



June 24, 2020

Randall Richardson
21622 NE 150th St
Woodinville, WA 98077

RE: Wetland and Stream Reconnaissance Report for King County Tax Parcel 0326069002

Wetland Resources, Inc. (WRI) performed a site reconnaissance on June 2, 20120 to locate jurisdictional wetlands and streams on and within the vicinity of King County parcel number 032606002. The subject property is located at 23602 NE 200th St in unincorporated King County, northeast of the City of Woodinville. The Public Land Survey System (PLSS) locator for the subject property is Section 3, Township 26N, Range 06E, W.M. The subject property is located within the Snohomish watershed, Water Resources Inventory Area (WRIA) 7.

The 16.7-acre subject property is an undeveloped forested parcel with an access point along the southern property line. The subject property is located in a rural residential setting with large, forested open space between residential pockets. The property was partially cleared for the construction of a single-family residence and associated appurtenances. The topography of the site is generally flat with a slight westerly aspect and undulations throughout.



Figure 1: Aerial view of subject site (not to scale).

Due to unpermitted clearing activity on-site, King County code enforcement issued a stop work order (PREA19-0269 / ENFR19-0955) and requested an environmental review of the property, in order to demonstrate compliance with the County's Critical Areas Code.

METHODOLOGY AND RESULTS

Prior to conducting the on-site investigation, public resource information was reviewed to identify the presence of wetlands, streams, and other critical areas within and near the project area. These sources include: the USFWS National Wetlands Inventory (NWI); USDA/NRCS Web Soil Survey; WDFW SalmonScape Interactive Mapping System; WDFW Priority Habitat and Species (PHS) Interactive Map; King County iMap Interactive Mapping Tool; and WDNR Forest Practices Application Mapping Tool.

- *US Fish and Wildlife Service National Wetlands Inventory:*
The National Wetlands Inventory does not show any wetlands or streams on the subject property. The closest mapped feature is the Tuck Creek wetland complex located over 0.37 miles west of the subject property.
- *USDA Natural Resources Conservation Service (NRCS) Web Soil Survey:*
The Web Soil Survey maps the soils underlying the site as Alderwood gravelly sandy loam, 8 to 15 percent slopes.
- *WDFW SalmonScape Interactive Mapping System:*
SalmonScape does not map any streams on or near the subject property. The closest mapped feature is Tuck Creek (Type-F) approximately 0.37 miles to the west.
- *WDFW Priority Habitats and Species Interactive Map:*
The Priority Habitats and Species Map does not show any critical areas on site, but displays the Tuck Creek wetland complex in the same location as NWI, 0.37 miles west of the property.
- *King County iMap Interactive Mapping Tool:*
iMap does not show any critical areas on site, but displays the Tuck Creek wetland complex in the same location as the above resources, 0.37 miles west of the property.
- *WDNR Forest Practices Application Mapping Tool:*
FPAMT does not map any streams on or near the subject property. The closest mapped feature is Tuck Creek (Type-F) approximately 0.37 miles to the west.

The presence of wetlands was determined using the routine determination approach described in the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0) (U.S. Army Corps of Engineers 2010). Under the routine methodology, the process for making a wetland determination is based on three steps:

- 1.) Examination of the site for hydrophytic vegetation (species present and percent cover);
- 2.) Examination of the site for hydric soils;
- 3.) Determining the presence of wetland hydrology

Hydrophytic Vegetation Criteria

The manuals define hydrophytic vegetation as the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present. One of the most common indicators for hydrophytic vegetation is when more than 50 percent of a plant community consists of species rated “Facultative” and wetter on lists of plant species that occur in wetlands.

Soils Criteria and Mapped Description

The manuals define hydric soils as those that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part. Field indicators are used for determining whether a given soil meets the definition for hydric soils. According to NRCS Web Soil Survey, the subject property is underlain by Alderwood gravelly sandy loam, 8 to 15 percent slopes.

