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9601 and 9611 SE 36th Street, Wetland and Stream Delineation Report

DCG/Watershed Reference Number: 2403.0393.00

Summary

This report has been prepared to present the findings of a wetland and watercourse delineation study located at 9601 and 9611 SE 36th Street in Mercer Island, Washington (parcels #2655500185 and #2655500075). In addition to the information and findings presented in this report, the following documents are enclosed:

- Site Photos
- Delineation Sketch
- Wetland Determination Data Forms
- Wetland Rating Forms and Figures

Two jurisdictional watercourses/streams (Streams A and B) were identified within the study area with several on-site piped segments. Six jurisdictional wetlands (Wetlands A through F) were identified on the forested slope on the Mercer Island Public Works property (parcel #2655500185). No wetlands or streams were identified on the Mercer Island City Hall property (parcel #2655500075). Identified wetlands, streams, and associated buffers are summarized below in Table 1.

Table 1. Summary of wetlands, streams, and required buffers per Mercer Island Municipal Code.

Feature Name	Category/Type	Habitat Score	Buffer (ft)	Setback (ft)
Wetlands A and B	Category IV (Slope)	4	40 feet	10 feet
Wetlands C, D, E, and F	Category IV (Depressional)	5	40 feet	10 feet
Stream A	Type F	-	120 feet	10 feet
Stream B	Type F	-	120 feet	10 feet
Piped Stream A	Piped	-	-	45 feet

Seattle
9706 4th Ave NE, Ste 300
Seattle, WA 98115
Tel 206.523.0024

Kirkland
750 6th Street
Kirkland, WA 98033
Tel 425.822.5242

Mount Vernon
2210 Riverside Dr, Ste 110
Mount Vernon, WA 98273
Tel 360.899.1110

Whidbey
1796 E Main St, Ste 105
Freeland, WA 98249
Tel 360.331.4131

Federal Way
31620 23rd Ave S, Ste 307
Federal Way, WA 98003
Tel 253.237.7770

Spokane
601 Main Ave, Ste 617
Spokane, WA 99201
Tel 509.606.3600

Study Area

The study area is defined as the property located at 9601 and 9611 SE 36th Street (parcels #2655500185 and #2655500075) and is approximately 13.6 acres in size (Figure 1). Adjacent public or private property within 200 feet was screened from the edge of the study area parcels or nearest publicly accessible land; no private property was accessed without permission.

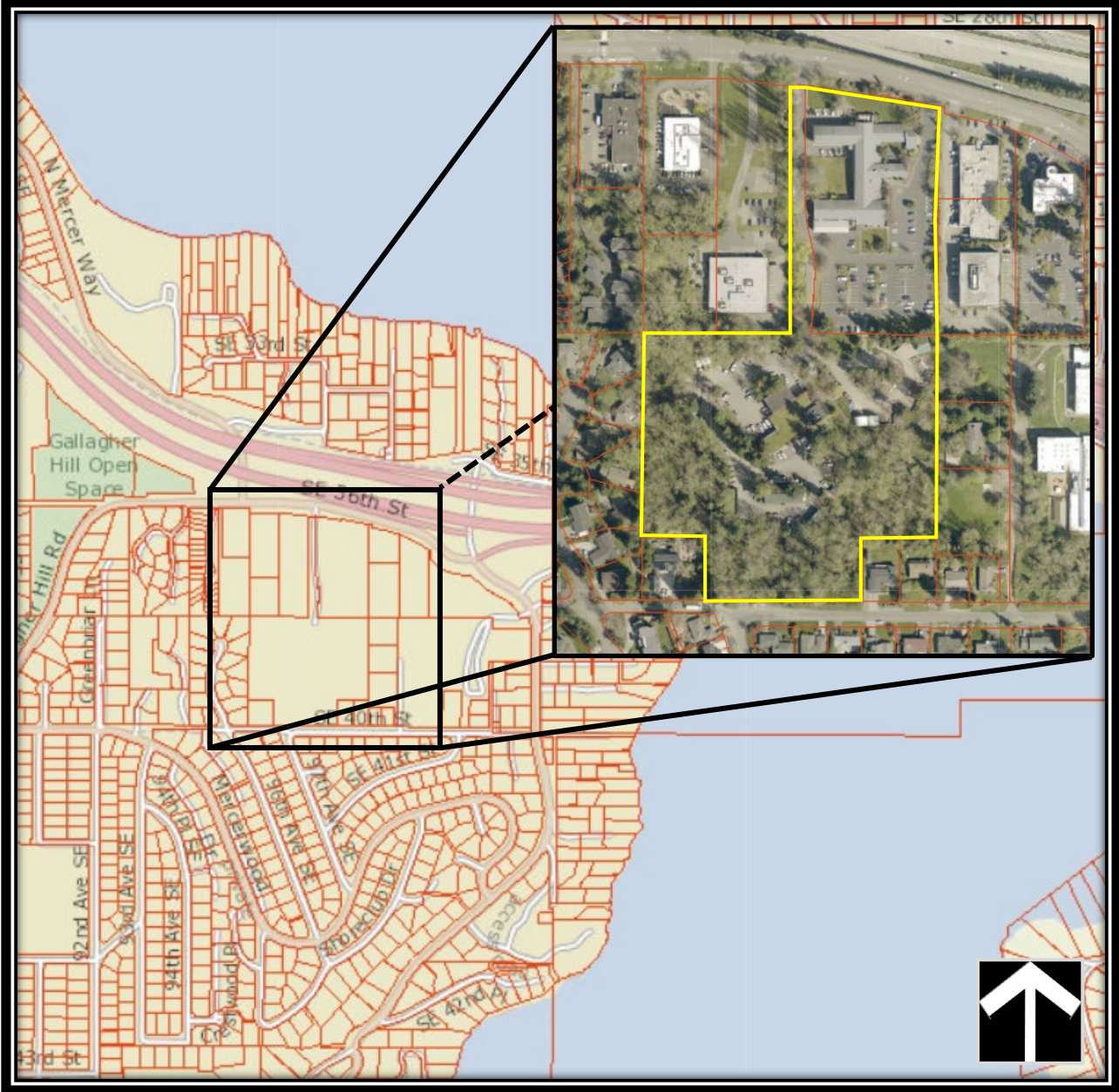


Figure 1. Study area vicinity map, study area outlined in yellow (source: King County iMap, 2021).

