

## Sewall Wetland Consulting, Inc.

PO Box 880  
Fall City, WA 98024

Phone: 253-859-0515

August 11, 2023

Michael Jackson  
63510 Overtree Rd  
Bend, Oregon 97701

RE: Critical Area Report – Parcels #636935, 136935, 960269 & 960270  
Kittitas County, Washington  
SWC Job #23-141

This report describes our observations of any jurisdictional wetlands, streams and/or buffers on or within 200' of Parcels #636935, 136935, 960269 & 960270, located at 13131 Salmon la Sac Road in unincorporated Kittitas County, Washington.



*Above: Vicinity Map of site*



*Above: Aerial photograph of the study area from Kittitas Mapsifter website.*

The group of parcels parcel is an irregular shaped 9.97 acres in and located in the SE  $\frac{1}{4}$  of Section 34, Township 21 North, Range 14 east of the W.M.

In addition to the 4 parcels listed, we also reviewed a portion of Parcel #296935 which abuts the west side of the site and is owned by the Wenatchee National Forest.

## **METHODOLOGY**

Ed Sewall of Sewall Wetland Consulting, Inc. inspected the site and areas within 200' of the site on June 19 & 23, 2023.

The site was reviewed using methodology described in the **Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)** (USACOE September 2008) as required by the US Army Corps of Engineers starting in June of 2009. This is the methodology currently recognized by Kittitas County for wetland determinations and delineations. The site was also reviewed using methodology described in Soil colors were identified using the 1990 Edited and Revised Edition of the **Munsell Soil Color Charts** (Kollmorgen Instruments Corp. 1990).

Wetlands in Kittitas County are rated using the 2014 Washington State Department of Ecology Washington State *Wetland Rating System for Eastern Washington, 2014 Update* dated June 2014 Publication No. 14-06-018.

The ordinary high water mark (OHWM) of any streams was located based upon the criteria described in the *Washington Department of Ecology publication Determining The Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State* (WADOE Publication 16-06-029, March 2010 revised October 2016).

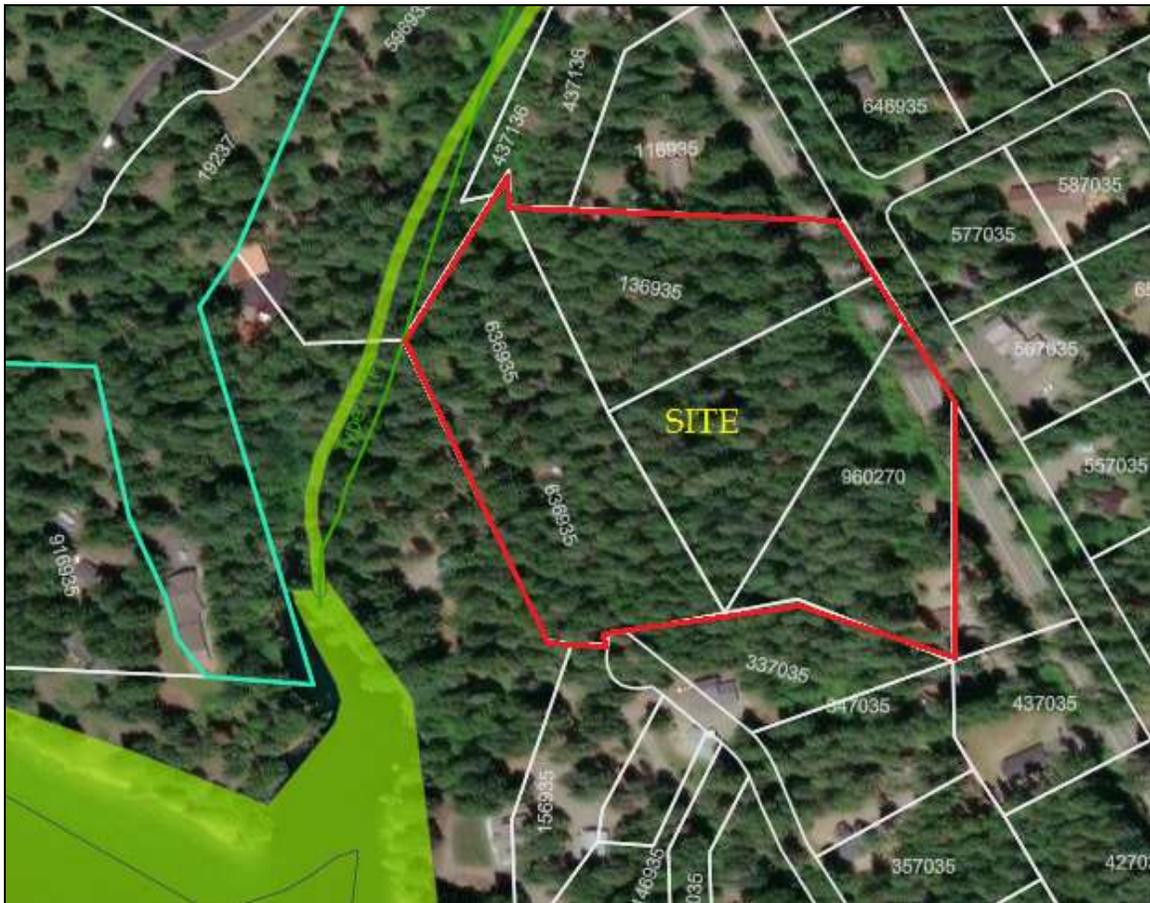
## **OBSERVATIONS**

### *Existing Site Documentation.*

Prior to visiting the site, a review of several natural resource inventory maps was conducted. Resources reviewed included the Kittitas Taxsifter website, National Wetland Inventory Map, WDNR Fpars Stream Typing Map, Kittitas County critical areas mapping, and the NRCS Soil Survey online mapping and Data.

### **Kittitas Taxsifter Website**

The Kittitas Taxsifter website with streams and wetland layers activated depicts no wetlands or streams on the site. A Type F stream is depicted to the northwest of the site (Spring Creek). The site is also depicted just east of the “Shoreline Residential” zone of Lake Cle Elum.



