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April 19, 2023

Linda Horish
6581 Peoh Point Road
Cle Elum, Washington 98922

RE: Revised Critical Area Report – Parcel #516534
Kittitas County, Washington
SWC Job #21-182

INTRODUCTION

This report describes our observations of jurisdictional wetlands, streams and buffers on or within 200' of your property (Parcel #516534) located north of Lower Peoh Point Road in the Cle Elum area of unincorporated Kittitas County, Washington (the "site").



Above: Vicinity Map



Above: Kittitas County TaxSifter aerial photograph of the site.

The site consists of an irregular shaped parcel totaling 25.15 acres in size and located within the NW $\frac{1}{4}$ of Section 5, Township 19 North, Range 16 East of the W.M.

METHODOLOGY

Ed Sewall of Sewall Wetland Consulting, Inc. inspected the site on October 19, 2021 and March 20 of 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 and Kittitas

County. Soil colors were identified using the 1990 Edited and Revised Edition of the Munsell Soil Color Charts (Kollmorgen Instruments Corp. 1990).

This study reviewed the large, northern portion of the site concentrating around the existing clearing which would be the preferred building site for a single family home. This review did not look at the narrow finger of the parcel that extends towards Lower Peoh Point Road as access to the site already exists on the existing gravel road on the parcel to the south (#546534).

OBSERVATIONS

Existing Site Documentation.

Prior to visiting the site, a review of several natural resource inventory maps was conducted. Resources reviewed included the Kittitas County TaxSifter website, National Wetland Inventory Map, WDNR Fpars stream mapping website, WDFW Priority Habitats and Species maps, and the NRCS Soil Survey online mapping.

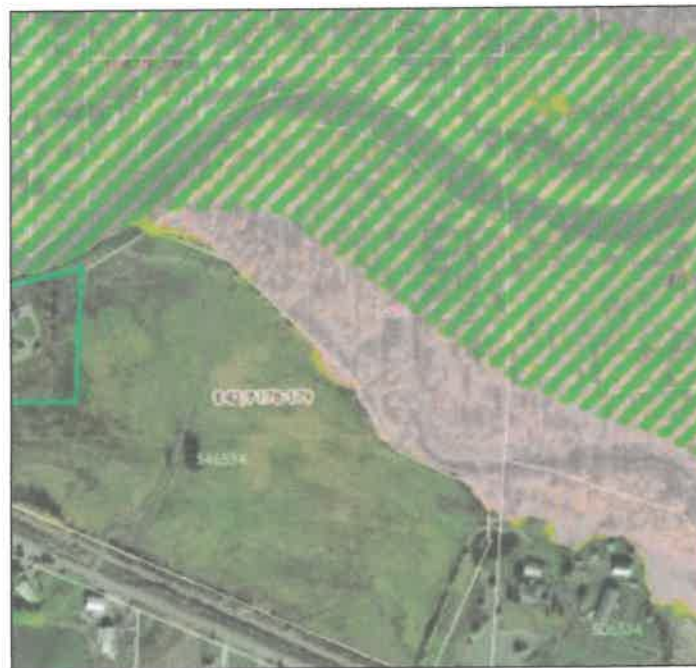
Kittitas County TaxSifter website

The Kittitas County TaxSifter website depicts numerous critical areas on the site. The Yakima River and a tributary are mapped as Type 1 (aka Type S) waters (Shoreline of the state), and a small area of scrub shrub wetland along the Yakima River.

The north end of the site is mapped within the floodway, and the south half within the 100 Year floodplain. The entire site with the exception of a small triangle of land on the south is mapped within the Rural Conservancy Shoreline Management zone.



Above: Kittitas County TaxsiFTER aerial photograph of the site with wetland and stream layers activated.



Above: Kittitas County TaxsiFTER aerial photograph of the site with floodplain layer activated.



Above: Kittitas County TaxSifter aerial photograph of the site with shoreline layer activated.

National Wetlands Inventory (NWI)

The NWI map depicts the same streams and wetland area depicted on the County website. No field verification was conducted for this inventory and an aerial photograph from 1983 was used to make these interpretations.



The wetlands and deepwater habitats in this area were photo interpreted using 1:58,000 scale, color infrared imagery from 1983.

Above: NWI Map of the study area

Soil Survey

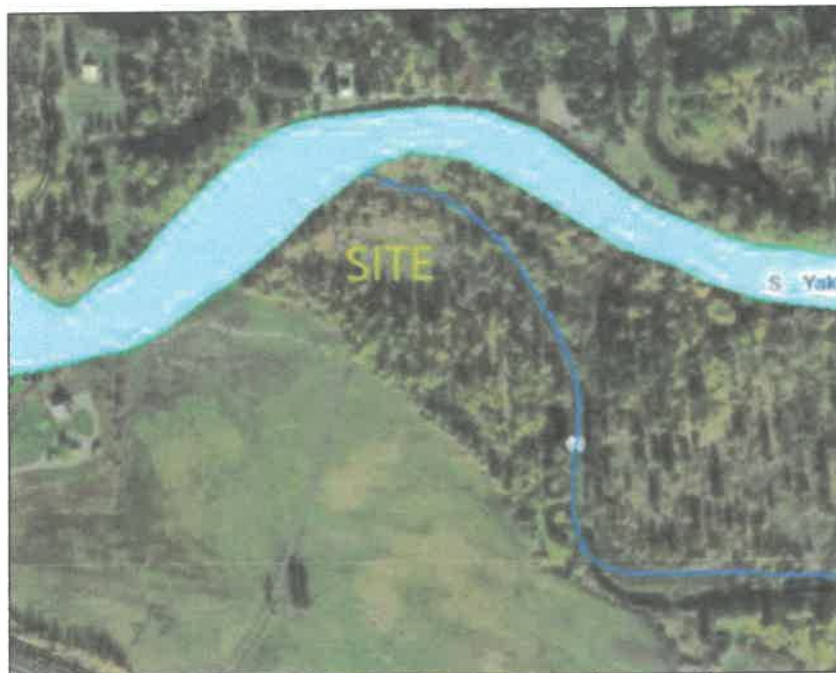
According to the NRCS Soil Mapper website, the site is a mix of somewhat excessively drained Xerofluents, and somewhat poorly drained Quicksell loam. Neither of these soil series is considered a "hydric" or wetland soils according to the publication Hydric Soils of the United States (USDA NTCHS Pub No.1491, 1991).



Above: NRCS Soil map of the study area.

WADNR Fpars Stream Mapping Website

The WADNR Fpars stream mapping website depicts the same streams as the NWI mapping and shows the Yakima River as a Type S water as well as a small stream across the site south of the Yakima River as a Type S water. As described further in this report, this southern stream is mis-mapped on the various inventories and is actually located east of its mapped location.



Above WADNR Fpars Stream Map

Field observations

Uplands

The site is accessed from Lower Peoh Point Road through a gravel access road across the parcel to the south (#546534). The gravel access road enters the site through a gate and the existing road proceeds north to a large cleared area within the forested area south of the Yakima River. The Yakima River is located along the north side of the site.

A tributary stream passes through the east side of the site and drains to the north into the Yakima River. This stream is erroneously mapped on the County, NWI and WDNR Fpars mapping, which show the stream diagonally across the site entering the Yakima much farther west than it does in reality. What is located in a portion of the area shown as a stream is an area of wetland on the east.

The site is generally 4'-6' in elevation above the Yakima River OHWM and consists of a deciduous forested area comprised of an overstory of Black cottonwood with scattered ponderosa pine, and douglas fir with snowberry, alder and weedy species in the understory.

Soil pits excavated through the upland areas consists of a dry, gravelly cobbly loam with a chroma of 10YR 3/3-3/4 and were found to be dry throughout the site.

Streams – Yakima River

As previously mentioned, the Yakima River abuts the north edge of the site. The river is located approximately 4'-6" below the main grade of the site and is bordered by a steeply sloping gravel and shrub covered stream bank. The OHWM of the river was flagged with blue flagging labeled S1-S16 (gps points 866-881, *see map Page 10 of this report*).

The Yakima River is a Type S water or a Shoreline of the state. Kittitas County Code 17B.05.050-1 has a 100' buffer measured from the OHWM of the River for areas designated Rural Conservancy such as the site.

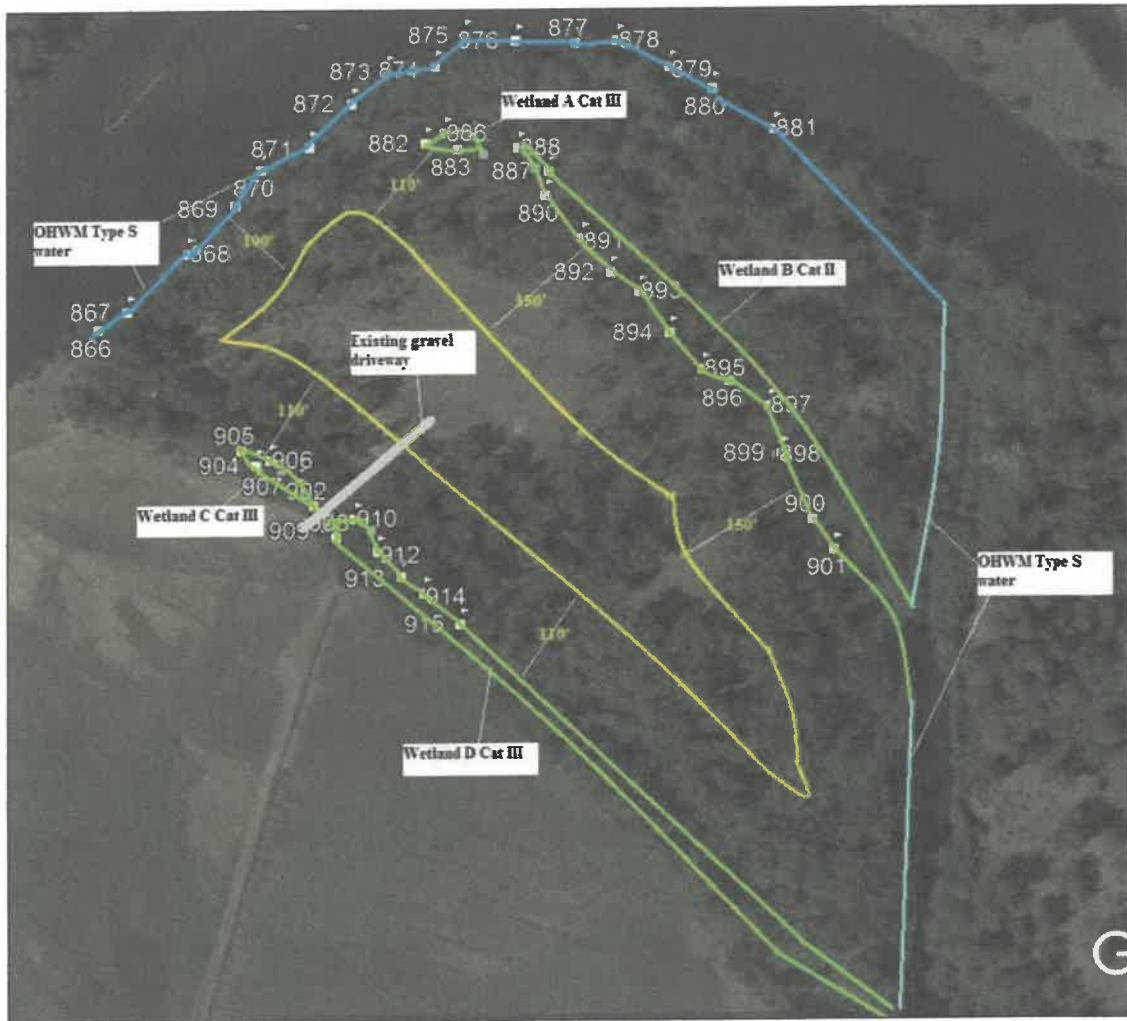
Shoreline Environment Designation	Type S Standard Shoreline Buffer Width (feet)
Urban Conservancy	100
Shoreline Residential	100
Rural Conservancy	100
Natural	150