Methods

Field investigations for the delineation study were conducted on March 20th and 21st, 2024, by ecologists Sage Yuasa and Brent Rutley.

The study area was evaluated for wetlands using methodology from the *Corps of Engineers Wetland 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). The presence or absence of wetlands was determined based on an examination of vegetation, soils, and hydrology. Wetlands were classified using the Washington State Department of Ecology's *Wetland Rating System for Western Washington*: (Hruby 2014).

Characterization of weather conditions for precipitation in the Wetland Determination Data Forms were determined using the WETS table methodology (USDA, NRCS 2015). The "Seattle Tacoma Intl AP" station from 1991-2020 was used as a source for precipitation data (<http://agacis.rcc-acis.org/>). The WETS table methodology uses climate data from the three months prior to the site visit month to determine if normal conditions are present in the study area region.

The study area was evaluated for streams based on the presence or absence of an ordinary high water mark (OHWM) as defined by Section 404 of the Clean Water Act, the Washington Administrative Code (WAC) 220-660-030, and the Revised Code of Washington (RCW) 90.58.030 and guidance documents including *Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State* (Anderson 2016) and *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States* (Mersel and Lichvar 2014).

Public-domain information on the subject properties was reviewed for this delineation study. Resources and review findings are presented in Table 2 of the "Environmental Setting" section of this letter.

Environmental Setting

The study area is in the Mercer Island drainage basin of the Cedar – Sammamish watershed (WRIA 8); Section 7 of Township 24 North, Range 05 of the Public Land Survey System. The surrounding land use intensity is dominated by high-intensity residential and commercial development.

The study area consists of two city-owned properties (parcels #2655500075 and #2655500185), both accessible by a private road off of SE 36th Street. Parcel #2655500075 is developed with the Mercer Island City Hall, paved parking lot, maintained lawn, and ornamental vegetation (Photos 1 and 2). Parcel #2655500185 is developed with Mercer Island Public Works facility, paved driveways, canopy structures, concrete storage structures, staging areas, and retaining walls (Photos 3 through 7). Development is contained within a chain-link fence around the perimeter of the facility with an undeveloped forested area wrapping around the southern portion of the property (Photo 8). The undeveloped forested portion of the property is dominated by a canopy of big-leaf maple, Douglas-fir, western red cedar, and red alder. The understory is composed of osoberry, salmonberry, Himalayan blackberry, western swordfern, trailing blackberry, dull Oregon grape, and English ivy (Photos 9 and 10).

No wetlands or streams were identified on the City Hall property (parcel #2655500075). Two streams were identified on the Public Works property (parcel #2655500185) and along the western edge of the private access road with a critical area buffer extending east toward the City Hall property (see Watercourses). Two slope wetlands and four depressional wetlands were identified south of the Public Works property within the forested canopy (see Wetlands).

Public-domain information reviewed for the site is summarized below (Table 2).

Table 2. Summary of online mapping and inventory resources.

Resource	Summary
USDA NRCS: Web Soil Survey	<i>Kitsap silt loam, 8 to 15 percent slopes mapped in the western portion of the subject property. Kitsap silt loam, 2 to 8 percent slopes mapped in the eastern portion of the subject property.</i>
USFWS: NWI Wetland Mapper	<i>No wetlands or streams mapped on the subject properties.</i>
PHS on the Web	<i>Biodiversity areas and corridor (Gallagher Hill Open Space) mapped approximately 640-feet west of the subject properties.</i>
WDFW & NWIFC: Statewide Washington Integrated Fish Distribution	<i>Type N stream mapped approximately 850-feet northeast of the subject property. No wetlands or streams mapped on the subject properties.</i>
WA-DNR: Forest Practices Application Mapping Tool	<i>Type N stream mapped approximately 850-feet northeast of the subject property. No wetlands or streams mapped on the subject properties.</i>
King County iMap	<i>No environmentally sensitive areas mapped on the subject properties.</i>
City of Mercer Island GIS Portal	<i>One Type-Np and one Type-Ns stream mapped on the subject property. Both streams flow into a “piped watercourse”. Landslide area mapped on the subject property. Protected slope areas mapped on the subject property. Seismic hazard mapped on the subject properties.</i>
WETS Climatic Condition	<i>Wetter than normal.</i>

Wetlands

Two slope wetlands (Wetlands A and B) and four depressional wetlands (Wetlands C, D, E, and F) were identified on the Public Works property (parcel #2655500185). No wetlands were identified on the City Hall property (parcel #2655500075). Wetlands A through F are summarized below in Tables 3 through 8, respectively.

Table 3. Wetland A assessment summary.



