

December 19, 2023

Rebecca DeVere-Houghton
911 Game Bird Loop
Ellensburg, Washington 98926

RE: Houghton Plat Critical Area Report – Parcel #281133
City of Ellensburg, Washington
SWC Job #23-151

Dear Rebecca,

This report describes our observations of any jurisdictional wetlands, streams and/or buffers on Parcel #28113, located at 2519 North Airport Road in the City of Ellensburg, Washington (the “site”). The site consists of a rectangular parcel with a total area of 4.69 acres located within SE $\frac{1}{4}$ of Section 26, Township 18 North, Range 18 East of the W.M.

METHODOLOGY

Ed Sewall of Sewall Wetland Consulting, Inc. inspected the site on August 10, 2023. The site was reviewed using methodology described in the ***Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*** (USACOE September 2008) as required by the US Army Corps of Engineers starting in June of 2009. This is the methodology currently recognized by the City of Ellensburg 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 the City of Ellensburg are rated using the 2014 Washington State Department of Ecology Washington State ***Wetland Rating System for Eastern Washington, 2014 Update*** dated June 2014 Publication No. 14-06-018.

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



Above: Vicinity Map of site



Above: Aerial photograph from Kittitas Mapsifter website

OBSERVATIONS

Existing Site Documentation.

Prior to visiting the site, a review of several natural resource inventory maps was conducted. Resources reviewed included the National Wetland Inventory Map and the NRCS Soil Survey online mapping and Data, Kittitas County Taxsifter website, WADNR Fpars water type mapping and the WDFW Priority Habitats and species mapping. In addition, a previous study by Sewall Wetland Consulting for the *Sparks Airport Road* site was reviewed as it abuts the site.

National Wetlands Inventory (NWI)

The NWI map depicts a scrub-shrub wetland on the western half of the site. A stream is depicted several hundred feet east of the site on the east side of Airport Road.



Above: NWI map of the area of the site

Soil Survey

According to the NRCS Soil Mapper website, the site is mapped as containing 2 soil types; Nack ashy loam (Map unit #633) and Woldale clay loam (Map unit #580). Both of these soils are considered somewhat poorly drained and both are formed in alluvium. Neither soil is considered a wetland, or hydric soil according to the publication Hydric Soils of the United States (USDA NTCHS Pub No.1491, 1991).



Above: NRCS soil map of the site.

Kittitas County Mapsifter

The Kittitas County Mapsifter website depicts the same wetland shown on the NWI map. As with the NWI inventory, this wetland mapping represents an aerial photograph interpretation of the site with no field verification.

The Mapsifter also depicts portions of the site in the 100 Year Floodplain as well.



Above: Kittitas County wetland and stream mapping of the site.



Above: Kittitas County floodway mapping of the site.

