

Sewall Wetland Consulting, Inc.

PO Box 880
Fall City, WA 98024

Phone: 253-859-0515

November 21, 2024

Chris Immer
1759 Joans Lane
Lummi Island, Washington 98262

RE: Critical Areas Report & Reasonable Use Justification
Parcels #738035, 728035, 718035, 708035, 698035, 688035,
678035, 668035, 658035 & 788035
Kittitas County, Washington
SWC Job #24-175

Dear Chris,

This report describes our observations and delineation of any jurisdictional wetlands or streams on Parcels #738035, 728035, 718035, 708035, 698035, 688035, 678035, 668035, & 658035, located off Jay Way in the Snoqualmie Pass area of unincorporated Kittitas County, Washington (the "site").



Above: Vicinity map of the site.

The site consists of a nine (9) irregularly shaped abutting parcels with an overall area of approximately 1.31 acres and located within NE $\frac{1}{4}$ of Section 9, Township 22 North, Range 11 East of the W.M.



Above: Kittitas County Taxsifter aerial image of the site.

METHODOLOGY

Ed Sewall of Sewall Wetland Consulting, Inc. inspected the site on November 6, 2022. 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.

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 flood & critical areas mapping, WDFW Priority Habitats and Species Maps, and the NRCS Soil Survey online mapping and Data.

Kittitas Taxsifter Website

The Kittitas Taxsifter website with streams and wetland layers activated depicts a linear emergent wetland as well as a Type F stream on the northeast side of the site. This layer is taken from the NWI map which has had no ground verification.



Above: Kittitas County Taxsifter with wetland and stream layers activated.

National Wetlands Inventory (NWI)

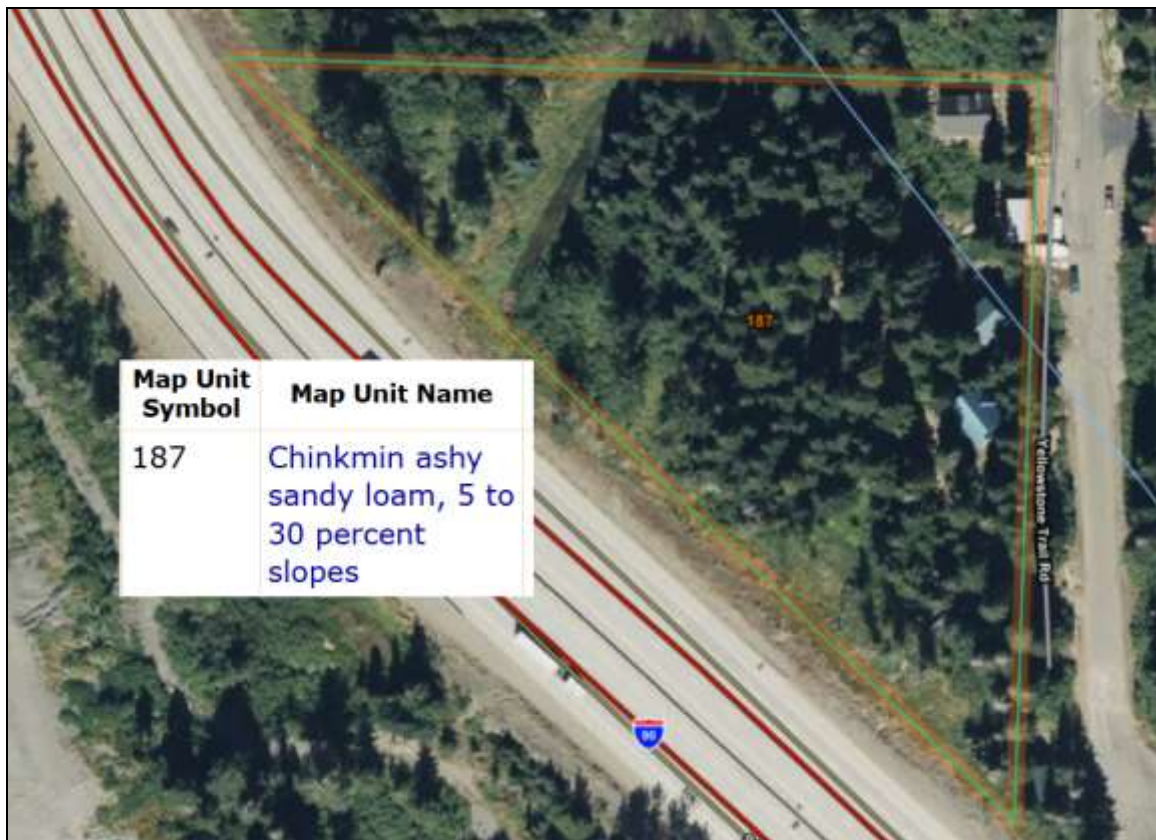
The NWI map depicts a stream on the northeast side of the site. These areas were interpreted from aerial photographs by the US Fish and Wildlife Service using 2017 aerial photographs with no ground-truthing.



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 Chinkman ashy sandy loam. Chinkman soils are formed in colluvium from glacial till, volcanic ash, and pumice overlying dense glacial till. Chinkman 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

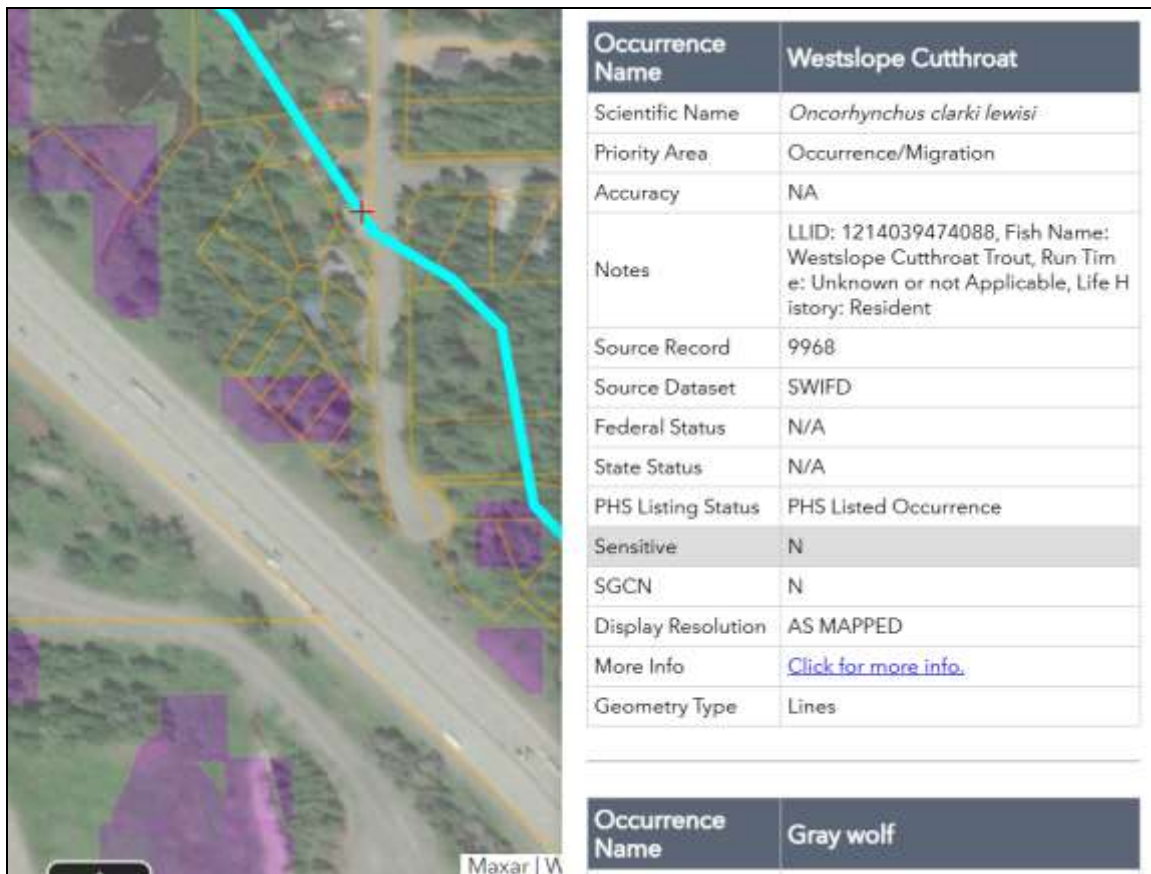
According to the WADNR FPARS website with stream types layers activated there is a Type F (fish bearing) stream mapped on the northeast side of the site.