The other tributary stream mapped on the inventory maps is not where it is depicted on the various maps. The stream is actually located entirely along the eastern edge of the site. A portion of this was flagged at the east end of Wetland B but was generally over 200' from any proposed use

on the site. This stream is also mapped as a Type S water and would also have a 100' buffer measured from the OHWM.

Wetlands

A total of 4 wetlands were identified and delineated on the site. Below is a description of these areas;



Above: GPS mapping of the OHWM of the Yakima River and wetlands along the site.

Wetland A

Wetland A is a small emergent wetland located in a linear depression on the north end of the site but south of the Yakima River. This feature appears to be an isolated depression except in flooding events when it may connect to the stream on the eastern side of the site.

Wetland A was delineated with pink wetland flags labeled A1-A5 (gps points 882-866). This wetland is vegetated with a mix of reed canary grass, sedge and some soft rush.

Soil pits excavated within this wetland revealed a sandy loam with a soil color of 10YR 2/2 with few, fine faint, redoximorphic concentrations. Soils were saturated to the surface during our site visit.

Wetland A was rated using the WADOE *Washington State Wetland Rating System for Eastern Washington 2014 update* (Publ No. 14-06-030). This wetland was rated as a depressional wetland and scored a total of 17 points with 6 points for habitat indicating a Category III wetland. According to Kittitas County Municipal Code Chapter 17BH (Shorelines), Category III wetlands for a moderate land use as is proposed in the area of this wetland would have a have a 110' buffer.

17B.50.020G Wetlands - buffers.

1. Buffer widths: Buffers shall be established and maintained to protect all regulated wetlands. Standard minimum buffer for wetlands are listed in the Table at KCC 17B.50.020G-1. The buffer shall not be altered except as authorized by this Program provided that such alterations meet all other standards for the protection of regulated wetlands. Buffers are measured horizontally in all directions from the regulated wetland edge as marked in the field.

17B.50.020G-1. Wetland Buffers for Wetlands in Shoreline Jurisdiction

Wetland Category	Low Intensity Use and Development	Low and Moderate Intensity Use and Development*	High Intensity Use and Development*
Category I	125 feet	190 feet	250 feet
Category II	100 feet	150 feet	200 feet
Category III	75 feet	110 feet	150 feet
Category IV	25 feet	40 feet**	50 feet

Wetland B

Wetland B is a forested wetland that consists of a finger of wetland that extends to the east and connects to the tributary stream on the eastern

side of the site. This wetland was flagged with pink wetland flagging labeled B1-B15 (gps points 887-901). The eastern end connects to wetland that borders the Type S water on the eastern side of the site and extends further east off-site.

This forested wetland is vegetated with an overstory of red alder and cottonwood with an understory primarily comprised of emergent species including reed canary grass, small fruited bulrush, and sedge.

Soil pits excavated within this wetland revealed a sandy loam with a soil color of 10YR 3/2 with common, medium, distinct, redoximorphic concentrations. Soils were saturated to the surface during our site visit.

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 riverine wetland and scored a total of 20 points with 6 points for habitat indicating a Category II wetland. According to Kittitas County Municipal Code Chapter 17BH (Shorelines), Category II wetlands for a moderate land use as is proposed in the area of this wetland would have a have a 150' buffer.

Wetland C

Wetland C is a linear scrub-shrub wetland located on the west side of the driveway access onto the site along the south property line. This area receives tailwater runoff from irrigation water on the field to the south. This wetland was flagged with pink wetland flagging labeled C1-C6 (gps points 902-907). A culvert is located under the driveway that would let water within the wetland flow to the east into Wetland D if water levels reach the culvert.

This wetland is vegetated with willows, cottonwood saplings, rose and reed canary grass.

Soil pits excavated within this wetland revealed a sandy loam with a soil color of 10YR 2/2 with few, fine, faint redoximorphic concentrations. Soils were moist during our site visit.

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 17

points with 6 points for habitat indicating a Category III wetland. According to Kittitas County Municipal Code Chapter 17BH (Shorelines), Category III wetlands for a moderate land use as is proposed in the area of this wetland would have a have a 110' buffer.

Wetland D

Wetland D Is a linear forested wetland located on the east side of the driveway access onto the site along the south property line. As with Wetland C, this area receives tailwater runoff from irrigation water on the field to the south as well as a small stream or irrigation ditch. This wetland was flagged with pink wetland flagging labeled D1-D8 (gps points 908-915).

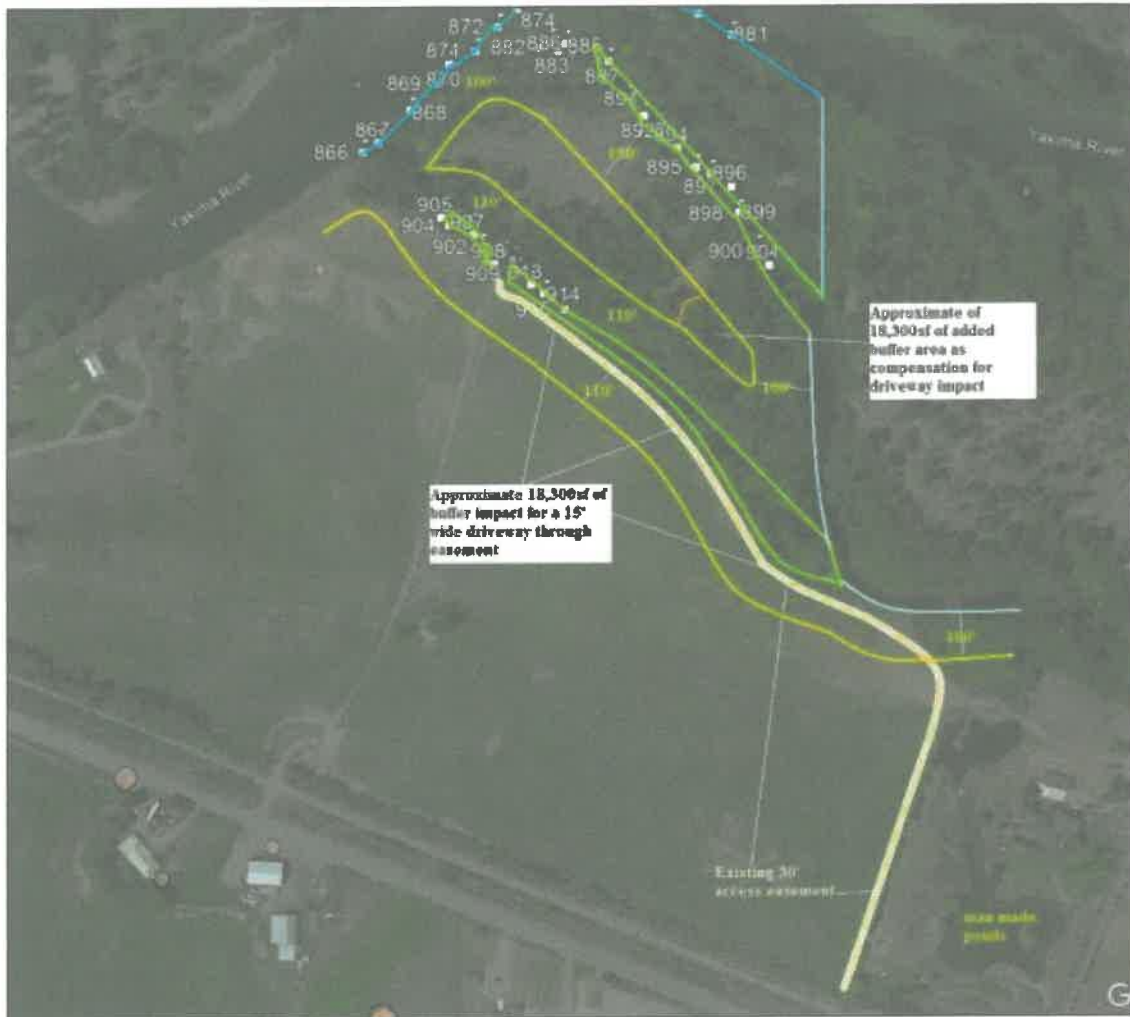
This wetland is vegetated with an overstory of black cottonwood, with red-osier dogwood, willow, Rose and reed canary grass in the understory.

Soil pits excavated within this wetland revealed a sandy loam with a soil color of 10YR 3/2 with common, medium, distinct, redoximorphic concentrations. Soils were saturated to the surface during our site visit.