WDNR Fpars Stream Mapping

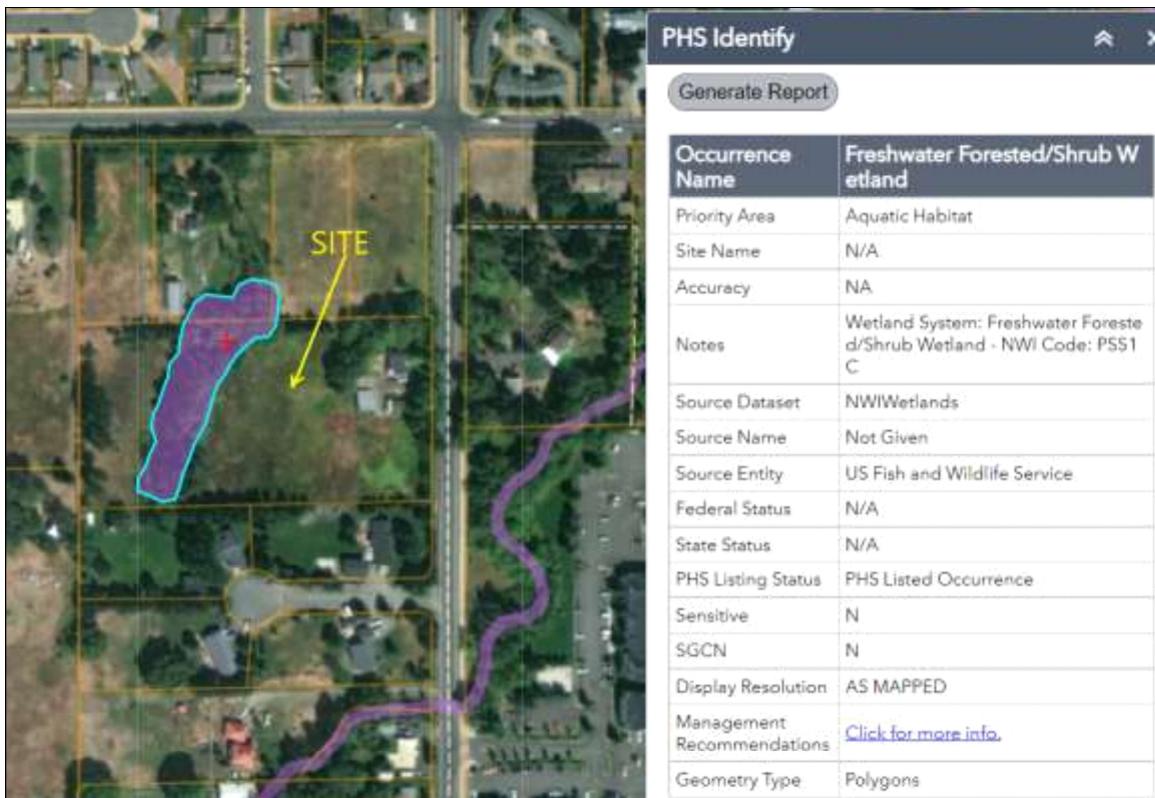
According to the WDNR Fpars stream mapping website, there are no streams on or near the site. A stream is depicted approximately 150' east of Airport Road and the site.

WDFW Priority Habitats and Species Maps

The WDFW Priority Habitats and Species mapping for the site depicts the same wetland carried over from the NWI mapping. As previously mentioned, this is based upon an aerial photograph interpretation with no field verification.



Above: WADNR Fpars stream mapping of the site



Above: WDFW Priority habitat mapping of the area of the site.

Sewall Wetland Consulting Study Parcels #14455 & 14456

A Critical Area Study was conducted for the Sparks Plat parcels (#14455 & 14456) north of the site in 2022. No wetlands or streams were found on the sparks site. A potential wetland was observed on Parcel #281133 (Houghton Site) and was classified as a “depressional” wetland. This wetland scored a total of 18 points with 5 for habitat. This indicates a Category III wetland under City of Ellensburg Code, and had a 130' buffer measured from the wetland edge. This was reviewed by both the City and WADOE and approved.

Field observations

The site contains a single family home with several outbuilding on the eastern side of the site along Airport Road. A gravel driveway and associated landscaped areas are in the area surrounding the home.

An irrigation ditch passes along the east edge of the site at the toe of the road prism of Airport Road. A perimeter of crack willow and ponderosa pine is present along Airport Road and the north boundary of the site.

An irrigation fed wetland is present in the western half of the site as described in the previous study of the Sparks property to the north. On either side of the wetland is fallow pasture areas.

The eastern pasture is a mix of thistle, knapweed, and English plantain, prickly lettuce and quackgrass. Two small clusters of aspen saplings are located along the southeast and center of the pasture.

Soils outside the wetland on the site are all cobbly loams with a soil color of 10YR 3/3 and were found to be dry.

The western pasture is mostly quackgrass with some knapweed. A small overgrown farm road crosses the wetland to access the western pasture. A row of cottonwoods is located along the west boundary of the site.

As previously described, there is a forested wetland in the western portion of the site. Below is a description of this area.

Wetland A

Wetland A is a linear forested wetland along an irrigation drainage that enters the site from irrigation flows along Bender Road to the north. It is unknown if this is the only hydrology source for the wetland. However, the City considers it a wetland based upon the review of the Sparks Plat to the north.

A small farm road passes through the north end of the wetland with a 12" broken culvert located under the road. The north part of the wetland was flagged with flags A1-A5 and the south part with B1-B13. The culvert is relatively flat and may allow flow in both directions so the two areas are considered one wetland for rating purposes.

The wetland is vegetated with an overstory of black cottonwood, crack willow, and some sedge.