Hydrology Criteria

The 2010 Regional Supplement defines wetland hydrology as “areas that are inundated (flooded or ponded) or the water table is less than or equal to 12 inches below the soil surface for 14 or more consecutive days during the growing season at a minimum frequency of 5 years in 10.” During the early growing season, wetland hydrology determinations are made based on physical observation of surface water, a high water table, or saturation in the upper 12 inches. Outside of the early growing season, wetland hydrology determinations are made based on physical evidence of recent inundation or saturation (i.e. water marks, surface soil cracks, water-stained leaves).

The ordinary high water marks (OHWM) of streams and waterbodies when present, are identified using the methodology described in *Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State* (Anderson et al. 2016).

It should be noted that a formal wetland delineation was not performed and the wetland rating is based primarily on observations made during the site reconnaissance. Therefore, the rating may be subject to change if a formal delineation is carried out.

CRITICAL AREAS DETERMINATION FINDINGS

Based on the results of the site reconnaissance, there are no wetlands or streams present on the subject site. Dominant vegetation on-site is represented big-leaf maple (*Acer macrophyllum*; FACU), Douglas fir (*Pseudotsuga menziesii*; FACU), Western red cedar (*Thuja plicata*; FAC), Western hemlock (*Tsuga heterophylla*; FACU), beaked hazelnut (*Corylus cornuta*; FACU), red elderberry (*Sambucus racemosa*; FACU), western sword fern (*Polystichum munitum*; FACU), bracken fern (*Pteridium aquilinum*; FACU), salmonberry (*Rubus spectabilis*; FAC), (Himalayan blackberry (*Rubus armeniacus*; FAC), and trailing blackberry (*Rubus ursinus*; FACU). Soils on-site are generally a very dark grayish brown (10YR 3/2) in the upper layers. The sublayers are generally dark brown (10YR 3/3) and yellowish brown (10YR 4/4) sandy loam. These soil characteristics are not consistent with any of the hydric soil indicators listed in the 2010 Regional Supplement. Soils sampled on-site do not appear to be flooded, ponded, or saturated long enough during the growing season to develop anaerobic conditions in the upper part, and therefore do not appear to meet wetland soils criteria. A topographic drainage was observed in the northwest portion of the site. This swale continues to the southwest. No stream conditions were observed.



Figure 2: Typical upland forest on subject property (existing trail shown).



Figure 3: Topographic drainage and upland forest at northwest corner of property. No stream observed.

OFF-SITE WETLAND

One wetland (Wetland A) was observed just off-site to the west of the subject parcel. This feature appears to be resultant of drainage modifications observed on NE 200th St, and may not be a result of natural water. Wetland A is a depression, palustrine scrub-shrub wetland. Vegetation within the wetland is dominated by shrubs and herbaceous species, including, but not limited to, salmonberry (*Rubus spectabilis*; FAC), bentgrasses (*Agrostis* sp.; FAC), creeping buttercup (*Ranunculus repens*; FAC), skunk cabbage (*Lysichiton americanus*; OBL), and slough sedge (*Carex obnupta*; OBL). As this wetland was off-site, soils could not be sampled. However, small areas of ponding and surface saturation was observed. This wetland received a score of 16 points on the 2014 Western Washington Rating system, including a habitat score of 6 points. Wetlands that receive scores

between 16 and 9 points are considered Category III wetlands. In King County, Category III wetlands with habitat scores of 6 or 7, adjacent to moderate-intensity land uses (e.g. residential activities) are assigned buffer widths of 110 feet.

No wetlands or streams are located on the subject parcel. The disturbed area associated with the unpermitted clearing, may be located within a portion of the buffer of Wetland A. As a result, all clearing activity in this regulated area shall cease, and the buffer of Wetland A shall be demarcated with silt fencing. Additionally, a re-vegetation plan shall be implemented to restore this area to a pre-disturbance conditions. As this project is a Single-Family residential project, it meets the Categorical Exemptions criteria (WAC 197-11-800) and does not require SEPA compliance.