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

WDFW Priority Habitats Maps

According to the WDFW Priority Habitat Website with Public access layers activated, the site is located within the Township in which the northern spotted owl and grey wolf, both federally listed, are known to exist. The creek passing through the east side of the site is identified as having west slope cutthroat trout as well. A small polygon on the south end of the site is erroneously identified as shrub-steppe.



Above: WDFW Priority Habitats Map of the site.

Field observations

The site consists of a small hill with 9 separate abutting parcels. A gravel road known as Jay Way provides access to the site from Yellowstone Road. Two structures were noted on the site but the remaining parcels are undeveloped. Interstate 90 is located just west of the site, single family homes are located south and east of the site and undeveloped wetland area is located north of the site.

The site is located on a small hillside with steep slopes on the east and north. A well-defined creek that is tributary to Coal Creek passes along the north side of the site flowing to the south and under Yellowstone Road. The remainder of the site is typical third growth conifer forest found in this part of the Cascades with silver fir and mountain hemlock

as the dominant species with huckleberry, salmonberry, mountain ash and devils club in the understory.

Soils on the upland portion of the site are a gravelly ashy loam with soil colors of 10YR 3/2-3/3 with no hydric indicators.

Two wetlands and one stream are located along the site. Below is a description of these areas.

Wetland A

Wetland A is the south end of a larger wetland that extends off-site to the north. This wetland contains aquatic bed, emergent, scrub-shrub and forested wetland classes. The south edge is defined by an old excavated ditch-like feature which appears to be used to collect water off the highway to the west. Species observed within the wetland near the site include reed canary grass, small fruited bulrush, hardhack, and sitka willow.

The south edge of the wetland was located with gps points 249-258.

Soil pits excavated within the wetland revealed a range of soil types from a gravelly loam with a soil color of 10YR 2/1, to a sapric muck with a color of 10YR 2/2. The soil was inundated with standing water up to 30" deep near the site.

Wetland C 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 depressional wetland and scored a total of 19 points with 7 points for habitat indicating a Category II wetland.

According to Kittitas County Municipal Code Chapter 17A.07.030, Category II wetlands have a buffer of 150' for moderate intensity land uses such as a single family home. In addition, a 15' Building Setback line is required from the edge of the buffer.

Table 17A.07.030: Standard Buffer Widths

Category of Wetland	Land Use with Low Impact ¹	Land Use with Moderate Impact ²	Land Use with High Impact ³
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

Wetland B

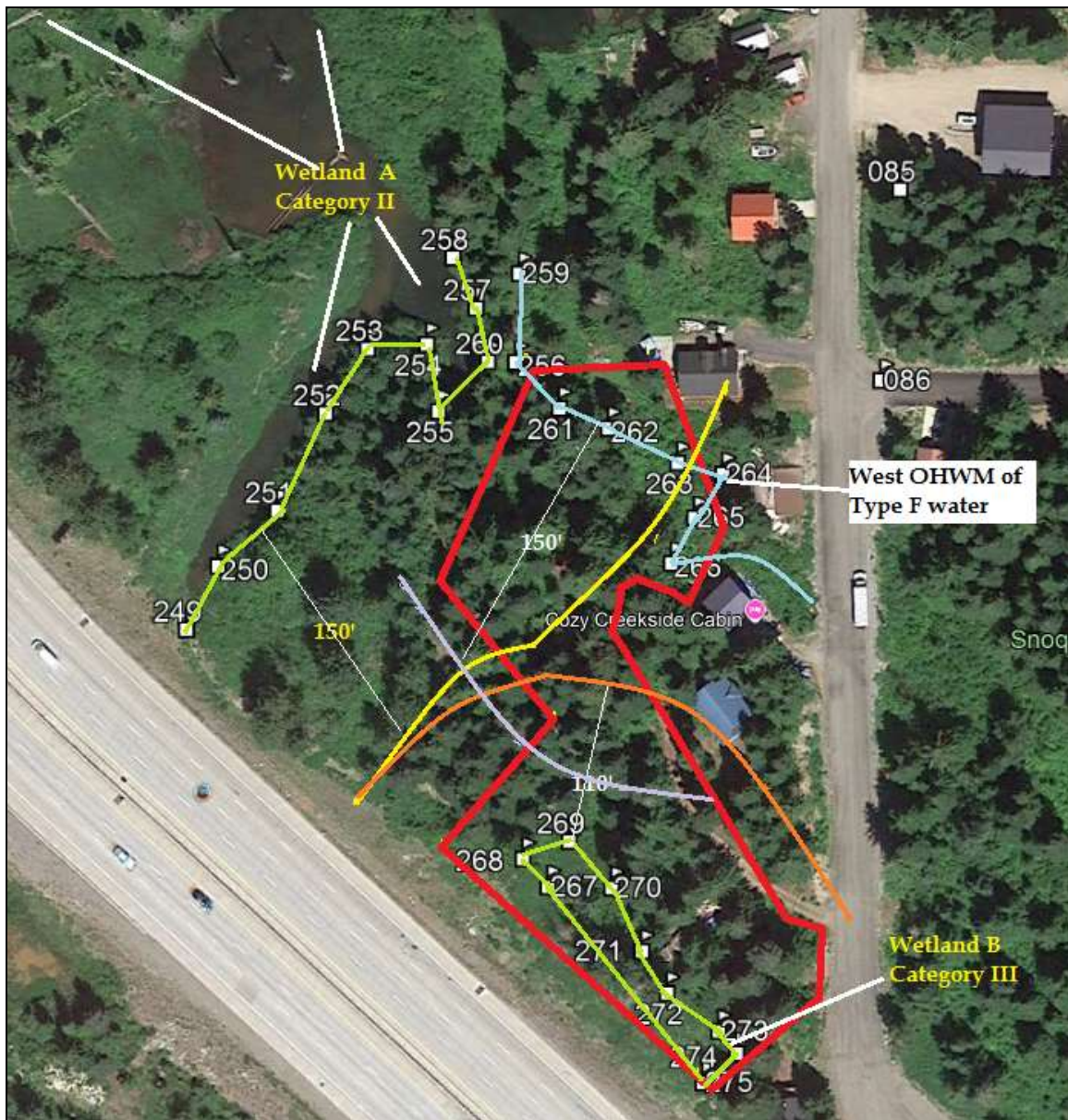
Wetland B is a small emergent and scrub-shrub wetland located at the tow of the slope of Interstate 90. This wetland is characterized by an emergent area of reed canary grass, sedge and small fruited bulrush and an area of hardhack.