Wetland D 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 riverine wetland and scored a total of 18 points with 6 points for habitat indicating a Category III wetland. According to Kittitas County Municipal Code Chapter 17BH (Shorelines), Category III wetlands for a moderate land use as is proposed in the area of this wetland would have a have a 110' buffer.

Proposed Access Driveway

The existing gravel driveway leads to a large area outside the wetlands, streams and buffers of these features and could be a potential building site with no critical area impacts. However, the legal access for the property comes along the eastern side of the site from Lower Peoh Point Road and curves along the perimeter of the existing pasture.



Above: Proposed access driveway to gain access to the site.

The pasture itself has no regulated wetlands within the vicinity of the proposed access driveway. The presumed driveway width within the easement will be 15'. The easement itself passes through approximately 1,200 linear feet of the buffer of the 110' buffer of Wetland D and the

Type S water to the north and east. The total amount of buffer impact in an existing grazed pasture is approximately 18,300sf.

To compensate for the proposed impact, we are proposing to add an equivalent area of forested habitat as buffer to the north side of Wetland D and the Type S water. Kittitas County Code only allows buffer averaging to a minimum 75% of the standard width. This cannot be done with the location of the existing easement. 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 this property 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 the driveway through the existing legal access easement.

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 parcel contains an existing 30' wide access easement which is the only way to access the site from Lower Peoh Point Road. To not allow the construction of an access driveway 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 this parcel other than for a single family home with an access driveway with less impact on the wetland and stream buffer than is proposed on the existing attached site plan.

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

Response: The proposed 15' wide driveway is the narrowest that would be reasonable for a single family home and is the minimum necessary to provide access to the site.

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 parcel existed prior to the enactment of the new wetland and stream buffers which now require this reasonable use, which went into effect in December of 2021. This parcel existed prior to the effective date of this Title and is not a result of any action taken by the owner of this parcel.

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

Response: The proposed access driveway 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 the access driveway totals of 18,300sf of existing grazed pasture buffer.

To compensate for permanent impact to the buffer from the driveway, 18,300sf of forested area adjacent to the existing buffer of the same wetland and stream, north of Wetland D will be added as compensation.

The proposed buffer addition will result in no net loss of buffer function to the wetland or stream, will increase the portion of the buffer that is forested, 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.



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 Chapter 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 name or number: C

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat.

H 1.1. Does the wetland unit have the potential to provide habitat for many species?

H 1.1.1 Categories of vegetation structure
Check the Cowardin vegetation classes present and categories of emergent plants. Size threshold for each category is >= X acre or >= 10% of the unit (unit is < 2.5 acres)

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

4-6 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 point NO = 0 points

H 1.3. Surface Water
 H 1.3.1 Does the unit have areas of "open" water (without herbaceous or shrub plants) over at least X acre OR 10% of its area during the March to early June OR in August to the end of September?
 Note: answer YES for Lake-Fringe wetlands
 YES = 3 points & go to H 1.4
 NO = go to H 1.2

H 1.3.2 Does the unit have an intermittent or permanent, and unvegetated, stream within its boundaries, or along one side, over at least X acre or 10% of its area, (answer yes only if H 1.3.1 is NO)? YES = 3 points NO = 0 points

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 knifefill, reed canarygrass, purple loosestrife, Russian Olive, Phragmites, Canadian Thistle, Yellow-flag Iris, and Salt Cedar (Tamarisk)
 # of species > 9 species = 2 points 4-8 species = 1 point < 4 species = 0 points

H 1.5. Interspersion of habitats
 Decide from the diagrams below whether interspersion between types of plant structures (described in H 1.1), and unvegetated areas (open water or mudflats) is high, medium, low, or none.
 Use map of Cowardin plant classes prepared for questions H1.1 and map of open water from H1.3

None = 0 points
 Low = 1 point
 Moderate = 2 points
 High = 3 points

NOTE: If you have four or more classes or three plant classes and open water the rating is always "High".

1st/3 score per box

Wetland name or number: C

H 1.6. Special Habitat Features:
 Check the habitat features that are present in the wetland unit. The number of checks is the score.
 Loose rocks larger than 4" dia large, downed, woody debris (>4in. diameter) within the area of surface ponding or in stream.
 Cattails or bulrushes are present within the unit.
 Standing snags (diameter at the bottom > 4 inches) in the wetland unit or within 30 m (100ft) 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)
 Minimum score possible = 6

H 1.7. TOTAL Score - Add the check marks in the box above

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

H 2.0. Does the landscape have the potential to support habitat at the site?
 H 2.1 Accessible habitat (only area of habitat abutting wetland unit). Calculate:
 % undisturbed habitat (1) + [(% moderate and low intensity land uses)/2] 6 = 20 %

If total accessible habitat is:
 > 1/3 (33.3%) of 1km circle (~100 hectares) points = 3
 20 - 33% of 1km circle points = 2
 10 - 19% of 1km circle points = 1
 < 10% of 1km circle points = 0

H 2.2 Undisturbed habitat in 1km circle around unit. If:
 Undisturbed habitat > 50% of circle 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 circle points = 0

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

The wetland unit is in an area where annual rainfall is less than 12 inches, and its water regime is not influenced by irrigation practices, dams, or water control structures. (Generally, this means outside boundaries of reclamation areas, irrigation district, or reservoirs) points = 3

Total for H 2

Rating of Landscapes Potential If score is: 4-6 = H < 3 = L

H 3.0 Is the Habitat provided by the site valuable to society?
 H 3.1 Does the site provides habitat for species valued in laws, regulations or policies? (choose the Alphabet score)
 Site meets ANY of the following criteria:
 ___ It provides habitat for Threatened or Endangered species (any plant or animal on state or federal lists)
 ___ It is a "priority area" for an individual WDPW species
 ___ It is a Wetland With a High Conservation Value as determined by the Department of Natural Resources
 ___ It has 3 or more priority habitats within 100m (see Appendix B)
 ___ 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 100m (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: C

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland unit 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 units should also be characterized based on their junctions.

Wetland Type	Category
<p>Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.</p> <p>SC 1.0 Vernal pools is the wetland unit 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. NOTE: If you find perennials, "obligate", wetland plants the wetland is probably NOT a vernal pool The soil in the wetland are shallow (<1ft deep (30 cm)) 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>YES = Go to SC 1.1 NO - not a vernal pool YES = Go to SC 1.2 NO - not a vernal pool with special characteristics</p>	<p>SC 1.1 Is the vernal pool relatively undisturbed in February and March? YES = Category II NO = Category III</p> <p>SC 1.2 Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 miles (other wetlands, rivers, lakes etc.)? YES = Category II NO = Category III</p>
<p>SC 2.0 Alkali wetlands Does the wetland unit meet one of the following two criteria?</p> <ul style="list-style-type: none"> The wetland has a conductivity between 2.0 - 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 80% of the edges of the wetland More than 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. <p>YES = Category I NO - not an alkali wetland</p>	<p>Cat. II Cat. III</p>

Wetland name or number: C

Wetlands with High Conservation Value (WHCV)

SC 2.1 Has the Department of Natural Resources updated their web site to include the list of Wetlands with High Conservation Value?
 YES - Go to SC 2.2 NO - Go to SC 2.3

SC 2.2 Is the wetland unit you are rating listed on the DNR database as having a High Conservation Value? YES = Category I NO = not a WHCV Heritage wetland?

SC 2.3 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland?
<http://www1.dnr.wa.gov/info/refdesk/databases/wetlands.pdf>
 YES - contact WHVP/DNR and go to SC 2.4 NO - not a WHCV

SC 2.4 Has DNR identified the wetland within the S/T/R as a wetland with High Conservation value and is listed on their web site?
 YES = Category I NO - not a WHCV

SC 4.0 Bogs and Calcareous Fens
Does the wetland unit (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 junctions.

SC 4.1 Does an area within the wetland unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that comprise 15 inches or more of the first 32 inches 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 unit have organic silt/clay/finer peats or mucks that are less than 15 inches 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 unit 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

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" deep. If the pH is less than 5.0 and the plant species in Table 5 are present, the wetland is a bog.

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's 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 question SC 4.5

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 Question 6

6. Do the species listed in Table 6 comprise at least 10% of the total plant cover 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 ≥ 6.8 AND electrical conductivity ≥ 200 uS/cm at multiple locations within the wetland

Yes - Is a Category I calcareous fen No - is not a calcareous fen

Wetland name or number: C

<p>SC 5.0 Forested Wetlands Does the wetland unit 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 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 X acre of trees (even in wetlands smaller than 2.5 acres) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW (see definitions in question H3.1) <p>YES = go to SC 5.1 NO = not a forested wetland with special characteristics</p>	<p>SC 5.1 Does the wetland <u>not</u> have a forest canopy whose 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</p> <p>SC 5.2 Does the unit 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</p> <p>SC 5.3 Does the wetland unit have areas 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 5.5</p> <p>SC 5.4 Is the forested component of the wetland within the "100 year floodplain" of a river or stream? YES = Category II</p> <p>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 p.1</p>
<p>Wetland name or number: <u>C</u></p>	<p>Col. I Col. I Col. II Col. II</p>

Wetland name or number: C

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/001465/2wdfw081105.pdf>.)

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

- Aspen Stands: Pure or mixed stands of aspen greater than 0.4 ha (1 acre).
- 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 p. 152).
- Old-growth/Wetland 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 25 trees/ha (10 trees/acre) that are > 53 cm (21 in) dbh, and 2.5-7.5 snags/ha (1 - 3 snags/acre) that are > 30-35 cm (12-14 in) 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. Major fire scars: Stands with average diameters exceeding 53 cm (21 in) 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: Woodlands 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.
- Stream: 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 7.6 m (25 ft) high and occurring below 5000 ft.
- Talus: Homogeneous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), 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 logs have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 in (20 ft) 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 Barstide Steppe for sites with little or no shrub cover).
- Barstide Steppes: Nonforested vegetation type dominated by broadleaf herbaceous flora (i.e. forbs), perennial bunchgrasses, or a combination of both. Bluebunch Weibgrass (*Pseudoroegneria spicata*) is often the prevailing cover component along with Idaho Fescue (*Festuca idahoensis*), Sandberg Bluegrass (*Poa secunda*), Rough Fescue (*F. campestris*), or needlegrass (*Achnatherum* spp.).
- Juniper Savanna: 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

Habitat Functions - Indicators that the wetland is providing important habitat

H 1.1. Does the wetland unit have the potential to provide habitat for many species?