Soil pits excavated within the wetland revealed a gravelly loam with a soil color of 10YR 3/2 with common, medium, distinct redoximorphic concentrations.

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, and rating this wetland as a “depressional” wetland, this wetland scored a total of 18 points with 5 for habitat. This indicates a Category III wetland.

City of Ellensburg Municipal Code 15.62.030.10.c indicates a 130' buffer if the components of Table 15.620.030.E.2 are not implemented. If these measures are implemented, a 90' buffer would be utilized.



Above: GPS location of the Category III wetland located on the site. Note this depicts the buffer at 130'. If the mitigation measures are utilized the buffer would be 90'.

Table 15.620.030(E)(1) Wetland Buffer Requirements If Table 15.620.030(E)(2) Is Implemented

Wetland Category	Buffer Width Based on Habitat Score (Feet)			
	3 – 4 Habitat Points	5 Habitat Points	6 – 7 Habitat Points	8 – 9 Habitat Points
Category I: Based on total score	75	90	120	150
Category I: Forested	75	90	120	150
Category I: Bogs and wetlands of high conservation value	190			
Category I: Alkali	150			
Category II: Based on total score	75	90	120	150
Category II: Vernal pool	150			
Category II: Forested	75	90	120	150
Category III (all)	60	90	120	150
Category IV (all)	40			

Table 15.620.030(E)(3) Wetland Buffer Requirements If Table 15.620.030(E)(2) Is Not Implemented

Wetland category	Buffer width (feet) based on habitat score			
	3 – 4 habitat points	5 habitat points	6 – 7 habitat points	8 – 9 habitat points
Category I: Based on total score	100	130	180	200
Category I: Forested	100	130	180	200
Category I: Bogs and wetlands of high conservation value	250			
Category I: Alkali	200			
Category II: Based on total score	100	130	180	200
Category II: Vernal pool	200			
Category II: Forested	100	130	180	200
Category III (all)	80	130	180	200
Category IV (all)	50			

Table 15.620.030(E)(2) Required Measures to Minimize Impacts to Wetlands

(Measures are required, where applicable to a specific proposal)

Disturbance	Required measures to minimize impacts
Lights	<ul style="list-style-type: none">Direct lights away from wetland
Noise	<ul style="list-style-type: none">Locate activity that generates noise away from wetlandIf warranted, enhance existing buffer with native vegetation plantings adjacent to noise sourceFor activities that generate relatively continuous, potentially disruptive noise, such as certain <u>heavy industry</u> or mining, establish an additional 10-foot heavily vegetated buffer strip immediately adjacent to the outer wetland buffer
Toxic runoff	<ul style="list-style-type: none">Route all new, untreated runoff away from wetland while ensuring wetland is not dewateredEstablish covenants limiting use of pesticides within 150 feet of wetlandApply integrated pest management
Stormwater runoff	<ul style="list-style-type: none">Retrofit stormwater detention and <u>treatment</u> for roads and existing adjacent <u>development</u>Prevent channelized flow from lawns that directly enters the bufferUse low intensity <u>development</u> techniques
Change in water regime	<ul style="list-style-type: none">Infiltrate or treat, drain, and disperse into buffers new runoff from <u>impervious surfaces</u> and new lawns
Pets and human disturbance	<ul style="list-style-type: none">Use privacy fencing or <u>plant</u> dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregionPlace wetland and its buffer in a separate tract or protect with a conservation <u>easement</u>
Dust	<ul style="list-style-type: none">Use best management practices to control dust

Proposed Project

The proposed project is a 13 lot plat with associated access road and infrastructure (see attached site plan). The proposed plat has been designed to avoid the Category III wetland. However, buffer averaging of the 130' buffer as allowed by Code is proposed to create a more logical lot layout condensed on the eastern side of the property. Per Ellensburg Municipal Code chapter 15.620.030.e;

6. Wetland buffer width averaging. The director may allow modification of the standard wetland buffer width in accordance with an approved critical area report and the best available science on a case-by-case basis by averaging buffer widths. Averaging of buffer widths may only be allowed where a qualified professional wetland scientist demonstrates that:

a. It will not reduce wetland functions or functional performance;

Response: The proposed reduced and averaged buffer will not impact the function of the buffer to protect the wetland. The area is currently a mix of meadow and forested area along the wetland. The area is generally flat and will continue to function as needed.