The edge of the wetland was located with gps points 268-275.

Soil pits excavated within the wetland revealed a gravelly loam with a soil color of 2.5Y 4/2 with common, medium, distinct redoximorphic concentrations. The soil was inundated with several inches of standing water.

Wetland B 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 depressional wetland and scored a total of 17 points with 4 points for habitat indicating a Category III wetland.

According to Kittitas County Municipal Code Chapter 17A.07.030, Category III wetlands have a buffer of 110' for moderate intensity land uses such as a single family home. In addition, a 15' Building Setback line is required from the edge of the buffer.



Above: Critical Area Mapping of the site.

Coal Creek Tributary

As previously described a stream is located along the north end of the site. The ordinary high water mark (OHWM) of the stream was located with gps points 259-266.

This stream has been typed as a Type F water by WDFW and flows easterly under Yellowstone Road before entering Coal Creek off-site to the

southeast. The Type F stream consists of boulder, cobble and gravel bottomed channel with well-defined banks.

According to Table 17A.04.030-4 of the Kittitas County Municipal Code, Type F waters within the “Cascade Ecoregion” have a 150’ buffer (RMZ) measured from the OHWM. Type Ns streams have a 50’ buffer measured from the OHWM.

4. Standard Riparian Management Zones for Waters of the State.

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 ^{1,2}	
	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

Potential Development of the Parcels

As depicted on the critical areas mapping of the site shown on Page 12 of this report, wetlands, streams and buffer cover 100% of these parcels.

In order to develop each of these parcels with a single family home as they area zoned for, would require some impact to the buffer of wetland and or stream buffer.

Since the entire site is taken up by critical areas and buffers, there is no area on the site to accommodate buffer averaging to fit any proposed improvements. As a result, the use of KCMC 17A.04.030.6 which provides the criteria to do buffer averaging for impacts to the buffer/RMZ of the stream is not feasible.

The only way any improvements on these parcels can occur is the use of Reasonable Use Exception, as described in KCMC 17A.01.060. The use of this provision will be required to construct and improvement on these parcels.

This portion of the code states;

17A.01.060 Exceptions

2. Reasonable Use. If the application of this Title would deny all reasonable economic use of the subject property, the County shall determine if the property owner may apply for an exception pursuant to the following:

a. Exception Request and Review Process. An application for a reasonable use exception shall be made to the County and shall include a critical areas report, as described in KCC 17A.01.080, including mitigation plan, if necessary; and any other related project documents, such as permit applications to other agencies, special studies, and environmental documents prepared pursuant to the State Environmental Policy Act (Chapter 43.21C RCW and rules thereunder in Chapter 197-11 WAC).

The application shall follow the administrative project permit review process outlined in KCC 15A.03. In determining what is considered reasonable use of an undeveloped parcel, the Director may consider additional information such as zoning, and comparable structure sizes and land uses of the surrounding area.

b. Director Review. The Director shall approve, approve with conditions, or deny the request based on the proposal's ability to comply with all the reasonable use exception criteria in Subsection 2(c).

The following describes the criteria for the Reasonable Use review;

c. Reasonable Use Review Criteria. Criteria for review and approval of reasonable use exceptions include:

i. The application of this Title would deny all reasonable economic use of the property;

Response: The existing parcels are 100% covered with wetland and or stream buffer. The parcels are zoned for single family homes. There is no way to build on these parcels as allowed by the zoning without impacting buffer. This would deny the legal reasonable economic use of the property.

ii. No other reasonable economic use of the property has less impact on the critical area and its buffer;

Response: There is no other use of these parcels other than for a single family home with less impact on buffers.

iii. The proposed impact to the critical area is the minimum necessary to allow for reasonable economic use of the property;

Response: The proposed construction of a single family home on each parcel would include a reasonably sized structure typical for the neighborhood and minimizing buffer impact.

iv. The inability of the applicant to derive reasonable economic use of the property is not the result of actions by the applicant after the effective date of this Title;

Response: The existing parcels existed prior to the enactment of the regulations of wetland and streams and their associated buffers. As a result of the critical area regulations these parcels now require this reasonable use, which went into effect in December of 2021. These parcels existed prior to the effective date of this Title and is not a result of any action taken by the owners of these parcels.

v. The proposal does not pose an unreasonable threat to the public health, safety, or welfare on or off the development proposal site;

Response: A single family home on each of these parcels does not pose any threat to public health, safety or welfare on or off the site.

vi. The proposal will result in no net loss of critical area functions and values consistent with the best available science;

Response: The proposed cumulative impacts from any structure constructed on each parcel would not impact the functions of any of these critical areas. To compensate for any impacts mitigation measures would be undertaken at an appropriate ratio of 1:1 for impacts to include thinning of overstory trees and placement of an appropriate native shrub understory. Currently the majority of the parcels consists of a dense, dark forest with too many closely spaced immature trees. Thinning and placement of native understory shrubs would increase the functions of these buffers.

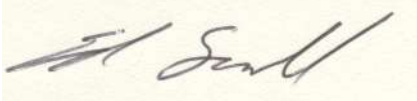
The proposed buffer enhancement will result in no net loss of buffer function to the critical areas and utilizes best available science.

vii. The proposal is consistent with other application regulations and standards.

Response: The proposal is consistent with other applicable regulations and standards.

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.

Sincerely,
Sewall Wetland Consulting, Inc.

A handwritten signature in black ink, appearing to read 'Ed Sewall', on a light-colored rectangular background.