H 1.1.1 Categories of vegetation structure

Check the Cowardin vegetation classes present and categories of emergent plants. Size threshold for each category is ≥ 1 acre or $\geq 10\%$ of the unit if unit is < 2.5 acres

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

4-6 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 point (NO = 0 points)

H 1.3. Surface Water

H 1.3.1 Does the unit have areas of "open" water (without herbaceous or shrub plants) over at least X acre OR 10% of its area during the March to early June OR in August to the end of September?

YES = 3 points & go to H 1.4
 NO = go to H 1.3.2

H 1.3.2 Does the unit have an intermittent or permanent, and unvegetated stream within its boundaries, or along one side, over at least X acre or 10% of its area. (answer yes only if H 1.3.1 is NO)?

YES = 3 points (NO = 0 points)

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 European Milfoil, reed canyograns, purple loosestrife, Russian Olive, Phragmites, Canadian Thistle, Yellow-flag Iris, and Soft Cedar (Fraxinus).

of species _____ Scoring: > 9 species = 2 points 4-9 species = 1 point 4 species = 0 points

H 1.5. Interspersion of habitats

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

Use map of Cowardin plant classes prepared for questions H1.1 and map of open water from H1.3

None = 0 points
 Low = 1 point
 Moderate = 2 points
 High = 3 points

NOTE: If you have four or more classes or three plants classes and open water the rating is always "high".

Wetland name or number D

H 1.6. Special Habitat Features:

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

- Loose rocks larger than 4" or large, downed, woody debris (>4in. diameter) within the area of surface ponding or in stream.
- Cartfalls or bulrushes are present within the unit.
- Standing water (diameter at the bottom > 4 inches) in the wetland unit or within 30 m (100ft) of the edge.
- Emergent or scrub vegetation in areas that are permanently inundated/ponded.
- Stable steep banks of fine material that might be used by beaver or muskrat for damming (> 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)

Minimum score possible = 6

H 1. TOTAL Score - Add the check marks in the box above

Rating of Site Potential If score is: 12 - 16 = H 0 - 3 = L Record the rating on the first page

H 2.0. Does the landscape have the potential to support habitat at the site?

H 2.1 Accessible habitat (only area of habitat abutting wetland unit). Calculate: % undisturbed habitat $\frac{7}{14} \rightarrow (7\% \text{ moderate and low intensity land uses}) / 21 = 20\%$

If total accessible habitat is:

- $> 1/3$ (33.3%) of 1km circle (=100 hectares) points = 3
- 20 - 33% of 1km circle points = 2
- 10-19% of 1km circle points = 1
- $< 10\%$ of 1km circle points = 0

H 2.2 Undisturbed habitat in 1km circle around unit. If:

- Undisturbed habitat $> 50\%$ of circle points = 3
- Undisturbed habitat 10 - 50% and in 1-3 patches points = 2
- Undisturbed habitat 10 - 50% and > 3 patches points = 1
- Undisturbed habitat $\leq 10\%$ of circle points = 0

H 2.3 Land use intensity in 1 km circle. If:

- $> 50\%$ of circle is high intensity land use points = (2)
- Does not meet criterion above points = 0

The wetland unit is in an area where annual rainfall is less than 12 inches, 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.) points = 3

Total for H 2 Add the points in the boxes above

Rating of Landscape Potential If score is: 4 - 6 = 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 provides habitat for species valued in laws, regulations or policies? (choose the highest score) Site meets ANY of the following criteria:

- It provides habitat for Threatened or Endangered species (any plant or animal on state or federal lists) points = 2
- It is a "priority area" for an individual WDFW species
- It is a Wetland with a High Conservation Value as determined by the Department of Natural Resources
- It has 3 or more priority habitats within 100m (see Appendix B)
- 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 100m (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: B

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland unit 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 units should also be characterized based on their functions.

Wetland Type	Category
<p>Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.</p> <p>SC 1.0 Vernal pools Is the wetland unit less than 4000 ft², 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. NOTE: If you find perennial, "obligate", wetland plants the wetland is probably NOT a vernal pool --- The soil in the wetland is shallow (<1ft deep (30 cm)) 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</p> <p>SC 1.2 Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 miles (other wetlands, rivers, lakes etc.)? YES = Category II NO = Category III</p> <p>SC 2.0 Alkali wetlands Does the wetland unit meet one of the following two criteria? --- The wetland has a conductivity > 3.0 mS/cm. --- The wetland has a conductivity between 2.0 - 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 80% of the edge of the wetland --- More than 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</p>	<p>Category</p> <p>Cat. II Cat. III Cat. I</p>

Wetland name or number: B

SC 3.0 Wetlands with High Conservation Value (WHCV)

SC 2.1 Has the Department of Natural Resources updated their web site to include the list of Wetlands with High Conservation Value?
 YES - Go to SC 2.2
 NO - Go to SC 2.3

SC 2.2 Is the wetland unit you are rating listed in the DNR database as having a High Conservation Value? YES = Category I
 NO = not a WHCV

SC 2.3 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland?
 YES = Category I
 NO = not a WHCV

SC 2.4 Has DNR identified the wetland within the S/T/R as a wetland with High Conservation value and is listed on their web site?
 YES = Category I
 NO = not a WHCV

SC 4.0 Bogs and Calcareous Fens
 Does the wetland unit (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.
 SC 4.1. Does an area within the wetland unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches 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 unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock or an impermeable horizon 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 unit 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

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" deep. If the pH is less than 5.0 and the plant species in Table 5 are present, the wetland is a bog.

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, Englemann's 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 question SC 4.5

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 Question 6

6. Do the species listed in Table 6 comprise at least 10% of the total plant cover 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 ≥ 6.8 AND electrical conductivity ≥ 200 uS/cm at multiple locations within the wetland

YES -- is a Category I calcareous fen
 NO - is not a calcareous fen

Wetland name or number: B

Wetland name or number: B

Appendix B: WDFW Priority Habitats in Eastern Washington

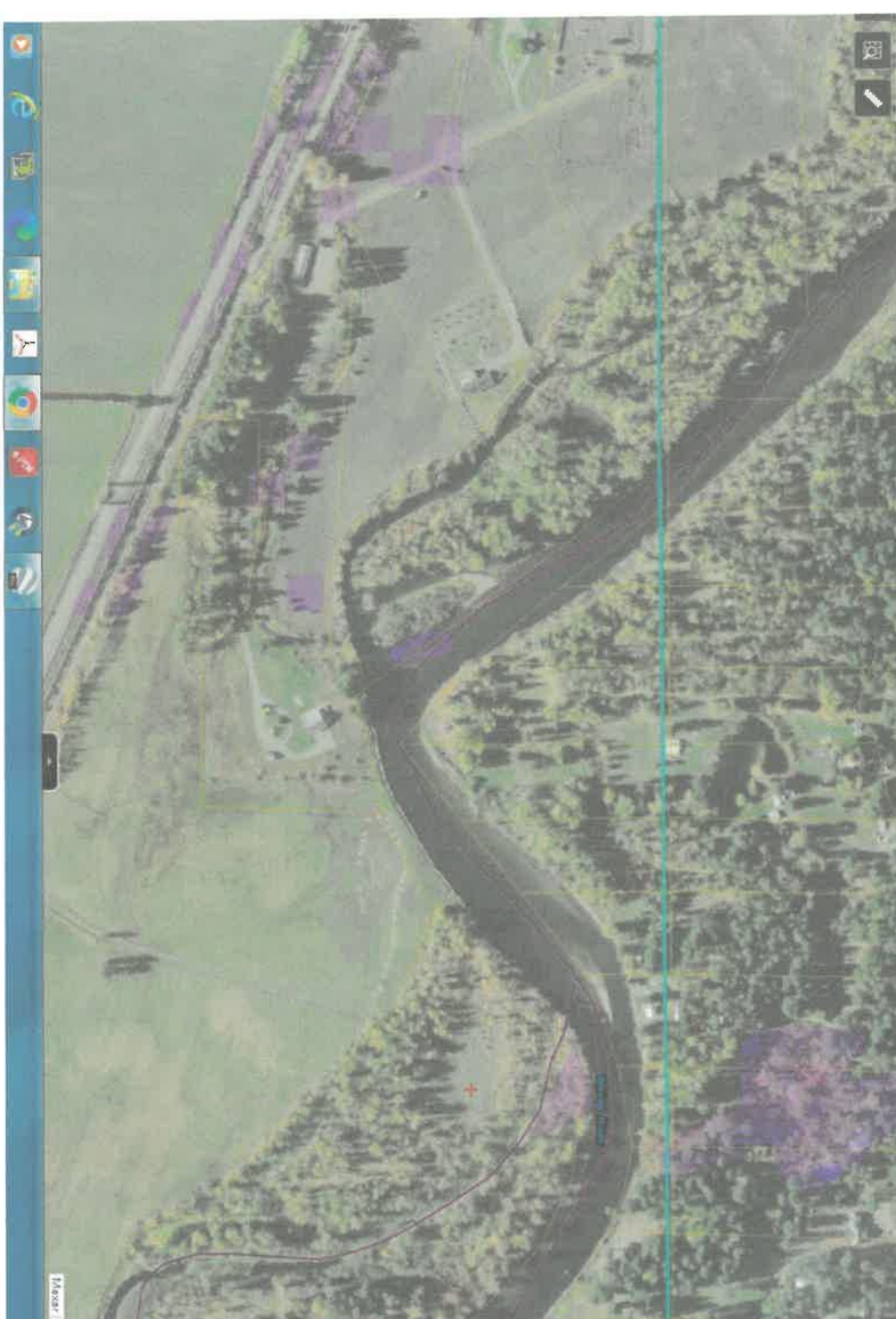
Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in Washington Department of Fish and Wildlife, 2008, Priority Habitat and Species List, Olympia, Washington, 177 pp. <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf>)

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

- ___ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).
- ___ **Shrubsteppe Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (full descriptions in WDFW PHS report p. 158).
- ___ **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 25 trees/ha (10 trees/acre) that are > 58 cm (21 in) dbh, and 2.5-7.5 snags/ha (1 - 3 snags/acre) that are > 30-35 cm (12-14 in) 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 53 cm (21 in) 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; 60 - 300 years old west and 80 - 140 years old east of the Cascade crest.
- ___ **Oregon white Oak:** Woodlands 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.
- ___ **Cavear:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in rolls, rock, ice, or other geological formations and is large enough to contain a human.
- ___ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.
- ___ **Talus:** Homogeneous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including clasp allides 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 > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) 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 needlegrass (*Achnatherum* spp.).
- ___ **Juniper Savanna:** 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.