*Above: Kittitas County TaxsiFTER with wetland and stream layers activated.*



*Above: Kittitas TaxSifter website with Shoreline layer activated.*

### **National Wetlands Inventory (NWI)**

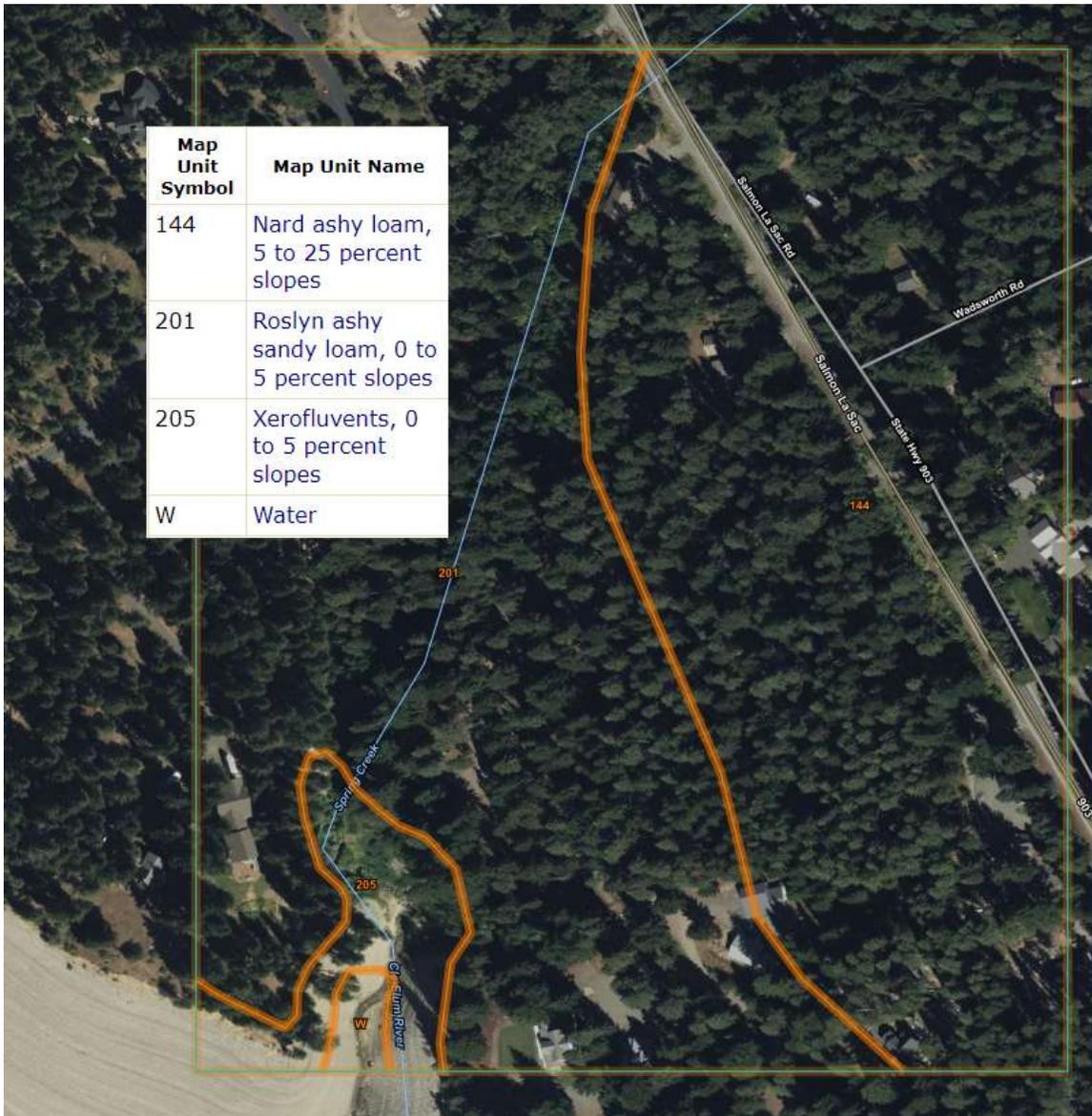
The NWI map depicts no wetlands or streams on the site. A stream is depicted to the northwest as is shown on the County mapping.



*Above: NWI map of the area of the site*

### **Soil Survey**

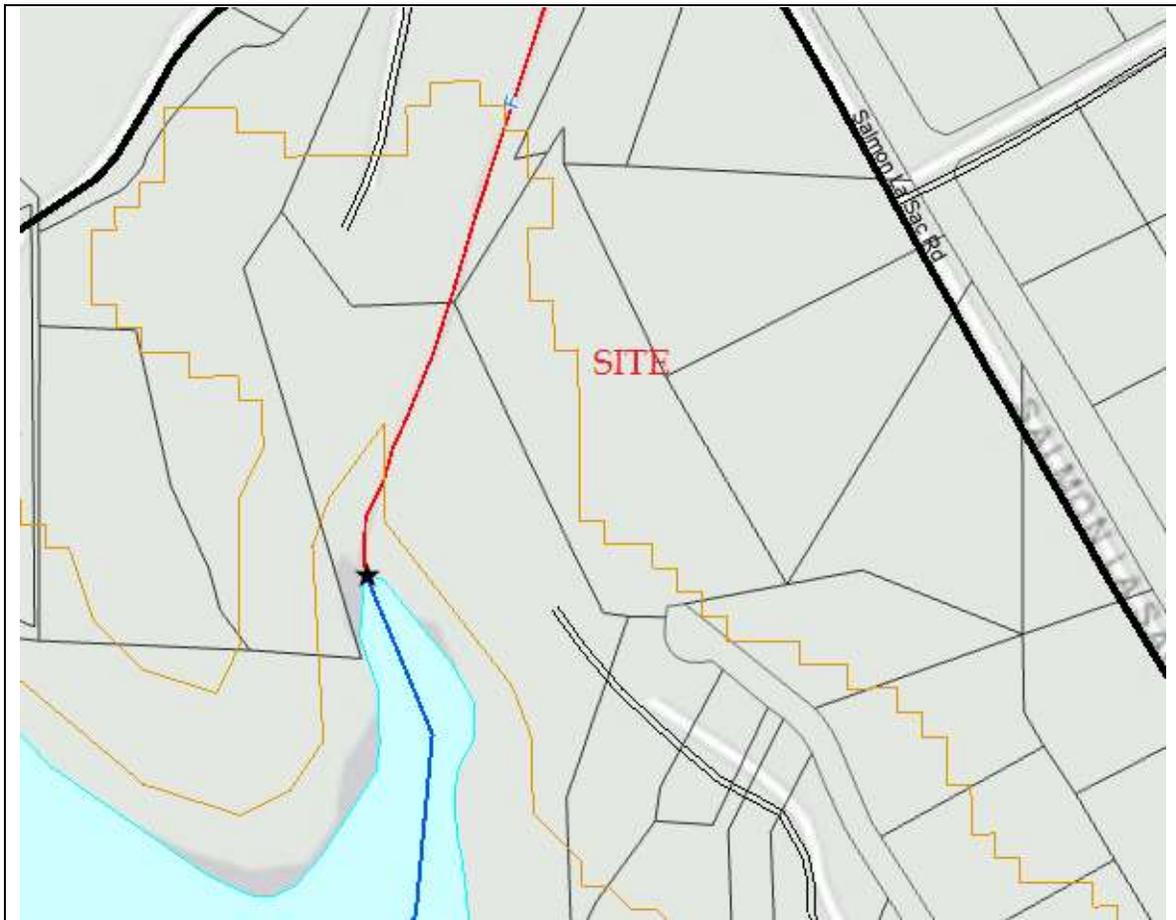
According to the NRCS Soil Mapper website, the site is mapped as containing moderately well drained Nard ashy loam, as well as well drained Roslyn ashy sandy loam. These soils are not considered "hydric" or wetland soils according to the publication Hydric Soils of the United States (USDA NTCHS Pub No.1491, 1991).



*Above: NRCS soil map of the site.*

**WADNR FPARS website**

According to the WADNR FPARS website with stream types layers activated depicts a Type F stream off-site to the northwest. Lake Cle Elum is depicted as a Type S water also off-site to the west.



*Above: WDNR Fpars Stream Mapping of the area of the site.*

### **Field observations**

The site contains an existing gravel driveway as well 3 residential structures located on the north side of the site. The site is forested and also contains numerous trails as well as informal gravel roads.

The site is generally on a flat plateau sloping off to the northwest and west towards Spring Creek and Lake Cle Elum.

The site has an overstory mix of ponderosa pine, Douglas fir, and along the creek, some western red cedar.

Understory species consist of Oregon grape, serviceberry, snowberry, hazelnut, vine maple and lupine.

Soil pits excavated throughout the site revealed a dry gravelly loam soil with a chroma of 3-4 without any hydric soil characteristics.

### Critical Areas

A single Type F stream (Spring Creek) and the Shoreline of Lake Cle Elum are present along the site. In addition, a small, slope type wetland is present along the south side of Spring Creek as depicted on the attached Survey. Steep slopes are also present but review of slopes was not a part of this study.

Below is a description of these critical areas;

#### *Streams/Waterbodies*

##### Spring Creek

As previously described, a Type F stream known as Spring Creek passes through the site. The south OHHM of the stream was flagged with blue flagging labeled S1-S13. At flag S13 the stream joins the Type S waterbody (Lake Cle Elum), which continues the flag line to S25 as a Type S water.

The stream has an 8'-10' wide, cobble boulder bottom which becomes wider at the lake with more of a gravel bottom. Some flow was present in the channel during our dry season review of the channel.

This stream best meets the classification of a Type F stream due to its known fish use and channel >3' in width and < 16% slope.

According to Kittitas County Municipal Code 17.A.04.030-4, Type F streams in the Cascade Ecoregion have a 150' buffer measured from the OHHM of the stream. In addition, a 15' Building Setback line is required from the edge of the buffer.