Ed Sewall
Senior Wetlands Ecologist PWS #212

Attached: Data Sheets
Rating Forms 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 Title 17A

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

WETLAND DETERMINATION DATA FORM – Arid West Region

Wet A

Project/Site: Immer City/County: Kittitas Sampling Date: 11-6-24
 Applicant/Owner: _____ State: WA Sampling Point: DP#1
 Investigator(s): Ed Smith Section, Township, Range: S9 T22 N R1 E
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Chickman 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 <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: 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%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
= Total Cover				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 = _____
Sapling/Shrub Stratum (Plot size: _____) 1. <u>Salix sitchensis</u> <u>80</u> <u>FACW</u>				
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: _____) 1. <u>Phalaris amabilis</u> <u>70</u> <u>FACW</u>				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
= Total Cover				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
Remarks:				

SOIL

Sampling Point:

DP

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

[illegible]

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

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

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <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 checked="" 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) | | |
- ³Indicators of hydrophytic vegetation and wetland hydrology must be present unless disturbed or problematic

³Indicators 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"/> 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 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 along 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) |

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): 1

Water Table Present? Yes ☐ No ☒ Depth (inches): 12

Saturation Present? Yes ☒ No ☐ Depth (inches): 0

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

upland near wet A

Project/Site: Immer City/County: Kittitas Sampling Date: 11-6-24
 Applicant/Owner: _____ State: WA Sampling Point: DP#2
 Investigator(s): Ed Scmidt Section, Township, Range: S9 T22N R11E
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Chickman 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. <u><i>Prosopis juliflora</i></u>	<u>96</u>		<u>Fac</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>1</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: _____)				Prevalence Index worksheet:
1. _____				Total % Cover of: _____ 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: _____)				Hydrophytic Vegetation Indicators:
1. _____				___ Dominance Test is >50%
2. _____				___ Prevalence Index is ≤3.0 ¹
3. _____				___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. _____				___ Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
Remarks:				

SOIL

Sampling Point: DP #2

[illegible]

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

wet B

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Immer City/County: Kittitas Sampling Date: 11-6-24
 Applicant/Owner: _____ State: WA Sampling Point: D#3
 Investigator(s): Ed Schmidt Section, Township, Range: S9 T22N R1E
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Chinaman 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 <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes _____ No _____	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: 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</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				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 = _____
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum (Plot size: _____)				
1. <u>Phalaris amabilis</u>	<u>60</u>	<u>FACW</u>		
2. <u>Scirpus micropus</u>	<u>30</u>	<u>FACW</u>		
3. <u>Carex spp</u>	<u>10</u>	<u>FAC</u>		
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
% Bare Ground in Herb Stratum _____	% Cover of Biotic Crust _____			
Remarks:				

SOIL

Sampling Point:

DP#3

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

[illegible]

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

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

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <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 checked="" 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 checked="" 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) | | |
- ³Indicators of hydrophytic vegetation wetland hydrology must be present unless disturbed or problematic

³Indicators 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"/> 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 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 along 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) |

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): 2

Water Table Present? Yes No Depth (inches):

Saturation Present? Yes No Depth (inches): 0
(includes capillary fringe)

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 #): Wet A - Immer Date of site visit: 11-6-24
 Rated by Ed Smith Trained by Ecology? ☒ Yes ☐ No Date of training _____
 HGM Class used for rating Deposited 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 II (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	
Circle the appropriate ratings						
Site Potential	H	M	L	H	M	L
Landscape Potential	H	M	L	H	M	L
Value	H	M	L	H	M	L
Score Based on Ratings	6		6		7	19

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
	Circle the appropriate category
Vernal Pools	II 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 dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid 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 *8*

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

DEPRESSIONAL WETLANDS

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

Points
(only 1
score per
box)

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

D 1.1. Characteristics of surface water outflows from the wetland:

- Wetland has no surface water outlet
- Wetland has an intermittently flowing outlet
- Wetland has a highly constricted permanently flowing outlet
- Wetland has a permanently flowing, unconfined, surface outlet

points = 5
points = 3
points = 3
points = 1

3

D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions of soils)

YES = 3 NO = 0

0

D 1.3. Characteristics of persistent vegetation (Emergent, Scrub-shrub, and/or Forested Cowardin classes)

- Wetland has persistent, ungrazed, vegetation for $> \frac{2}{3}$ of area
- Wetland has persistent, ungrazed, vegetation from $\frac{1}{3}$ to $\frac{2}{3}$ of area
- Wetland has persistent, ungrazed vegetation from $\frac{1}{10}$ to $< \frac{1}{3}$ of area
- Wetland has persistent, ungrazed vegetation $< \frac{1}{10}$ of area

points = 5
points = 3
points = 1
points = 0

5

D 1.4. Characteristics of seasonal ponding or inundation:

- This is the area of ponding that fluctuates every year. Do not count the area that is permanently ponded.*
- Area seasonally ponded is $> \frac{1}{2}$ total area of wetland
- Area seasonally ponded is $\frac{1}{4}$ - $\frac{1}{2}$ total area of wetland
- Area seasonally ponded is $< \frac{1}{4}$ total area of wetland

points = 3
points = 1
points = 0

3

Total for D 1

Add the points in the boxes above

11

Rating of Site Potential If score is: 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 receive stormwater discharges?

Yes = 1 No = 0

1

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

Yes = 1 No = 0

0

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

Yes = 1 No = 0

0

D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions

D 2.1- D 2.3? Source _____

Yes = 1 No = 0

0

Total for D 2

Add the points in the boxes above

1

Rating of Landscape Potential If score is: 3 or 4 = H ✓ 1 or 2 = M 0 = L

Record the rating on the first page

D 3.0. Is the water quality improvement provided by the site valuable to society?

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?

Yes = 1 No = 0

0

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]?

Yes = 1 No = 0

1

D 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 the wetland is found)?

Yes = 2 No = 0

0

Total for D 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

DEPRESSIONAL WETLANDS

Points
(only 1 score
per box)

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

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

D 4.1. 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 |
| <i>(If outlet is a ditch and not permanently flowing treat wetland as "intermittently flowing")</i> | |

4

D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or deepest part (if dry).

- | | |
|---|------------|
| Seasonal ponding: > 3 ft above the lowest point in wetland or the surface of permanent ponding | points = 8 |
| Seasonal ponding: 2 ft - < 3 ft above the lowest point in wetland or the surface of permanent ponding | points = 6 |
| The wetland is a headwater wetland | points = 4 |
| Seasonal ponding: 1 ft - < 2 ft | points = 4 |
| Seasonal ponding: 6 in - < 1 ft | points = 2 |
| Seasonal ponding: < 6 in or wetland has only saturated soils | points = 0 |

6

Total for D 4

Add the points in the boxes above

10

Rating of Site Potential If score is: 12-16 = H 6-11 = M 0-5 = L

Record the rating on the first page

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

D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0

1

D 5.2. Is > 10% of the area within 150 ft of the wetland in a land use that generates runoff? Yes = 1 No = 0

1

D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses? Yes = 1 No = 0

0

Total for D 5

Add the points in the boxes above

2

Rating of Landscape Potential If score is: 3 = H 1 or 2 = M 0 = L

Record the rating on the first page

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

D 6.1. The wetland is in a landscape that has flooding problems.

Choose the description that best matches conditions around the wetland being rated. Do not add points. Choose the highest score if more than one condition is met.

The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds), AND

- | | |
|---|------------|
| Flooding occurs in sub-basin that is immediately down-gradient of 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 by human or natural conditions that the water stored by the wetland cannot reach areas that flood.