<p>SC 5.0 Forested Wetlands Does the wetland unit 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 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 4 acre of trees (even in wetlands smaller than 2.5 acres) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW (see definitions in question H3.1) <p>YES = go to SC 5.1 NO = not a forested wetland with special characteristics</p>	<p>SC 5.1 Does the wetland unit have a forest canopy where more than 60% of the tree species (by cover) are slow growing native trees (see Table 7)</p> <p>YES = Category I NO = go to SC 5.2</p> <p>SC 5.2 Does the unit 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>SC 5.3 Does the wetland unit have areas with a forest canopy where more than 50% of the tree species (by cover) are fast growing species. (see Table 7)</p> <p>YES = Category II NO = go to SC 5.5</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</p> <p>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 p. 1</p>
<p>Cat. I</p>	<p>Cat. I</p>
<p>Cat. I</p>	<p>Cat. II</p>
<p>Cat. II</p>	<p>NA</p>



PHS Identify

Buffer Options:
 Distance: Units:

Occurrence Name	Northern Spotted Owl
Scientific Name	<i>Strix occidentalis</i>
Notes	This polygon mark represents one or more records of the above species or habitat occurrence. Contact PHS Data Release (360-902-2543) for obtaining information about marked sensitive species and habitats.
Federal Status	Threatened
State Status	Endangered
PHS Listing Status	PHS Listed Occurrence
Sensitive	Y
SGCN	Y
Display Resolution	TOWNSHIP

Occurrence Name Gray wolf

Scientific Name *Canis lupus*

Notes
 This polygon mark represents one or more records of the above species or habitat occurrence. Contact PHS Data Release (360-902-2543) for obtaining information about marked sensitive species and habitats.

Federal Status Endangered

State Status Endangered

PHS Listing Status PHS Listed Occurrence

Sensitive Y

SGCN Y

Display Resolution TOWNSHIP

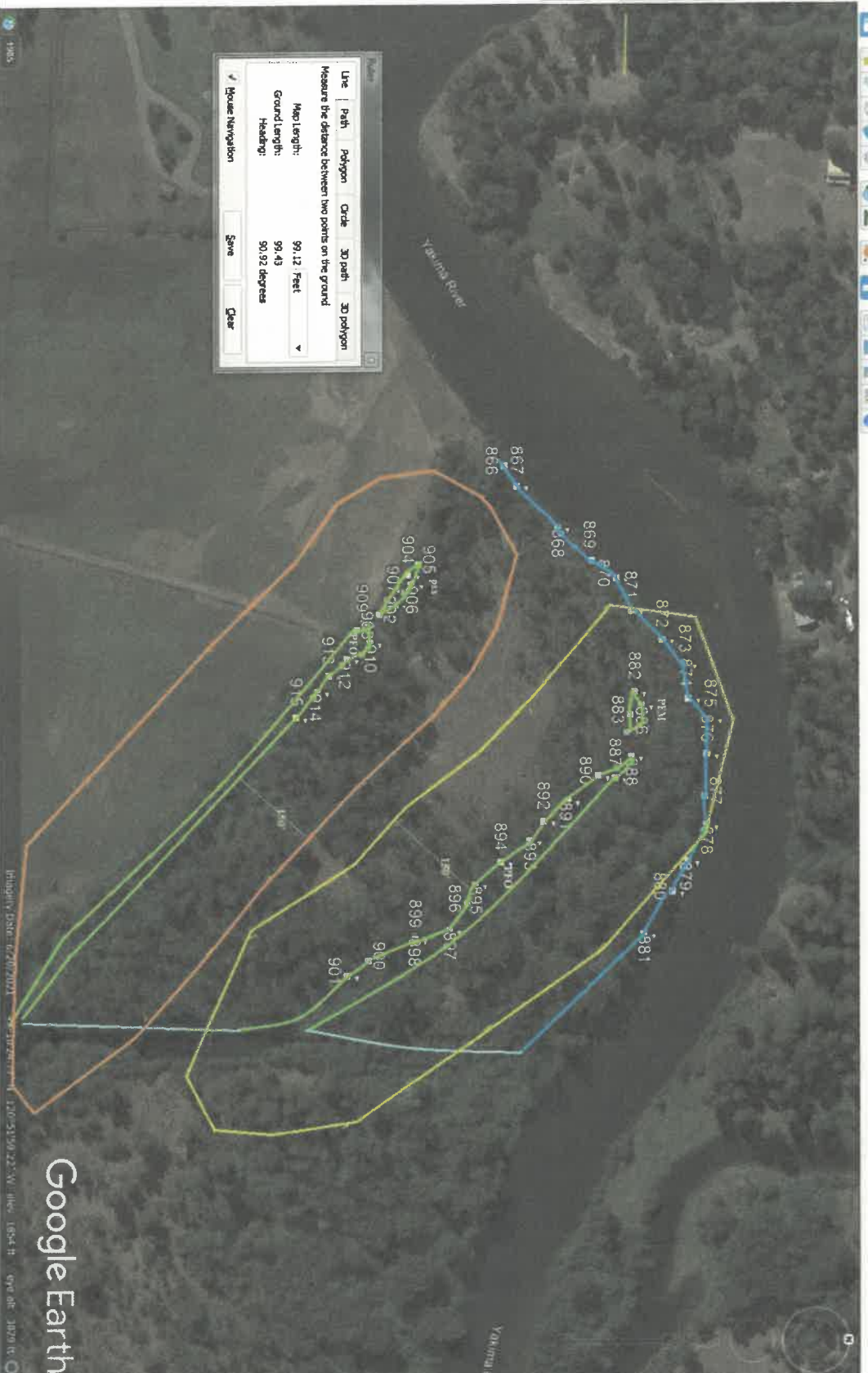
- Layers
- Primary Database
- Announcements
- Borders and Labels
- Places
- Photos
- Roads and Transportation
- 3D Buildings
- Weather
- Gallery
- More
- Terrain

Measure the distance between two points on the ground

Map Length:	99.12 Feet
Ground Length:	99.43
Heading:	50.92 degrees

Mouse Navigation

Save Clear

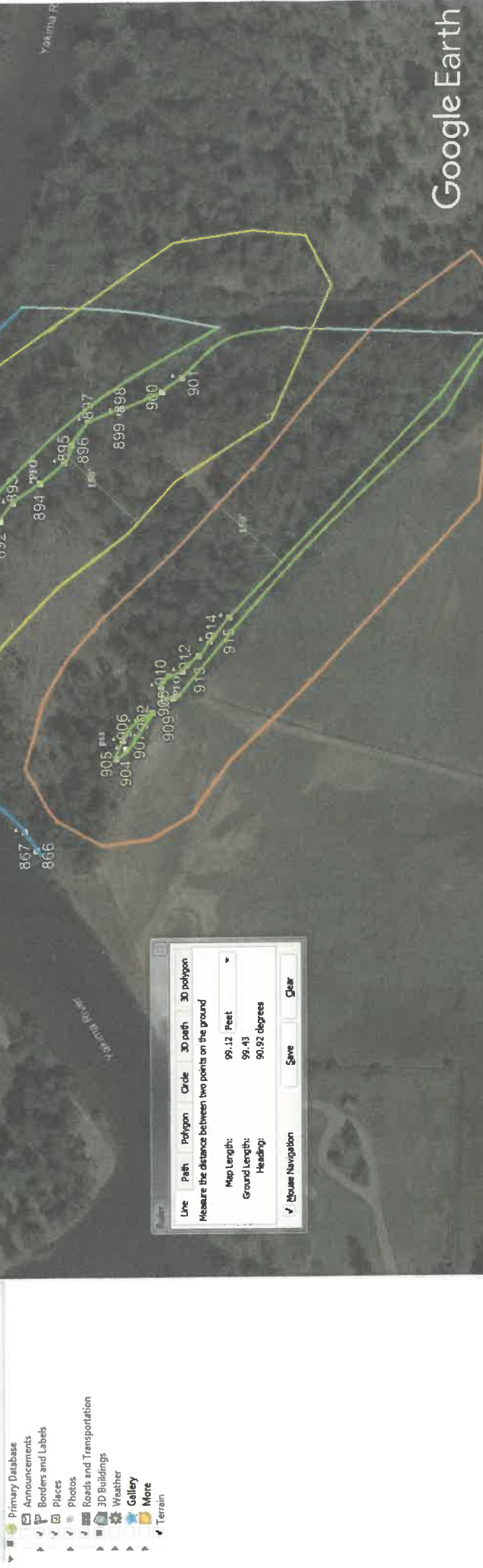


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Places

Layers

- Primary Database
- Announcements
- Borders and Labels
- Places
- Photos
- Roads and Transportation
- 3D Buildings
- Weather
- Galley
- More
- Terrain



Measure the distance between two points on the ground

Line	Path	Polygon	Circle	3D path	3D polygon
Map Length:				99.12	Feet
Ground Length:				99.43	
Heading:				90.02	degrees

Route Navigation

Wetland name or number: C

Maps and figures required to answer questions correctly (Eastern Washington)