		WETLAND A – Assessment Summary								
Location:	Southwest portion of study area, extending to fenced in area of City Public Works									
WRIA / Sub-basin:	Cedar-Sammamish River watershed (WRIA 8) / Mercer Island drainage basin									
	2014 Western WA Ecology Rating:		Category IV							
	Buffer Width and Buffer Setback:		40-foot standard buffer and 10 foot setback							
	Wetland Size:		Approx. 3,500 sq. ft.							
	Cowardin Classification(s):		Palustrine Forested, Palustrine Scrub Shrub							
	HGM Classification(s):		Slope							
	Wetland Data Sheet(s):		DP-1							
	Upland Data Sheet (s):		DP-2							
	Flag Color:		Pink- and black-striped							
	Flag Numbers:		A-1 to A-25							
Vegetation	Tree stratum:	<i>Alnus rubra</i>								
	Shrub stratum:	<i>Rubus bifrons, Rubus spectabilis</i>								
	Herb stratum:	<i>Ranunculus repens, Tolmiea menziesii, Hedera helix, Equisetum telmateia</i>								
Soils	Soil survey:	Kitsap silt loam, 8 to 15 percent slopes								
	Field data:	Hydrogen Sulfide (A4), Depleted Matrix (F3), Redox Dark Surface (F6)								
Hydrology	Source:	High water table								
	Field data:	High Water Table (A2), Saturation (A3)								
Wetland Functions										
	Improving Water Quality			Hydrologic			Habitat			
Site Potential	H	M	<u>L</u>	H	M	<u>L</u>	H	M	<u>L</u>	
Landscape Potential	H	<u>M</u>	L	H	<u>M</u>	L	H	M	<u>L</u>	
Value	H	M	<u>L</u>	H	M	<u>L</u>	<u>H</u>	M	L	TOTAL
Score Based on Ratings	4			4			5			13

Table 4. Wetland B assessment summary.



		WETLAND B – Assessment Summary								
Location:	Southern portion of study area, extending to fenced in area of City Public Works									
WRIA / Sub-basin:	Cedar-Sammamish River watershed (WRIA 8) / Mercer Island drainage basin									
	2014 Western WA Ecology Rating:		Category IV							
	Buffer Width and Buffer Setback:		40-foot standard buffer and 10 foot setback							
	Wetland Size:		Approx. 4,700 sq. ft.							
	Cowardin Classification(s):		Palustrine Forested, Palustrine Scrub Shrub							
	HGM Classification(s):		Slope							
	Wetland Data Sheet(s):		DP-3							
	Upland Data Sheet (s):		DP-4							
	Flag Color:		Pink- and black-striped							
	Flag Numbers:		B-1 to B-21							
Vegetation	Tree stratum:	<i>Alnus rubra</i>								
	Shrub stratum:	<i>Rubus bifrons, Rubus spectabilis</i>								
	Herb stratum:	<i>Ranunculus repens, Tolmiea menziesii, Hedera helix, Oenanthe sarmentosa</i>								
Soils	Soil survey:	Kitsap silt loam, 8 to 15 percent slopes								
	Field data:	Redox Dark Surface (F6)								
Hydrology	Source:	High water table								
	Field data:	High Water Table (A2), Saturation (A3)								
Wetland Functions										
	Improving Water Quality			Hydrologic			Habitat			
Site Potential	H	M	<u>L</u>	H	M	<u>L</u>	H	M	<u>L</u>	
Landscape Potential	H	<u>M</u>	L	H	<u>M</u>	L	H	M	<u>L</u>	
Value	H	M	<u>L</u>	H	M	<u>L</u>	<u>H</u>	M	L	TOTAL
Score Based on Ratings	4			4			5			13

Table 5. Wetland C assessment summary.


WETLAND C – Assessment Summary				
Location:	Located in eastern portion of study area at the base of a small hill			
WRIA / Sub-basin:	Cedar-Sammamish River watershed (WRIA 8) / Mercer Island drainage basin			
	2014 Western WA Ecology Rating:	Category IV		
	Buffer Width and Buffer Setback:	40-foot standard buffer and 10 foot setback		
	Wetland Size:	Approx. 800 sq. ft.		
	Cowardin Classification(s):	Palustrine Scrub Shrub		
	HGM Classification(s):	Depressional		
	Wetland Data Sheet(s):	DP-8		
	Upland Data Sheet (s):	n/a		
	Flag Color:	Pink- and black-striped		
	Flag Numbers:	C-1 to C-7		
Vegetation	Tree stratum:	<i>Alnus rubra</i>		
	Shrub stratum:	<i>Rubus bifrons, Rubus spectabilis</i>		
	Herb stratum:	<i>Ranunculus repens, Tolmiea menziesii, Hedera helix</i>		
Soils	Soil survey:	Kitsap silt loam, 2 to 8 percent slopes		
	Field data:	Depleted Matrix (F3)		
Hydrology	Source:	High water table		
	Field data:	High Water Table (A2), Saturation (A3)		
Wetland Functions				
	Improving Water Quality	Hydrologic	Habitat	
Site Potential	H <u>M</u> L	H <u>M</u> L	H M <u>L</u>	
Landscape Potential	H <u>M</u> L	H <u>M</u> L	H M <u>L</u>	
Value	H M <u>L</u>	H M <u>L</u>	<u>H</u> M L	TOTAL
Score Based on Ratings	5	5	5	15

Table 6. Wetland D assessment summary.

FACET		WETLAND D – Assessment Summary							
Location:	Located in eastern portion of study area, east of Stream A and base of small hill								
WRIA / Sub-basin:	Cedar-Sammamish River watershed (WRIA 8) / Mercer Island drainage basin								
		2014 Western WA Ecology Rating:	Category IV						
		Buffer Width and Buffer Setback:	40-foot standard buffer and 10 foot setback						
		Wetland Size:	Approx. 2500 sq. ft.						
		Cowardin Classification(s):	Palustrine Scrub Shrub						
		HGM Classification(s):	Depressional						
		Wetland Data Sheet(s):	DP-5						
		Upland Data Sheet (s):	DP-6						
		Flag Color:	Pink- and black-striped						
Flag Numbers:	D-1 to D-16								
Vegetation	Tree stratum:	<i>Alnus rubra</i>							
	Shrub stratum:	<i>Rubus bifrons, Rubus spectabilis</i>							
	Herb stratum:	<i>Ranunculus repens, Tolmiea menziesii, Hedera helix</i>							
Soils	Soil survey:	Kitsap silt loam, 2 to 8 percent slopes							
	Field data:	Depleted Matrix (F3)							
Hydrology	Source:	High water table							
	Field data:	Saturation (A3)							
Wetland Functions									
	Improving Water Quality				Hydrologic			Habitat	
Site Potential	H <u>M</u> L				H <u>M</u> L			H M <u>L</u>	
Landscape Potential	H <u>M</u> L				H <u>M</u> L			H M <u>L</u>	
Value	H M <u>L</u>				H M <u>L</u>			<u>H</u> M L	TOTAL
Score Based on Ratings	5			5			5		15

Table 7. Wetland E assessment summary.