Explain why _____ points = 0

There are no problems with flooding downstream of the wetland points = 0

D 6.2. Has the site has been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0

Total for D 6




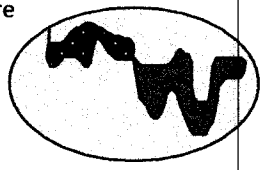
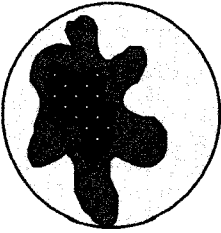
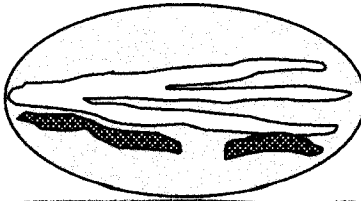
Add the points in the boxes above

2

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

These questions apply to wetlands of all HGM classes.		(only 1 score per box)
HABITAT FUNCTIONS - Indicators that site functions to provide important habitat		
H 1.0. Does the wetland have the potential to provide habitat for many species?		
<p>H 1.1. Structure of the plant community:</p> <p>Check the Cowardin vegetation classes present and categories of emergent plants. Size threshold for each category is $\geq \frac{1}{4}$ ac or $\geq 10\%$ of the wetland if wetland is < 2.5 ac.</p> <p><input checked="" type="checkbox"/> Aquatic bed</p> <p><input type="checkbox"/> Emergent plants 0-12 in (0-30 cm) high are the highest layer and have $> 30\%$ cover</p> <p><input checked="" type="checkbox"/> Emergent plants $> 12-40$ in ($> 30-100$ cm) high are the highest layer with $> 30\%$ cover</p> <p><input type="checkbox"/> Emergent plants > 40 in (> 100 cm) high are the highest layer with $> 30\%$ cover</p> <p><input checked="" type="checkbox"/> Scrub-shrub (areas where shrubs have $> 30\%$ cover)</p> <p><input type="checkbox"/> Forested (areas where trees have $> 30\%$ cover)</p>	<p>4 or more checks: points = 3</p> <p>3 checks: points = 2</p> <p>2 checks: points = 1</p> <p>1 check: points = 0</p>	3
H 1.2. Is one of the vegetation types Aquatic Bed?	Yes = 1 No = 0	1
H 1.3. Surface water		
<p>H 1.3.1. Does the wetland have areas of open water (without emergent or shrub plants) over at least $\frac{1}{4}$ 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.</p> <p>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 $\frac{1}{4}$ ac or 10% of its area? Answer yes only if H 1.3.1 is No.</p>		<p>Yes = 3 points & go to H 1.4 No = go to H 1.3.2</p> <p>Yes = 3 No = 0</p>
<p>H 1.4. Richness of plant species</p> <p>Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold. You do not have to name the species.</p> <p>Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Russian olive, Phragmites, Canadian thistle, yellow-flag iris, and saltcedar (Tamarisk)</p> <p># of species _____</p>		<p>Scoring: > 9 species: points = 2</p> <p>4-9 species: points = 1</p> <p>< 4 species: points = 0</p>
<p>H 1.5. Interspersion of habitats</p> <p>Decide from the diagrams below whether interspersions among types of plant structures (described in H 1.1), and unvegetated areas (open water or mudflats) is high, moderate, low, or none.</p> <p>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.</p>		Figure__
<div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>None = 0 points</p> </div> <div style="text-align: center;">  <p>Low = 1 point</p> </div> <div style="text-align: center;">  <p>Moderate = 2 points</p> </div> </div> <p>All three diagrams in this row are</p> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <p>Riparian braided channels with 2 classes</p>		<p>High = 3 points</p> <p>3</p>

A

12

<p>H 1.6. Special habitat features</p> <p><i>Check the habitat features that are present in the wetland. The number of checks is the number of points.</i></p> <p><input 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.</p> <p><input checked="" type="checkbox"/> Cattails or bulrushes are present within the wetland.</p> <p><input checked="" type="checkbox"/> Standing snags (diameter at the bottom > 4 in) in the wetland or within 30 m (100 ft) of the edge.</p> <p><input checked="" type="checkbox"/> Emergent or shrub vegetation in areas that are permanently inundated/ponded.</p> <p><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</p> <p><input type="checkbox"/> Invasive species cover less than 20% in each stratum of vegetation (<i>canopy, sub-canopy, shrubs, herbaceous, moss/ground cover</i>)</p>		
<p>Total for H 1</p>	<p>Add the points in the boxes above</p>	<p>5</p>

3

15

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

H 2.0. Does the landscape have the potential to support habitat functions of the site?	
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H 2.1. Accessible habitat (only area of habitat abutting wetland). If total accessible habitat is:	
--	--

Calculate: $\frac{10}{33.3\%}$ undisturbed habitat $\frac{10}{33.3\%} + [(\% \text{ moderate and low intensity land uses})/2] \frac{0}{33.3\%} = \frac{10}{33.3\%}$

$> \frac{1}{3}$ (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

H 2.2. Undisturbed habitat in 1 km Polygon around wetland.	
--	--

Calculate: % undisturbed habitat 50 + [(% moderate and low intensity land uses)/2] 0 = 50 %

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

1

H 2.3. Land use intensity in 1 km Polygon: > 50% of Polygon is high intensity land use Does not meet criterion above	points = (- 2) points = 0	0
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points = (-2) 0
points = 0

0

<p>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. <i>Generally, this means outside boundaries of reclamation areas, irrigation districts, or reservoirs</i></p>	<p>Yes = 3 No = 0</p>
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Yes = 3 No = 0

Total for H 2	<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; width: 50px; height: 50px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; width: 10px; height: 10px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; width: 5px; height: 5px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; width: 2px; height: 2px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; width: 1px; height: 1px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; 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2

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

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

Site meets ANY of the following criteria:	points = 2
---	------------

- | | |
|--|--|
| <ul style="list-style-type: none"> — 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	Category
<p><i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i></p> <p>SC 1.0. Vernal pools</p> <p>Is the wetland less than 4000 ft², and does it meet at least two of the following criteria?</p> <ul style="list-style-type: none"> — Its 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. <i>If you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool.</i> — The soil in the wetland is shallow [< 1 ft (30 cm) 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. <p style="text-align: right;">Yes – Go to SC 1.1 No = Not a vernal pool</p> <p>SC 1.1. Is the vernal pool relatively undisturbed in February and March?</p> <p style="text-align: right;">Yes – Go to SC 1.2 No = Not a vernal pool with special characteristics</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 style="text-align: right;">Yes = Category II No = Category III</p>	Cat. II Cat. III
<p>SC 2.0. Alkali wetlands</p> <p>Does the wetland meet one of the following criteria?</p> <ul style="list-style-type: none"> — 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 in the wetland can be classified as “alkali” species (see Table 4 for list of plants found in alkali systems). — 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. <p>OR does the wetland unit meet two of the following three sub-criteria?</p> <ul style="list-style-type: none"> — Salt encrustations around more than 75% of the edge of the wetland — More than $\frac{3}{4}$ of the plant cover consists of species listed on Table 4 — 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. <p style="text-align: right;">Yes = Category I No = Not an alkali wetland</p>	Cat. I
<p>SC 3.0. Wetlands of High Conservation Value (WHCV)</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?</p> <p style="text-align: right;">Yes – Go to SC 3.2 No – Go to SC 3.3</p> <p>SC 3.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?</p> <p style="text-align: right;">Yes = Category I No = Not a WHCV</p> <p>SC 3.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?</p> <p>http://www1.dnr.wa.gov/nhp/refdesk/datasetsearch/wnhpwetlands.pdf</p> <p style="text-align: right;">Yes – Contact WNHP/WDNR and go to SC 3.4 No = Not a WHCV</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?</p> <p style="text-align: right;">Yes = Category I No = Not a WHCV</p>	Cat. I

