 46 to 52 degrees F  
*Frost-free period:* 100 to 150 days  
*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Cheney and similar soils:* 60 percent  
*Seaboldt, dry, and similar soils:* 25 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Cheney

#### Setting

*Landform:* Outwash plains  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Loess mixed with minor amounts of volcanic ash over sandy and gravelly glaciofluvial deposits

#### Typical profile

*Ap - 0 to 10 inches:* ashy silt loam  
*A - 10 to 14 inches:* ashy silt loam  
*Bw - 14 to 22 inches:* ashy silt loam  
*Bt - 22 to 28 inches:* ashy silt loam  
*2C1 - 28 to 32 inches:* very gravelly sandy loam  
*2C2 - 32 to 60 inches:* extremely gravelly coarse sand

#### Properties and qualities

*Slope:* 0 to 8 percent  
*Depth to restrictive feature:* More than 80 inches  
*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:* Moderate (about 6.7 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 2e  
*Hydrologic Soil Group:* B

## Custom Soil Resource Report

*Ecological site:* R009XC430WA - Loamy Bunchgrass 15-18 PZ  
*Hydric soil rating:* No

### Description of Seaboldt, Dry

#### Setting

*Landform:* Outwash plains on plateaus  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Loess mixed with minor amounts of volcanic ash over glaciofluvial deposits over residuum from basalt

#### Typical profile

*Ap1 - 0 to 7 inches:* ashy loam  
*Ap2 - 7 to 10 inches:* ashy loam  
*Bw1 - 10 to 16 inches:* loam  
*2Bw2 - 16 to 23 inches:* sandy loam  
*2C - 23 to 28 inches:* extremely gravelly sandy loam  
*3R - 28 to 38 inches:* bedrock

#### Properties and qualities

*Slope:* 0 to 8 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 4.0 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 3e  
*Hydrologic Soil Group:* C  
*Ecological site:* R009XC430WA - Loamy Bunchgrass 15-18 PZ  
*Hydric soil rating:* No

### Minor Components

#### Rock outcrop

*Percent of map unit:* 5 percent  
*Hydric soil rating:* No

#### Rockly

*Percent of map unit:* 3 percent  
*Landform:* Plateaus  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R009XB535WA - Loamy Dwarf Shrub 18-24 PZ  
*Hydric soil rating:* No

#### Uhlig, dry

*Percent of map unit:* 3 percent  
*Landform:* Outwash terraces

## Custom Soil Resource Report

*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R009XB535WA - Loamy Dwarf Shrub 18-24 PZ  
*Hydric soil rating:* No

### **Cocolalla**

*Percent of map unit:* 2 percent  
*Landform:* Drainageways, depressions  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave  
*Ecological site:* R009XB535WA - Loamy Dwarf Shrub 18-24 PZ  
*Hydric soil rating:* Yes

### **Fourmound**

*Percent of map unit:* 2 percent  
*Landform:* Plateaus  
*Microfeatures of landform position:* Mounds  
*Down-slope shape:* Linear, convex  
*Across-slope shape:* Linear, convex  
*Other vegetative classification:* ponderosa pine/common snowberry (CN170)  
*Hydric soil rating:* No

## **3110—Fourmound-Stutler complex, 0 to 8 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2wgp  
*Elevation:* 1,900 to 2,500 feet  
*Mean annual precipitation:* 16 to 20 inches  
*Mean annual air temperature:* 45 to 50 degrees F  
*Frost-free period:* 100 to 140 days  
*Farmland classification:* Prime farmland if irrigated

### **Map Unit Composition**

*Fourmound and similar soils:* 45 percent  
*Stutler and similar soils:* 40 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Fourmound**

#### **Setting**

*Landform:* Plateaus  
*Microfeatures of landform position:* Mounds  
*Down-slope shape:* Linear, convex  
*Across-slope shape:* Linear, convex  
*Parent material:* Glaciofluvial deposits and loess mixed with minor amounts of volcanic ash over residuum derived from basalt

## Custom Soil Resource Report

### Typical profile

*A1 - 0 to 4 inches:* gravelly ashy silt loam  
*A2 - 4 to 9 inches:* ashy silt loam  
*A3 - 9 to 15 inches:* ashy silt loam  
*Bw1 - 15 to 30 inches:* silt loam  
*Bw2 - 30 to 43 inches:* silt loam  
*2BC - 43 to 47 inches:* extremely gravelly silt loam  
*2R - 47 to 57 inches:* bedrock

### Properties and qualities

*Slope:* 0 to 8 percent  
*Depth to restrictive feature:* 40 to 60 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:* Moderate (about 7.8 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 2e  
*Hydrologic Soil Group:* B  
*Ecological site:* F009XY001WA - Mesic Xeric Loamy Hills and Canyons  
Ponderosa Pine Moderately Warm Dry Shrub  
*Other vegetative classification:* ponderosa pine/common snowberry (CN170)  
*Hydric soil rating:* No

### Description of Stutler

#### Setting

*Landform:* Outwash plains  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Sandy and gravelly glaciofluvial deposits with minor amounts of volcanic ash and loess in the upper part

#### Typical profile

*Oi - 0 to 1 inches:* slightly decomposed plant material  
*A - 1 to 5 inches:* gravelly ashy silt loam  
*Bw1 - 5 to 12 inches:* gravelly ashy silt loam  
*Bw2 - 12 to 22 inches:* very cobbly silt loam  
*Bw3 - 22 to 32 inches:* extremely cobbly loam  
*Bq1 - 32 to 42 inches:* extremely gravelly coarse sandy loam  
*Bq2 - 42 to 61 inches:* extremely gravelly loamy coarse sand

#### Properties and qualities

*Slope:* 0 to 8 percent  
*Depth to restrictive feature:* More than 80 inches  
*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

## Custom Soil Resource Report

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Low (about 4.0 inches)

### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3s

*Hydrologic Soil Group:* B

*Ecological site:* F009XY001WA - Mesic Xeric Loamy Hills and Canyons

Ponderosa Pine Moderately Warm Dry Shrub

*Other vegetative classification:* ponderosa pine/common snowberry (CN170)

*Hydric soil rating:* No

### **Minor Components**

#### **Hardesty**

*Percent of map unit:* 5 percent

*Landform:* Drainageways, depressions

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear, concave

*Across-slope shape:* Linear, concave

*Other vegetative classification:* ponderosa pine/ninebark (CN190)

*Hydric soil rating:* No

#### **Seaboldt, warm**

*Percent of map unit:* 5 percent

*Landform:* Outwash plains on plateaus

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Other vegetative classification:* ponderosa pine/Idaho fescue (CN140)

*Hydric soil rating:* No

#### **Rockly**

*Percent of map unit:* 3 percent

*Landform:* Plateaus

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* R009XY001WA - Very Shallow

*Hydric soil rating:* No

#### **Cocolalla**

*Percent of map unit:* 2 percent

*Landform:* Depressions, drainageways

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Concave

*Ecological site:* R009XY988WA - Wetland Complex

*Hydric soil rating:* Yes

### 3113—Stutler-Springdale complex, 3 to 15 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2wgl  
*Elevation:* 1,900 to 2,500 feet  
*Mean annual precipitation:* 15 to 20 inches  
*Mean annual air temperature:* 45 to 50 degrees F  
*Frost-free period:* 100 to 130 days  
*Farmland classification:* Prime farmland if irrigated

#### Map Unit Composition

*Stutler and similar soils:* 55 percent  
*Springdale and similar soils:* 30 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Stutler

##### Setting

*Landform:* Outwash plains  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Sandy and gravelly glaciofluvial deposits with minor amounts of volcanic ash and loess in the upper part

##### Typical profile

*Oi - 0 to 1 inches:* slightly decomposed plant material  
*A - 1 to 5 inches:* gravelly ashy silt loam  
*Bw1 - 5 to 12 inches:* gravelly ashy silt loam  
*Bw2 - 12 to 22 inches:* very cobbly silt loam  
*Bw3 - 22 to 32 inches:* extremely cobbly loam  
*Bq1 - 32 to 42 inches:* extremely gravelly coarse sandy loam  
*Bq2 - 42 to 61 inches:* extremely gravelly loamy coarse sand

##### Properties and qualities

*Slope:* 3 to 15 percent  
*Depth to restrictive feature:* More than 80 inches  
*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 4.0 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 3e

## Custom Soil Resource Report

*Hydrologic Soil Group:* B

*Ecological site:* F009XY001WA - Mesic Xeric Loamy Hills and Canyons

Ponderosa Pine Moderately Warm Dry Shrub

*Other vegetative classification:* ponderosa pine/common snowberry (CN170)

*Hydric soil rating:* No

### Description of Springdale

#### Setting

*Landform:* Outwash terraces

*Landform position (three-dimensional):* Riser

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Sandy and gravelly glaciofluvial deposits with minor amounts of volcanic ash and loess in the upper part

#### Typical profile

*O<sub>i</sub> - 0 to 1 inches:* slightly decomposed plant material

*A - 1 to 3 inches:* gravelly ashy coarse sandy loam

*AB - 3 to 7 inches:* gravelly ashy coarse sandy loam

*B<sub>w</sub> - 7 to 13 inches:* gravelly ashy coarse sandy loam

*C<sub>1</sub> - 13 to 25 inches:* very gravelly loamy coarse sand

*C<sub>2</sub> - 25 to 61 inches:* very cobbly coarse sand

#### Properties and qualities

*Slope:* 3 to 15 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Capacity of the most limiting layer to transmit water (K<sub>sat</sub>):* High (1.98 to 5.95 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:* Very low (about 2.3 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 4s