WETLAND E – Assessment Summary				
Location:	Located in eastern portion of study area, east of Wetland D			
WRIA / Sub-basin:	Cedar-Sammamish River watershed (WRIA 8) / Mercer Island drainage basin			
	2014 Western WA Ecology Rating:	Category IV		
	Buffer Width and Buffer Setback:	40-foot standard buffer and 10 foot setback		
	Wetland Size:	Approx. 500 sq. ft.		
	Cowardin Classification(s):	Palustrine Scrub Shrub		
	HGM Classification(s):	Depressional		
	Wetland Data Sheet(s):	DP-7		
	Upland Data Sheet (s):	n/a		
	Flag Color:	Pink- and black-striped		
Flag Numbers:	E-1 to E-9			
Vegetation	Tree stratum:	N/A		
	Shrub stratum:	<i>Rubus bifrons</i>		
	Herb stratum:	N/A		
Soils	Soil survey:	Kitsap silt loam, 2 to 8 percent slopes		
	Field data:	Depleted Matrix (F3)		
Hydrology	Source:	High water table		
	Field data:	High Water Table (A2), Saturation (A3)		
Wetland Functions				
	Improving Water Quality	Hydrologic	Habitat	
Site Potential	H <u>M</u> L	H <u>M</u> L	H M <u>L</u>	
Landscape Potential	H <u>M</u> L	H <u>M</u> L	H M <u>L</u>	
Value	H M <u>L</u>	H M <u>L</u>	<u>H</u> M L	TOTAL
Score Based on Ratings	5	5	5	15

Table 8. Wetland F assessment summary.

WETLAND F – Assessment Summary				
Location:	Located in southern portion of study area, upslope of Stream A.			
WRIA / Sub-basin:	Cedar-Sammamish River watershed (WRIA 8) / Mercer Island drainage basin			
	2014 Western WA Ecology Rating:	Category IV		
	Buffer Width and Buffer Setback:	40-foot standard buffer and 10 foot setback		
	Wetland Size:	Approx. 700 sq. ft.		
	Cowardin Classification(s):	Palustrine Scrub Shrub		
	HGM Classification(s):	Depressional		
	Wetland Data Sheet(s):	DP-9		
	Upland Data Sheet (s):	n/a		
	Flag Color:	Pink- and black-striped		
	Flag Numbers:	F-1 to F-8		
Vegetation	Tree stratum: <i>Alnus rubra</i>	<i>Rubus bifrons, Rubus spectabilis</i> <i>Ranunculus repens, Tolmiea menziesii, Hedera helix, Polystichum munitum</i>		
	Shrub stratum:			
	Herb stratum:			
Soils	Soil survey:	Kitsap silt loam, 2 to 8 percent slopes		
	Field data:	Depleted Matrix (F3)		
Hydrology	Source:	High water table		
	Field data:	High Water Table (A2), Saturation (A3)		
Wetland Functions				
	Improving Water Quality	Hydrologic	Habitat	
Site Potential	H <u>M</u> L	H <u>M</u> L	H M <u>L</u>	
Landscape Potential	H <u>M</u> L	H <u>M</u> L	H M <u>L</u>	
Value	H M <u>L</u>	H M <u>L</u>	<u>H</u> M L	TOTAL
Score Based on Ratings	5	5	5	15

Stream A

The channel of Stream A originates along the southern boundary of parcel #2655500185 on SE 40th Street via a one-foot-wide PVC culvert (Photo 11). The contributing basin of Stream A is heavily urbanized with dense single-family residential development, and no open channel is present south of SE 40th Street. The open channel flows north through the forested slope of parcel #2655500185 and centrally through the Public Works property (Photos 12 and 13). The stream is piped as it enters the Public Works property and for a short duration adjacent to the public access road (Photo 14 and 15). The stream continues as an open channel along the western edge of the private access road and flows north toward SE 36th Street and outlets via a Type 2 catch basin (3b-221) (Photos 16 and 17). The Mercer Island GIS Map Portal depicts the stream as piped under the I-90 corridor north of the project area with intermittent sections of open channel between I-90 and Lake Washington. The stream has been identified on the GIS Map Portal as a Type F stream between Lake Washington and 94th Avenue SE and Type Np south of 94th Avenue SE.

The stream channel is incised between two and five feet throughout the open channel with a streambed composition of hardpan, silt, sand, and gravel (Photo 18). The riparian vegetation is dominated by big-leaf maple, red alder, Douglas-fir, western red cedar, Himalayan blackberry, osoberry, western swordfern, and English ivy. Stream A is approximately three feet wide and flows at a gradient of six percent per the Mercer Island GIS Map Portal. Based on observed characteristics, Stream A satisfies the criteria of a fish-accessible water under WAC 222-16-031.

Stream B

The channel of Stream B originates off-site, west of parcel #2655500185, and flows east along the northwestern perimeter of the Public Works facility (Photos 19 and 20). Similar to Stream A, the contributing basin is heavily urbanized with no open channel south of SE 40th Street, as depicted by the Mercer Island GIS Map Portal. The banks of the channel are lined with rip-rap, and the streambed is comprised of sand, silt, and gravel. The stream has a confluence with Stream A near the private access road and continues as a single channel to the north (Photo 21). Stream A is approximately three feet wide and flows at a gradient of 10 percent per the Mercer Island GIS Map Portal. Based on observed characteristics, Stream B satisfies the criteria of a fish-accessible water under WAC 222-16-031.