b. The wetland contains variations in sensitivity due to existing physical characteristics or the character of the buffer varies in slope, soils, or vegetation, and the wetland would benefit from a wider buffer in places and would not be adversely impacted by a narrower buffer in other places;

Response: The proposed buffer averaging will reduce the buffer by 7,854sf on the eastern side of the buffer and add an equal area to the western buffer. This will create one large undisturbed area of wetland and buffer. It will also cease the use of the existing crossing through the wetland reducing any future impacts to this area.

c. The total area contained in the buffer area after averaging is no less than that which would be contained within the standard buffer; and

Response: The proposed buffer averaging will reduce the buffer by 7,854sf on the eastern side of the buffer and add an equal area to the western buffer.

d. The buffer width is not reduced to less than 75 percent of the standard width or 35 feet.

Response: The proposed buffer averaging will reduce the buffer to a minimum width of 97.5' which is 75% of the standard 130' buffer meeting this criteria.

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.



Ed Sewall
Senior Wetlands Ecologist PWS #212

Attached: Site Plan/Buffer Averaging Plan
Data sheets
Rating Form & 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.

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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

Houghton/#23-151
Sewall Wetland Consulting, Inc.
December 19, 2023
Page 16

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: <u>Houghton</u>	City/County: <u>Ellensburg</u>	Sampling Date: <u>8-10-23</u>
Applicant/Owner: <u>Ed Sewall</u>	State: <u>WA</u>	Sampling Point: <u>DPI</u>
Investigator(s): <u>Ed Sewall</u>	Section, Township, Range: <u>526 T18N R18E S4W</u>	
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none):	
Subregion (LRR):	Lat:	Long:
Soil Map Unit Name:	NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)		
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed?		Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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 <input type="checkbox"/>	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> 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>Salix fragilis</u>	<u>50</u>	<u>Trew</u>		Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2.				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</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. <u>Atriplex</u>	<u>10</u>	<u>ND</u>		<input checked="" type="checkbox"/> Dominance Test is >50%
2. <u>Festuca</u>	<u>40</u>	<u>FAC</u>		<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
3.				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4.				<input type="checkbox"/> 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks:				

WETLAND DETERMINATION DATA FORM – Arid West Region

Meadow east of
wetland

Project/Site: <u>Houghton</u>	City/County: <u>Ellensburg</u>	Sampling Date: <u>8-10-23</u>
Applicant/Owner: <u>Ed Stodd</u>	State: <u>WA</u>	Sampling Point: <u>DP#2</u>
Investigator(s): <u>Ed Stodd</u>	Section, Township, Range: <u>526 T 18 N R 18 E of NW 1/4</u>	
Landform (hillslope, terrace, etc.): _____	Local relief (concave, convex, none): _____ Slope (%): _____	
Subregion (LRR): _____	Lat: _____	Long: _____ Datum: _____
Soil Map Unit Name: _____ NWI classification: _____		
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)		
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed?		Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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 <input type="checkbox"/>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
= Total Cover		
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)		
Prevalence Index worksheet:		
Total % Cover of: _____ Multiply by: _____		
OBL species _____ x 1 = _____		
FACW species _____ x 2 = _____		
FAC species _____ x 3 = _____		
FACU species _____ x 4 = _____		
UPL species _____ x 5 = _____		
Column Totals: _____ (A) _____ (B)		
Prevalence Index = B/A = _____		
Hydrophytic Vegetation Indicators:		
— Dominance Test is >50%		
— Prevalence Index is ≤3.0 ¹		
— Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)		
— Problematic Hydrophytic Vegetation ¹ (Explain)		
1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks:		
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____

WETLAND DETERMINATION DATA FORM – Arid West Region

wet &
north end

Project/Site: <u>Houghton</u>	City/County: <u>Ellensburg</u>	Sampling Date: <u>8-10-23</u>
Applicant/Owner: <u>Ed Stodd</u>	State: <u>WA</u>	Sampling Point: <u>DP#3</u>
Investigator(s): <u>Ed Stodd</u>	Section, Township, Range: <u>526 T 18 N R 18 E S 16 NW 1/4</u>	
Landform (hillslope, terrace, etc.): _____	Local relief (concave, convex, none): _____ Slope (%): _____	
Subregion (LRR): _____	Lat: _____	Long: _____ Datum: _____
Soil Map Unit Name: _____	NWI classification: _____	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)		
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed?		Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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 <input type="checkbox"/>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks:			

VEGETATION – Use scientific names of plants.