*Hydrologic Soil Group:* A

*Ecological site:* F009XY001WA - Mesic Xeric Loamy Hills and Canyons

Ponderosa Pine Moderately Warm Dry Shrub

*Other vegetative classification:* ponderosa pine/common snowberry (CN170)

*Hydric soil rating:* No

### Minor Components

#### Hardesty

*Percent of map unit:* 5 percent

*Landform:* Drainageways, depressions

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear, concave

*Across-slope shape:* Linear, concave

*Other vegetative classification:* ponderosa pine/ninebark (CN190)

*Hydric soil rating:* No

#### Northstar

*Percent of map unit:* 5 percent

## Custom Soil Resource Report

*Landform:* Plateaus

*Landform position (two-dimensional):* Shoulder, backslope

*Landform position (three-dimensional):* Side slope, base slope

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Other vegetative classification:* ponderosa pine/common snowberry (CN170)

*Hydric soil rating:* No

### **Rock outcrop**

*Percent of map unit:* 5 percent

*Hydric soil rating:* No

## **3114—Rockly-Fourmound complex, 0 to 15 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2wgn

*Elevation:* 1,800 to 2,600 feet

*Mean annual precipitation:* 15 to 20 inches

*Mean annual air temperature:* 46 to 50 degrees F

*Frost-free period:* 100 to 140 days

*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Rockly and similar soils:* 55 percent

*Fourmound and similar soils:* 25 percent

*Minor components:* 20 percent

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

### **Description of Rockly**

#### **Setting**

*Landform:* Plateaus

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Loess mixed with minor amounts of volcanic ash over residuum derived from basalt

#### **Typical profile**

*A - 0 to 3 inches:* very cobbly loam

*Bw - 3 to 6 inches:* very cobbly loam

*R - 6 to 16 inches:* bedrock

#### **Properties and qualities**

*Slope:* 0 to 8 percent

*Depth to restrictive feature:* 4 to 12 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)

## Custom Soil Resource Report

*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Very low (about 0.5 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7s  
*Hydrologic Soil Group:* D  
*Ecological site:* R009XY001WA - Very Shallow  
*Hydric soil rating:* No

### Description of Fourmound

#### Setting

*Landform:* Plateaus  
*Microfeatures of landform position:* Mounds  
*Down-slope shape:* Linear, convex  
*Across-slope shape:* Linear, convex  
*Parent material:* Glaciofluvial deposits and loess mixed with minor amounts of volcanic ash over residuum derived from basalt

#### Typical profile

*A1 - 0 to 4 inches:* gravelly ashy silt loam  
*A2 - 4 to 9 inches:* ashy silt loam  
*A3 - 9 to 15 inches:* ashy silt loam  
*Bw1 - 15 to 30 inches:* silt loam  
*Bw2 - 30 to 43 inches:* silt loam  
*2BC - 43 to 47 inches:* extremely gravelly silt loam  
*2R - 47 to 57 inches:* bedrock

#### Properties and qualities

*Slope:* 0 to 15 percent  
*Depth to restrictive feature:* 40 to 60 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:* Moderate (about 7.8 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 3e  
*Hydrologic Soil Group:* B  
*Ecological site:* F009XY001WA - Mesic Xeric Loamy Hills and Canyons  
Ponderosa Pine Moderately Warm Dry Shrub  
*Other vegetative classification:* ponderosa pine/common snowberry (CN170)  
*Hydric soil rating:* No

### Minor Components

#### Northstar

*Percent of map unit:* 8 percent  
*Landform:* Plateaus  
*Landform position (two-dimensional):* Shoulder, backslope

## Custom Soil Resource Report

*Landform position (three-dimensional):* Side slope, base slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Other vegetative classification:* ponderosa pine/common snowberry (CN170)  
*Hydric soil rating:* No

### **Rock outcrop**

*Percent of map unit:* 7 percent  
*Hydric soil rating:* No

### **Cocolalla**

*Percent of map unit:* 4 percent  
*Landform:* Depressions, drainageways  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave  
*Ecological site:* R009XY988WA - Wetland Complex  
*Hydric soil rating:* Yes

### **Water**

*Percent of map unit:* 1 percent  
*Microfeatures of landform position:* Ponds

## **3115—Northstar-Rock outcrop complex, 3 to 15 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2wgm  
*Elevation:* 1,800 to 2,550 feet  
*Mean annual precipitation:* 15 to 19 inches  
*Mean annual air temperature:* 42 to 50 degrees F  
*Frost-free period:* 90 to 140 days  
*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Northstar and similar soils:* 50 percent  
*Rock outcrop:* 25 percent  
*Minor components:* 25 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Northstar**

#### **Setting**

*Landform:* Plateaus  
*Landform position (two-dimensional):* Shoulder, backslope  
*Landform position (three-dimensional):* Side slope, base slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Loess with an influence of volcanic ash over residuum and/or colluvium derived from basalt

## Custom Soil Resource Report

### Typical profile

*Oi - 0 to 1 inches:* slightly decomposed plant material  
*Oe - 1 to 3 inches:* moderately decomposed plant material  
*A1 - 3 to 6 inches:* extremely cobbly ashy loam  
*A2 - 6 to 11 inches:* extremely cobbly ashy loam  
*BA - 11 to 17 inches:* very gravelly ashy loam  
*Bw - 17 to 26 inches:* extremely gravelly loam  
*R - 26 to 36 inches:* bedrock

### Properties and qualities

*Slope:* 3 to 15 percent  
*Depth to restrictive feature:* 23 to 43 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:* Very low (about 1.9 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7s  
*Hydrologic Soil Group:* C  
*Ecological site:* F009XY001WA - Mesic Xeric Loamy Hills and Canyons  
Ponderosa Pine Moderately Warm Dry Shrub  
*Other vegetative classification:* ponderosa pine/common snowberry (CN170)  
*Hydric soil rating:* No

### Description of Rock Outcrop

#### Typical profile

*R - 0 to 60 inches:* bedrock

#### Properties and qualities

*Slope:* 3 to 15 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

### Minor Components

#### Rubble land

*Percent of map unit:* 5 percent  
*Hydric soil rating:* No

#### Hardesty

*Percent of map unit:* 5 percent  
*Landform:* Drainageways, depressions  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Other vegetative classification:* ponderosa pine/ninebark (CN190)  
*Hydric soil rating:* No

## Custom Soil Resource Report

### **Rockly**

*Percent of map unit:* 5 percent  
*Landform:* Plateaus  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R009XY001WA - Very Shallow  
*Hydric soil rating:* No

### **Stutler**

*Percent of map unit:* 4 percent  
*Landform:* Outwash plains  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Other vegetative classification:* ponderosa pine/common snowberry (CN170)  
*Hydric soil rating:* No

### **Cocolalla**

*Percent of map unit:* 4 percent  
*Landform:* Depressions, drainageways  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave  
*Ecological site:* R009XY988WA - Wetland Complex  
*Hydric soil rating:* Yes

### **Klickson**

*Percent of map unit:* 2 percent  
*Landform:* Escarpments  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Other vegetative classification:* Douglas-fir/ninebark (CN260)  
*Hydric soil rating:* No

## **3117—Northstar-Rock outcrop-Rockly complex, 0 to 15 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2wgq  
*Elevation:* 1,800 to 2,550 feet  
*Mean annual precipitation:* 15 to 19 inches  
*Mean annual air temperature:* 46 to 50 degrees F  
*Frost-free period:* 100 to 140 days  
*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Northstar and similar soils: 30 percent*

*Rock outcrop: 25 percent*

*Rockly and similar soils: 20 percent*

*Minor components: 25 percent*

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

**Description of Northstar**

**Setting**

*Landform: Plateaus*

*Landform position (two-dimensional): Shoulder, backslope*

*Landform position (three-dimensional): Side slope, base slope*

*Down-slope shape: Linear*

*Across-slope shape: Linear*

*Parent material: Loess with an influence of volcanic ash over residuum and/or colluvium derived from basalt*

**Typical profile**

*O<sub>i</sub> - 0 to 1 inches: slightly decomposed plant material*

*O<sub>e</sub> - 1 to 3 inches: moderately decomposed plant material*

*A<sub>1</sub> - 3 to 6 inches: extremely cobbly ashy loam*

*A<sub>2</sub> - 6 to 11 inches: extremely cobbly ashy loam*

*BA - 11 to 17 inches: very gravelly ashy loam*

*B<sub>w</sub> - 17 to 26 inches: extremely gravelly loam*

*R - 26 to 36 inches: bedrock*

**Properties and qualities**

*Slope: 0 to 15 percent*

*Depth to restrictive feature: 23 to 43 inches to lithic bedrock*

*Drainage class: Well drained*

*Capacity of the most limiting layer to transmit water (K<sub>sat</sub>): 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: Very low (about 1.9 inches)*