USE OF THIS REPORT

This reconnaissance report is supplied to Randall Richardson as a means of determining the presence of on-site and adjacent critical areas as required by King County. This report is based largely on readily observable conditions and, to a lesser extent, on readily ascertainable conditions. No attempt has been made to determine hidden or concealed conditions.

The laws applicable to critical areas are subject to varying interpretations and may be changed at any time by the courts or legislative bodies. This report is intended to provide information deemed relevant in the applicant's attempt to comply with the laws now in effect.

This report conforms to the standard of care employed by ecologists. No other representation or warranty is made concerning the work or this report and any implied representation or warranty is disclaimed.

Wetland Resources, Inc.



Jeff Mallahan
Senior Ecologist

Enclosures: Existing Conditions Map
DOE Wetland Rating Form

REFERENCES

- Anderson, P.S., Meyer, S., Olson, P., and E. Stockdale. 2016. *Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State*. Washington State Department of Ecology. Publication #16-06-029.
- Cowardin, et al., 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Department of the Interior. FWS/OBS-79/31. December 1979.
- Hruby, T. 2014. *Washington State Wetland Rating System for Western Washington: 2014 Update*. Washington State Department of Ecology. Publication #14-06-029. October 2014.
- Lichvar, R.W., M. Butterwick, N.C. Melvin, and W.N. Kirchner. 2014. *The National Wetland Plant List: 2014 Update of Wetland Ratings*. Phytoneuron 2014-41: 1-42.
- King County, 2019. *King County Code, Title 21A*. King County, WA. December 2019.
- Munsell Color. 2012. *Munsell Soil Color Book*. Munsell Color, Grand Rapids, MI.
- Natural Resources Conservation Service (NRCS). 2020. *Web Soil Survey*. United States Department of Agriculture. <http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>.
- U.S. Army Corps of Engineers. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)*. Vicksburg, MS
- U.S. Fish & Wildlife Service. 2020. *National Wetlands Inventory (NWI) Online Mapper*. <http://www.fws.gov/wetlands/Data/Mapper.html>.
- WA Department of Ecology. 2016. Anderson, P.S., Meyer, S., Olson, P., and E. Stockdale. *Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State*. Washington State Department of Ecology. Publication #16-06-029.
- WA Department of Fish & Wildlife. 2020a. *Priority Habitat and Species (PHS) Interactive Map*. <http://apps.wdfw.wa.gov/phsontheweb/>
- WA Department of Fish & Wildlife. 2020b. *SalmonScape Online Mapping Application*. <http://apps.wdfw.wa.gov/salmonscape/map.html>

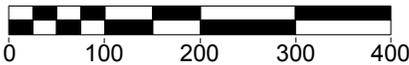
RECONNAISSANCE MAP

RICHARDSON - NE 200TH ST

PORTION OF SECTION 3, TOWNSHIP 26N, RANGE 06E, W.M.



Scale 1" = 200'



PLEASE NOTE: THIS MAP IS **APPROXIMATE** FOR PLANNING AND DISCUSSION PURPOSES ONLY. THIS DOES NOT REPRESENT A DELINEATION OR SURVEY. ALL WETLANDS, STREAMS, BUFFER, AND PROPERTY LINE LOCATIONS ARE **APPROXIMATE**. THE LOCATIONS SHOWN ON THIS MAP SHOULD **NOT** BE USED TO CREATE A FORMAL SITE LAYOUT.

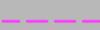
LEGEND



WETLAND



PROPERTY BOUNDARY



APPROX. BUFFER



Wetland Resources, Inc.