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

soil east push

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: <u>Houghton</u>	City/County: <u>Ellensburg</u>	Sampling Date: <u>8-10-23</u>
Applicant/Owner: <u>Ed Sevall</u>	State: <u>WA</u>	Sampling Point: <u>DR 44</u>
Investigator(s): <u>Ed Sevall</u>	Section, Township, Range: <u>526 T 18 N R 18 E S 16</u>	
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none): _____ Slope (%): _____	
Subregion (LRR):	Lat: _____	Long: _____ Datum: _____
Soil Map Unit Name: _____	NWI classification: _____	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)		
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed?		Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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 type="checkbox"/> No <input checked="" type="checkbox"/>	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>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. <u>Lactuca serriola</u>	<u>60</u>	<u>MJ</u>	<ul style="list-style-type: none"> — Dominance Test is >50% — Prevalence Index is $\leq 3.0^1$ — Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) — Problematic Hydrophytic Vegetation¹ (Explain) 	
2. _____	_____	_____		
3. _____	_____	_____		
4. _____	_____	_____		
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 <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks:				

WETLAND DETERMINATION DATA FORM – Arid West Region

Aspen 5 ha
on SW

Project/Site: <u>Houghton</u>	City/County: <u>Ellensburg</u>	Sampling Date: <u>8-10-23</u>
Applicant/Owner: <u>Ed Scott</u>	State: <u>WA</u>	Sampling Point: <u>DP#5</u>
Investigator(s): <u>Ed Scott</u>	Section, Township, Range: <u>526 T 18 N R 18 E S 16W</u>	
Landform (hillslope, terrace, etc.): _____	Local relief (concave, convex, none): _____ Slope (%): _____	
Subregion (LRR): _____	Lat: _____	Long: _____ Datum: _____
Soil Map Unit Name: _____ NWI classification: _____		
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)		
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed?		Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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 <input type="checkbox"/>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
= Total Cover		
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>3</u> (B)		
Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66</u> (A/B)		
Prevalence Index worksheet:		
Total % Cover of: _____ Multiply by: _____		
OBL species	_____	x 1 = _____
FACW species	_____	x 2 = _____
FAC species	_____	x 3 = _____
FACU species	_____	x 4 = _____
UPL species	_____	x 5 = _____
Column Totals: _____ (A) _____ (B)		
Prevalence Index = B/A = _____		
Hydrophytic Vegetation Indicators:		
Dominance Test is >50%		
Prevalence Index is ≤3.0 ¹		
Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)		
Problematic Hydrophytic Vegetation ¹ (Explain)		
1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks:		

Wetland name or number A

RATING SUMMARY – Eastern Washington

Name of wetland (or ID #): Houghton Wet A Date of site visit: 8-10-23
 Rated by Ed Senn Trained by Ecology? Yes Yes No No Date of training _____

HGM Class used for rating Depressed Wetland has multiple HGM classes? Y ✓

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	
<i>Circle the appropriate ratings</i>				
Site Potential	H <u>M</u> L	H <u>M</u> <u>L</u>	H <u>M</u> L	
Landscape Potential	H <u>M</u> L	<u>H</u> M L	H M <u>L</u>	
Value	<u>H</u> M L	H <u>M</u> L	H <u>M</u> L	TOTAL
Score Based on Ratings	<u>7</u>	<u>6</u>	<u>5</u>	<u>18</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	
	<i>Circle the appropriate category</i>	
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	I	

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 A

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

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

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

Wetland name or number A**DEPRESSATIONAL WETLANDS**Points
(only 1
score per
box)**Water Quality Functions - Indicators that the site functions to improve water quality**

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

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

Wetland has no surface water outlet

points = 5

Wetland has an intermittently flowing outlet

points = 3

Wetland has a highly constricted permanently flowing outlet

points = 3

Wetland has a permanently flowing, unconstricted, surface outlet

points = 1

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

points = 5

Wetland has persistent, ungrazed, vegetation from $\frac{1}{3}$ to $\frac{2}{3}$ of area

points = 3

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

points = 1

Wetland has persistent, ungrazed vegetation $< \frac{1}{10}$ of area

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.