Stormwater Features

One stormwater feature was identified in the eastern portion of the Public Works facility (see Delineation Sketch). The feature is partially vegetated with Himalayan blackberry and reed canarygrass; it is confined by a concrete structure, regularly maintained, and adjacent to a Type

2 catch basin (2a-82) (Photos 22 through 24). The surrounding environment consists of impervious surfaces to the west and north and non-wetland habitat to the east and south. The City of Mercer Island definition of a wetland (see local regulations) does not include *artificial wetlands such as drainage ditches, grass-lined swales, and detention facilities*.

Local Regulations

Wetlands

Wetlands in the City of Mercer Island are regulated under Mercer Island City Code (MICC) Chapter 19.07 – Environment. Wetlands in the City of Mercer Island are classified using the *2014 Update to the Western Washington Wetland Rating System* (Publication #14-06-029) (Rating System). According to the MICC, wetlands are classified as one of four categories based on the Rating System. Wetland buffers in the City of Mercer Island are established based on a combination of the wetland category and habitat score, per MICC 19.07.190(C)(1). The on-site wetlands, Wetlands A through F are Category IV wetlands with habitat scores ranging between four and five points. The City of Mercer Island requires a standard buffer of 40-feet for all six delineated wetlands (see Table 1).

Wetland Buffer Averaging

Wetland buffer averaging is allowed in the City of Mercer Island provided the following requirements are met per MIMC 19.07.190.C.5.

1. The applicant has demonstrated how impacts have been avoided consistent with section 19.07.100, mitigation sequencing;
2. The applicant has demonstrated how all proposed impacts have been mitigated consistent with 19.07.190.E. and buffer averaging will not result in a loss of ecological function;
3. The proposed buffer width is not less than 75 percent of the standard buffer width at any point (30-feet for Wetlands A through F); and
4. The total area of the buffer is equal to the area required without averaging.

Watercourses

The City of Mercer Island regulates watercourses (streams) under MICC 19.07.180 – *Watercourses*. A watercourse is defined as *a course or route, formed by nature, and generally consisting of a channel with a bed, banks, or sides throughout substantially all its length, along which*

surface waters, with some regularity (annually in the rainy season), naturally and normally flow in draining from higher to lower lands per MIMC 19.16.010. Watercourses on Mercer Island are classified as Type S, Type F, Type Np, Type Ns, or piped. Type F watercourses include all waters, other than Type S waters, which are within the bankfull widths of defined channels and periodically inundated areas of their associated wetlands, or within lakes, ponds, or impoundments having a surface area of one-half acre or greater at seasonal low water and which in any case contain fish habitat. Per MICC 19.16.010 - Definitions, fish habitat is: Habitat which is used by any fish at any life stage at any time of the year, including potential habitat likely to be used by fish which could be recovered by restoration or management and includes off-channel habitat. According to WAC 222-16-031, streams wider than two feet with a gradient less than 16 percent are presumed to provide fish habitat regardless of downstream culverts or other artificial fish passage barriers. Furthermore, downstream culverts that are not fish passable could be restored by retrofitting to allow fish passage. Typically, whenever fish barrier culverts need repair or replacement, state and federal laws and regulations require such culverts be upgraded to meet minimum fish passage requirements.

Therefore, Watercourse A and B are classified as a Type F watercourses, with piped segments classified as Piped. Type F streams require a standard 120-foot buffer per MIMC 19.07.180(C)(1). Piped watercourses segments do not require a buffer. However, a 45-foot setback, offset from the centerline of the pipe is required per MICC 19.07.180(C)(6).

Building Setbacks

Buildings and other structures shall be set back a minimum of ten feet from the edges of a watercourse buffer per MICC 19.07.180(C)(7) and ten feet from the edges of a wetland buffer per MICC 19.07.190(C)(7).

Per MICC 19.07.180.C.8 and MICC 19.07.190.C.8, *“the following may be allowed in the critical area setback, provided no structures nor building overhangs may be closer than five feet from the edge of a watercourse and wetland buffer:*

- a. Landscaping;*
- b. Uncovered decks less than 30 inches above existing or finished grade, whichever is lower;*
- c. Building overhangs if such overhangs do not extend more than 18 inches into the setback area;*
- d. Hardscape and driveways; provided, that such improvements may be subject to requirements in chapter 15.09, storm water master program;*

e. Split-rail fences;

f. Trails, consistent with the requirements of this chapter; and

g. Subgrade components of foundations; provided, that any temporary impacts to building setbacks shall be restored to their previous condition or better."

Modifications

The City of Mercer Island allows additions to or reconstruction of an existing established structure or building within a critical area and/or buffer constructed on or before January 1, 2005, provided the following criteria outlined in MICC 19.07.130 are met:

1. *The seasonal limitations on land clearing, grading, filling, and foundation work described in section 19.07.160(F2) – Geologically hazardous areas, shall apply.*
2. *Additions shall be allowed if all of the following criteria are met:*
 - a. *The structure is enlarged not more than a cumulative of 200 square feet larger than its footprint as of January 1, 2005;*
 - b. *If the existing, legally established structure is located within a wetland or watercourse buffer, the addition may be no closer to the wetland or watercourse than a distance equal to 75 percent of the applicable standard buffer and must also be no closer to the watercourse or wetland than the existing structure;*
 - c. *A critical area study approved by the city demonstrates impacts have been avoided and minimized and mitigated consistent with section 19.07.100, mitigation sequencing;*
 - d. *If the modification or addition is proposed within a geologically hazardous area or associated buffer, a qualified professional provides a statement of risk with section 19.07.160(B)(3).*
3. *Reconstruction of legally established nonconforming structures shall meet the standards in section 19.01.050. The code official may require a critical area study and mitigation plan addressing temporary impacts to critical areas and buffers.*
4. *Demolition. Removal of structures in watercourses and wetland buffers and geologically hazardous areas, provided:*
 - a. *Site disturbance is limited to the existing access and footprint;*
 - b. *There is no site disturbance within or to wetlands and watercourses;*