**Interpretive groups**

*Land capability classification (irrigated): None specified*

*Land capability classification (nonirrigated): 7s*

*Hydrologic Soil Group: C*

*Ecological site: F009XY001WA - Mesic Xeric Loamy Hills and Canyons*

*Ponderosa Pine Moderately Warm Dry Shrub*

*Other vegetative classification: ponderosa pine/common snowberry (CN170)*

*Hydric soil rating: No*

**Description of Rock Outcrop**

**Typical profile**

*R - 0 to 60 inches: bedrock*

**Properties and qualities**

*Slope: 0 to 15 percent*

*Depth to restrictive feature: 0 inches to lithic bedrock*

## Custom Soil Resource Report

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 8

*Hydric soil rating:* No

### Description of Rocky

#### Setting

*Landform:* Plateaus

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Loess mixed with minor amounts of volcanic ash over residuum derived from basalt

#### Typical profile

*A - 0 to 3 inches:* very cobbly loam

*Bw - 3 to 6 inches:* very cobbly loam

*R - 6 to 16 inches:* bedrock

#### Properties and qualities

*Slope:* 0 to 15 percent

*Depth to restrictive feature:* 4 to 12 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:* Very low (about 0.5 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7s

*Hydrologic Soil Group:* D

*Ecological site:* R009XY001WA - Very Shallow

*Hydric soil rating:* No

### Minor Components

#### Fourmound

*Percent of map unit:* 10 percent

*Landform:* Plateaus

*Microfeatures of landform position:* Mounds

*Down-slope shape:* Linear, convex

*Across-slope shape:* Linear, convex

*Other vegetative classification:* ponderosa pine/common snowberry (CN170)

*Hydric soil rating:* No

#### Cocolalla

*Percent of map unit:* 5 percent

*Landform:* Depressions, drainageways

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Concave

*Ecological site:* R009XY988WA - Wetland Complex

## Custom Soil Resource Report

*Hydric soil rating:* Yes

### **Speigle**

*Percent of map unit:* 5 percent

*Landform:* Escarpments

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Other vegetative classification:* ponderosa pine/common snowberry (CN170)

*Hydric soil rating:* No

### **Rubble land**

*Percent of map unit:* 5 percent

*Hydric soil rating:* No

## **3120—Marble loamy sand, 0 to 8 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2wgf

*Elevation:* 1,530 to 2,500 feet

*Mean annual precipitation:* 15 to 22 inches

*Mean annual air temperature:* 45 to 50 degrees F

*Frost-free period:* 100 to 130 days

*Farmland classification:* Prime farmland if irrigated

### **Map Unit Composition**

*Marble and similar soils:* 80 percent

*Minor components:* 20 percent

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

### **Description of Marble**

#### **Setting**

*Landform:* Outwash plains

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Sandy glaciofluvial deposits

#### **Typical profile**

*Oi - 0 to 1 inches:* slightly decomposed plant material

*A - 1 to 4 inches:* loamy sand

*E - 4 to 8 inches:* loamy sand

*E and Bt1 - 8 to 27 inches:* sand

*E and Bt2 - 27 to 53 inches:* sand

*C - 53 to 60 inches:* sand

## Custom Soil Resource Report

### Properties and qualities

*Slope:* 0 to 8 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well 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  
*Available water supply, 0 to 60 inches:* Low (about 3.1 inches)

### Interpretive groups

*Land capability classification (irrigated):* 4e  
*Land capability classification (nonirrigated):* 4e  
*Hydrologic Soil Group:* A  
*Ecological site:* F043AY509WA - Warm, Xeric, Sandy, Outwash Terraces and Plains (Ponderosa Pine/Dry Grass) *Pinus ponderosa* / *Pseudoroegneria spicata* , *Pinus ponderosa* / *Festuca idahoensis*  
*Other vegetative classification:* ponderosa pine/Idaho fescue (CN140)  
*Hydric soil rating:* No

### Minor Components

#### Hagen

*Percent of map unit:* 10 percent  
*Landform:* Outwash terraces  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Ecological site:* F043AY502WA - Warm Mesic Xeric Loamy Foothills, Terraces, mixed ash surface (Ponderosa Pine/Shrub) *Pinus Ponderosa* /*Symphoricarpos albus*, *Pinus Ponderosa* / *Physocarpus malvaceus*  
*Other vegetative classification:* ponderosa pine/common snowberry (CN170)  
*Hydric soil rating:* No

#### Hardesty

*Percent of map unit:* 5 percent  
*Landform:* Drainageways, depressions  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Ecological site:* F043AY501WA - Warm Mesic Xeric Loamy Foothills, Terraces, High Water Table (Ponderosa Pine/Shrub) *Pinus Ponderosa* /*Symphoricarpos albus*, *Pinus Ponderosa* / *Physocarpus malvaceus*  
*Other vegetative classification:* ponderosa pine/ninebark (CN190)  
*Hydric soil rating:* No

#### Marblespring

*Percent of map unit:* 5 percent  
*Landform:* Outwash terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* F043AY509WA - Warm, Xeric, Sandy, Outwash Terraces and Plains (Ponderosa Pine/Dry Grass) *Pinus ponderosa* / *Pseudoroegneria spicata* , *Pinus ponderosa* / *Festuca idahoensis*

## Custom Soil Resource Report

*Other vegetative classification:* ponderosa pine/bluebunch wheatgrass (CN130)  
*Hydric soil rating:* No

### **3122—Marble loamy sand, 15 to 30 percent slopes**

#### **Map Unit Setting**

*National map unit symbol:* 2wgb  
*Elevation:* 1,600 to 2,500 feet  
*Mean annual precipitation:* 15 to 22 inches  
*Mean annual air temperature:* 42 to 50 degrees F  
*Frost-free period:* 90 to 140 days  
*Farmland classification:* Farmland of statewide importance

#### **Map Unit Composition**

*Marble and similar soils:* 75 percent  
*Minor components:* 25 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### **Description of Marble**

##### **Setting**

*Landform:* Outwash plains  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Sandy glaciofluvial deposits

##### **Typical profile**

*Oi - 0 to 1 inches:* slightly decomposed plant material  
*A - 1 to 4 inches:* loamy sand  
*E - 4 to 8 inches:* loamy sand  
*E and Bt1 - 8 to 27 inches:* sand  
*E and Bt2 - 27 to 53 inches:* sand  
*C - 53 to 60 inches:* sand

##### **Properties and qualities**

*Slope:* 15 to 30 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well 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  
*Available water supply, 0 to 60 inches:* Low (about 3.1 inches)

##### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4e  
*Hydrologic Soil Group:* A

## Custom Soil Resource Report

*Ecological site:* F043AY509WA - Warm, Xeric, Sandy, Outwash Terraces and Plains (Ponderosa Pine/Dry Grass) *Pinus ponderosa* / *Pseudoroegneria spicata* , *Pinus ponderosa* / *Festuca idahoensis*  
*Other vegetative classification:* ponderosa pine/Idaho fescue (CN140)  
*Hydric soil rating:* No

### Minor Components

#### Marblespring

*Percent of map unit:* 10 percent  
*Landform:* Outwash terraces  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Other vegetative classification:* ponderosa pine/bluebunch wheatgrass (CN130)  
*Hydric soil rating:* No

#### Hardesty

*Percent of map unit:* 5 percent  
*Landform:* Drainageways, depressions  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Other vegetative classification:* ponderosa pine/ninebark (CN190)  
*Hydric soil rating:* No

#### Hagen

*Percent of map unit:* 5 percent  
*Landform:* Outwash terraces  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Other vegetative classification:* ponderosa pine/common snowberry (CN170)  
*Hydric soil rating:* No

#### Battleplain

*Percent of map unit:* 3 percent  
*Landform:* Outwash plains  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Other vegetative classification:* ponderosa pine/bluebunch wheatgrass (CN130)  
*Hydric soil rating:* No

#### Elmira

*Percent of map unit:* 2 percent  
*Landform:* Outwash terraces  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Other vegetative classification:* Douglas-fir/common snowberry (CN310)  
*Hydric soil rating:* No

## 3123—Marble loamy sand, 30 to 55 percent slopes

### Map Unit Setting

*National map unit symbol:* 2wgd  
*Elevation:* 1,530 to 2,500 feet  
*Mean annual precipitation:* 15 to 22 inches  
*Mean annual air temperature:* 45 to 50 degrees F  
*Frost-free period:* 100 to 140 days  
*Farmland classification:* Not prime farmland

### Map Unit Composition

*Marble and similar soils:* 75 percent  
*Minor components:* 25 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Marble

#### Setting

*Landform:* Outwash plains  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Sandy glaciofluvial deposits

#### Typical profile

*Oi - 0 to 1 inches:* slightly decomposed plant material  
*A - 1 to 4 inches:* loamy sand  
*E - 4 to 8 inches:* loamy sand  
*E and Bt1 - 8 to 27 inches:* sand  
*E and Bt2 - 27 to 53 inches:* sand  
*C - 53 to 60 inches:* sand

#### Properties and qualities

*Slope:* 30 to 55 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well 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  
*Available water supply, 0 to 60 inches:* Low (about 3.1 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7e  
*Hydrologic Soil Group:* A  
*Ecological site:* F043AY509WA - Warm, Xeric, Sandy, Outwash Terraces and Plains (Ponderosa Pine/Dry Grass) *Pinus ponderosa* / *Pseudoroegneria spicata* , *Pinus ponderosa* / *Festuca idahoensis*