points = 3

Area seasonally ponded is $> \frac{1}{2}$ total area of wetland

points = 1

Area seasonally ponded is $\frac{1}{4}$ - $\frac{1}{2}$ total area of wetland

points = 0

Area seasonally ponded is $< \frac{1}{4}$ total area of wetland

1

Total for D 1

Add the points in the boxes above

9

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

0

D 2.1- D 2.3? Source _____

Yes = 1 No = 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

2

Total for D 3

Add the points in the boxes above

3

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**DEPRESSIVE 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 unconstricted surface outlet

points = 0

(If outlet is a ditch and not permanently flowing treat wetland as "intermittently flowing")

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

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

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 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

1

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

Record the rating on the first page

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?

H 1.1. Structure of the plant community:

Check the Cowardin vegetation classes present and categories of emergent plants. Size threshold for each category is >= 1/4 ac or >= 10% of the wetland if wetland is < 2.5 ac.

Aquatic bed

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

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

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

~~Shrub~~ shrub (areas where shrubs have >30% cover)

Forested (areas where trees have >30% cover)

4 or more checks: points = 3

3 checks: points = 2

2 checks: points = 1

1 check: points = 0

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

Yes = 1 No = 0

1
0

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 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 1/4 ac or 10% of its area? **Answer yes only if H 1.3.1 is No.**

Probably all irrigation

Yes = 3 No = 0

3

H 1.4. Richness of plant species

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.*

Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Russian olive, Phragmites, Canadian thistle, yellow-flag iris, and saltcedar (Tamarisk)

of species

Scoring: > 9 species: points = 2

4-9 species: points = 1

< 4 species: points = 0

1

H 1.5. Interspersion of habitats

Decide from the diagrams below whether interspersion among types of plant structures (described in H 1.1), and unvegetated areas (open water or mudflats) is high, moderate, low, or none.

Use map of Cowardin and emergent plant classes prepared for questions H 1.1 and map of open water from H 1.3. If you have four or more plant classes or three classes and open water, the rating is always high.

Figure



None = 0 points



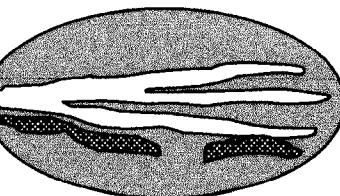
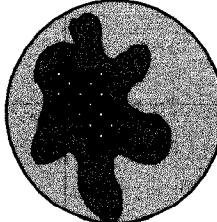
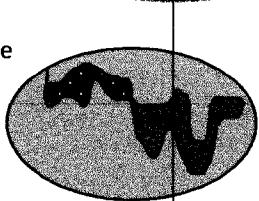
Low = 1 point



Moderate = 2 points



All three diagrams in this row are
High = 3 points



Riparian braided channels with 2 classes

Wetland name or number A

H 1.6. Special habitat features

Check the habitat features that are present in the wetland. The number of checks is the number of points.

- Loose rocks larger than 4 in OR large, downed, woody debris (> 4 in diameter) within the area of surface ponding or in stream.
- Cattails or bulrushes are present within the wetland.
- Standing snags (diameter at the bottom > 4 in) in the wetland or within 30 m (100 ft) of the edge.
- Emergent or shrub vegetation in areas that are permanently inundated/ponded.
- 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
- Invasive species cover less than 20% in each stratum of vegetation (canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)

2

Total for H 1

Add the points in the boxes above

8

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

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:

Calculate: 0 % undisturbed habitat 10 + [(% moderate and low intensity land uses)/2] 5 = 5 %
 > $\frac{1}{3}$ (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

0

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

Calculate: 4 % undisturbed habitat 10 + [(% moderate and low intensity land uses)/2] 5 = 9 %
 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