- c. *All soils are stabilized, and the area is revegetated with appropriate native vegetation;*
- d. *Necessary building permits are obtained.*

State and Federal Regulations

Federal Agencies

Most wetlands and streams are regulated by the U.S. Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act. Any proposed filling or other direct impacts to Waters of the U.S., including wetlands (except isolated wetlands), would require preconstruction notification and permit authorization from the Corps. Wetlands A and B are not isolated; Wetlands C, D, E, and F appear isolated in our opinion, as we did not observe any surface water connections to a Water of the U.S.; a Jurisdictional Determination from the Corps would be required to confirm the wetlands' jurisdictional status. Unavoidable impacts to jurisdictional wetlands are typically required to be compensated through implementation of an approved mitigation plan. If activities requiring a Corps permit are proposed, a Joint Aquatic Resource Permit Application (JARPA) could be submitted to obtain authorization.

Federally permitted actions that could affect endangered species may also require a biological assessment study and consultation with the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service. Compliance with the Endangered Species Act must be demonstrated for activities within jurisdictional wetlands and the 100-year floodplain. Application for Corps permits may also require an individual 401 Water Quality Certification and Coastal Zone Management Consistency determination from Ecology and a cultural resource study in accordance with Section 106 of the National Historic Preservation Act.

Washington Department of Ecology (Ecology)

Like the Corps, Ecology is charged with reviewing, conditioning, and approving or denying certain federally permitted actions that result in discharges to state waters under Section 401 of the Clean Water Act. However, Ecology review under the Clean Water Act would only become necessary if a Section 404 permit from the Corps was issued. Ecology also regulates wetlands, including isolated wetlands, under the Washington Water Pollution Control Act, but only if direct wetland impacts are proposed. Therefore, authorization from Ecology would not be needed if filling activities are avoided.

A JARPA may also be submitted to Ecology to obtain a Section 401 Water Quality Certification and Coastal Zone Management Consistency Determination if filling is proposed. Ecology

approvals are either issued concurrently with the Corps approval or within 90 days following the Corps approval.

In general, neither the Corps nor Ecology regulates wetland and stream buffers, unless direct impacts are proposed. When direct impacts are proposed, buffers are applied based on Corps and Ecology joint regulatory guidance.

Washington Department of Fish and Wildlife (WDFW)

Chapter 77.55 of the RCW (the Hydraulic Code) gives WDFW the authority to review, condition, and approve or deny “any construction activity that will use, divert, obstruct, or change the bed or flow of state waters.” This provision includes any in-water work, the crossing or bridging of any state waters and can sometimes include stormwater discharge to state waters. WDFW will issue a Hydraulic Project Approval (HPA) if a project meets regulatory requirements.

WDFW can also restrict activities to a particular timeframe through the conditions of approval on an HPA. Work is typically restricted to late summer and early fall, however, WDFW has in the past allowed crossings that don’t involve in-stream work to occur at any time during the year.

Disclaimer

The information contained in this letter is based on the application of technical guidelines currently accepted as the best available science and in conjunction with the manuals and criteria referenced above. All discussions, conclusions and recommendations reflect the best professional judgment of the author(s) and are based upon information available at the time the study was conducted. All work was completed within the constraints of budget, scope, and timing. The findings of this report are subject to verification and agreement by the appropriate local, state, and federal regulatory authorities. No other warranty, expressed or implied, is made.

Please call if you have any questions or if we can provide you with any additional information.

Sincerely,

A handwritten signature in black ink that reads "Sage Yuasa". The signature is written in a cursive, flowing style.

Sage Yuasa
Ecologist / ISA Certified Arborist

Enclosures

References

- Anderson, P.S. et al. 2016. Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State. (Publication #16-06-029). Olympia, WA: Shorelands and Environmental Assistance Program, Washington Department of Ecology.
- Department of Ecology (Ecology). 2018. July 2018 Modifications for Habitat Score Ranges. Modified from Wetland Guidance for CAO Updates, Western Washington Version. (Publication #16-06-001). Accessed 8/16/18:
<https://fortress.wa.gov/ecy/publications/parts/1606001part1.pdf>.
- Environmental Laboratory. 1987. "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- Hruby, T. 2014. Washington State Wetland Rating System for Western Washington: 2014 Update. (Publication #14-06-029). Olympia, WA: Washington Department of Ecology.
- Mersel, M.K. and Lichvar, R.W. 2014. A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States. ERDC/CRREL TR-14-13.
- 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). ed. J. S. Wakely, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-3. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2015. National Engineering Handbook, Part 650 Engineering Field Handbook, Chapter 19 Hydrology Tools for Wetland Identification and Analysis. ed. R. A. Weber. 210-VI-NEH, Amend. 75. Washington, DC.

Site Photos



Photo 1. Mercer Island City Hall, maintained lawn, and ornamental vegetation.



Photo 2. Mercer Island City Hall and maintained lawn.

Site Photos



Photo 3. Property developed with Mercer Island Public Works.



Photo 4. Concrete structures and staging areas built into forested slope.

Site Photos



Photo 5. Large concrete structures built into hillside with vegetation on roof.



Photo 6. Public works buildings with green roofs.

Site Photos



Photo 7. Perimeter of the facility contains concrete and rock retaining walls.



Photo 8. Undeveloped forested area beyond chain-linked fence to the south.