**Table 17A.04.030-4 Standard RMZ Widths  
 Kittitas County Nonshoreline Rivers, Streams, Lakes and Ponds  
 (does not include building setback [KCC 17A.01.090.5])**

Stream Type	Riparian Management Zone Widths <sup>1,2</sup>	
	Cascade Ecoregion (feet)	Columbia Plateau Ecoregion (feet)
Type S (Shoreline)	See the SMP	See the SMP
Type F	150	100
Type Np	100	65
Type Ns	50	40

Lake Cle Elum

Lake Cle elum borders the west side of the site. The OHWM of the lake was flagged with blue flags S13-S25. The OHWM in this area is a sloping cobble log covered area which has a relatively deistinlcy marked drift line along the OHWM.

Lake Cle Elumis a Type S water. Shorelin waters have buffers based upon the Kittitas County Shoreline Management Plan (SMP). According the the SMP, Shoreline Residential areas as are located along the site have a 100’ buffer measured from the OHWM.

**Table 5.5-1. Standard Shoreline Buffers (Type S Waters)**

<b>Shoreline Environment Designation</b>	<b>Type S Standard Shoreline Buffer Width (feet)</b>
Urban Conservancy	100
Shoreline Residential	100
Rural Conservancy	100
Natural	150

Wetland A

There is a small slope type wetland along the south side of Spring Creek. This area was flagged with pink wetland delineation flagging labeled A1-A5.

This wetland consists of a groundwater seep area that drains into Spring Creek. The area contains several western red cedar trees as well as vine maple, manna grass, hedge nettle and lady fern.

Soil pits excavated within this wetland revealed a sapric muck soil that was saturated to the surface.

Using the US Fish and Wildlife Wetland Classification Method (Cowardin et al. 1979), Wetland A would be classified as PFO4B (palustrine, forested, needle leaved coniferous, saturated).

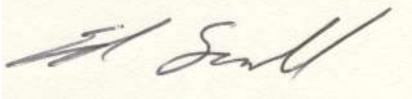
Wetland A was rated using the WADOE Washington State Wetland Rating System for Eastern Washington 2014 update (Publ No. 14-06-030). This wetland was rated as a slope wetland and scored a total of 17 points with 6 points for habitat indicating a Category III wetland. According to Kittitas County Municipal Code Chapter 17A.07, Category III wetlands for a high intensity land use have a 150' buffer measured from the wetland edge. The buffer is 110' if the land use is a moderate intensity.

**Table 17A.07.030: Standard Buffer Widths**

Category of Wetland	Land Use with Low Impact <sup>1</sup>	Land Use with Moderate Impact <sup>2</sup>	Land Use with High Impact <sup>3</sup>
I	125 ft	190 ft	250 ft
II	100 ft	150 ft	200 ft
III	75 ft	110 ft	150 ft
IV	25 ft	40 ft	50 ft

If you have any questions in regards to this report or need additional information, please feel free to contact me at (253) 859-0515 or at [esewall@sewallwc.com](mailto:esewall@sewallwc.com) .

Sincerely,  
*Sewall Wetland Consulting, Inc.*



Ed Sewall  
Senior Wetlands Ecologist PWS #212

Attached: Site Survey  
Data Sheets  
Wetland Rating Form and associated exhibits

## REFERENCES

Cowardin, L., V. Carter, F. Golet, and E. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service, FWS/OBS-79-31, Washington, D. C.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1. U. S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, Mississippi.

Kittitas County Municipal Code

Muller-Dombois, D. and H. Ellenberg. 1974. Aims and Methods of Vegetation Ecology. John Wiley & Sons, Inc. New York, New York.

Munsell Color. 1988. Munsell Soil Color Charts. Kollmorgen Instruments Corp., Baltimore, Maryland.

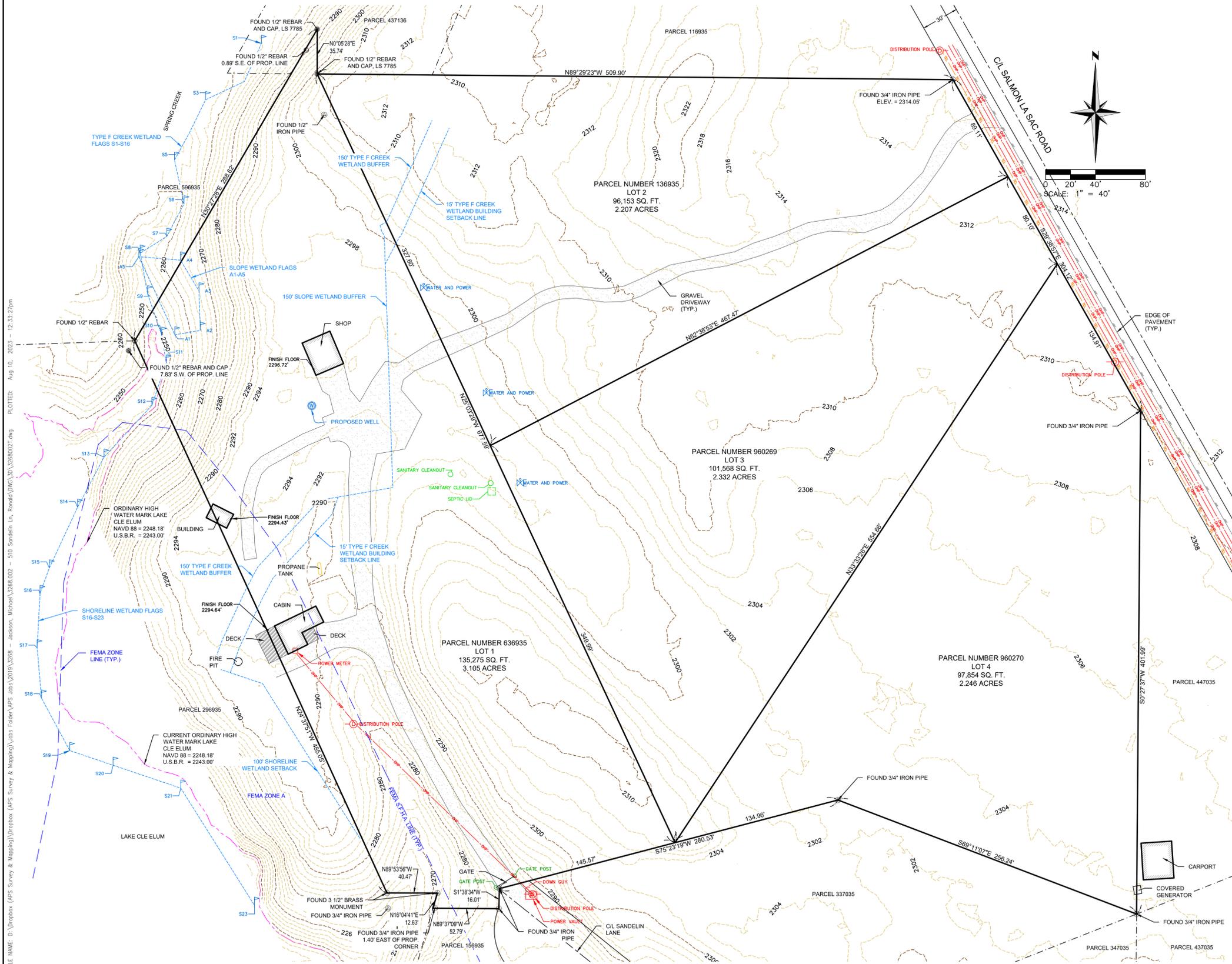
National Technical Committee for Hydric Soils. 1991. Hydric Soils of the United States. USDA Misc. Publ. No. 1491.

Reed, P., Jr. 1988. National List of Plant Species that Occur in Wetlands: Northwest (Region 9). 1988. U. S. Fish and Wildlife Service, Inland Freshwater Ecology Section, St. Petersburg, Florida.