- 2

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 No = 0

0

Total for H 2

Add the points in the boxes above

- 1

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:
 — 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

points = 2

Site has 1 or 2 priority habitats within 100 m (see Appendix B)
 Site does not meet any of the criteria above

points = 1

points = 0

1

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

Wetland Type	Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	Category
SC 1.0. Vernal pools Is the wetland less than 4000 ft ² , and does it meet at least two of the following criteria? — 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.	Yes – Go to SC 1.1 No = Not a vernal pool SC 1.1. Is the vernal pool relatively undisturbed in February and March? Yes – Go to SC 1.2 No = Not a vernal pool with special characteristics	
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.)?	Yes = Category II No = Category III	Cat. II Cat. III
SC 2.0. Alkali wetlands Does the wetland meet one of the following criteria? — 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. OR does the wetland unit meet two of the following three sub-criteria? — Salt encrustations around more than 75% of the edge of the wetland — More than $\frac{1}{2}$ 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.	Yes = Category I No = Not an alkali wetland	Cat. I
SC 3.0. Wetlands of High Conservation Value (WHCV) SC 3.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? SC 3.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? SC 3.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf SC 3.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and it is listed on their website?	Yes – Go to SC 3.2 No – Go to SC 3.3 Yes = Category I No = Not a WHCV Yes – Contact WNHP/WDNR and go to SC 3.4 No = Not a WHCV Yes = Category I No = Not a WHCV	Cat. I

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? 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.</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? See Appendix C for a field key to identify organic soils.	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?	Yes = Category I bog No – Go to SC 4.4	
<p>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>		
SC 4.4. Is an area with peats or mucks forested (> 30% cover) with subalpine fir, western red cedar, western hemlock, larch, 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:		
<ul style="list-style-type: none"> — 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 $\geq 200 \text{ uS/cm}$ at multiple locations within the wetland 		
Yes = Is a Category I calcareous fen No = Is not a calcareous fen		
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? (Continue only if you have identified that a forested class is present in question H 1.1)</p> <ul style="list-style-type: none"> — 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 $\frac{1}{4}$ 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 (see definitions in question H3.1) 		
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 (see Table 7)?	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 $\frac{1}{4}$ acre with a forest canopy where more than 50% of the tree species (by cover) are fast growing species (see Table 7)?	Yes = Category II No – Go to SC 5.4	Cat. II
SC 5.4. Is the forested component of the wetland within the 100 year floodplain of a river or stream?	Yes = Category II No = Not a forested wetland with special characteristics	Cat. II
<p>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>		NA

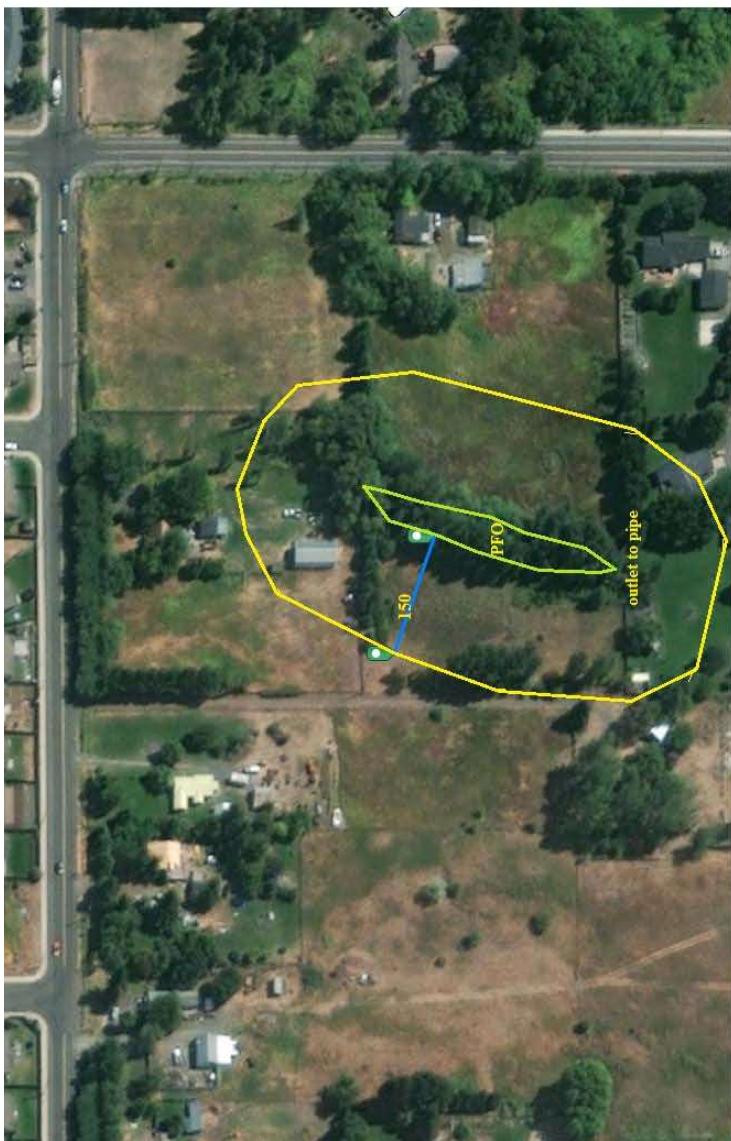
Appendix B: WDFW Priority Habitats in Eastern Washington