Delineation / Mitigation / Restoration / Habitat Creation / Permit Assistance

9505 19th Avenue S.E. Suite 106 Everett, Washington 98208

Phone: (425) 337-3174

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RECON MAP
RICHARDSON - NE 200TH ST
KING COUNTY

Randell Richardson
21622 NE 150th St
Woodinville, WA 98077

Sheet 1/1
WRI #: 20106
Drawn by: JM
Date: 06/24/2020

Wetland name or number A

RATING SUMMARY – Western Washington

Name of wetland (or ID #): 20106 WLA Date of site visit: 6/2/2020
 Rated by JM Trained by Ecology? Yes No Date of training 3/2015
 HGM Class used for rating DEPRESSIONAL Wetland has multiple HGM classes? Y N

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

OVERALL WETLAND CATEGORY III (based on functions or special characteristics)

1. Category of wetland based on FUNCTIONS

- Category I – Total score = 23 - 27
- Category II – Total score = 20 - 22
- Category III – Total score = 16 - 19
- Category IV – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>Circle the appropriate ratings</i>				
Site Potential	H M <input type="checkbox"/> L	H <input type="checkbox"/> M L	H M <input type="checkbox"/> L	
Landscape Potential	H M <input type="checkbox"/> L	H M <input type="checkbox"/> L	<input type="checkbox"/> H M L	
Value	<input type="checkbox"/> H M L	H <input type="checkbox"/> M L	H <input type="checkbox"/> M L	TOTAL
Score Based on Ratings	5	5	6	16

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

- 9 = H,H,H
- 8 = H,H,M
- 7 = H,H,L
- 7 = H,M,M
- 6 = H,M,L
- 6 = M,M,M
- 5 = H,L,L
- 5 = M,M,L
- 4 = M,L,L
- 3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	<input checked="" type="checkbox"/>

Wetland name or number A

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	A1
Hydroperiods	D 1.4, H 1.2	A1
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	A1
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	A1
Map of the contributing basin	D 4.3, D 5.3	A2
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	A2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	A3
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	A4

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (<i>can be added to another figure</i>)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs 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	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 area within 150 ft of the wetland (<i>can be added to another figure</i>)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	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 (<i>can be added to figure above</i>)	S 4.1	
Boundary of 150 ft buffer (<i>can be added to another figure</i>)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

Wetland name or number A

HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides except during floods?

NO – go to 2

YES – the wetland class is **Tidal Fringe** – go to 1.1

- 1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?

NO – **Saltwater Tidal Fringe (Estuarine)**

YES – **Freshwater Tidal Fringe**

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

NO – go to 3

YES – The wetland class is **Flats**

*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

3. Does the entire wetland unit **meet all** of the following criteria?

_The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;

_At least 30% of the open water area is deeper than 6.6 ft (2 m).

NO – go to 4

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

4. Does the entire wetland unit **meet all** of the following criteria?

_The wetland is on a slope (*slope can be very gradual*),

_The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,

_The water leaves the wetland **without being impounded**.

NO – go to 5

YES – The wetland class is **Slope**

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

5. 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 2 years.

Wetland name or number A **NO** – go to 6**YES** – The wetland class is **Riverine****NOTE:** The Riverine unit can contain depressions that are filled with water when the river is not flooding

6. 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 7

YES – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

NO – go to 8

YES – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. **GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 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 classes present within the wetland unit being scored.

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	<input type="checkbox"/>	Riverine
Slope + Depressional	<input type="checkbox"/>	Depressional
Slope + Lake Fringe	<input type="checkbox"/>	Lake Fringe
Depressional + Riverine along stream within boundary of depression	<input type="checkbox"/>	Depressional
Depressional + Lake Fringe	<input type="checkbox"/>	Depressional
Riverine + Lake Fringe	<input type="checkbox"/>	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	<input type="checkbox"/>	Treat as ESTUARINE