Reed, P.B. Jr. 1993. 1993 Supplement to the list of plant species that occur in wetlands: Northwest (Region 9). USFWS supplement to Biol. Rpt. 88(26.9) May 1988.

USDA NRCS & National Technical Committee for Hydric Soils, September 1995. Field Indicators of Hydric Soils in the United States - Version 2.1

**BOUNDARY AND TOPOGRAPHIC SURVEY**  
**LOTS 1 THROUGH 4, VDOLK CLE ELUM LOTS**  
 NW1/4 OF THE SE1/4 OF SECTION 34, TOWNSHIP 21 NORTH, RANGE 14 EAST, W.M., KITTITAS COUNTY, WASHINGTON



**HORIZONTAL DATUM:**  
 THE HORIZONTAL CONTROL IS BASED ON THE MONUMENTATION SURROUNDING THE SITE AND ESTABLISHED IN NAD83/2011 WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, EXPRESSED IN U.S. SURVEY FEET-GROUND DISTANCES.

**VERTICAL DATUM:**  
 NAVD 88  
 CONVERSION FACTOR BUREAU OF RECLAMATION DAM DATUM:  
 NAVD88 - 5.18' = U.S.B.R. DAM DATUM

**FLOOD PLAIN NOTES:**  
 BY GRAPHICAL SCALING ONLY, THE SUBJECT SITE IS LOCATED WITHIN FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) ZONE A AND AREAS OUTSIDE OF FEMA'S SPECIAL FLOOD HAZARD AREAS, AS SHOWN ON THE FLOOD INSURANCE MAP (FIRM), COMMUNITY PANEL NO. 53037C0365D, WHICH BEARS AN EFFECTIVE DATE OF SEPTEMBER 24, 2021. NO FIELD SURVEYING WAS PERFORMED TO DETERMINE THIS ZONE.

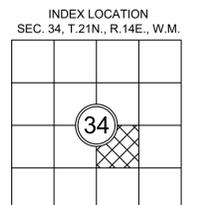
**PROJECT BENCHMARK:**  
 FOUND 3/4" IRON PIPE MARKING THE NORTHEAST CORNER OF KITTITAS COUNTY TAX PARCEL NUMBER 136935.  
 ELEVATION = 2314.05'

**CONTOUR INTERVAL - 2 FOOT:**  
 THE CONTOURS SHOWN HEREON WERE COMPUTER GENERATED FROM DIRECT FIELD OBSERVATIONS AND WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES-YAKIMA K2K 2014-LIDAR DATA, WITH RESULTING ACCURACY THAT MEETS OR EXCEEDS NATIONAL MAPPING STANDARDS, ONE-HALF THE CONTOUR INTERVAL.

- GENERAL NOTES:**
1. THE PURPOSE OF THIS SURVEY IS TO SHOW THE EXTERIOR BOUNDARY LINES, EXISTING SITE IMPROVEMENTS, NATURAL FEATURES AND EXISTING TERRAIN FOR LOTS 1-4, VDOLK CLE ELUM LOTS, AS SHOWN HEREON, FOR THE INTENDED USE OF ARCHITECTURAL AND CIVIL ENGINEERING DESIGN.
  2. THIS SURVEY WAS PERFORMED USING A TRIMBLE R12I IN CONJUNCTION WITH A TRIMBLE S SERIES, 3" TOTAL STATION WITH RESULTING ACCURACY THAT MEETS OR EXCEEDS STANDARDS PER WAC 332-130-090.
  3. THE INFORMATION ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE IN JUNE OF 2022 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
  4. ALL MONUMENTS SHOWN AS FOUND WERE LOCATED DURING THE COURSE OF THIS SURVEY.
  5. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT. EASEMENTS, ENCUMBRANCES AND RESTRICTIONS MAY EXIST ON THIS PROPERTY THAT ARE NOT SHOWN HEREON.
  6. UTILITIES SHOWN HEREON ARE BASED UPON ABOVE GROUND OBSERVATIONS. ACTUAL LOCATIONS OF UNDERGROUND UTILITIES MAY VARY.

**LEGAL DESCRIPTION:**  
 STATUTORY WARRANTY DEED  
 AFN: 201905240056  
 LOTS 1, 2, 3 AND 4 OF THAT CERTAIN SURVEY RECORDED SEPTEMBER 27, 2017, IN BOOK 41 OF SURVEYS, PAGES 39 THROUGH 41, UNDER AUDITOR'S FILE NO. 201709270059, RECORDS OF KITTITAS COUNTY, STATE OF WASHINGTON; BEING A PORTION OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 34, TOWNSHIP 21 NORTH, RANGE 14 EAST, W.M., KITTITAS COUNTY, STATE OF WASHINGTON.

- REFERENCES:**
- R1. SEGREGATION BOOK 41 OF SURVEYS, PAGES 39-41
  - R2. RECORD OF SURVEY BOOK 4 OF SURVEYS, PAGE 42
  - R3. RECORD OF SURVEY BOOK 39 OF SURVEYS, PAGES 171-175
  - R4. PLAT OF SUNSHINE ESTATES BOOK 3 OF PLATS, PAGES 72-73



**BOUNDARY & TOPOGRAPHIC SURVEY**  
**LOTS 1 THROUGH 4, VDOLK CLE ELUM LOTS**  
 FOR  
 13131 SALMON LA SAC ROAD AND 510 SANDEILIN LANE, RONALD, WASHINGTON

MICHAEL AND RACHEL JACKSON

KITTITAS COUNTY WASHINGTON  
 SCALE: 1" = 40'  
 DATE: 8/10/23  
 APSSM PROJECT NO.: 3268.002  
 ACAD NAME: 3268002T.dwg

SURVEYED BY: JC/DA	CHECKED BY: VW	APPROVED BY: SW
DATE: 8/10/2023	REVISION: CK'D	WETLANDS/WELL LOCATION: SW
BY: SW	APPR.:	SW

DRAWING FILE NAME: d:\dtopbox (APS Survey & Mapping)\dtopbox (APS Survey & Mapping)\Jobs Folder\APS Jobs\2019\3268 - Jackson, Michael\3268002T.dwg PLOTTED: Aug 10, 2023 - 12:35:27pm

Slope above stream

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Jackson City/County: Kittitas Sampling Date: 6-19-23  
 Applicant/Owner: \_\_\_\_\_ State: WA Sampling Point: DP#1  
 Investigator(s): Ed Smith Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

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

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

Hydrophytic Vegetation Present?	Yes _____	No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b>	Yes _____	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes _____	No <input checked="" type="checkbox"/>			
Remarks:					

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

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Pseudotsuga mucronata</u>	<u>60</u>		<u>FACU</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____				
= Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Berberis nervosa</u>	<u>60</u>		<u>FACU</u>	<u>        </u> Total % Cover of: <u>        </u> Multiply by:
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
= Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. _____				<input type="checkbox"/> Dominance Test is >50%
2. _____				<input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>
3. _____				<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
4. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. _____				
6. _____				
7. _____				
8. _____				
= Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Footnote:
1. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
= Total Cover				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>
Remarks:				

**SOIL**

Sampling Point: DP #1

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
1"	DuSF							
16	104314						gsl	

<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 Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			

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

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more 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 along 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)

**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:

Method A

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Jackson City/County: KATIAS Sampling Date: 6-19-23

Applicant/Owner: State: WA Sampling Point: DP#2

Investigator(s): Ed Smith Section, Township, Range:

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

Subregion (LRR): Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

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

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

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

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

Table with 2 columns: Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? and Is the Sampled Area within a Wetland? Yes No

Remarks:

VEGETATION - Use scientific names of plants.

Large table for vegetation data with columns: Tree Stratum, Sapling/Shrub Stratum, Herb Stratum, Woody Vine Stratum, Absolute % Cover, Dominant Species?, Indicator Status, Dominance Test worksheet, Prevalence Index worksheet, Hydrophytic Vegetation Indicators, and Hydrophytic Vegetation Present?