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/>)

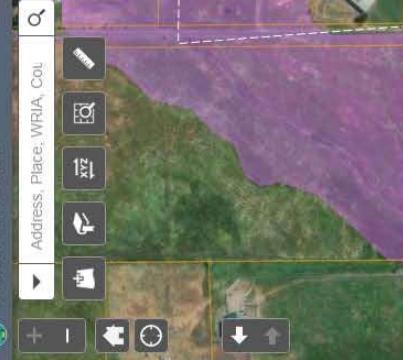
Count how many of the following priority habitats are within 330 ft (100 m) of the wetland: **NOTE: This question is independent of the land use between the wetland and the priority habitat.**

- **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. *irrigation drainage*
- **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.



PHS on the Web

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PHS Identify
Select a tolerance to identify features within...

Buffer Options: Distance: 0 Units: Feet Clear

Generate Report

Occurrence Name	Habitat Feature
Freshwater Forested/Shrub Wetland	Aquatic Habitat
Priority Area	N/A
Site Name	NA
Accuracy	NA
Notes	Wetland System: Freshwater Forested Shrub Wetland - NW Code: PSS1 C
Source Dataset	NW Wetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SOCN	N
Display Resolution	AS MAPPED
Management Recommendations	Click for more info
Geometry Type	Polygons

Occurrence Name	Habitat Feature
Shrubsteppe	Shrubsteppe
Priority Area	Kittitas County Presumptive Shrubsteppe
Site Name	NA
Accuracy	General location of Shrubsteppe. Confirm or refine with site-scale info. WDFW recommends using a scale 1:1000 to inform site-scale and use decisions. Expectation-of-fit-around-co
Notes	Max 1 WDFW City of Yakima, County of K

Map: 120.555837, 47.017173 Degrees
Scale: 1:8000
Orientation: North

Icons: Address, Place, WRIA, Col, Q, 2x2, 4x4, 8x8, 16x16, 32x32, 64x64, 128x128, 256x256, 512x512, 1024x1024, 2048x2048, 4096x4096, 8192x8192, 16384x16384, 32768x32768, 65536x65536, 131072x131072, 262144x262144, 524288x524288, 1048576x1048576, 2097152x2097152, 4194304x4194304, 8388608x8388608, 16777216x16777216, 33554432x33554432, 67108864x67108864, 134217728x134217728, 268435456x268435456, 536870912x536870912, 1073741824x1073741824, 2147483648x2147483648, 4294967296x4294967296, 8589934592x8589934592, 17179869184x17179869184, 34359738368x34359738368, 68719476736x68719476736, 137438953472x137438953472, 274877906944x274877906944, 549755813888x549755813888, 1099511627776x1099511627776, 2199023255552x2199023255552, 4398046511104x4398046511104, 8796093022208x8796093022208, 17592186044416x17592186044416, 35184372088832x35184372088832, 70368744177664x70368744177664, 140737488355328x140737488355328, 281474976710656x281474976710656, 562949953421312x562949953421312, 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A satellite map showing a town with a large yellow buffer drawn around it. A blue line with arrows indicates a path or route within the buffer area. The map includes a legend, search bar, and various tools.

Public Notification (Buffer)

Select or search for a feature in the map

Parcel#, Map#, Name, Status

Apply a search distance

500 Feet

Address Layer

Mailing Address

Format

Comma-separated values (CSV)

Measurement

0.2mi | Kilometers

Measurement Result

1 Kilometers

Press CTRL to enable snapping

Clear

Powered by **esri**
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6/20/2022