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	D 1.1, H 1.1, H 1.4	
Hydroperiods	D 1.1, H 1.2, H 1.3	
Location of outlets (can be added to map of hydroperiods)	D 2.1, D 5.2	
Boundary of 150 ft buffer (can be added to another figure)	H 2.1, H 2.2	
Polygon of area 1km from wetland edge - including polygons for accessible habitat and undisturbed habitat	D 3.1, D 3.2	
Screen capture of map of 303d listed waters in basin (from Ecology web site)	D 3.3	
Screen capture of list of TMDL's for WRMA in which unit is found (from web)	H 1.3.1	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.4	
Hydroperiods	H 1.1, H 1.3	
Ponded depressions	R 1.1	
Boundary of 150 ft buffer (can be added to another figure)	R 1.2, R 4.2	
Plant cover of trees, shrubs, and herbaceous plants	R 4.1	
Width of unit vs. width of stream (can be added to another figure)	H 1.1, H 2.2	
Polygon of area 1km from wetland edge -including polygons for accessible habitat and undisturbed habitat	R 3.1	
Screen capture of map of 303d listed waters in basin (from Ecology web site)	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 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of 150 ft buffer (can be added to another figure)	L 2.2	
Polygon of area 1km from wetland edge -including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2	
Screen capture of map of 303d listed waters in basin (from Ecology web site)	L 3.1	
Screen capture of list of TMDL's for WRMA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 3.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (can be added to figure above)	S 4.1	
Boundary of 150 ft buffer (can be added to another figure)	S 1.1, S 5.1	
Polygon of area 1km from wetland edge (including polygons for accessible habitat and undisturbed habitat)	H 2.1, H 2.2	
Screen capture of map of 303d listed waters in basin (from Ecology web site)	S 3.1, S 3.2	
Screen capture of list of TMDL's for WRMA in which unit is found (from web)	S 3.3	

Wetland name or number: C

RATING SUMMARY -- Eastern Washington

Name of wetland (or ID #): Arish wet C Date of site visit: 10-19-21
 Rated by: Ed Sewell Trained by Ecology? Yes No Date of training: _____
 HGM Class Used for Rating: Dep-1 Unit has multiple HGM classes? Y N

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

OVERALL WETLAND CATEGORY III

1. Category of wetland based on FUNCTIONS

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

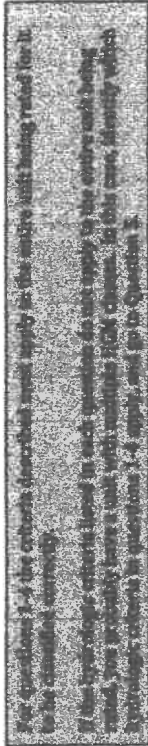
Score for each function based on three ratings (order of ratings is not important):
 9 = H,H,H
 8 = H,H,M
 7 = H,M,L
 6 = H,M,M
 5 = H,L,L
 4 = M,M,L
 3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

SPECIAL CHARACTERISTIC	Check the appropriate category	CATEGORY
Vernal Pools	<input type="checkbox"/>	II III
Alkali	<input type="checkbox"/>	I
Wetland with high conservation value	<input type="checkbox"/>	I
Bog	<input type="checkbox"/>	I
Old Growth or Mature Forest - slow growing	<input type="checkbox"/>	I
Aspen Forest	<input type="checkbox"/>	I
Old Growth or Mature Forest - fast growing	<input type="checkbox"/>	II
Floodplain forest	<input type="checkbox"/>	II
None of the above	<input checked="" type="checkbox"/>	

Wetland name or number: C

HGM Classification of Wetland Units in Eastern Washington



Wetland name or number: C

classes present within your wetland. 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 unit, classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the Wetland Unit	High Water Mark (HWM) Class
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 unable still 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.

1. Does the entire wetland 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 acres (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.
- Does the water leave the wetland without being impounded?

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 <3ft diameter and less than 1 foot deep).

NO - go to 3 YES - The wetland class is Slope

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 ten years.

NOTE: The riverine unit can contain depressions that are filled with water when the river is not flooding.

NO - go to 4 YES - The wetland class is Riverine

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. IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE 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

Wetland name or number: C

DEPRESSIONAL WETLANDS		Points (only 1 score per box)
Water Quality Functions - Indicators that the site functions to improve water quality.		
D 1.0 Does the wetland unit have the potential to improve water quality?		
D 1.1 Characteristics of surface water flow out of the wetland unit: 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 surface outlet - points = 1 D 1.2 The soil 2 inches below the surface (or diff layer) is clay or organic (see NRCS definitions of soils) YES points = 3 NO points = 0		3
D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class) Wetland has persistent, ungrazed, vegetation for > 2/3 of area - points = 5 Wetland has persistent, ungrazed, vegetation from 1/3 to 2/3 of area - points = 3 Wetland has persistent, ungrazed vegetation from 1/10 to < 1/3 of area - points = 1 Wetland has persistent, ungrazed vegetation < 1/10 of area - points = 0 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 > 1/2 total area of wetland - points = 3 Area seasonally ponded is 1/4 - 1/2 total area of wetland - points = 1 Area seasonally ponded is < 1/4 total area of wetland - points = 0		5
Total for D 1		3
Rating of Site Potential If score is: 12-16 = H 6-11 = M 0-5 = L		
Add the points in the boxes above		
Total for D 1		

DEPRESSIONAL WETLANDS		Points (only 1 score per box)
Water Quality Functions - Indicators that the site functions to improve water quality.		
D 2.0 Does the landscape have the potential to support the water quality function at the site?		
D 2.1 Does the Wetland unit receive stormwater discharges? - Yes = 1 No = 0 D 2.2 Is > 10% of the buffer within 150 ft of wetland unit in land uses that generate pollutants - Yes = 1 No = 0 D 2.3 Are there septic systems within 250 ft of the wetland unit? - Yes = 1 No = 0 D 2.4 Are there are other sources of pollutants coming into the wetland that are not listed in questions D2.1 - D2.3? Source - Yes = 1 No = 0		1
Total for D 2		1
Rating of Landscape Potential If score is: 3 or 4 = H 0 = L		
Add the points in the boxes above		
Total for D 2		

DEPRESSIONAL WETLANDS		Points (only 1 score per box)
Water Quality Functions - Indicators that the site functions to improve water quality.		
D 3.0 Is the water quality improvement, provided by the site valuable to society?		
D 3.1 Does the unit discharge directly (within 1 mile) to a stream, river, or lake that is on the SQP list? - Yes = 1 (No = 0) D 3.2 Is the unit in a basin or sub-basin where water quality is an issue in some aquatic resource (SQP list, eutrophic lakes, problems with nuisance and toxic algae)? - Yes = 1 (No = 0) 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 unit is found) - Yes = 2 (No = 0)		0
Total for D 3		0
Rating of Value If score is: 2-4 = H 0 = L		
Add the points in the boxes above		
Total for D 3		

Record the rating on the first page

Wetland name or number: C

DEPRESSIONAL WETLANDS		Points (only 1 score per box)
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion.		
D 4.0 Does the wetland unit have the potential to reduce flooding and erosion?		
D 4.1 Characteristics of surface water flow out of the wetland unit: 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 surface outlet - points = 0 (If outlet is a ditch and not permanently flowing treat unit 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 units with no outlet measure from the surface of permanent water or deepest part (if dry). Seasonal ponding: >= 3 ft above the lowest point in unit or the surface of permanent ponding - points = 8 Seasonal ponding: 2 ft - < 3 ft above the lowest point in unit or the surface of permanent ponding - points = 6 The wetland is a "mesowater" wetland - points = 4 Seasonal ponding: 1 ft - < 2 ft - points = 2 Seasonal ponding: 6 in - < 1 ft - points = 0		2
Total for D 4		6
Rating of Site Potential If score is: 12-16 = H 6-11 = M 0-5 = L		
Add the points in the boxes above		
Total for D 4		

Record the rating on the first page

DEPRESSIONAL WETLANDS		Points (only 1 score per box)
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion.		
D 5.0 Does the landscape have the potential to support hydrologic functions at the site?		
D 5.1 Does the unit receive any stormwater discharges? - Yes = 1 No = 0 D 5.2 Is > 10% of the land use within 150 ft of the wetland in a land uses that generates runoff? - Yes = 1 No = 0 D 5.3 Is more than 25% of the contributing basin of the wetland unit covered with intensive human land uses? - Yes = 1 No = 0		1
Total for D 5		1
Rating of Landscape Potential If score is: 3 = H 0 = L		
Add the points in the boxes above		
Total for D 5		

Record the rating on the first page

DEPRESSIONAL WETLANDS		Points (only 1 score per box)
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion.		
D 6.0 Are the hydrologic functions provided by the site valuable to society?		
D 6.1 Is the unit in a landscape that has flooding problems? Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met. I The wetland captures surface water that would otherwise flow downgradient into areas where flooding has damaged human or natural resources (e.g. salmon redds), AND o Damage occurs in sub-basin that is immediately downgradient of unit - points = 2 o Damage occurs in a sub-basin further down-gradient - points = 1 II 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 III There are no problems with flooding downstream of the unit. - points = 0		1
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		1
Rating of Value If score is: 2-4 = H 1 = M 0 = L		
Add the points in the boxes above		
Total for D 6		

Record the rating on the first page

Wetland name or number: B

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

R 1.0 Does the wetland unit have the potential to improve water quality?

R 1.1 Area of surface depressions within the riverine wetland that can trap sediments during a flooding event
 Depressions cover > 1/3 area of wetland points = 6
 Depressions cover > 1/10 area of wetland points = 3
 Depressions present but cover < 1/10 area of wetland points = 1
 No depressions present points = 0

R 1.2 Structure of plants in the unit (areas with > 80% cover at person height; not Cowardin classes)
 Forest or shrub > 2/3 the area of the wetland points = 10
 Forest or shrub 1/3 - 2/3 area of the wetland points = 5
 Ungrazed, herbaceous plants > 2/3 area of wetland points = 5
 Ungrazed herbaceous plants 1/3 - 2/3 area of wetland points = 2
 Forest, shrub, and ungrazed herbaceous < 1/3 area of wetland points = 0

Total for R 1: Add the points in the boxes above
 Rating of Site Potential: If score is: 12 - 16 = H 6 - 11 = M 0 - 5 = L
 Record the rating on the first page

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

R 2.1 Is the unit within an incorporated city or within its UGA? Yes = 2 (No = 0)
 Yes = 1 (No = 0)

R 2.2 Does the contributing basin include a UGA or incorporated area? Yes = 1 (No = 0)
 Yes = 1 (No = 0)

R 2.3 Does at least 10% of the contributing basin contain tilled fields, pastures, or forests that have been cleared within the last 5 years? Yes = 1 (No = 0)
 Yes = 1 (No = 0)

R 2.4 Is > 10% of the buffer within 150 ft of wetland unit in land uses that generate pollutants? Yes = 1 (No = 0)
 Yes = 1 (No = 0)

R 2.5 Are there other sources of pollutants coming into the wetland that are not listed in questions R 2.1 - R 2.4? Source: Yes = 1 (No = 0)
 Yes = 1 (No = 0)

Total for R 2: Add the points in the boxes above
 Rating of Landscape Potential: If score is: 3 - 6 = H 1 or 2 = M 0 = L
 Record the rating on the first page

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

R 3.1 Is the unit along a stream or river that is on the 303 d list or on a tributary that drains to one? Yes = 1 (No = 0)
 Yes = 1 (No = 0)

R 3.2 Does the river on stream have TMDL limits for nutrients, toxics, or pathogens? Yes = 1 (No = 0)
 Yes = 1 (No = 0)

R 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 in which unit is found) Yes = 2 (No = 0)
 Yes = 2 (No = 0)

Total for R 3: Add the points in the boxes above
 Rating of Value: If score is: 2 - 4 = H 1 = M 0 = L
 Record the rating on the first page

Wetland name or number: B

RIVERINE WETLANDS
Hydrologic Functions - Indicators that site functions to reduce flooding and stream erosion

R 4.0 Does the wetland unit have the potential to reduce flooding and erosion?