## Custom Soil Resource Report

*Other vegetative classification:* ponderosa pine/Idaho fescue (CN140)  
*Hydric soil rating:* No

### Minor Components

#### Spens

*Percent of map unit:* 12 percent  
*Landform:* Outwash terraces  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Other vegetative classification:* ponderosa pine/Idaho fescue (CN140)  
*Hydric soil rating:* No

#### Hagen

*Percent of map unit:* 5 percent  
*Landform:* Outwash terraces  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Other vegetative classification:* ponderosa pine/common snowberry (CN170)  
*Hydric soil rating:* No

#### Spens, cool

*Percent of map unit:* 4 percent  
*Landform:* Outwash terraces  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Other vegetative classification:* Douglas-fir/common snowberry (CN310)  
*Hydric soil rating:* No

#### Battleplain

*Percent of map unit:* 3 percent  
*Landform:* Outwash plains  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Other vegetative classification:* ponderosa pine/bluebunch wheatgrass (CN130)  
*Hydric soil rating:* No

#### Hardesty

*Percent of map unit:* 1 percent  
*Landform:* Drainageways, depressions  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Other vegetative classification:* ponderosa pine/ninebark (CN190)  
*Hydric soil rating:* No

## **3141—Springdale gravelly ashy coarse sandy loam, 8 to 15 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2wg8  
*Elevation:* 1,530 to 2,500 feet  
*Mean annual precipitation:* 15 to 23 inches  
*Mean annual air temperature:* 45 to 50 degrees F  
*Frost-free period:* 100 to 140 days  
*Farmland classification:* Prime farmland if irrigated

### **Map Unit Composition**

*Springdale and similar soils:* 60 percent  
*Minor components:* 40 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Springdale**

#### **Setting**

*Landform:* Outwash terraces  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Sandy and gravelly glaciofluvial deposits with minor amounts of volcanic ash and loess in the upper part

#### **Typical profile**

*Oi - 0 to 1 inches:* slightly decomposed plant material  
*A - 1 to 3 inches:* gravelly ashy coarse sandy loam  
*AB - 3 to 7 inches:* gravelly ashy coarse sandy loam  
*Bw - 7 to 13 inches:* gravelly ashy coarse sandy loam  
*C1 - 13 to 25 inches:* very gravelly loamy coarse sand  
*C2 - 25 to 61 inches:* very cobbly coarse sand

#### **Properties and qualities**

*Slope:* 8 to 15 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Somewhat excessively drained  
*Capacity of the most limiting layer to transmit water (Ksat):* High (1.98 to 5.95 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:* Very low (about 2.3 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4s  
*Hydrologic Soil Group:* A

## Custom Soil Resource Report

*Ecological site:* F009XY001WA - Mesic Xeric Loamy Hills and Canyons  
Ponderosa Pine Moderately Warm Dry Shrub  
*Other vegetative classification:* ponderosa pine/common snowberry (CN170)  
*Hydric soil rating:* No

### Minor Components

#### Spens

*Percent of map unit:* 14 percent  
*Landform:* Outwash terraces  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Other vegetative classification:* ponderosa pine/Idaho fescue (CN140)  
*Hydric soil rating:* No

#### Marble

*Percent of map unit:* 14 percent  
*Landform:* Outwash plains  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* F043AY509WA - Warm, Xeric, Sandy, Outwash Terraces and  
Plains (Ponderosa Pine/Dry Grass) Pinus ponderosa / Pseudoroegneria  
spicata , Pinus ponderosa / Festuca idahoensis  
*Other vegetative classification:* ponderosa pine/Idaho fescue (CN140)  
*Hydric soil rating:* No

#### Garrison

*Percent of map unit:* 5 percent  
*Landform:* Outwash plains  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* F043AY510WA - Warm, Xeric, Loamy Hillsides, Low Available  
Water Capacity (Ponderosa Pine/Dry Grass) Pinus ponderosa /  
Pseudoroegneria spicata , Pinus ponderosa / Festuca idahoensis  
*Other vegetative classification:* ponderosa pine/bluebunch wheatgrass (CN130)  
*Hydric soil rating:* No

#### Opportunity

*Percent of map unit:* 5 percent  
*Landform:* Outwash plains  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Other vegetative classification:* ponderosa pine/Idaho fescue (CN140)  
*Hydric soil rating:* No

#### Hardesty

*Percent of map unit:* 2 percent  
*Landform:* Drainageways  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave

## Custom Soil Resource Report

*Ecological site:* F043AY501WA - Warm Mesic Xeric Loamy Foothills, Terraces, High Water Table (Ponderosa Pine/Shrub) Pinus Ponderosa /Symphoricarpos albus, Pinus Ponderosa / Physocarpus malvaceus  
*Other vegetative classification:* ponderosa pine/ninebark (CN190)  
*Hydric soil rating:* No

### **3143—Spens very gravelly loamy coarse sand, 30 to 65 percent slopes**

#### **Map Unit Setting**

*National map unit symbol:* 2wgc  
*Elevation:* 1,530 to 2,400 feet  
*Mean annual precipitation:* 15 to 20 inches  
*Mean annual air temperature:* 42 to 50 degrees F  
*Frost-free period:* 90 to 140 days  
*Farmland classification:* Not prime farmland

#### **Map Unit Composition**

*Spens and similar soils:* 60 percent  
*Minor components:* 40 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### **Description of Spens**

##### **Setting**

*Landform:* Outwash terraces  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Parent material:* Sandy and gravelly glaciofluvial deposits

##### **Typical profile**

*A - 0 to 3 inches:* very gravelly loamy coarse sand  
*C1 - 3 to 18 inches:* very gravelly loamy coarse sand  
*C2 - 18 to 60 inches:* very gravelly coarse sand

##### **Properties and qualities**

*Slope:* 30 to 65 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Somewhat excessively drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Very high (19.98 to 99.90 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:* Very low (about 2.0 inches)

##### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7e  
*Hydrologic Soil Group:* A

## Custom Soil Resource Report

*Ecological site:* F043AY509WA - Warm, Xeric, Sandy, Outwash Terraces and Plains (Ponderosa Pine/Dry Grass) Pinus ponderosa / Pseudoroegneria spicata , Pinus ponderosa / Festuca idahoensis  
*Other vegetative classification:* ponderosa pine/Idaho fescue (CN140)  
*Hydric soil rating:* No

### Minor Components

#### **Battleplain, moist**

*Percent of map unit:* 14 percent

*Landform:* Outwash plains

*Landform position (three-dimensional):* Riser

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* F043AY502WA - Warm Mesic Xeric Loamy Foothills, Terraces, mixed ash surface (Ponderosa Pine/Shrub) Pinus Ponderosa /Symphoricarpos albus, Pinus Ponderosa / Physocarpus malvaceus

*Other vegetative classification:* ponderosa pine/common snowberry (CN170)

*Hydric soil rating:* No

#### **Marble**

*Percent of map unit:* 14 percent

*Landform:* Outwash plains

*Landform position (three-dimensional):* Riser

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* F043AY509WA - Warm, Xeric, Sandy, Outwash Terraces and Plains (Ponderosa Pine/Dry Grass) Pinus ponderosa / Pseudoroegneria spicata , Pinus ponderosa / Festuca idahoensis

*Other vegetative classification:* ponderosa pine/Idaho fescue (CN140)

*Hydric soil rating:* No

#### **Wapal**

*Percent of map unit:* 6 percent

*Landform:* Outwash terraces

*Landform position (three-dimensional):* Riser

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* F043AY519WA - Warm-Frigid, Xeric, Loamy Slopes, low AWC subsoils (Douglas-Fir/Warm Dry Shrub) Pseudotsuga menziesii / Physocarpus malvaceus - Symphoricarpos albus

*Other vegetative classification:* Douglas-fir/ninebark (CN260)

*Hydric soil rating:* No

#### **Springdale**

*Percent of map unit:* 6 percent

*Landform:* Outwash terraces

*Landform position (three-dimensional):* Riser

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* F044AY502WA - Warm Mesic Xeric Sandy Hill slopes and Outwash terraces (Ponderosa Pine/Shrub) Pinus Ponderosa /Symphoricarpos albus, Pinus Ponderosa / Physocarpus malvaceus

*Other vegetative classification:* ponderosa pine/common snowberry (CN170)

*Hydric soil rating:* No

## 3144—Wapal gravelly ashy coarse sandy loam, 0 to 8 percent slopes

### Map Unit Setting

*National map unit symbol:* v9jj  
*Elevation:* 1,530 to 2,100 feet  
*Mean annual precipitation:* 18 to 23 inches  
*Mean annual air temperature:* 42 to 45 degrees F  
*Frost-free period:* 90 to 120 days  
*Farmland classification:* Prime farmland if irrigated

### Map Unit Composition

*Wapal and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Wapal

#### Setting

*Landform:* Outwash terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Sandy and gravelly glaciofluvial deposits with minor amounts of volcanic ash and loess in the upper part