Site Photos



Photo 9. Undeveloped forested area west of the Public Works facility.



Photo 10. Undeveloped forested area southeast of the Public Works facility.

Site Photos



Photo 11. Undeveloped forested area west of the Public Works facility.



Photo 12. Stream A flowing south toward the Public Works facility.

Site Photos



Photo 13. Stream A flowing south through the center of the Public Works facility.



Photo 14. Piped section of Stream A along private access road to Public Works facility.

Site Photos



Photo 15. Piped section of Stream A under entrance to Public Works facility.



Photo 16. Stream A flowing north toward SE 36th Street and west of the private access road.

Site Photos



Photo 17. Stream A outlets via Type 2 catch basin (3b-221).



Photo 18. Incised section of Stream A with exposed hardpan.

Site Photos



Photo 19. Stream B flowing east along the northern perimeter of the Public Works facility.



Photo 20. Stream B is located along northern perimeter of the Public Works facility.

Site Photos



Photo 21. West view of Stream B confluence with Stream A.



Photo 22. Stormwater feature located in eastern portion of Public Works facility.

Site Photos



Photo 23. Stormwater feature dredged between site visits.

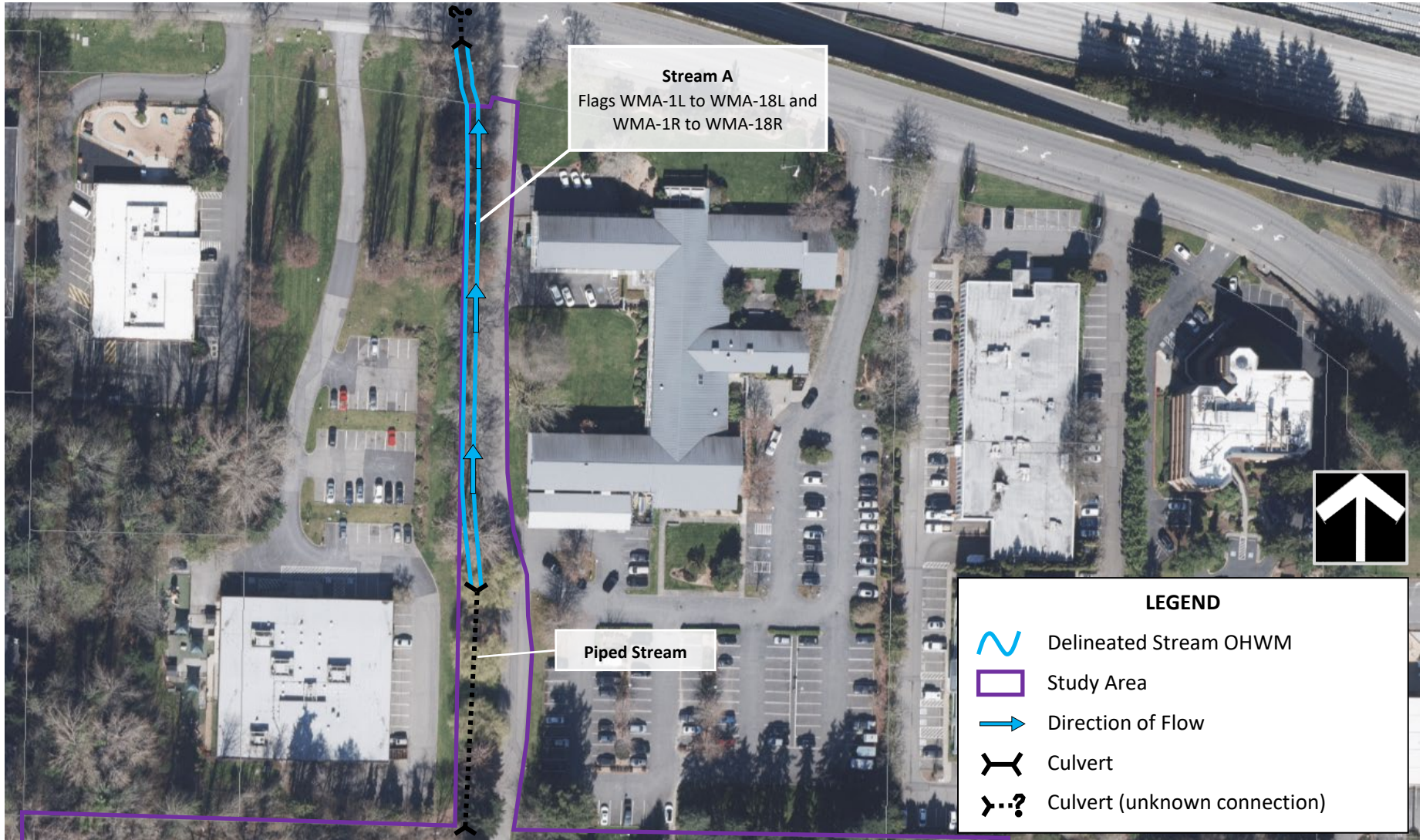


Photo 24. Type 2 catch basin (2a-82), adjacent to stormwater feature.