Remarks:

**SOIL**

Sampling Point: DPRZ

**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>		
<u>16</u>	<u>10Y 3/2</u>						<u>mucky</u>	

<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.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>
<input checked="" type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

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

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?**    Yes     No

Remarks:

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<u>Primary Indicators (minimum of one required; check all that apply)</u>	<u>Secondary Indicators (2 or more required)</u>
<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 along 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)

**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:

above return of lake

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Jackson City/County: Kingman Sampling Date: 6-11-23  
 Applicant/Owner: \_\_\_\_\_ State: WA Sampling Point: DP #3  
 Investigator(s): JD Smith Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks:	

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

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>33</u> (A/B)
4. _____	_____	_____	_____	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:	
1. <u>Salix sitchensis</u>	<u>40</u>		<u>FACW</u>	Total % Cover of:	Multiply by:
2. <u>Symphoricarpos albus</u>	<u>60</u>		<u>FACU</u>	OBL species _____ x 1 = _____	
3. <u>Betula nana</u>	<u>20</u>		<u>UPL</u>	FACW species _____ x 2 = _____	
4. _____	_____	_____	_____	FAC species _____ x 3 = _____	
5. _____	_____	_____	_____	FACU species _____ x 4 = _____	
= Total Cover				UPL species _____ x 5 = _____	Column Totals: _____ (A) _____ (B)
Herb Stratum (Plot size: _____)				Prevalence Index = B/A = _____	
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>	
2. _____	_____	_____	_____	___ Dominance Test is >50%	
3. _____	_____	_____	_____	___ Prevalence Index is ≤3.0 <sup>1</sup>	
4. _____	_____	_____	_____	___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
5. _____	_____	_____	_____	___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
6. _____	_____	_____	_____	___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
7. _____	_____	_____	_____	___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
8. _____	_____	_____	_____	___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
= Total Cover				___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
Woody Vine Stratum (Plot size: _____)				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>	
2. _____	_____	_____	_____		
= Total Cover					
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____			
Remarks:					

**SOIL**

Sampling Point: DD43

**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>		
16	10M 4/19						gsl	

<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"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)
	<input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)

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

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <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)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

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

**Wetland Hydrology Present?** Yes \_\_\_\_\_ No

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

Remarks:

Wetland name or number A

## RATING SUMMARY – Eastern Washington

Name of wetland (or ID #): Jackson Wet A Date of site visit: 6-19-23  
 Rated by Ed Sewall Trained by Ecology?  Yes  No Date of training \_\_\_\_\_  
 HGM Class used for rating Slope Wetland has multiple HGM classes?  Y  N

**NOTE: Form is not complete without the figures requested (figures can be combined).**  
 Source of base aerial photo/map \_\_\_\_\_

**OVERALL WETLAND 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

**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

FUNCTION	Improving Water Quality		Hydrologic		Habitat					
	<i>Circle the appropriate ratings</i>									
Site Potential	H	M	<u>L</u>	H	<u>M</u>	L	H	<u>M</u>	L	
Landscape Potential	H	<u>M</u>	L	H	<u>M</u>	L	H	<u>M</u>	L	
Value	H	<u>M</u>	L	H	<u>M</u>	L	H	<u>M</u>	L	<b>TOTAL</b>
Score Based on Ratings		<u>5</u>		<u>6</u>		<u>6</u>		<u>17</u>		

### 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY	
	<i>Circle the appropriate category</i>	
Vernal Pools	<u>II</u>	III
Alkali	I	
Wetland of High Conservation Value	I	
Bog and Calcareous Fens	I	
Old Growth or Mature Forest – slow growing	I	
Aspen Forest	I	
Old Growth or Mature Forest – fast growing	II	
Floodplain forest	II	
None of the above	<input checked="" type="checkbox"/>	

Wetland name or number   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	
Hydroperiods (including area of open water for H 1.3)	D 1.4, H 1.2, H 1.3	
Location of outlet ( <i>can be added to map of hydroperiods</i> )	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	D 2.2, D 5.2	
Map of the contributing basin	D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	D 3.3	

**Riverine Wetlands**

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

**Lake Fringe Wetlands**

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

**Slope Wetlands**

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

## HGM Classification of Wetland in Eastern Washington

For questions 1-4, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-4 apply, and go to Question 5.

1. Does the entire unit **meet both** of the following criteria?
- The vegetated part of the wetland is on the water side of the Ordinary High Water Mark of a body of permanent open water (without any plants on the surface) that is at least 20 ac (8 ha) in size
  - At least 30% of the open water area is deeper than 10 ft (3 m)

**NO - go to 2**

**YES - The wetland class is Lake Fringe (Lacustrine Fringe)**

2. Does the entire wetland unit **meet all** of the following criteria?
- The wetland is on a slope (*slope can be very gradual*),
  - The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks;
  - The water leaves the wetland **without being impounded**.

NO - go to 3

**YES - The wetland class is Slope**

**NOTE:** Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).

3. Does the entire wetland unit **meet all** of the following criteria?
- The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river;
  - The overbank flooding occurs at least once every 10 years.

NO - go to 4

**YES - The wetland class is Riverine**

**NOTE:** The Riverine wetland can contain depressions that are filled with water when the river is not flooding.

4. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

NO - go to 5

**YES - The wetland class is Depressional**

5. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. **GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-4 APPLY TO DIFFERENT AREAS IN THE WETLAND UNIT (make a rough sketch to help you decide).** Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

Wetland name or number     A    

**NOTE:** Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the wetland unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM Class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine (the riverine portion is within the boundary of depression)	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine

*If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.*

Wetland name or number A

<b>SLOPE WETLANDS</b>		Points (only 1 score per box)
<b>Water Quality Functions</b> - Indicators that the site functions to improve water quality		
<b>S 1.0. Does the site have the potential to improve water quality?</b>		
S 1.1. Characteristics of average slope of wetland: (a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance) Slope is 1% or less Slope is > 1% - 2% Slope is > 2% - 5% Slope is greater than 5%	points = 3 points = 2 points = 1 <u>points = 0</u>	0
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or tureorganic (use NRCS definitions): Yes = 3 <u>No = 0</u>		0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. <i>Dense means you have trouble seeing the soil surface (&gt;75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.</i> Dense, uncut, herbaceous plants > 90% of the wetland area Dense, uncut, herbaceous plants > ½ of area Dense, woody, plants > ½ of area Dense, uncut, herbaceous plants > ¼ of area Does not meet any of the criteria above for plants	points = 6 points = 3 <u>points = 2</u> points = 1 points = 0	2
Total for S 1	Add the points in the boxes above	2

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

<b>S 2.0. Does the landscape have the potential to support the water quality function at the site?</b>		
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? <u>Yes = 1</u> No = 0		1
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other sources _____ Yes = 1 No = 0		0
Total for S 2	Add the points in the boxes above	1

**Rating of Landscape Potential** If score is: 1-2 = M 0 = L Record the rating on the first page

<b>S 3.0. Is the water quality improvement provided by the site valuable to society?</b>		
S 3.1. Does the wetland discharge directly to a stream, river, or lake that is on the 303(d) list (within 1 mi)? Yes = 1 <u>No = 0</u>		0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? At least one aquatic resource in the basin is on the 303(d) list. <u>Yes = 1</u> No = 0		1
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the drainage or basin in which wetland is found)? Yes = 2 <u>No = 0</u>		0
Total for S 3	Add the points in the boxes above	1

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

Wetland name or number A

**SLOPE WETLANDS**

Points  
(only 1  
score per  
box)

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

S 4.0. Does the site have the potential to reduce flooding and erosion?

S 4.1. 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. *Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows.*

Dense, uncut, **rigid** plants cover > 90% of the area of the wetland

All other conditions

points = 1  
points = 0

**Rating of Site Potential** If score is:  1 = M  0 = L

Record the rating on the first page

S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?

S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses that generate excess surface runoff?

Yes = 1 No = 0

**Rating of Landscape Potential** If score is:  1 = M  0 = L

Record the rating on the first page

S 6.0. Are the hydrologic functions provided by the site valuable to society?