#### Typical profile

*Oi - 0 to 2 inches:* slightly decomposed plant material  
*A - 2 to 6 inches:* gravelly ashy coarse sandy loam  
*Bw1 - 6 to 13 inches:* gravelly ashy coarse sandy loam  
*Bw2 - 13 to 17 inches:* very gravelly coarse sandy loam  
*BC - 17 to 21 inches:* very gravelly loamy coarse sand  
*C - 21 to 30 inches:* extremely gravelly coarse sand  
*Bq1 - 30 to 36 inches:* very gravelly coarse sand  
*Bq2 - 36 to 62 inches:* extremely gravelly coarse sand

#### Properties and qualities

*Slope:* 0 to 8 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Somewhat excessively drained  
*Capacity of the most limiting layer to transmit water (Ksat):* High (1.98 to 5.95 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:* Very low (about 2.5 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4s  
*Hydrologic Soil Group:* A

## Custom Soil Resource Report

*Ecological site:* F043AY585WA - Warm-Frigid, Xeric, Sandy, Outwash Terraces  
(Douglas-fir Warm Dry Shrub)  
*Other vegetative classification:* Douglas-fir/ninebark (CN260)  
*Hydric soil rating:* No

### Minor Components

#### Bonner

*Percent of map unit:* 8 percent  
*Landform:* Outwash terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Other vegetative classification:* grand fir/ninebark (CN506)  
*Hydric soil rating:* No

#### Kaniksu

*Percent of map unit:* 7 percent  
*Landform:* Outwash plains  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Other vegetative classification:* grand fir/ninebark (CN506)  
*Hydric soil rating:* No

## 3145—Wapal gravelly ashy coarse sandy loam, 15 to 30 percent slopes

### Map Unit Setting

*National map unit symbol:* nvb9  
*Elevation:* 1,530 to 2,500 feet  
*Mean annual precipitation:* 18 to 23 inches  
*Mean annual air temperature:* 42 to 50 degrees F  
*Frost-free period:* 90 to 130 days  
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Wapal and similar soils:* 65 percent  
*Minor components:* 35 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Wapal

#### Setting

*Landform:* Outwash terraces  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Sandy and gravelly glaciofluvial deposits with minor amounts of volcanic ash and loess in the upper part

## Custom Soil Resource Report

### Typical profile

*O<sub>i</sub>* - 0 to 2 inches: slightly decomposed plant material  
*A* - 2 to 6 inches: gravelly ashy coarse sandy loam  
*Bw<sub>1</sub>* - 6 to 13 inches: gravelly ashy coarse sandy loam  
*Bw<sub>2</sub>* - 13 to 17 inches: very gravelly coarse sandy loam  
*BC* - 17 to 21 inches: very gravelly loamy coarse sand  
*C* - 21 to 30 inches: extremely gravelly coarse sand  
*Bq<sub>1</sub>* - 30 to 36 inches: very gravelly coarse sand  
*Bq<sub>2</sub>* - 36 to 62 inches: extremely gravelly coarse sand

### Properties and qualities

*Slope*: 15 to 30 percent  
*Depth to restrictive feature*: More than 80 inches  
*Drainage class*: Somewhat excessively drained  
*Capacity of the most limiting layer to transmit water (K<sub>sat</sub>)*: High (1.98 to 5.95 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*: Very low (about 2.5 inches)

### Interpretive groups

*Land capability classification (irrigated)*: None specified  
*Land capability classification (nonirrigated)*: 4e  
*Hydrologic Soil Group*: A  
*Ecological site*: F043AY585WA - Warm-Frigid, Xeric, Sandy, Outwash Terraces (Douglas-fir Warm Dry Shrub)  
*Other vegetative classification*: Douglas-fir/ninebark (CN260)  
*Hydric soil rating*: No

### Minor Components

#### Scoap

*Percent of map unit*: 14 percent  
*Landform*: Escarpments  
*Landform position (two-dimensional)*: Backslope  
*Landform position (three-dimensional)*: Side slope  
*Down-slope shape*: Linear  
*Across-slope shape*: Linear  
*Other vegetative classification*: Douglas-fir/ninebark (CN260)  
*Hydric soil rating*: No

#### Springdale

*Percent of map unit*: 11 percent  
*Landform*: Outwash terraces  
*Landform position (three-dimensional)*: Riser  
*Down-slope shape*: Linear  
*Across-slope shape*: Linear  
*Other vegetative classification*: ponderosa pine/common snowberry (CN170)  
*Hydric soil rating*: No

#### Elmira

*Percent of map unit*: 5 percent  
*Landform*: Outwash terraces  
*Landform position (three-dimensional)*: Riser  
*Down-slope shape*: Convex

## Custom Soil Resource Report

*Across-slope shape:* Convex  
*Other vegetative classification:* Douglas-fir/common snowberry (CN310)  
*Hydric soil rating:* No

### **Klickson**

*Percent of map unit:* 5 percent  
*Landform:* Escarpments  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Other vegetative classification:* Douglas-fir/ninebark (CN260)  
*Hydric soil rating:* No

## **3146—Scoop-Wapal complex, 30 to 60 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2wc7  
*Elevation:* 1,530 to 2,400 feet  
*Mean annual precipitation:* 18 to 23 inches  
*Mean annual air temperature:* 42 to 45 degrees F  
*Frost-free period:* 90 to 120 days  
*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Scoop and similar soils:* 45 percent  
*Wapal and similar soils:* 35 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Scoap**

#### **Setting**

*Landform:* Escarpments  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Outwash mixed with loess and minor amounts of volcanic ash in the upper part

#### **Typical profile**

*O<sub>i</sub> - 0 to 1 inches:* slightly decomposed plant material  
*A<sub>1</sub> - 1 to 7 inches:* gravelly ashy sandy loam  
*A<sub>2</sub> - 7 to 17 inches:* very gravelly ashy sandy loam  
*B<sub>w</sub> - 17 to 30 inches:* very gravelly sandy loam  
*BC - 30 to 47 inches:* very gravelly sandy loam  
*C - 47 to 60 inches:* gravelly loamy sand

#### **Properties and qualities**

*Slope:* 30 to 60 percent

## Custom Soil Resource Report

*Depth to restrictive feature:* More than 80 inches  
*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 3.3 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7e  
*Hydrologic Soil Group:* B  
*Ecological site:* F043AY518WA - Warm-Frigid, Xeric, Loamy Slopes, mixed ash surface (Douglas-Fir/Warm Dry Shrub) *Pseudotsuga menziesii* / *Physocarpus malvaceus* - *Symphoricarpos albus*  
*Other vegetative classification:* Douglas-fir/ninebark (CN260)  
*Hydric soil rating:* No

### Description of Wapal

#### Setting

*Landform:* Outwash terraces  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Sandy and gravelly glaciofluvial deposits with minor amounts of volcanic ash and loess in the upper part

#### Typical profile

*O<sub>i</sub> - 0 to 2 inches:* slightly decomposed plant material  
*A - 2 to 6 inches:* gravelly ashy coarse sandy loam  
*Bw<sub>1</sub> - 6 to 13 inches:* gravelly ashy coarse sandy loam  
*Bw<sub>2</sub> - 13 to 17 inches:* very gravelly coarse sandy loam  
*BC - 17 to 21 inches:* very gravelly loamy coarse sand  
*C - 21 to 30 inches:* extremely gravelly coarse sand  
*Bq<sub>1</sub> - 30 to 36 inches:* very gravelly coarse sand  
*Bq<sub>2</sub> - 36 to 62 inches:* extremely gravelly coarse sand

#### Properties and qualities

*Slope:* 30 to 60 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Somewhat excessively drained  
*Capacity of the most limiting layer to transmit water (Ksat):* High (1.98 to 5.95 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:* Very low (about 2.5 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7e  
*Hydrologic Soil Group:* A  
*Ecological site:* F043AY585WA - Warm-Frigid, Xeric, Sandy, Outwash Terraces (Douglas-fir Warm Dry Shrub)  
*Other vegetative classification:* Douglas-fir/ninebark (CN260)

## Custom Soil Resource Report

*Hydric soil rating:* No

### Minor Components

#### Rock outcrop

*Percent of map unit:* 5 percent

*Hydric soil rating:* No

#### Elmira

*Percent of map unit:* 5 percent

*Landform:* Outwash terraces

*Landform position (three-dimensional):* Riser

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Other vegetative classification:* Douglas-fir/common snowberry (CN310)

*Hydric soil rating:* No

#### Rubble land

*Percent of map unit:* 5 percent

*Hydric soil rating:* No

#### Klickson

*Percent of map unit:* 5 percent

*Landform:* Escarpments

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Other vegetative classification:* Douglas-fir/ninebark (CN260)

*Hydric soil rating:* No

## 3503—Uhlig ashy silt loam, dry, 0 to 8 percent slopes

### Map Unit Setting

*National map unit symbol:* 2kkz7

*Elevation:* 2,000 to 2,500 feet

*Mean annual precipitation:* 15 to 18 inches

*Mean annual air temperature:* 46 to 52 degrees F

*Frost-free period:* 90 to 150 days

*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Uhlig, dry, and similar soils:* 80 percent

*Minor components:* 20 percent

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

### Description of Uhlig, Dry

#### Setting

*Landform:* Outwash terraces

## Custom Soil Resource Report

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Loess mixed with minor amounts of volcanic ash over glaciofluvial deposits