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

Wetland name or number A

DEPRESSIONAL AND FLATS WETLANDS		
Water Quality Functions - Indicators that the site functions to improve water quality		
D 1.0. Does the site have the potential to improve water quality?		
D 1.1. Characteristics of surface water outflows from the wetland:		
<input type="checkbox"/> Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3		2
<input checked="" type="checkbox"/> Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2		
<input type="checkbox"/> Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1		
<input type="checkbox"/> Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1		
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 <input type="checkbox"/> No = 0		0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes):		
<input type="checkbox"/> Wetland has persistent, ungrazed, plants > 95% of area points = 5		1
<input type="checkbox"/> Wetland has persistent, ungrazed, plants > ½ of area points = 3		
<input checked="" type="checkbox"/> Wetland has persistent, ungrazed plants > 1/10 of area points = 1		
<input type="checkbox"/> Wetland has persistent, ungrazed plants < 1/10 of area points = 0		
D 1.4. Characteristics of seasonal ponding or inundation: <i>This is the area that is ponded for at least 2 months. See description in manual.</i>		
<input type="checkbox"/> Area seasonally ponded is > ½ total area of wetland points = 4		2
<input checked="" type="checkbox"/> Area seasonally ponded is > ¼ total area of wetland points = 2		
<input type="checkbox"/> Area seasonally ponded is < ¼ total area of wetland points = 0		
Total for D 1	Add the points in the boxes above	5

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

D 2.0. Does the landscape have the potential to support the water quality function of the site?		
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 <input type="checkbox"/> No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 <input type="checkbox"/> No = 0	0
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 <input type="checkbox"/> No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source _____	Yes = 1 <input type="checkbox"/> No = 0	0
Total for D 2	Add the points in the boxes above	0

Rating of Landscape Potential If score is: 3 or 4 = H 1 or 2 = M 0 = L Record the rating on the first page

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

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

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Wetland name or number A**DEPRESSIONAL AND FLATS WETLANDS****Hydrologic Functions** - Indicators that the site functions to reduce flooding and stream degradation

D 4.0. Does the site have the potential to reduce flooding and erosion?		
D 4.1. Characteristics of surface water outflows from the wetland:		
<input type="checkbox"/> Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	2
<input checked="" type="checkbox"/> Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet	points = 2	
<input type="checkbox"/> Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch	points = 1	
<input type="checkbox"/> Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 0	
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.		
<input type="checkbox"/> Marks of ponding are 3 ft or more above the surface or bottom of outlet	points = 7	3
<input type="checkbox"/> Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet	points = 5	
<input checked="" type="checkbox"/> Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet	points = 3	
<input type="checkbox"/> The wetland is a "headwater" wetland	points = 3	
<input type="checkbox"/> Wetland is flat but has small depressions on the surface that trap water	points = 1	
<input type="checkbox"/> Marks of ponding less than 0.5 ft (6 in)	points = 0	
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.		
<input type="checkbox"/> The area of the basin is less than 10 times the area of the unit	points = 5	3
<input checked="" type="checkbox"/> The area of the basin is 10 to 100 times the area of the unit	points = 3	
<input type="checkbox"/> The area of the basin is more than 100 times the area of the unit	points = 0	
<input type="checkbox"/> Entire wetland is in the Flats class	points = 5	
Total for D 4	Add the points in the boxes above	8

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

Record the rating on the first page

D 5.0. Does the landscape have the potential to support hydrologic functions of the site?		
D 5.1. Does the wetland receive stormwater discharges?	Yes = 1 <input type="checkbox"/> No = <input type="text" value="0"/>	0
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	Yes = 1 <input type="checkbox"/> No = <input type="text" value="0"/>	0
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)?	Yes = 1 <input type="checkbox"/> No = <input type="text" value="0"/>	0
Total for D 5	Add the points in the boxes above	0

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

Record the rating on the first page

D 6.0. Are the hydrologic functions provided by the site valuable to society?		
D 6.1. The unit is 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. The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):		
<input type="checkbox"/> • Flooding occurs in a sub-basin that is immediately down-gradient of unit.	points = 2	1
<input checked="" type="checkbox"/> • Surface flooding problems are in a sub-basin farther down-gradient.	points = 1	
<input type="checkbox"/> Flooding from groundwater is an issue in the sub-basin.	points = 1	
<input type="checkbox"/> 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	
<input type="checkbox"/> There are no problems with flooding downstream of the wetland.	points = 0	
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?		
	Yes = 2 <input type="checkbox"/> No = <input type="text" value="0"/>	0
Total for D 6	Add the points in the boxes above	1

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

Record the rating on the first page

Wetland name or number A **These questions apply to wetlands of all HGM classes.****HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat

H 1.0. Does the site have the potential to provide habitat?