S 6.1. Distance to the nearest areas downstream that have flooding problems:

The sub-basin immediately down-gradient of site has surface flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds)

points = 2

Surface flooding problems are in a sub-basin farther down-gradient

points = 1

No flooding problems anywhere downstream

points = 0

S 6.2. Has the site been identified as important for flood storage and flood conveyance in a regional flood control plan?

Yes = 2 No = 0

Total for S 6

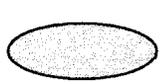
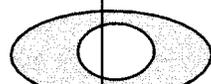
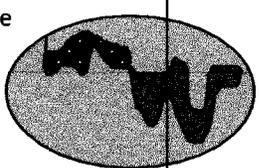
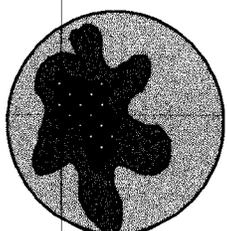
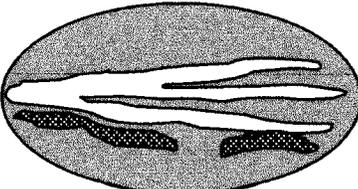
Add the points in the boxes above

**Rating of Value** If score is:  2-4 = H  1 = M  0 = L

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

Wetland name or number A

<b>These questions apply to wetlands of all HGM classes.</b> <b>HABITAT FUNCTIONS - Indicators that site functions to provide important habitat</b>		(only 1 score per box)
<b>H 1.0. Does the wetland have the potential to provide habitat for many species?</b>		
<b>H 1.1. Structure of the plant community:</b> <i>Check the Cowardin vegetation classes present and categories of emergent plants. Size threshold for each category is <math>\geq \frac{1}{4}</math> ac or <math>\geq 10\%</math> of the wetland if wetland is <math>&lt; 2.5</math> ac.</i> <input type="checkbox"/> Aquatic bed <input type="checkbox"/> Emergent plants 0-12 in (0-30 cm) high are the highest layer and have $> 30\%$ cover <input checked="" type="checkbox"/> Emergent plants >12-40 in (>30-100 cm) high are the highest layer with $>30\%$ cover <input type="checkbox"/> Emergent plants $> 40$ in ( $> 100$ cm) high are the highest layer with $>30\%$ cover <input type="checkbox"/> Scrub-shrub (areas where shrubs have $>30\%$ cover) <input checked="" type="checkbox"/> Forested (areas where trees have $>30\%$ cover)		4 or more checks: points = 3 3 checks: points = 2 2 checks: points = 1 1 check: points = 0
<b>H 1.2. Is one of the vegetation types Aquatic Bed?</b>		Yes = 1 No = 0
<b>H 1.3. Surface water</b> <b>H 1.3.1. Does the wetland have areas of open water (without emergent or shrub plants) over at least <math>\frac{1}{4}</math> ac OR 10% of its area during the March to early June OR in August to the end of September? Answer YES for Lake Fringe wetlands.</b> Yes = 3 points & go to H 1.4 No = go to H 1.3.2 <b>H 1.3.2. Does the wetland have an intermittent or permanent, and unvegetated stream within its boundaries, or along one side, over at least <math>\frac{1}{4}</math> ac or 10% of its area? Answer yes only if H 1.3.1 is No</b>		Yes = 3 No = 0
<b>H 1.4. Richness of plant species</b> Count the number of plant species in the wetland that cover at least $10 \text{ ft}^2$ . Different patches of the same species can be combined to meet the size threshold. You do not have to name the species. <i>Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Russian olive, Phragmites, Canadian thistle, yellow-flag iris, and saltcedar (Tamarisk)</i> # of species ____		Scoring: $> 9$ species: points = 2 <del>4-9 species: points = 1</del> $< 4$ species: points = 0
<b>H 1.5. Interspersion of habitats</b> Decide from the diagrams below whether interspersion among types of plant structures (described in H 1.1), and unvegetated areas (open water or mudflats) is high, moderate, low, or none. Use map of Cowardin and emergent plant classes prepared for questions H 1.1 and map of open water from H 1.3. If you have four or more plant classes or three classes and open water, the rating is always high.		Figure__
 None = 0 points		 Low = 1 point
 Moderate = 2 points		
All three diagrams in this row are High = 3 points		   Riparian braided channels with 2 classes

Wetland name or number A

6

<b>H 1.6. Special habitat features</b> <i>Check the habitat features that are present in the wetland. The number of checks is the number of points.</i>		
<input checked="" type="checkbox"/> Loose rocks larger than 4 in OR large, downed, woody debris (> 4 in diameter) within the area of surface ponding or in stream. <input type="checkbox"/> Cattails or bulrushes are present within the wetland. <input type="checkbox"/> Standing snags (diameter at the bottom > 4 in) in the wetland or within 30 m (100 ft) 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 checked="" type="checkbox"/> Invasive species cover less than 20% in each stratum of vegetation ( <i>canopy, sub-canopy, shrubs, herbaceous, moss/ground cover</i> )		2
Total for H 1	Add the points in the boxes above	8

**Rating of Site Potential** If score is: 15-18 = H 7-14 = M 0-6 = L Record the rating on the first page

<b>H 2.0. Does the landscape have the potential to support habitat functions of the site?</b>		
<b>H 2.1. Accessible habitat (only area of habitat abutting wetland). If total accessible habitat is:</b> <i>Calculate:</i> 5% undisturbed habitat <u>20</u> + [(% moderate and low intensity land uses)/2] <u>10</u> = <u>15</u> % > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1km Polygon points = 2 10-19% of 1km Polygon points = 1 <10% of 1km Polygon points = 0		1
<b>H 2.2. Undisturbed habitat in 1 km Polygon around wetland.</b> <i>Calculate:</i> 30% undisturbed habitat <u>30</u> + [(% moderate and low intensity land uses)/2] <u>15</u> = <u>45</u> % Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10 - 50% and in 1-3 patches points = 2 Undisturbed habitat 10 - 50% and > 3 patches points = 1 Undisturbed habitat < 10% of Polygon points = 0		2
<b>H 2.3. Land use intensity in 1 km Polygon:</b> > 50% of Polygon is high intensity land use points = (-2) Does not meet criterion above points = 0		0
<b>H 2.4. The wetland is in an area where annual rainfall is less than 12 in, and its water regime is not influenced by irrigation practices, dams, or water control structures. Generally, this means outside boundaries of reclamation areas, irrigation districts, or reservoirs</b> Yes = 3 No = 0		0
Total for H 2	Add the points in the boxes above	3

**Rating of Landscape Potential** If score is: 4-9 = H 1-3 = M < 1 = L Record the rating on the first page

<b>H 3.0. Is the habitat provided by the site valuable to society?</b>		
<b>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose the highest score that applies to the wetland being rated</b> Site meets ANY of the following criteria: points = 2 — It has 3 or more priority habitats within 100 m (see Appendix B) — It provides habitat for Threatened or Endangered species (any plant or animal on state or federal lists) — It is mapped as a location for an individual WDFW species — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources — It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats within 100 m (see Appendix B) points = 1 Site does not meet any of the criteria above points = 0		

**Rating of Value** If score is: 2 = H 1 = M 0 = L Record the rating on the first page

Wetland name or number   A  

**CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

*Please determine if the wetland meets the attributes described below and circle the appropriate category. NOTE: A wetland may meet the criteria for more than one set of special characteristics. Record all those that apply. NOTE: All wetlands should also be characterized based on their functions.*