### Typical profile

*Ap1 - 0 to 4 inches:* ashy silt loam

*Ap2 - 4 to 10 inches:* ashy silt loam

*A - 10 to 18 inches:* ashy loam

*Bt1 - 18 to 32 inches:* loam

*Bt2 - 32 to 42 inches:* loam

*C - 42 to 60 inches:* very fine sandy loam

### Properties and qualities

*Slope:* 0 to 8 percent

*Depth to restrictive feature:* More than 80 inches

*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:* High (about 10.4 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2e

*Hydrologic Soil Group:* B

*Ecological site:* R009XC430WA - Loamy Bunchgrass 15-18 PZ

*Hydric soil rating:* No

### Minor Components

#### Narcisse

*Percent of map unit:* 5 percent

*Landform:* Drainageways

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* R009XB535WA - Loamy Dwarf Shrub 18-24 PZ

*Hydric soil rating:* No

#### Cheney

*Percent of map unit:* 5 percent

*Landform:* Outwash plains

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* R009XB535WA - Loamy Dwarf Shrub 18-24 PZ

*Hydric soil rating:* No

#### Battleplain

*Percent of map unit:* 5 percent

*Landform:* Outwash plains

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

## Custom Soil Resource Report

*Across-slope shape:* Linear

*Other vegetative classification:* ponderosa pine/bluebunch wheatgrass (CN130)

*Hydric soil rating:* No

### **Deno**

*Percent of map unit:* 3 percent

*Landform:* Plateaus

*Landform position (three-dimensional):* Tread

*Microfeatures of landform position:* Mounds

*Down-slope shape:* Linear

*Across-slope shape:* Convex

*Ecological site:* R009XB535WA - Loamy Dwarf Shrub 18-24 PZ

*Hydric soil rating:* No

### **Seaboldt, dry**

*Percent of map unit:* 2 percent

*Landform:* Outwash plains on plateaus

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* R009XB535WA - Loamy Dwarf Shrub 18-24 PZ

*Hydric soil rating:* No

## **3504—Brincken ashy silt loam, 0 to 8 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2kkzg

*Elevation:* 1,800 to 2,600 feet

*Mean annual precipitation:* 15 to 18 inches

*Mean annual air temperature:* 46 to 52 degrees F

*Frost-free period:* 90 to 140 days

*Farmland classification:* All areas are prime farmland

### **Map Unit Composition**

*Brincken and similar soils:* 70 percent

*Minor components:* 30 percent

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

### **Description of Brincken**

#### **Setting**

*Landform:* Outwash terraces on loess hills

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Loess mixed with minor amounts of volcanic ash over sandy and gravelly glaciofluvial deposits over an older age of loess

#### **Typical profile**

*Ap - 0 to 7 inches:* ashy silt loam

*A - 7 to 13 inches:* ashy silt loam

## Custom Soil Resource Report

*AB - 13 to 19 inches:* ashy silt loam  
*Bw - 19 to 29 inches:* ashy silt loam  
*Bt1 - 29 to 41 inches:* extremely gravelly loam  
*Bt2 - 41 to 57 inches:* very gravelly sandy clay loam  
*2Btb - 57 to 60 inches:* silty clay loam

### Properties and qualities

*Slope:* 0 to 8 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to high  
(0.06 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:* Moderate (about 8.8 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 2e  
*Hydrologic Soil Group:* B  
*Ecological site:* R009XC430WA - Loamy Bunchgrass 15-18 PZ  
*Hydric soil rating:* No

### Minor Components

#### Reardan

*Percent of map unit:* 10 percent  
*Landform:* Loess hills  
*Landform position (two-dimensional):* Summit, footslope  
*Landform position (three-dimensional):* Interfluve, base slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R009XB535WA - Loamy Dwarf Shrub 18-24 PZ  
*Hydric soil rating:* No

#### Athena

*Percent of map unit:* 6 percent  
*Landform:* Loess hills  
*Landform position (two-dimensional):* Summit, footslope  
*Landform position (three-dimensional):* Interfluve, base slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R009XB535WA - Loamy Dwarf Shrub 18-24 PZ  
*Hydric soil rating:* No

#### Uhlig, dry

*Percent of map unit:* 5 percent  
*Landform:* Outwash terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R009XB535WA - Loamy Dwarf Shrub 18-24 PZ  
*Hydric soil rating:* No

#### Cheney

*Percent of map unit:* 5 percent

## Custom Soil Resource Report

*Landform:* Outwash plains  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R009XB535WA - Loamy Dwarf Shrub 18-24 PZ  
*Hydric soil rating:* No

### **Tucannon**

*Percent of map unit:* 3 percent  
*Landform:* Plateaus  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R009XB535WA - Loamy Dwarf Shrub 18-24 PZ  
*Hydric soil rating:* No

### **Narcisse**

*Percent of map unit:* 1 percent  
*Landform:* Drainageways  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R009XB535WA - Loamy Dwarf Shrub 18-24 PZ  
*Hydric soil rating:* No

# Soil Information for All Uses

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## Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

## Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

## Hydric Rating by Map Unit

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

## Custom Soil Resource Report

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

### References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

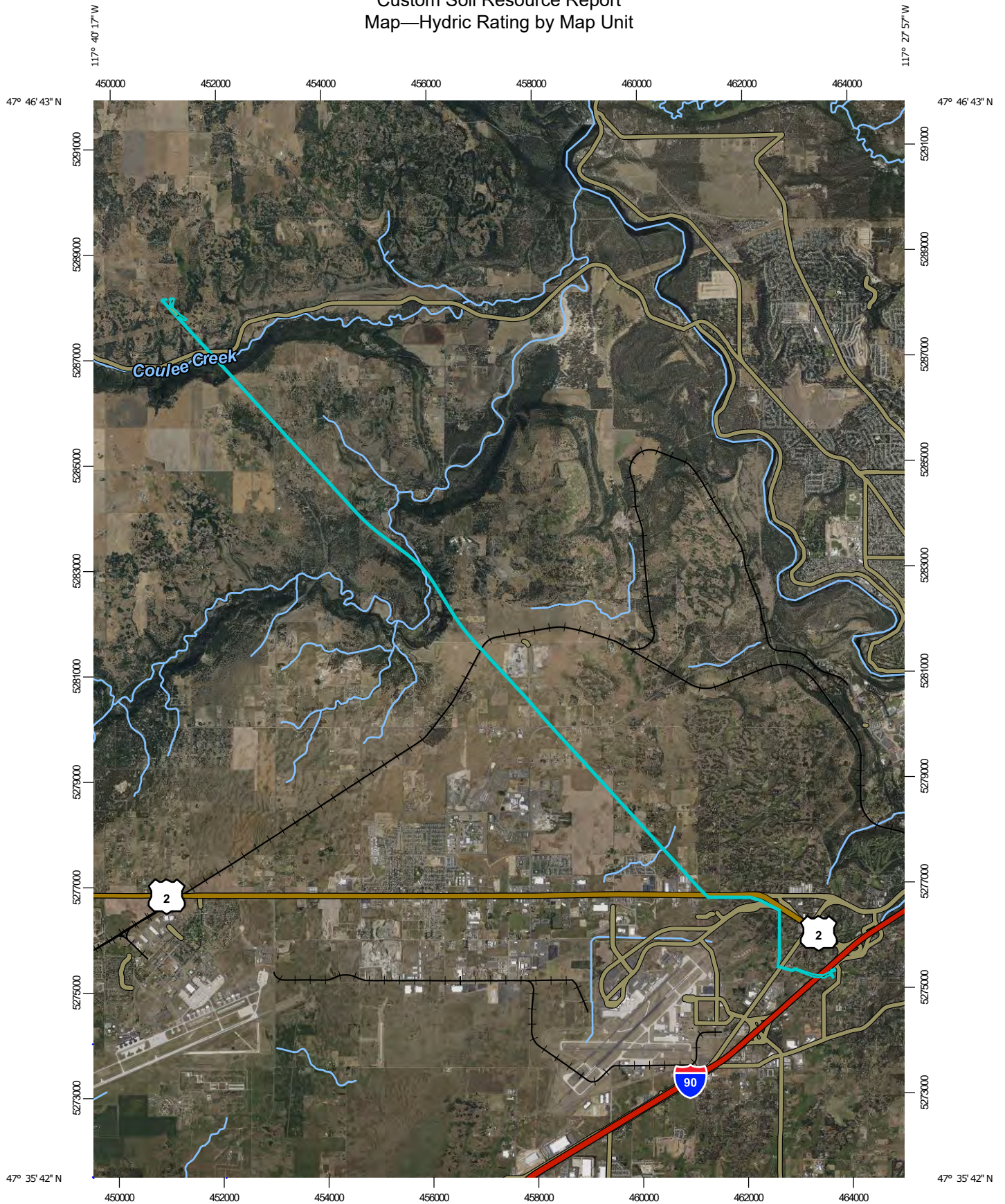
Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

# Custom Soil Resource Report Map—Hydric Rating by Map Unit



Map Scale: 1:99,500 if printed on A portrait (8.5" x 11") sheet.

0 1000 2000 4000 6000 Meters


0 4500 9000 18000 27000 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84









### MAP LEGEND

**Area of Interest (AOI)**







 Area of Interest (AOI)

**Soils**







**Soil Rating Polygons**

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available


**Soil Rating Lines**

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available






**Soil Rating Points**

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available


**Water Features**

 Streams and Canals

**Transportation**

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

**Background**

 Aerial Photography

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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: Spokane County, Washington  
 Survey Area Data: Version 16, Aug 26, 2024

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

Date(s) aerial images were photographed: May 9, 2022—Aug 15, 2022

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.