H 1.1. Structure of plant community: *Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.*

- | | | |
|---|----------------------------------|----------|
| <input type="checkbox"/> Aquatic bed | 4 structures or more: points = 4 | 1 |
| <input checked="" type="checkbox"/> Emergent | 3 structures: points = 2 | |
| <input checked="" type="checkbox"/> Scrub-shrub (areas where shrubs have > 30% cover) | 2 structures: points = 1 | |
| <input type="checkbox"/> Forested (areas where trees have > 30% cover) | 1 structure: points = 0 | |
| <i>If the unit has a Forested class, check if:</i> | | |
| <input type="checkbox"/> The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon | | |

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*).

- | | | |
|--|-------------------------------------|----------|
| <input type="checkbox"/> Permanently flooded or inundated | 4 or more types present: points = 3 | 1 |
| <input checked="" type="checkbox"/> Seasonally flooded or inundated | 3 types present: points = 2 | |
| <input checked="" type="checkbox"/> Occasionally flooded or inundated | 2 types present: points = 1 | |
| <input type="checkbox"/> Saturated only | 1 type present: points = 0 | |
| <input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland | | |
| <input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland | | |
| <input type="checkbox"/> Lake Fringe wetland | 2 points | |
| <input type="checkbox"/> Freshwater tidal wetland | 2 points | |

H 1.3. Richness of plant species

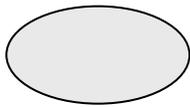
Count the number of plant species in the wetland that cover at least 10 ft².

Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle

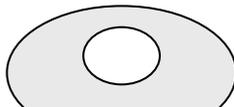
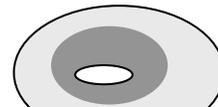
- | | | |
|------------------------------|-------------------|----------|
| If you counted: > 19 species | points = 2 | 1 |
| 5 - 19 species | points = 1 | |
| < 5 species | points = 0 | |

H 1.4. Interspersion of habitats

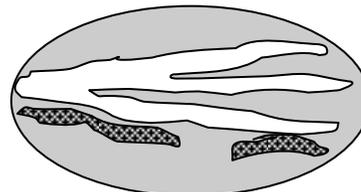
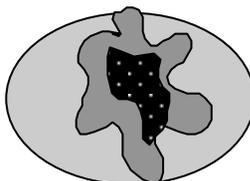
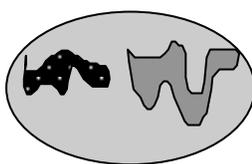
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always high.*



None = 0 points

**Low = 1 point****Moderate = 2 points**

All three diagrams in this row are **HIGH** = 3points

**1**

Wetland name or number A

<p>H 1.5. Special habitat features:</p> <p>Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <p><input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).</p> <p><input type="checkbox"/> Standing snags (dbh > 4 in) within the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)</p> <p><input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)</p> <p><input type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>)</p> <p><input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)</p>		1
Total for H 1	Add the points in the boxes above	5