Wetland Type	Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	Category
<p><b>SC 1.0. Vernal pools</b></p> <p>Is the wetland <b>less than 4000 ft<sup>2</sup></b>, and does it meet at least <b>two</b> of the following criteria?</p> <ul style="list-style-type: none"> <li>— Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input.</li> <li>— Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. <i>If you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool.</i></li> <li>— The soil in the wetland is shallow [<b>&lt; 1 ft (30 cm)</b> deep] and is underlain by an impermeable layer such as basalt or clay.</li> <li>— Surface water is present for less than 120 days during the wet season.</li> </ul>	<p>Yes – Go to <b>SC 1.1</b>    <b>No = Not a vernal pool</b></p> <p>SC 1.1. Is the vernal pool relatively undisturbed in February and March?            Yes – Go to <b>SC 1.2</b>    <b>No = Not a vernal pool with special characteristics</b></p>	
<p>SC 1.2. Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 mi (other wetlands, rivers, lakes etc.)?</p>	<p>Yes = <b>Category II</b>    No = <b>Category III</b></p>	<p><b>Cat. II</b> <b>Cat. III</b></p>
<p><b>SC 2.0. Alkali wetlands</b></p> <p>Does the wetland meet <b>one</b> of the following criteria?</p> <ul style="list-style-type: none"> <li>— The wetland has a conductivity &gt; 3.0 mS/cm.</li> <li>— The wetland has a conductivity between 2.0 and 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as “alkali” species (see Table 4 for list of plants found in alkali systems).</li> <li>— 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.</li> </ul> <p><b>OR</b> does the wetland unit meet two of the following three sub-criteria?</p> <ul style="list-style-type: none"> <li>— Salt encrustations around more than 75% of the edge of the wetland</li> <li>— More than ¾ of the plant cover consists of species listed on Table 4</li> <li>— A pH above 9.0. All alkali wetlands have a high pH, but please note that some freshwater wetlands may also have a high pH. Thus, pH alone is not a good indicator of alkali wetlands.</li> </ul>	<p>Yes = <b>Category I</b>    <b>No = Not an alkali wetland</b></p>	<p><b>Cat. I</b></p>
<p><b>SC 3.0. Wetlands of High Conservation Value (WHCV)</b></p> <p>SC 3.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value?            Yes – Go to <b>SC 3.2</b>    <b>No – Go to SC 3.3</b></p> <p>SC 3.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?            Yes = <b>Category I</b>    No = <b>Not a WHCV</b></p> <p>SC 3.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?  <a href="http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf">http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</a>            Yes – <b>Contact WNHP/WDNR and go to SC 3.4</b>    <b>No = Not a WHCV</b></p> <p>SC 3.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and it is listed on their website?            Yes = <b>Category I</b>    No = <b>Not a WHCV</b></p>		<p><b>Cat. I</b></p>

Wetland name or number A

<p><b>SC 4.0 Bogs and Calcareous Fens</b></p> <p>Does the wetland (or any part of the wetland unit) meet both the criteria for soils and vegetation in bogs or calcareous fens? <i>Use the key below to identify if the wetland is a bog or calcareous fen. If you answer yes you will still need to rate the wetland based on its functions.</i></p>		
SC 4.1. Does an area within the wetland have organic soil horizons (i.e., layers of organic soil), either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? <i>See Appendix C for a field key to identify organic soils.</i>	Yes – Go to SC 4.3 No – Go to SC 4.2	
SC 4.2. Does an area within the wetland have organic soils, either peats or mucks, that are less than 16 in deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?	Yes – Go to SC 4.3 No = Is not a bog for rating	
SC 4.3. Does an area within the wetland have more than 70% cover of mosses at ground level AND at least 30% of the total plant cover consists of species in Table 5? <b>NOTE:</b> If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 5 are present, the wetland is a bog.	Yes = Category I bog No – Go to SC 4.4	
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 in Table 5 provide more than 30% of the cover under the canopy?	Yes = Category I bog No – Go to SC 4.5	Cat. I
SC 4.5. Do the species listed in Table 6 comprise at least 20% of the total plant cover within an area of peats and mucks?	Yes = Is a Calcareous Fen for purpose of rating No – Go to SC 4.6	
SC 4.6. Do the species listed in Table 6 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 ≥ 6.8 AND electrical conductivity is ≥ 200 uS/cm at multiple locations within the wetland	Yes = Is a Category I calcareous fen No = Is not a calcareous fen	Cat. I

<p><b>SC 5.0. Forested Wetlands</b></p> <p>Does the wetland have an area of forest rooted within its boundary that meets at least one of the following three criteria? (<i>Continue only if you have identified that a forested class is present in question H 1.1</i>)</p> <ul style="list-style-type: none"> <li>— The wetland is within the 100 year floodplain of a river or stream</li> <li>— Aspen (<i>Populus tremuloides</i>) represents at least 20% of the total cover of woody species</li> <li>— There is at least ¼ ac of trees (even in wetlands smaller than 2.5 ac) that are “mature” or “old-growth” according to the definitions for these priority habitats developed by WDFW (<i>see definitions in question H3.1</i>)</li> </ul>		
Yes – Go to SC 5.1 No = Not a forested wetland with special characteristics		
SC 5.1. Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees ( <i>see Table 7</i> )?	Yes = Category I No – Go to SC 5.2	Cat. I
SC 5.2. Does the wetland have areas where aspen ( <i>Populus tremuloides</i> ) represents at least 20% of the total cover of woody species?	Yes = Category I No – Go to SC 5.3	Cat. I
SC 5.3. Does the wetland have at least ¼ acre with a forest canopy where more than 50% of the tree species (by cover) are fast growing species ( <i>see Table 7</i> )?	Yes = Category II No – Go to SC 5.4	Cat. II
SC 5.4. Is the forested component of the wetland within the 100 year floodplain of a river or stream?	Yes = Category II No = Not a forested wetland with special characteristics	Cat. II
<p><b>Category of wetland based on Special Characteristics</b></p> <p><i>Choose the highest rating if wetland falls into several categories</i></p> <p>If you answered No for all types, enter “Not Applicable” on Summary Form</p>		NA

## Appendix B: WDFW Priority Habitats in Eastern Washington

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here: <http://wdfw.wa.gov/conservation/phs/list/>)

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland: **NOTE:** *This question is independent of the land use between the wetland and the priority habitat.*

- **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- **Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).
- **Old-growth/Mature forests:** Old-growth east of Cascade crest – Stands are highly variable in tree species composition and structural characteristics due to the influence of fire, climate, and soils. In general, stands will be >150 years of age, with 10 trees/ac (25 trees/ha) that are > 21 in (53 cm) dbh, and 1-3 snags/ac (2.5-7.5 snags/ha) that are > 12-14 in (30-35 cm) diameter. Downed logs may vary from abundant to absent. Canopies may be single or multi-layered. Evidence of human-caused alterations to the stand will be absent or so slight as to not affect the ecosystem's essential structures and functions. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west and 80-160 years old east of the Cascade crest.
- **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).
- **Riparian:** The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 12 in (30 cm) in eastern Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.
- **Shrub-steppe:** A nonforested vegetation type consisting of one or more layers of perennial bunchgrasses and a conspicuous but discontinuous layer of shrubs (see Eastside Steppe for sites with little or no shrub cover).
- **Eastside Steppe:** Nonforested vegetation type dominated by broadleaf herbaceous flora (i.e., forbs), perennial bunchgrasses, or a combination of both. Bluebunch wheatgrass (*Pseudoroegneria spicata*) is often the prevailing cover component along with Idaho fescue (*Festuca idahoensis*), Sandberg bluegrass (*Poa secunda*), rough fescue (*F. campestris*), or needlegrasses (*Achnatherum* spp.).
- **Juniper Savannah:** All juniper woodlands.