**Table—Hydric Rating by Map Unit**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
1020	Cocolalla ashy silt loam, 0 to 3 percent slopes	82	0.1	0.1%
1021	Cocolalla-Hardesty complex, 0 to 3 percent slopes	53	0.9	0.6%
1203	Haploxerolls ashy silt loam, channeled, 0 to 8 percent slopes	5	4.7	3.1%
2053	Speigle-Rock outcrop complex, 15 to 30 percent slopes	0	8.5	5.5%
2054	Speigle-Rubble land-Rock outcrop complex, 30 to 90 percent slopes	0	1.8	1.2%
3026	Phoebe, dry-Battleplain complex, 0 to 8 percent slopes	0	3.3	2.1%
3040	Cheney-Alecanyon complex, 0 to 8 percent slopes	0	16.8	10.9%
3041	Alecanyon, very stony-Cheney complex, 0 to 8 percent slopes	0	11.4	7.4%
3044	Cheney ashy silt loam, 0 to 8 percent slopes	3	13.1	8.5%
3045	Rockly-Deno complex, 0 to 15 percent slopes	5	5.6	3.6%
3046	Cheney-Seaboldt, dry, complex, 0 to 8 percent slopes	2	17.5	11.4%
3110	Fourmound-Stutler complex, 0 to 8 percent slopes	2	0.6	0.4%
3113	Stutler-Springdale complex, 3 to 15 percent slopes	0	2.1	1.4%
3114	Rockly-Fourmound complex, 0 to 15 percent slopes	4	19.8	12.8%
3115	Northstar-Rock outcrop complex, 3 to 15 percent slopes	4	3.7	2.4%
3117	Northstar-Rock outcrop-Rockly complex, 0 to 15 percent slopes	5	20.6	13.4%
3120	Marble loamy sand, 0 to 8 percent slopes	0	3.3	2.1%

## Custom Soil Resource Report

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
3122	Marble loamy sand, 15 to 30 percent slopes	0	2.9	1.9%
3123	Marble loamy sand, 30 to 55 percent slopes	0	1.5	1.0%
3141	Springdale gravelly ashy coarse sandy loam, 8 to 15 percent slopes	0	6.3	4.1%
3143	Spens very gravelly loamy coarse sand, 30 to 65 percent slopes	0	1.7	1.1%
3144	Wapal gravelly ashy coarse sandy loam, 0 to 8 percent slopes	0	0.6	0.4%
3145	Wapal gravelly ashy coarse sandy loam, 15 to 30 percent slopes	0	1.8	1.1%
3146	Scoap-Wapal complex, 30 to 60 percent slopes	0	0.8	0.5%
3503	Uhlig ashy silt loam, dry, 0 to 8 percent slopes	0	4.1	2.6%
3504	Brincken ashy silt loam, 0 to 8 percent slopes	0	0.3	0.2%
<b>Totals for Area of Interest</b>			<b>154.3</b>	<b>100.0%</b>

### Rating Options—Hydric Rating by Map Unit

*Aggregation Method: Percent Present*

*Component Percent Cutoff: None Specified*

*Tie-break Rule: Lower*

# References

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- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2\\_054262](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262)
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- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2\\_053580](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580)
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2\\_053374](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374)
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

## Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2\\_054242](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242)

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2\\_053624](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624)

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. [http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs142p2\\_052290.pdf](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf)

**NOTES TO USERS**

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

**Coastal Base Flood Elevations** shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The projection used in the preparation of this map was Universal Transverse Mercator (UTM) zone 11. The horizontal datum was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov/> or contact the National Geodetic Survey at the following address:

NGS Information Services  
NOAA, NNGS12  
National Geodetic Survey  
SSIMC-3, #5202  
1315 East-West Highway  
Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov/>.

**Base map** information shown on this FIRM was derived from multiple sources. Base map files were provided in digital format by Spokane County GIS and Washington State Department of Natural Resources. This information was compiled at various map scales during the time period 1995-2007.

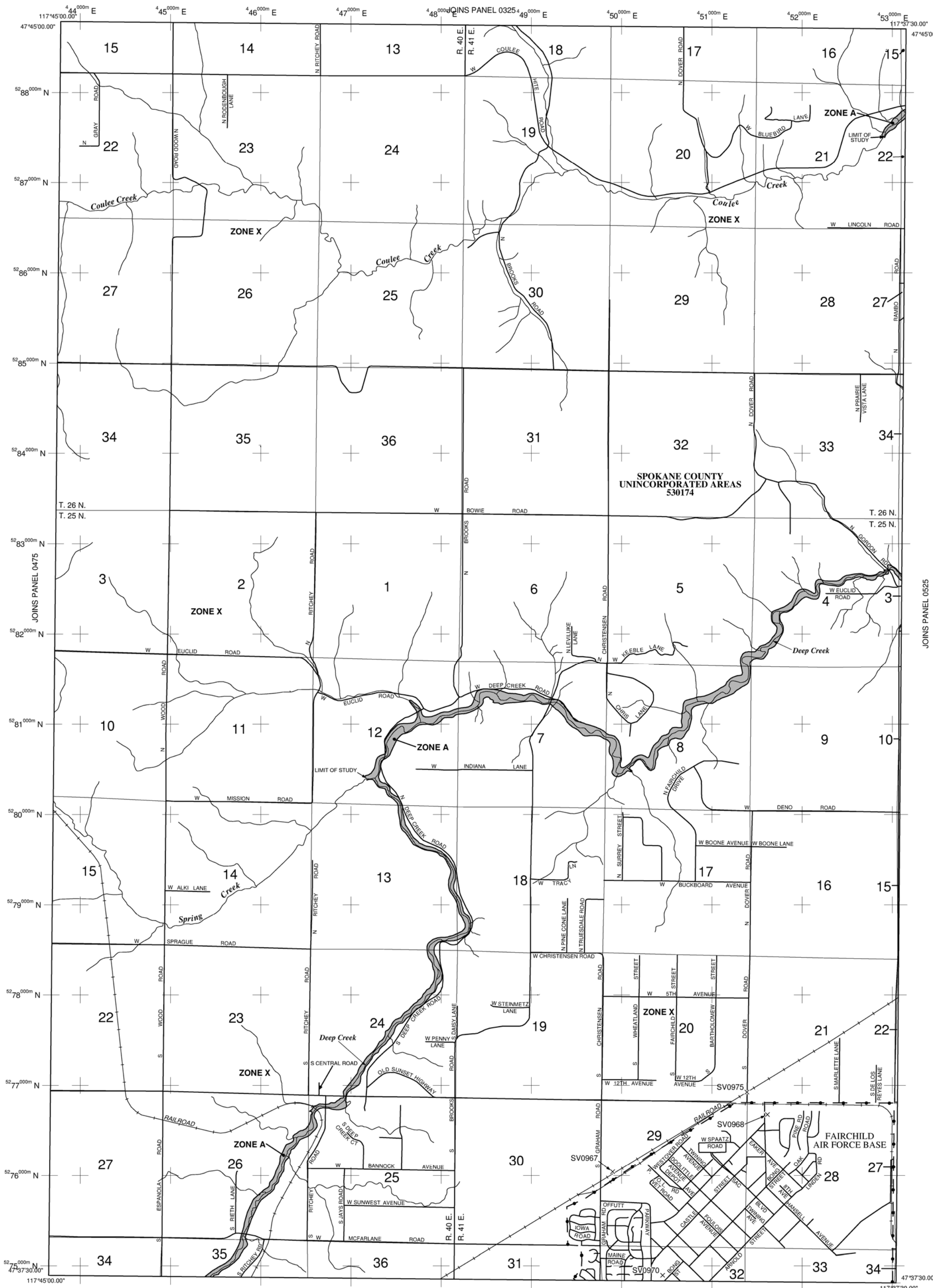
This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

**Corporate limits** shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at <http://www.msc.fema.gov/>.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-MAP(1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/>.



**LEGEND**

**SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

**ZONE A** No Base Flood Elevations determined.

**ZONE AE** Base Flood Elevations determined.

**ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

**ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

**ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently identified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

**ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

**ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

**ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

**FLOODWAY AREAS IN ZONE AE**

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

**OTHER FLOOD AREAS**

**ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

**OTHER AREAS**

**ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.

**ZONE D** Areas in which flood hazards are undetermined, but possible.

**COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**

**OTHERWISE PROTECTED AREAS (OPAs)**

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.