Wetland name or number A

SC 4.0 Bogs and Calcareous Fens		
<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>		
<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></p>	<p>Yes – Go to SC 4.3 No – Go to SC 4.2</p>	
<p>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?</p>	<p>Yes – Go to SC 4.3 No – Is not a bog for rating</p>	
<p>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? NOTE: 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.</p>	<p>Yes = Category I bog No – Go to SC 4.4</p>	
<p>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?</p>	<p>Yes = Category I bog No – Go to SC 4.5</p>	<p>Cat. I</p>
<p>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?</p>	<p>Yes = Is a Calcareous Fen for purpose of rating No – Go to SC 4.6</p>	
<p>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 (CaCO₃) 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</p>	<p>Yes = Is a Category I calcareous fen No = Is not a calcareous fen</p>	<p>Cat. I</p>
SC 5.0. Forested Wetlands		
<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> — The wetland is within the 100 year floodplain of a river or stream — Aspen (<i>Populus tremuloides</i>) represents at least 20% of the total cover of woody species — 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></p>	<p>Yes – Go to SC 5.1 No = Not a forested wetland with special characteristics</p>	
<p>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></p>	<p>Yes = Category I No – Go to SC 5.2</p>	<p>Cat. I</p>
<p>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?</p>	<p>Yes = Category I No – Go to SC 5.3</p>	<p>Cat. I</p>
<p>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></p>	<p>Yes = Category II No – Go to SC 5.4</p>	<p>Cat. II</p>
<p>SC 5.4. Is the forested component of the wetland within the 100 year floodplain of a river or stream?</p>	<p>Yes = Category II No = Not a forested wetland with special characteristics</p>	<p>Cat. II</p>
<p>Category of wetland based on Special Characteristics <i>Choose the highest rating if wetland falls into several categories</i> If you answered No for all types, enter “Not Applicable” on Summary Form</p>		<p>NA</p>

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.

Wetland name or number B

RATING SUMMARY – Eastern Washington

Name of wetland (or ID #): Immer Wet B Date of site visit: 11-6-24
 Rated by SL Sand Trained by Ecology? ☒ Yes ☐ No Date of training _____

HGM Class used for rating Depurms 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 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	
Circle the appropriate ratings				
Site Potential	H <u>(M)</u> L	H <u>(M)</u> L	H M <u>(L)</u>	
Landscape Potential	H <u>(M)</u> L	<u>(H)</u> M L	H <u>(M)</u> L	
Value	H <u>(M)</u> L	H <u>(M)</u> L	H M <u>(L)</u>	TOTAL
Score Based on Ratings	<u>6</u>	<u>7</u>	<u>4</u>	<u>17</u>

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 Circle the appropriate category
Vernal Pools	II 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 75

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 dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid 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 B

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 B

DEPRESSIONAL WETLANDS

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

Points
(only 1
score per
box)

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

D 1.1. Characteristics of surface water outflows from the wetland:

- Wetland has no surface water outlet
- Wetland has an intermittently flowing outlet
- Wetland has a highly constricted permanently flowing outlet
- Wetland has a permanently flowing, unconfined, surface outlet

points = 5
points = 3
points = 3
points = 1

3

D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions of soils)

YES = 3 NO = 0

0

D 1.3. Characteristics of persistent vegetation (Emergent, Scrub-shrub, and/or Forested Cowardin classes)

- Wetland has persistent, ungrazed, vegetation for $> \frac{2}{3}$ of area
- Wetland has persistent, ungrazed, vegetation from $\frac{1}{3}$ to $\frac{2}{3}$ of area
- Wetland has persistent, ungrazed vegetation from $\frac{1}{10}$ to $< \frac{1}{3}$ of area
- Wetland has persistent, ungrazed vegetation $< \frac{1}{10}$ of area

points = 3
points = 3
points = 1
points = 0

5

D 1.4. Characteristics of seasonal ponding or inundation:

- This is the area of ponding that fluctuates every year. Do not count the area that is permanently ponded.*
- Area seasonally ponded is $> \frac{1}{2}$ total area of wetland
- Area seasonally ponded is $\frac{1}{4}$ - $\frac{1}{2}$ total area of wetland
- Area seasonally ponded is $< \frac{1}{4}$ total area of wetland

points = 3
points = 1
points = 0

3

Total for D 1

Add the points in the boxes above

11

Rating of Site Potential If score is: 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 receive stormwater discharges?

Yes = 1 No = 0

1

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

Yes = 1 No = 0

1

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

Yes = 1 No = 0

0

D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions

D 2.1- D 2.3? Source

Yes = 1 No = 0

0

Total for D 2

Add the points in the boxes above

2

Rating of Landscape Potential If score is: 3 or 4 = H 1 or 2 = M 0 = L

Record the rating on the first page

D 3.0. Is the water quality improvement provided by the site valuable to society?

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?

Yes = 1 No = 0

0

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]?

Yes = 1 No = 0

1

D 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 the wetland is found)?

Yes = 2 No = 0

0

Total for D 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 B

DEPRESSIONAL WETLANDS

Points
(only 1 score
per box)

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

D 4.0. Does the site have the potential to reduce flooding and erosion?		
D 4.1. Characteristics of surface water outflows from the wetland:		
Wetland has no surface water outlet	points = 8	4
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	
(If outlet is a ditch and not permanently flowing treat wetland as "intermittently flowing")		
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or deepest part (if dry).		
Seasonal ponding: > 3 ft above the lowest point in wetland or the surface of permanent ponding	points = 8	2
Seasonal ponding: 2 ft - < 3 ft above the lowest point in wetland or the surface of permanent ponding	points = 6	
The wetland is a headwater wetland	points = 4	
Seasonal ponding: 1 ft - < 2 ft	points = 4	
Seasonal ponding: 6 in - < 1 ft	points = 2	
Seasonal ponding: < 6 in or wetland has only saturated soils	points = 0	
Total for D 4		Add the points in the boxes above 4