Rating of Site Potential If score is: 15-18 = H 7-14 = M 0-6 = L

Record the rating on the first page

<p>H 2.0. Does the landscape have the potential to support the habitat functions of the site?</p>		
<p>H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>).</p> <p>Calculate: % undisturbed habitat <u>35</u> + [(% moderate and low intensity land uses)/2] <u>28</u> = <u>63</u> %</p> <p>If total accessible habitat is:</p> <p><input checked="" type="checkbox"/> > 1/3 (33.3%) of 1 km Polygon points = 3</p> <p><input type="checkbox"/> 20-33% of 1 km Polygon points = 2</p> <p><input type="checkbox"/> 10-19% of 1 km Polygon points = 1</p> <p><input type="checkbox"/> < 10% of 1 km Polygon points = 0</p>		3
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p>Calculate: % undisturbed habitat <u>36</u> + [(% moderate and low intensity land uses)/2] <u>28</u> = <u>64</u> %</p> <p><input checked="" type="checkbox"/> Undisturbed habitat > 50% of Polygon points = 3</p> <p><input type="checkbox"/> Undisturbed habitat 10-50% and in 1-3 patches points = 2</p> <p><input type="checkbox"/> Undisturbed habitat 10-50% and > 3 patches points = 1</p> <p><input type="checkbox"/> Undisturbed habitat < 10% of 1 km Polygon points = 0</p>		3
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p><input type="checkbox"/> > 50% of 1 km Polygon is high intensity land use points = (- 2)</p> <p><input checked="" type="checkbox"/> ≤ 50% of 1 km Polygon is high intensity points = 0</p>		0
Total for H 2	Add the points in the boxes above	6

Rating of Landscape Potential If score is: 4-6 = H 1-3 = M < 1 = L

Record the rating on the first page

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

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

Record the rating on the first page

Wetland name or number A

WDFW Priority Habitats

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

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland 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 1 ac (0.4 ha).
- Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).
- Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
- Old-growth/Mature forests:** Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
- Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).
- Riparian:** The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).
- 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.
- Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).
- Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

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 A**CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? <input type="checkbox"/> The dominant water regime is tidal, <input type="checkbox"/> Vegetated, and <input type="checkbox"/> With a salinity greater than 0.5 ppt Yes –Go to SC 1.1 No= Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I No - Go to SC 1.2	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? <input type="checkbox"/> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i> , see page 25) <input type="checkbox"/> At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. <input type="checkbox"/> The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = Category I No = Category II	Cat. I Cat. II
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? Yes – Go to SC 2.2 No – Go to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = Category I No = Not a WHCV SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf Yes – Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? Yes = Category I No = Not a WHCV	Cat. I
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? Yes – Go to SC 3.3 No – Go to SC 3.2 SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to SC 3.3 No = Is not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = Is a Category I bog No – Go to SC 3.4 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 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = Is a Category I bog No = Is not a bog	Cat. I

Wetland name or number A

<p>SC 4.0. Forested Wetlands</p> <p>Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i></p> <p><input type="checkbox"/> Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.</p> <p><input type="checkbox"/> Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).</p> <p style="text-align: right;">Yes = Category I No = Not a forested wetland for this section</p>	Cat. I
<p>SC 5.0. Wetlands in Coastal Lagoons</p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <p><input type="checkbox"/> The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks</p> <p><input type="checkbox"/> The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be measured near the bottom</i>)</p> <p style="text-align: right;">Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon</p> <p>SC 5.1. Does the wetland meet all of the following three conditions?</p> <p><input type="checkbox"/> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).</p> <p><input type="checkbox"/> At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland.</p> <p><input type="checkbox"/> The wetland is larger than 1/10 ac (4350 ft²)</p> <p style="text-align: right;">Yes = Category I No = Category II</p>	Cat. I Cat. II
<p>SC 6.0. Interdunal Wetlands</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer yes you will still need to rate the wetland based on its habitat functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <p><input type="checkbox"/> Long Beach Peninsula: Lands west of SR 103</p> <p><input type="checkbox"/> Grayland-Westport: Lands west of SR 105</p> <p><input type="checkbox"/> Ocean Shores-Copalis: Lands west of SR 115 and SR 109</p> <p style="text-align: right;">Yes – Go to SC 6.1 No = not an interdunal wetland for rating</p> <p>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = Category I No – Go to SC 6.2</p> <p>SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = Category II No – Go to SC 6.3</p> <p>SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? Yes = Category III No = Category IV</p>	Cat I Cat. II Cat. III Cat. IV
<p>Category of wetland based on Special Characteristics</p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	N/A

Wetland name or number _____

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