R 4.1 Characteristics of the overbank storage the unit provides:
 Estimate the average width of the wetland unit perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of unit) / (average width of stream between banks).
 If the ratio is more than 2 points = 10
 If the ratio is between 1 - 2 points = 8
 If the ratio is 1/2 - < 1 points = 4
 If the ratio is 1/4 - < 1/2 points = 2
 If the ratio is < 1/4 points = 1

R 4.2 Characteristics of plants that slow down water velocities during floods: Treat large woody debris as "forest or shrub". Choose the points appropriate for the best description. (polygons need to have > 80% cover at person height NOT Cowardin classes):
 Forest or shrub for more than 2/3 the area of the wetland. points = 6
 Forest or shrub for > 1/3 area OR herbaceous plants > 2/3 area points = 4
 Forest or shrub for > 1/10 area OR herbaceous plants > 1/3 area points = 2
 Plants do not meet above criteria points = 0

Total for R 4: Add the points in the boxes above
 Rating of Site Potential: If score is: 12 - 16 = H 6 - 11 = M 0 - 5 = L
 Record the rating on the first page

R 5.0 Does the landscape have the potential to support the hydrologic functions at the site?

R 5.1 Is the stream/river adjacent to the unit downcut? Yes = 0 (No = 1)
 Yes = 1 (No = 0)

R 5.2 Does the upgradient watershed include a UGA or incorporated area? Yes = 1 (No = 0)
 Yes = 0 (No = 1)

R 5.3 Is the upgradient stream or river controlled by dams? Yes = 0 (No = 1)
 Yes = 1 (No = 0)

Total for R 5: Add the points in the boxes above
 Rating of Landscape Potential: If score is: 3 = H 1 or 2 = M 0 = L
 Record the rating on the first page

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

R 6.1 Distance to the nearest areas downstream that have flooding problems? Choose the description that best fits the site.
 The sub-basin immediately down-gradient of site has surface flooding problems that results in damage to human or natural resources points = 2
 Surface flooding problems are in a basin further down-gradient points = 1
 No flooding problems anywhere downstream points = 0

R 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)
 Yes = 2 (No = 0)

Total for R 6: Add the points in the boxes above
 Rating of Value: If score is: 2 - 4 = H 1 = M 0 = L
 Record the rating on the first page

Wetland name or number: D

RATING SUMMARY – Eastern Washington

Name of wetland (or ID #): Housh Wet D Date of site visit: 10-19-21

Rated by: Ed Sand Trained by Ecology? Yes No Date of training: _____

HGM Class Used for Rating: River Unit has multiple HGM classes? Y N

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

OVERALL WETLAND CATEGORY III

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	Importance of Water Quality	Hydrograph	Hydrology	Wetland
Site Potential	H M L	H M L	L H M L	M L
Landscape Potential	H M L	H M L	L H M L	M L
Value	H M L	H M L	L H M L	M L
Score Based on Ratings	<u>6 6 6 6</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
 6 = H,M,M
 5 = H,L,L
 4 = M,L,L
 3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Vernal Pools	II
Atlefall	I
Wetland with high conservation value	I
Bog	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	

Wetland name or number: D

Maps and figures required to answer questions correctly (Eastern Washington)

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents		D 1.3, H 1.1, H 1.4
Hydroperiods		D 1.4, H 1.2, H 1.3
Location of outlet (can be added to map of hydroperiods)		D 1.1, D 1.4
Boundary of 150 ft buffer (can be added to another figure)		D 2.2, D 5.2
Polygon of area 1km from wetland edge - including polygons for accessible habitat and undisturbed habitat		H 2.1, H 2.2
Screen capture of map of 303d listed waters in basin (from Ecology web site)		D 3.1, D 3.2
Screen capture of list of TMDL's for WRIA in which unit is found (from web)		D 3.3
Area of open water (can be added to map of hydroperiods)		H 1.3.1

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents		H 1.1, H 1.4
Hydroperiods		H 1.2, H 1.3
Ponded depressions		R 1.1
Boundary of 150 ft buffer (can be added to another figure)		R 2.4
Plant cover of trees, shrubs, and herbaceous plants		R 1.2, R 4.2
Width of unit vs. width of stream (can be added to another figure)		R 4.1
Polygon of area 1km from wetland edge - including polygons for accessible habitat and undisturbed habitat		H 2.1, H 2.2
Screen capture of map of 303d listed waters in basin (from Ecology web site)		R 3.1
Screen capture of list of TMDL's for WRIA in which unit is found (from web)		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 1.4
Plant cover of trees, shrubs, and herbaceous plants		L 1.2
Boundary of 150 ft buffer (can be added to another figure)		L 2.2
Polygon of area 1km from wetland edge (including polygons for accessible habitat and undisturbed habitat)		H 2.1, H 2.2
Screen capture of map of 303d listed waters in basin (from Ecology web site)		L 3.1
Screen capture of list of TMDL's for WRIA in which unit is found (from web)		L 3.3

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents		H 1.1, H 1.4
Hydroperiods		H 1.2
Plant cover of dense trees, shrubs, and herbaceous plants		S 1.3
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (can be added to figure above)		S 4.1
Boundary of 150 ft buffer (can be added to another figure)		S 2.1, S 5.1
Polygon of area 1km from wetland edge (including polygons for accessible habitat and undisturbed habitat)		H 2.1, H 2.2
Screen capture of map of 303d listed waters in basin (from Ecology web site)		S 3.1, S 3.2
Screen capture of list of TMDL's for WRIA in which unit is found (from web)		S 3.3

Wetland name or number: 7

HGM Classification of Wetland Units in Eastern Washington

For questions 1-4 the criteria described must apply to the entire unit being rated for it to be classified correctly.
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.

- Does the entire wetland 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 acres (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)**
- 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.
 Does the water leave the wetland without being impounded?
 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 <3ft diameter and less than 1 foot deep).
NO - go to 3. YES - The wetland class is **Slope**
- 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 ten years.
 NOTE: The riverine unit can contain depressions that are filled with water when the river is not flooding.
NO - go to 4. YES - The wetland class is **Riverine**

- 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**
- 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. IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE 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

Wetland name or number: 7

classes present within your wetland. 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 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 unable still 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

RIVERINE WETLANDS
Hydrologic Functions - Indicators that site functions to reduce flooding and stream erosion

R 4.0 Does the wetland unit have the potential to reduce flooding and stream erosion?
 R 4.1 Characteristics of the overbank storage the unit provides:
 Estimate the average width of the wetland unit perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of unit)/(average width of stream between banks).
 If the ratio is more than 2 points = 10
 If the ratio is between 1 - 2 points = 8
 If the ratio is $\frac{1}{2}$ - 1 points = 4
 If the ratio is $\frac{1}{4}$ - $\frac{1}{2}$ points = 2
 If the ratio is $< \frac{1}{4}$ points = 1

R 4.2 Characteristics of plants that slow down water velocities during floods. Treat large woody debris as "forest or shrub". Choose the points appropriate for the best description. (polygons need to have >50% cover at person height NOT Cowardin classes):
 Forest or shrub for more than 2/3 the area of the wetland. points = 6
 Forest or shrub for >1/3 area OR herbaceous plants > 2/3 area points = 4
 Forest or shrub for > 1/10 area OR herbaceous plants > 1/3 area points = 2
 Plants do not meet above criteria points = 0

Total for R 5 Add the points in the boxes above
 Rating of Site Potential If score is: 13 - 16 = H 6 - 11 = M 0 - 5 = L
 Record the rating on the first page

R 5.0 Does the landscape have the potential to support the hydrologic functions at the site?
 R 5.1 Is the stream/river adjacent to the unit downcut? Yes = 0 No = 1
 R 5.2 Does the upgradient watershed include a UGA or incorporated area? Yes = 1 No = 0
 R 5.3 Is the upgradient stream or river controlled by dams? Yes = 0 No = 1

Total for R 5 Add the points in the boxes above
 Rating of Landscape Potential If score is: 3 = H 1 or 2 = M 0 = L
 Record the rating on the first page

R 6.0 Are the hydrologic functions provided by the site valuable to society?
 R 6.1 Distance to the nearest areas downstream that have flooding problems? Choose the description that best fits the site.
 The sub-basin immediately down-gradient of site has surface flooding problems that results in damage to human or natural resources points = 2
 Surface flooding problems are in a basin further down-gradient points = 1
 No flooding problems anywhere downstream points = 0

R 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

Total for R 6 Add the points in the boxes above
 Rating of Value If score is: 2 - 4 = H 1 = M 0 = L
 Record the rating on the first page

Wetland name or number: A

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

R 1.0 Does the wetland unit have the potential to improve water quality?
 R 1.1 Area of surface depressions within the riverine wetland that can trap sediments during a flooding event.
 Depressions cover >1/3 area of wetland points = 6
 Depressions cover > 1/10 area of wetland points = 3
 Depressions present but cover < 1/10 area of wetland points = 1
 No depressions present points = 0

R 1.2 Structure of plants in the unit (areas with >50% cover at person height; not Cowardin classes):
 Forest or shrub > 2/3 the area of the wetland points = 10
 Forest or shrub 1/3 - 2/3 area of the wetland points = 5
 Ungrazed, herbaceous plants > 2/3 area of wetland points = 2
 Ungrazed herbaceous plants 1/3 - 2/3 area of wetland points = 1
 Forest, shrub, and ungrazed herbaceous < 1/3 area of wetland points = 0