**Note:** All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.





# Water Quality Atlas Map

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v Basic  
 v Drawing  
 ^ Other

Keyboard Identify
 Measure Distance
 Measure Area
 Image Service

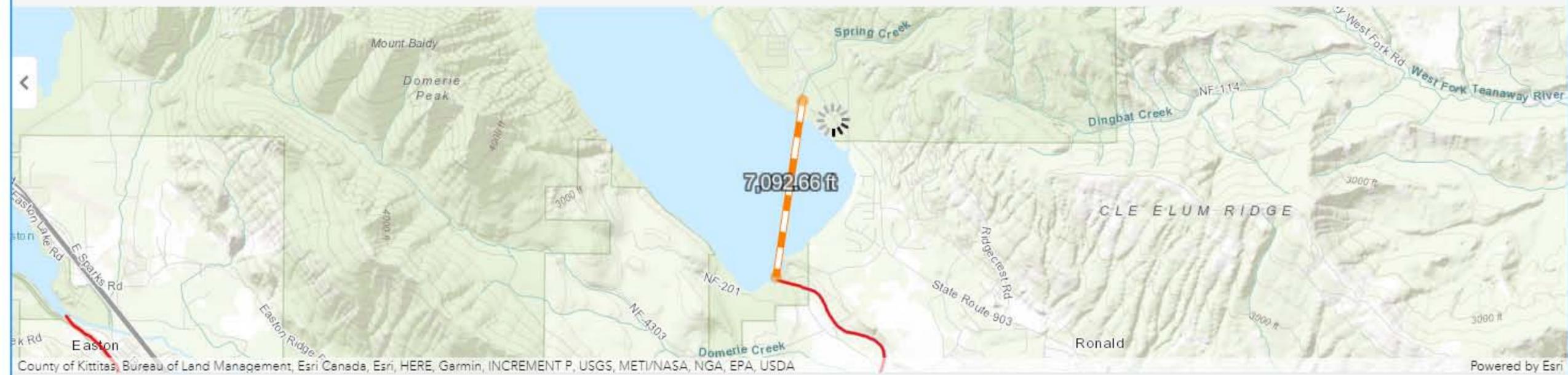
Usage:  
Click on map to add measure points. Double-click to finish.

Unit  
Feet

Distance  
7,092.66 ft

New measurement

Topo



Assessed Water/Sediment Filter Applied Clear filters Zoom to selection Table to CSV

Find	Listing ID	Assessment Unit ID	Category	Medium	Parameter	Details
	3724	17060108000228_001_001	5	Water	Temperature	<a href="#">View</a>
	3726	17030003000236_001_001	5	Water	Temperature	<a href="#">View</a>
	3727	17030001000538_001_001	5	Water	Temperature	<a href="#">View</a>

Show 5 entries Showing 1 to 5 of 5,739 entries First Previous Next Last



PHS Identify	
Occurrence Name	Gray wolf
Scientific Name	<i>Canis lupus</i>
Notes	This polygon mask represents one or more records of the above species or habitat occurrence. Contact PHS Data Release at <a href="mailto:phsproducts@dfw.wa.gov">phsproducts@dfw.wa.gov</a> for obtaining information about masked sensitive species and habitats.
Federal Status	Endangered
State Status	Endangered
PHS Listing Status	PHS Listed Occurrence
Sensitive	Y
SGCN	Y
Display Resolution	TOWNSHIP

Occurrence Name	Grizzly bear
Scientific Name	<i>Ursus arctos</i>
Notes	This polygon mask represents one or more records of the above species or habitat occurrence. Contact PHS Data Release at <a href="mailto:phsproducts@dfw.wa.gov">phsproducts@dfw.wa.gov</a> for obtaining information about masked sensitive species and habitats.
Federal Status	Threatened
State Status	Endangered
PHS Listing Status	PHS Listed Occurrence
Sensitive	Y
SGCN	Y
Display Resolution	TOWNSHIP

Occurrence Name	Northern Spotted Owl
Scientific Name	<i>Strix occidentalis</i>
Notes	This polygon mask represents one or more records of the above species or habitat occurrence. Contact PHS Data Release at <a href="mailto:phsproducts@dfw.wa.gov">phsproducts@dfw.wa.gov</a> for obtaining information about masked sensitive species and habitats.

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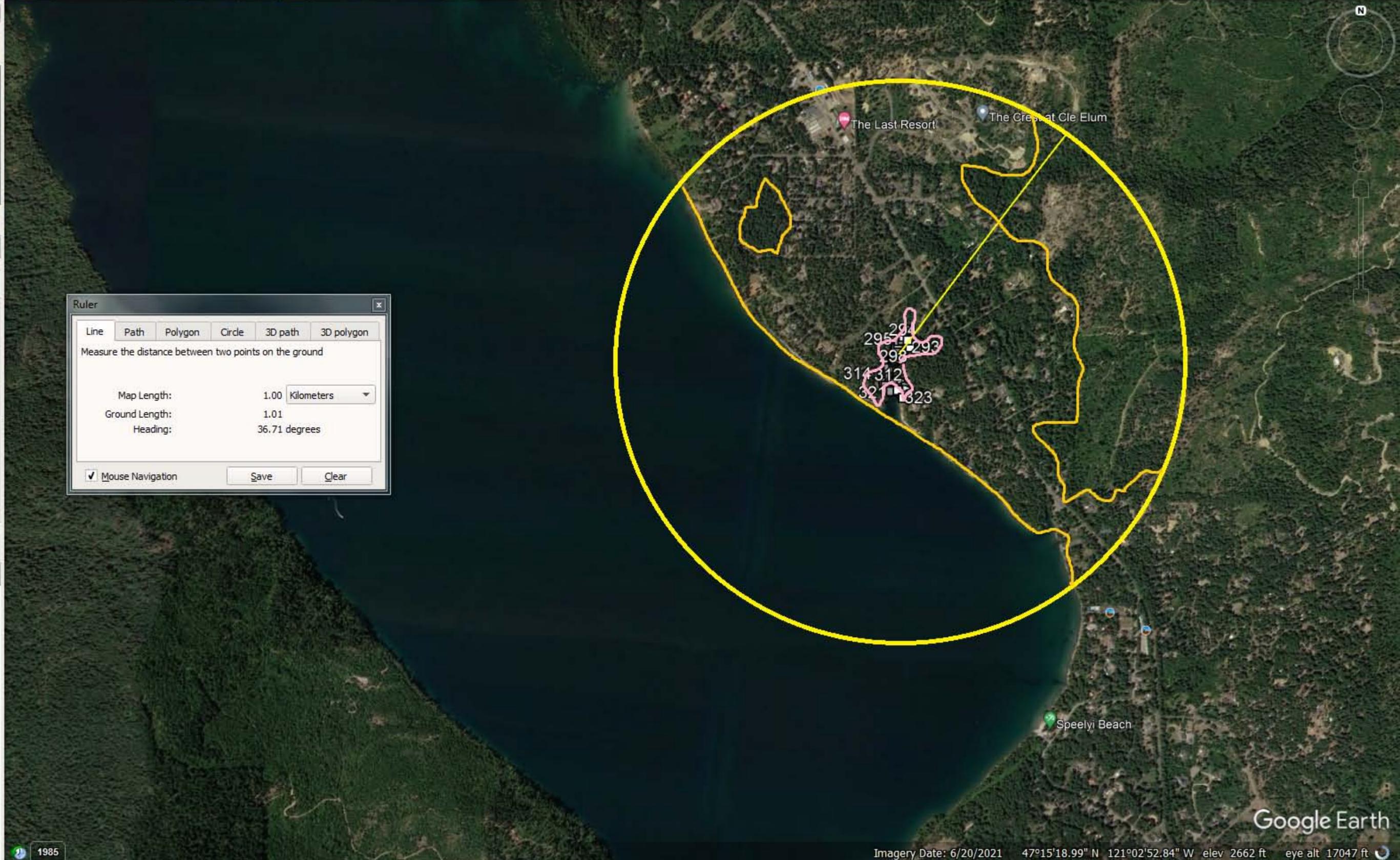
- Sightseeing Tour  
Make sure 3D Buildings layer is checked
- garmin GPS Device  
Created 09/07/12 08:30:41
- garmin GPS Device  
Created 12/12/12 08:01:16
- Untitled Polygon  
garmin GPS Device  
Created 02/21/13 12:17:00
- garmin GPS Device  
Created 03/04/13 14:07:06
- garmin GPS Device  
Created 03/19/13 09:08:15

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▼ Layers

Primary Database

- Announcements
- Borders and Labels
- Places
- Photos
- Roads
- 3D Buildings
- Weather
- Gallery
- More
- Terrain



Ruler

Line Path Polygon Circle 3D path 3D polygon

Measure the distance between two points on the ground

Map Length: 1.00 Kilometers

Ground Length: 1.01

Heading: 36.71 degrees

Mouse Navigation Save Clear