Rating of Site Potential If score is: 12-16 = H 6-11 = M 0-5 = L

Record the rating on the first page

D 5.0. Does the landscape have the potential to support the hydrologic functions of the site?		
D 5.1. Does the wetland receive stormwater discharges?	Yes = 1 No = 0	1
D 5.2. Is > 10% of the area within 150 ft of the wetland in a land use that generates runoff?	Yes = 1 No = 0	1
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses?	Yes = 1 No = 0	1
Total for D 5		Add the points in the boxes above 3

Rating of Landscape Potential If score is: 3 = H 1 or 2 = M 0 = L


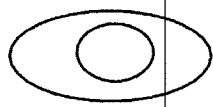
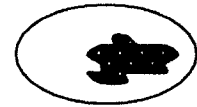
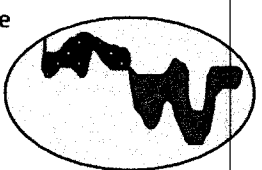
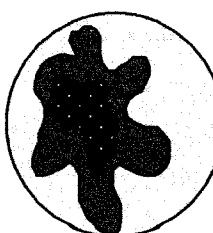
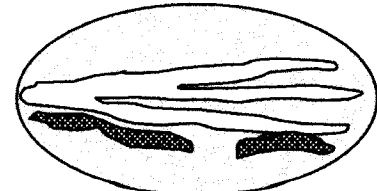
Record the rating on the first page

D 6.0. Are the hydrologic functions provided by the site valuable to society?		
D 6.1. The wetland is in a landscape that has flooding problems.		
Choose the description that best matches conditions around the wetland being rated. Do not add points. Choose the highest score if more than one condition is met.		
The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds), AND		
Flooding occurs in sub-basin that is immediately down-gradient of wetland	points = 2	1
Surface flooding problems are in a sub-basin farther down-gradient	points = 1	
The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood.		
Explain why _____	points = 0	
There are no problems with flooding downstream of the wetland	points = 0	
D 6.2. Has the site has been identified as important for flood storage or flood conveyance in a regional flood control plan?		
Yes = 2 No = 0		0
Total for D 6		Add the points in the boxes above 0

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

Record the rating on the first page

Wetland name or number B

<p>These questions apply to wetlands of all HGM classes.</p> <p>HABITAT FUNCTIONS - Indicators that site functions to provide important habitat</p>		<p>(only 1 score per box)</p>
<p>H 1.0. Does the wetland have the potential to provide habitat for many species?</p>		
<p>H 1.1. Structure of the plant community: <i>Check the Cowardin vegetation classes present and categories of emergent plants. Size threshold for each category is $\geq \frac{1}{4}$ ac or $\geq 10\%$ of the wetland if wetland is < 2.5 ac.</i></p> <p> <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 checked="" type="checkbox"/> Scrub-shrub (areas where shrubs have $>30\%$ cover) <input type="checkbox"/> Forested (areas where trees have $>30\%$ cover) </p> <p style="text-align: right;"> 4 or more checks: points = 3 3 checks: points = 2 2 checks: points = <u>1</u> 1 check: points = 0 </p>		<p>1</p>
<p>H 1.2. Is one of the vegetation types Aquatic Bed?</p>		<p>Yes = 1 No = <u>0</u></p>
<p>H 1.3. Surface water H 1.3.1. Does the wetland have areas of open water (without emergent or shrub plants) over at least $\frac{1}{4}$ 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. Yes = 3 points & go to H 1.4 No = go to H 1.3.2 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 $\frac{1}{4}$ ac or 10% of its area? Answer yes only if H 1.3.1 is No. Yes = 3 No = <u>0</u> </p>		<p>0</p>
<p>H 1.4. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². <i>Different patches of the same species can be combined to meet the size threshold. You do not have to name the species.</i> <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 4-9 species: points = <u>1</u> < 4 species: points = 0 </p>		<p>1</p>
<p>H 1.5. Interspersion of habitats Decide from the diagrams below whether interspersions 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. </p> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>None = 0 points</p> </div> <div style="text-align: center;">  <p>Low = 1 point</p> </div> <div style="text-align: center;">  <p>Moderate = 2 points</p> </div> </div> <p>All three diagrams in this row are High = 3 points</p> <div style="display: flex; justify-content: space-around; align-items: flex-end;">    </div> <p style="text-align: center;">Riparian braided channels with 2 classes</p>		<p>Figure__</p> <p>1</p>

Wetland name or number B

3

H 1.6. Special habitat features <i>Check the habitat features that are present in the wetland. The number of checks is the number of points.</i> <input 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 checked="" 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 type="checkbox"/> Invasive species cover less than 20% in each stratum of vegetation (<i>canopy, sub-canopy, shrubs, herbaceous, moss/ground cover</i>)		1
Total for H 1	Add the points in the boxes above	4

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

H 2.0. Does the landscape have the potential to support habitat functions of the site?		
H 2.1. Accessible habitat (only area of habitat abutting wetland). If total accessible habitat is: <i>Calculate:</i> % undisturbed habitat <u>10</u> + [(% moderate and low intensity land uses)/2] <u>0</u> = <u>5</u> % > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1km Polygon points = 2 10-19% of 1km Polygon <u>points = 1</u> <10% of 1km Polygon points = 0		1
H 2.2. Undisturbed habitat in 1 km Polygon around wetland. <i>Calculate:</i> % undisturbed habitat <u>50</u> + [(% moderate and low intensity land uses)/2] <u>0</u> = <u>50</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 <u>points = 1</u> Undisturbed habitat < 10% of Polygon points = 0		1
H 2.3. Land use intensity in 1 km Polygon: > 50% of Polygon is high intensity land use points = (-2) Does not meet criterion above <u>points = 0</u>		0
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 Yes = 3 <u>No = 0</u>		0
Total for H 2	Add the points in the boxes above	2

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

H 3.0. Is the habitat provided by the site valuable to society?		
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 Site meets ANY of the following criteria: points = 2 <input type="checkbox"/> It has 3 or more priority habitats within 100 m (see Appendix B) <input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on state or federal lists) <input type="checkbox"/> It is mapped as a location for an individual WDFW species <input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources <input type="checkbox"/> 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 <u>points = 0</u>		