Total for R1 Add the points in the boxes above
 Rating of Site Potential If score is: 13 - 16 = H 6 - 11 = M 0 - 5 = L
 Record the rating on the first page

R 2.0 Does the landscape have the potential to support the water quality function at the site?
 R 2.1 Is the unit within an incorporated city or within its UGA? Yes = 2 No = 0
 R 2.2 Does the contributing basin include a UGA or incorporated area? Yes = 1 No = 0
 R 2.3 Does at least 10% of the contributing basin contain tilled fields, pastures, or forests that have been cleared within the last 5 years? Yes = 1 No = 0
 R 2.4 Is > 10% of the buffer within 150 ft of wetland unit in land uses that generate pollutants? Yes = 1 No = 0
 R 2.5 Are there other sources of pollutants coming into the wetland that are not listed in questions R 2.1 - R 2.4? Yes = 1 No = 0

Total for R 2 Add the points in the boxes above
 Rating of Landscape Potential If score is: 3 - 6 = H 1 or 2 = M 0 = L
 Record the rating on the first page

R 3.0 Is the water quality improvement provided by the site valuable to society?
 R 3.1 Is the unit along a stream or river that is on the 303 d list or a tributary that drains to one?
 Yes = 1 No = 0
 R 3.2 Does the river or stream have TMDL limits for nutrients, toxics, or pathogens? Yes = 1 No = 0
 R 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 in which unit is found) Yes = 2 No = 1

Total for R 3 Add the points in the boxes above
 Rating of Value If score is: 2 - 4 = H 1 = M 0 = L
 Record the rating on the first page

Wetland name or number: D

Habitat Functions - Indicators that site functions to provide important habitat:

H 1.1. Does the wetland unit have the potential to provide habitat for many species?

H 1.1 Categories of vegetation structure
 Check the Cowardin vegetation classes present and categories of emergent plants. Size threshold for each category is >= 1/4 acre or >= 10% of the unit if unit is < 2.5 acres

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

H 1.2. Is one of the vegetation types "aquatic bed"? YES = 1 point NO = 0 points

H 1.3. Surface Water
 H 1.3.1 Does the unit have areas of "open" water (without herbaceous or shrub plants) over at least 1/4 acre OR 10% of its area during the March to early June OR in August to the end of September?
 Note: answer YES for Lake-filling wetlands
 YES = 3 points & go to H 1.4
 NO = go to H 1.3.2

H 1.3.2 Does the unit have an intermittent or permanent, and unvegetated stream within its boundaries, or along one side, over at least 1/4 acre or 10% of its area, (answer yes only if H 1.3.1 is NO)?
 YES = 3 points
 NO = 0 points

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 Soft-Collar Fleabane.
 # of species: > 9 species = 2 points 4-9 species = 1 point < 4 species = 0 points

H 1.5. Interspersion of habitats
 Decide from the diagrams below whether interspersion between types of plant structures (described in H 1.1), and unvegetated areas (open water or mudflats) is high, medium, low, or none.
 Use map of Cowardin plant classes prepared for questions H1.3 and map of open water from H1.3

High = 3 points
 Moderate = 2 points
 Low = 1 point
 None = 0 points

NOTE: If you have four or more classes or three plants classes and open water the rating is always "High".

Wetland name or number: A

Special Habitat Features:
 Check the habitat features that are present in the wetland unit. The number of checks is the score.
 Loose rocks larger than 4" gr. large, downed, woody debris (>4in. diameter) within the area of surface ponding or in stream.
 Gravel or boulders are present within the unit.
 Standing snags (diameter at the bottom > 4 inches) in the wetland unit or within 30 m (100ft) 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 damming (>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)
 Maximum score possible = 6

H 1.1. TOTAL Score - 2
 Add the check marks in the box above

Rating of Site Potential If score is: 12-15 = H 6-11 = M 0-5 = L
 Record the rating on the first page

H 2.0. Does the landscape have the potential to support habitat at the site?

H 2.1 Accessible habitat (only area of habitat abutting wetland unit). Calculator:
 % undisturbed habitat / 1 + [(% moderate and low intensity land uses)/2] = 24%
 If total accessible habitat is:
 > 1/3 (33.3%) of 1km circle (~100 hectares) points = 3
 20-33% of 1km circle points = 2
 10-19% of 1km circle points = 1
 <10% of 1km circle points = 0

H 2.2 Undisturbed habitat in 1km circle around unit. If:
 Undisturbed habitat > 50% of circle 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 circle points = 0

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

The wetland unit is in an area where annual rainfall is less than 12 inches, 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) points = 3

Total for H 2
 Add the points in the boxes above
 Rating of Landscape Potential If score is: 4-6 = H 3-5 = 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)
 Site meets ANY of the following criteria:
 It provides habitat for Threatened or Endangered species (any plant or animal on state or federal lists)
 It is a "priority area" for an individual WDFW species points = 2
 It is a Wetland With a High Conservation Value as determined by the Department of Natural Resources
 It has 3 or more priority habitats within 100m (see Appendix B)
 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
 She has 1 or 2 priority habitats within 100m (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: D

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland unit 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 units should also be characterized based on their functions.

Wetland Type	Category
<p>Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.</p> <p>SC 1.0 Vernal pools Is the wetland unit 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. NOTE: If you find perennial, "obligate", wetland plants the wetland is probably NOT a vernal pool The soil in the wetland is shallow (<1ft deep (30 cm)) 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>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? 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 miles (other wetlands, rivers, lakes etc.)? YES = Category II NO = Category III</p>	<p>Cat. II Cat. III</p>
<p>SC 2.0 Alkali wetlands Does the wetland unit meet one of the following two criteria? The wetland has a conductivity > 3.0 mS/cm. The wetland has a conductivity between 2.0 - 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> <p>OR</p> <p>Does the wetland unit meet two of the following three sub-criteria? Salt encrustations around more than 80% of the edge of the wetland More than 1/3 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> <p>YES = Category I NO = not an alkali wetland</p>	<p>Cat. I</p>

Wetland name or number: D

SC 3.0 Wetlands with High Conservation Value (WHCV)

SC 2.1 Has the Department of Natural Resources updated their web site to include the list of Wetlands with High Conservation Value?
YES - Go to SC 2.2
NO - Go to SC 2.3

SC 2.2 Is the wetland unit you are rating in the DNR database as having a High Conservation Value? YES = Category I
NO = not a WHCV

SC 2.3 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland?
<http://www1.dnr.wa.gov/nhp/refdesk/getassessch/wetland.htm>
YES = Category I
NO = not a WHCV

SC 2.4 Has DNR identified the wetland within the S7/R1 wetland with High Conservation value and is listed on their web site?
YES = Category I
NO = not a WHCV

SC 4.0 Bogs and Calcareous Fens
Does the wetland unit (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.

SC 4.1. Does an area within the wetland unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches 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 unit have organic soils, either peats or mucks that are less than 16 inches 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 unit 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

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" deep. If the pH is less than 5.0 and the plant species in Table 5 are present, the wetland is a bog.

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, Englemann's 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

5. Do the species listed in Table 5 comprise at least 20% of the total plant cover within an area of peats and mucks?
Yes - Category I bog
NO - go to question SC 4.5

6. Do the species listed in Table 6 comprise at least 10% of the total plant cover 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 ≥ 6.8 AND electrical conductivity ≥ 200 uS/cm at multiple locations within the wetland

Yes - is a Category I calcareous fen
No - is not a calcareous fen

Wetland name or number: A

<p>SC 5.0 Forested Wetlands Does the wetland unit 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 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 <p>— There is at least 1/4 acre of trees (even in wetlands smaller than 2.5 acres) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW (see definitions in question H 5.1)</p> <p>YES = go to SC 5.1 NO = not a forested wetland with special characteristics</p>	<p>SC 5.1 Does the wetland unit have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees (see Table 7)?</p> <p>YES = Category I NO = go to SC 5.2</p> <p>SC 5.2 Does the unit 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>SC 5.3 Does the wetland unit have areas with a forest canopy where more than 50% of the tree species (by cover) are fast growing species. (see Table 7)</p> <p>YES = Category II NO = go to SC 5.5</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</p> <p>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 p. 1</p>
	<p>Cat. I</p> <p>Cat. I</p> <p>Cat. II</p> <p>Cat. II</p> <p>NA</p>

Wetland name or number: _____

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>)

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

- ___ **Aspen Stands** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).
- ___ **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 p. 152).
- ___ **Old-growth/Mature Forests** Old-growth forest 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 25 trees/ha (10 trees/acre) that are > 53 cm (21 in) dbh, and 2.5-7.5 snags/ha (1 - 3 snags/acre) that are > 30-35 cm (12-14 in) 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 53 cm (21 in) 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 Oaks** Woodlands 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.
- ___ **Streams** 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 7.6 m (25 ft) high and occurring below 5000 ft.
- ___ **Talus** Homogeneous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft) 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 > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) 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 Steppes for sites with little or no shrub cover).
- ___ **Eastside Stepper** 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 Savannas** 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.



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■ Category 4C
■ Category 4B
■ Category 4A
■ Category 2
■ Category 1

Sediment
■ Category 5 - 303d
■ Category 4C
■ Category 4B
■ Category 4A
■ Category 2
■ Category 1



Assessed Water/Sediment Filter Applied [Clear Filter](#)

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Occurrence Name	Scientific Name	Notes
Northern Spotted Owl	<i>Strix occidentalis</i>	This polygon mask represents one or more records of the above species or habitat occurrence. Contact PHS Data Release (360.902.2543) for obtaining information about masked sensitive species and habitats
	Federal Status	Threatened
	State Status	Endangered
	PHS Listing Status	PHS Listed Occurrence
	Sensitive	Y
	SGCN	Y
	Display Resolution	TOWNSHIP
	Management Recommendations	Click for more info.

Occurrence Name	Scientific Name	Notes
Grey wolf	<i>Canis lupus</i>	This polygon mask represents one or more records of the above species or habitat occurrence. Contact PHS Data Release (360.902.2543) for obtaining information about masked sensitive species and habitats
	Federal Status	Endangered
	State Status	Endangered
	PHS Listing Status	PHS Listed Occurrence
	Sensitive	Y
	SGCN	Y
	Display Resolution	TOWNSHIP

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