Base Flood Elevation line and value; elevation in feet\*  
 Base Flood Elevation value where uniform within zone; elevation in feet\*  
 \* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

(A) Cross section line  
 (23) Transsect line

Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)  
 1000-meter Universal Transverse Mercator grid ticks, zone 11  
 6000000 M 5000-foot grid ticks; Washington State Plane coordinate system, north zone (FIPS/CONE 4601), Lambert Conformal Conic  
 DX5510 Bench mark (see explanation in Notes to Users section of this FIRM panel)  
 M1.5 River Mile

**MAP REPOSITORIES**  
 Refer to Map Repositories list on Map Index

**EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP**  
 July 6, 2010  
**EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL**

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

**MAP SCALE 1" = 2000'**  
 0 1000 2000 4000 FEET  
 0 600 1200 METERS

**NATIONAL FLOOD INSURANCE PROGRAM**

**PANEL 0500D**

**FIRM**  
**FLOOD INSURANCE RATE MAP**  
**SPOKANE COUNTY,**  
**WASHINGTON**  
**AND INCORPORATED AREAS**

**PANEL 500 OF 1150**  
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**CONTAINS:**

COMMUNITY	NUMBER	PANEL	SUFFIX
SPOKANE COUNTY	530174	0500	D

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER**  
**53063C0500D**

**EFFECTIVE DATE**  
**JULY 6, 2010**

**Federal Emergency Management Agency**

**NOTES TO USERS**

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The projection used in the preparation of this map was Universal Transverse Mercator (UTM) zone 11. The horizontal datum was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov/> or contact the National Geodetic Survey at the following address:

NGS Information Services  
NOAA, NNGS12  
National Geodetic Survey  
SSM-C-3, #5202  
1315 East-West Highway  
Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov/>.

Base map information shown on this FIRM was derived from multiple sources. Base map files were provided in digital format by Spokane County GIS and Washington State Department of Natural Resources. This information was compiled at various map scales during the time period 1995-2007.

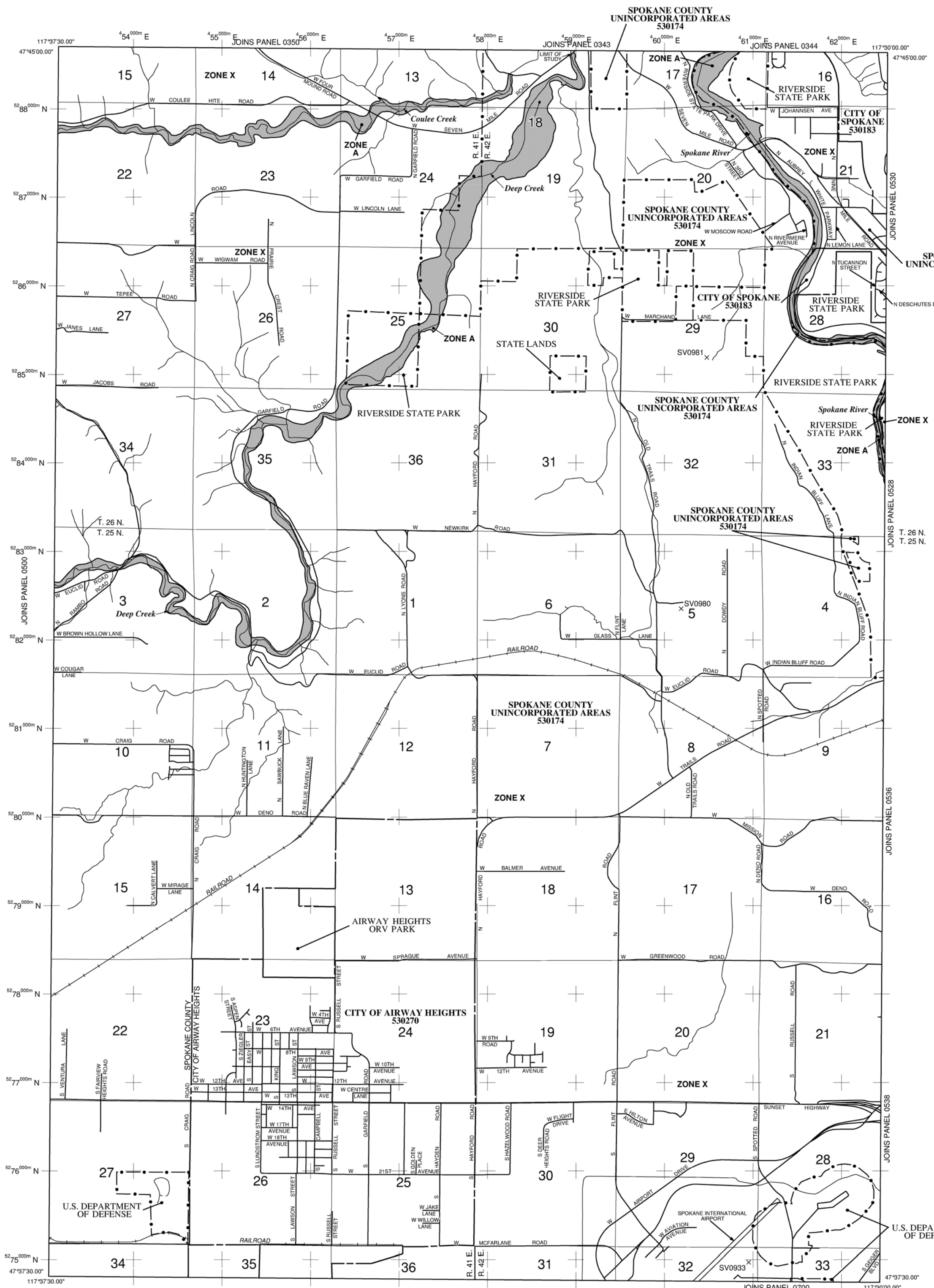
This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed Map Index for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the FEMA Map Service Center at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at <http://www.msc.fema.gov/>.

If you have questions about this map or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/>.



**LEGEND**

**SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

**ZONE A** No Base Flood Elevations determined.

**ZONE AE** Base Flood Elevations determined.

**ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

**ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

**ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently identified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

**ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

**ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

**ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

**FLOODWAY AREAS IN ZONE AE**

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

**OTHER FLOOD AREAS**

**ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

**OTHER AREAS**

**ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.

**ZONE D** Areas in which flood hazards are undetermined, but possible.

**COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**

**OTHERWISE PROTECTED AREAS (OPAs)**

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

Floodplain boundary  
Floodway boundary  
Zone D boundary  
CBRS and OPA boundary  
Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.  
Base Flood Elevation line and value; elevation in feet\*  
Base Flood Elevation value where uniform within zone; elevation in feet\*  
\* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

Cross section line  
Transect line  
Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)  
1000-meter Universal Transverse Mercator grid ticks, zone 11  
5000-foot grid ticks: Washington State Plane coordinate system, north zone (FIPS/CONE 4601), Lambert Conformal Conic  
DX5510  
Bench mark (see explanation in Notes to Users section of this FIRM panel)  
M1.5  
River Mile  
MAP REPOSITORIES  
Refer to Map Repositories list on Map Index  
EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP  
July 6, 2010  
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

**MAP SCALE 1" = 2000'**

0 1000 2000 4000 FEET  
0 600 1200 METERS

**NATIONAL FLOOD INSURANCE PROGRAM**

**PANEL 0525D**

**FIRM**  
**FLOOD INSURANCE RATE MAP**  
**SPOKANE COUNTY,**  
**WASHINGTON**  
**AND INCORPORATED AREAS**

**PANEL 525 OF 1150**  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**CONTAINS:**

COMMUNITY	NUMBER	PANEL	SUFFIX
SPOKANE COUNTY	530174	0525	D
AIRWAY HEIGHTS, CITY OF	530270	0525	D
SPOKANE, CITY OF	530183	0525	D

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER**  
**53063C0525D**

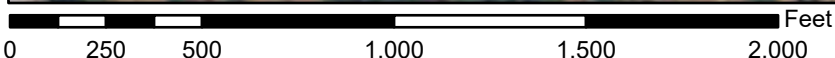
**EFFECTIVE DATE**  
**JULY 6, 2010**

**Federal Emergency Management Agency**

# National Flood Hazard Layer FIRMette



117°29'33"W 47°37'58"N



1:6,000

117°28'56"W 47°37'33"N

Basemap Imagery Source: USGS National Map 2023

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

<b>SPECIAL FLOOD HAZARD AREAS</b>		Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i>
		Regulatory Floodway
<b>OTHER AREAS OF FLOOD HAZARD</b>		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone D</i>
<b>OTHER AREAS</b>		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
<b>GENERAL STRUCTURES</b>		Area of Undetermined Flood Hazard <i>Zone D</i>
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
<b>OTHER FEATURES</b>		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
<b>MAP PANELS</b>		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped
		The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.



This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

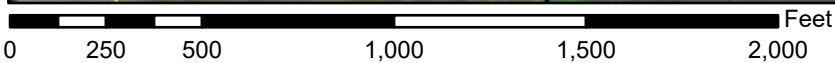
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **8/21/2025 at 10:47 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

# National Flood Hazard Layer FIRMette



117°30'3"W 47°38'31"N



1:6,000

117°29'25"W 47°38'7"N

Basemap Imagery Source: USGS National Map 2023

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i>
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone D</i>
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard <i>Zone D</i>
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
MAP PANELS		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped
		The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.



This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

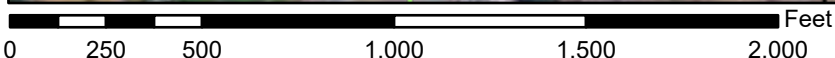
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **8/21/2025 at 10:45 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

# National Flood Hazard Layer FIRMMette



117°30'10"W 47°38'3"N



1:6,000

117°29'33"W 47°37'39"N

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **8/21/2025 at 10:46 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.