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

Wetland name or number 13

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		Category
<p><i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i></p>		
<p>SC 1.0. Vernal pools</p> <p>Is the wetland less than 4000 ft², and does it meet at least two of the following criteria?</p> <ul style="list-style-type: none"> — Its 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. <i>If you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool.</i> — The soil in the wetland is shallow [< 1 ft (30 cm) 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. <p style="text-align: right;">Yes – Go to SC 1.1 No = Not a vernal pool</p>		
<p>SC 1.1. Is the vernal pool relatively undisturbed in February and March?</p> <p style="text-align: right;">Yes – Go to SC 1.2 No = Not a vernal pool with special characteristics</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 = Category II No = Category III</p>	<p>Cat. II Cat. III</p>
<p>SC 2.0. Alkali wetlands</p> <p>Does the wetland meet one of the following criteria?</p> <ul style="list-style-type: none"> — 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 in the wetland can be classified as “alkali” species (see Table 4 for list of plants found in alkali systems). — 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. <p>OR does the wetland unit meet two of the following three sub-criteria?</p> <ul style="list-style-type: none"> — Salt encrustations around more than 75% of the edge of the wetland — More than $\frac{3}{4}$ of the plant cover consists of species listed on Table 4 — 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. <p style="text-align: right;">Yes = Category I No = Not an alkali wetland</p>		<p>Cat. I</p>
<p>SC 3.0. Wetlands of High Conservation Value (WHCV)</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?</p> <p style="text-align: right;">Yes – Go to SC 3.2 No – Go to SC 3.3</p> <p>SC 3.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?</p> <p style="text-align: right;">Yes = Category I No = Not a WHCV</p> <p>SC 3.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?</p> <p style="text-align: right;">http://www1.dnr.wa.gov/nhp/refdesk/datasetsearch/wnhpwetlands.pdf Yes – Contact WNHP/WDNR and go to SC 3.4 No = Not a WHCV</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?</p> <p style="text-align: right;">Yes = Category I No = Not a WHCV</p>		<p>Cat. I</p>

SC 4.0 Bogs and Calcareous Fens 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>		
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? NOTE: 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 ₃) 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
SC 5.0. Forested Wetlands 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> — The wetland is within the 100 year floodplain of a river or stream — Aspen (<i>Populus tremuloides</i>) represents at least 20% of the total cover of woody species — 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>		
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
Category of wetland based on Special Characteristics Choose the highest rating if wetland falls into several categories If you answered No for all types, enter “Not Applicable” on Summary Form		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.

Tools

Public Notification (Buffer)

Select or search for a feature in the map

Parcel#, Map#, Name, Situs

Apply a search distance

500 Feet

Addressee Layer

Mailing Address

Format

Comma-separated values (CSV)

Measurement

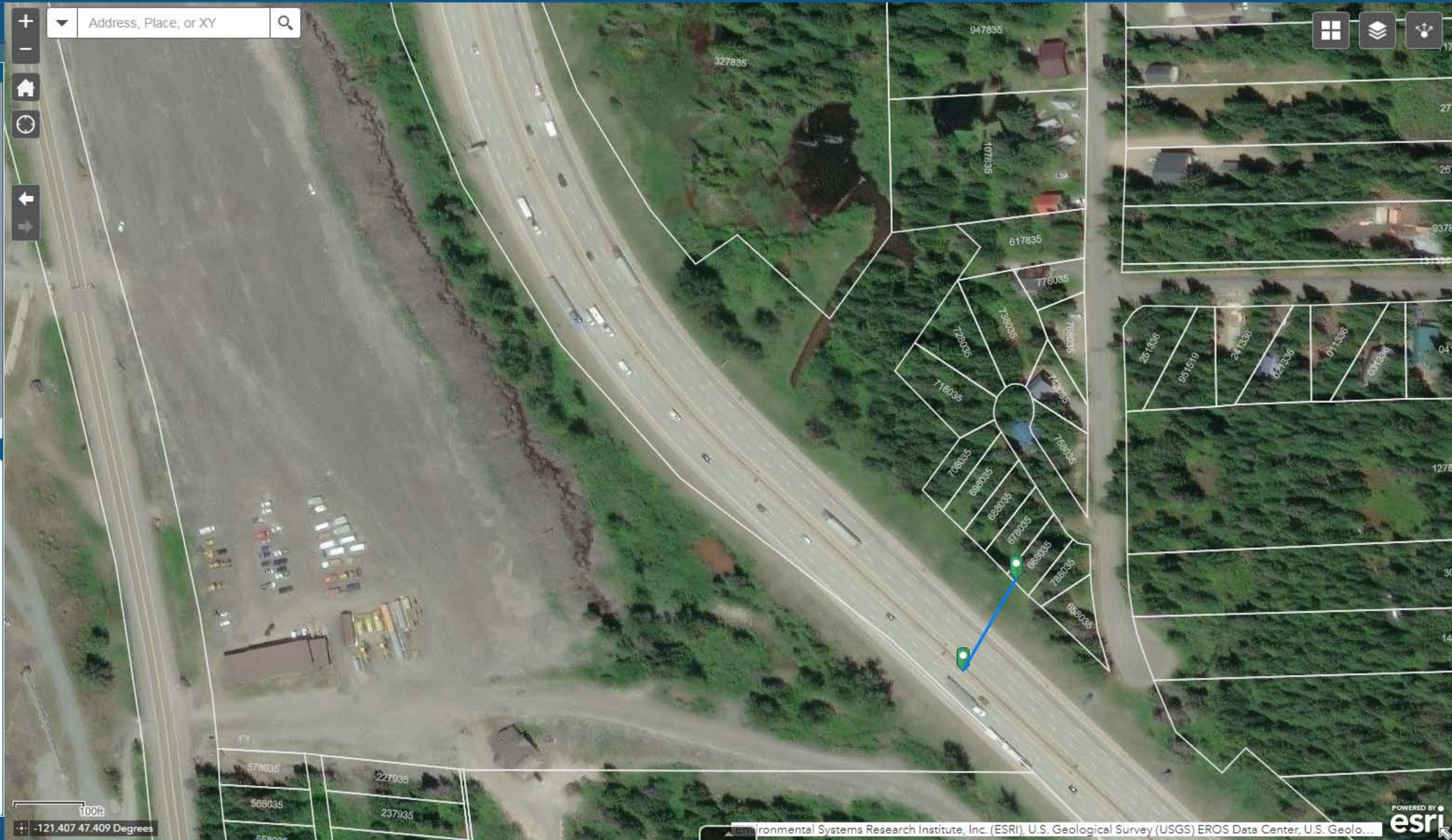
Feet

Measurement Result

152.7 Feet

Clear

Press CTRL to enable snapping



[Learn more](#)



Tools

 Add/Remove Map Data

 About

▼ Drawing

^ Other



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


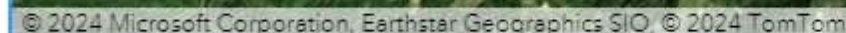
Unit

Feet

Distance

16,091.53 ft

New measurement

 Bing Imagery

Powered by Esri

Assessed Water/Sediment ▼

Zoom to selection

[Table to CSV](#)

Find	Listing ID	Assessment Unit ID	Category	Medium	Parameter	Details
	3724	17060108000228_001_001	5	Water	Temperature	View
	3726	17030003000236_001_001	5	Water	Temperature	View
	3727	17030001000538_001_001	5	Water	Temperature	View
	3732	17020008000040_001_001	5	Water	Temperature	View

Show entries Showing 1 to 5 of 31,791 entries

First Previous Next Last

Tools

Public Notification (Buffer)

Select or search for a feature in the map

Parcel#, Map#, Name, Situs

☐ Apply a search distance

500 Feet

Addressee Layer

Mailing Address

Format

Comma-separated values (CSV)

Measurement

Kilometers

Measurement Result

1 Kilometers

Clear

Press CTRL to enable snapping