Wetland and Stream Delineation Sketch – 9601 SE 36th Street

Site Address: 9601 SE 36th Street, Mercer Island, WA
Parcel Number: 2655500185
Site Visit Date: March 20, 2024

Jurisdiction: City of Mercer Island
Prepared for: David Cutler; Northwest Studio
DCG/W Ref. No.: 2403.0393.00

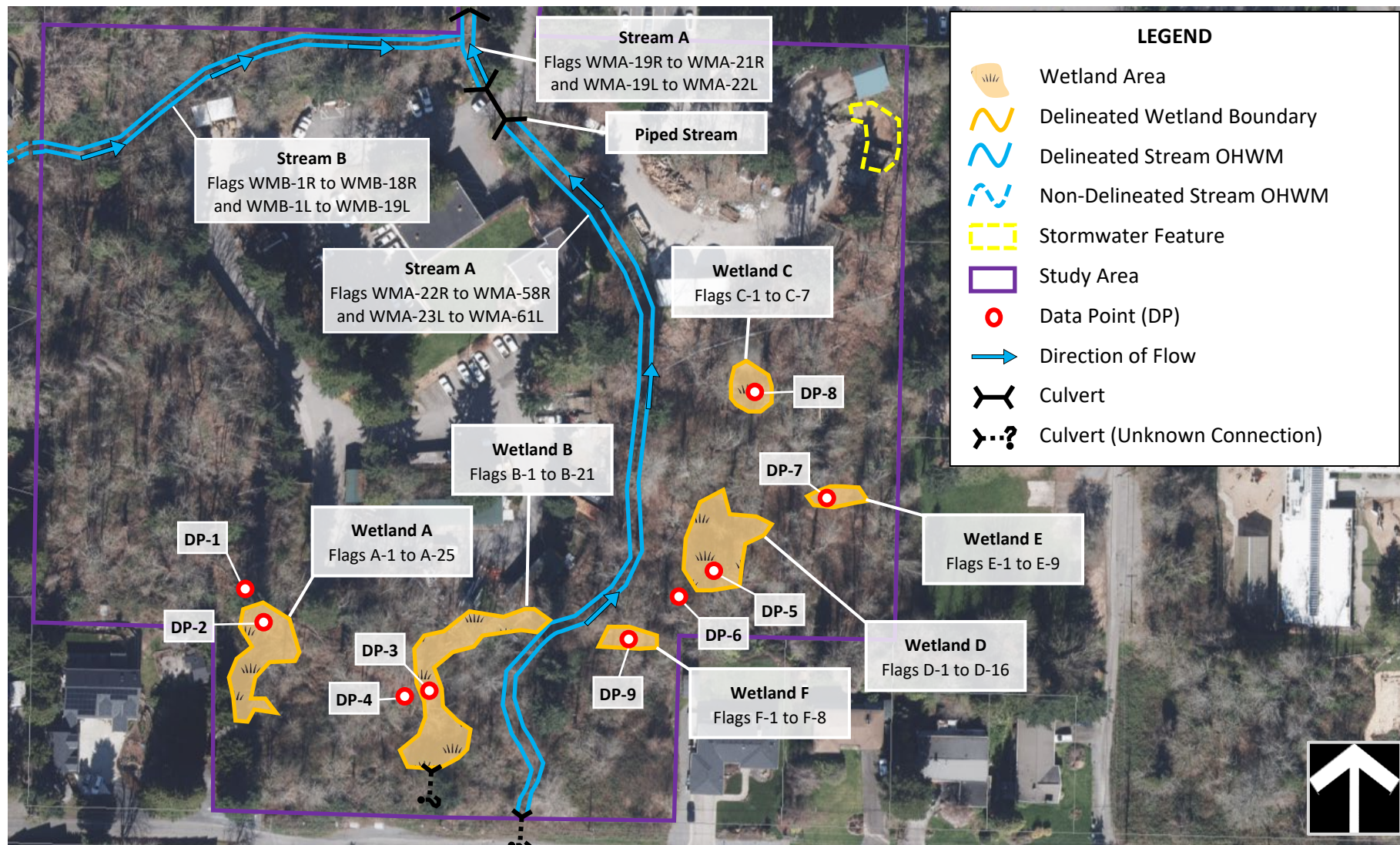


Note: Field sketch only. Features depicted are approximate and not to scale. Wetland boundaries are marked with pink- and black-stripped flags. Stream boundaries are marked with blue- and black-stripped flags. Data points are marked with yellow- and black-stripped flags. All observations were made from within the study area; adjoining private properties were not entered.

Wetland and Stream Delineation Sketch – 9601 SE 36th Street

Site Address: 9601 SE 36th Street, Mercer Island, WA
Parcel Number: 2655500185
Site Visit Date: March 20, 2024

Jurisdiction: City of Mercer Island
Prepared for: David Cutler; Northwest Studio
DCG/W Ref. No.: 2403.0393.00



Note: Field sketch only. Features depicted are approximate and not to scale. Wetland boundaries are marked with pink- and black-striped flags. Stream boundaries are marked with blue- and black-striped flags. Data points are marked with yellow- and black-striped flags. All observations were made from within the study area; adjoining private properties were not entered.



**WETLAND DETERMINATION DATA FORM –
Western Mountains, Valleys, and Coast Region**

DP - 1

Project/Site: 9601 SE 36th Street (Parcel #2655500185) City/County: City of Mercer Island Sampling date: 03-20-2024
 Applicant/Owner: Northwest Studio State: WA Sampling Point: DP-1
 Investigator(s): S. Yuasa, B. Rutley Section, Township, Range: S7, T24N, R05E
 Landform (hillslope, terrace, etc): Hillslope Local relief (concave, convex, none): None Slope (%): 5%
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kitsap silt loam, 8 to 15 percent slopes. NWI classification: None

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

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soils Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks: Wetland A in-pit. Slope wetland located southwest, upslope and between, two hillslope structures.					

VEGETATION – Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Notes	
Tree Stratum (Plot size: 5-m diameter)					
1. <u><i>Alnus rubra</i></u>	20	Y	FAC	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>4</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>75%</u> (A/B)	
2. _____					
3. _____					
4. _____					
<u>20</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____	
Sapling/Shrub Stratum (Plot size: 3-m diameter)					
1. <u><i>Rubus bifrons</i></u>	20	Y	FAC		
2. _____					
3. _____					
4. _____					
5. _____					
<u>20</u> = Total Cover					
Herb Stratum (Plot size: 1-m diameter)					
1. <u><i>Hedera helix</i></u>	35	Y	FACU	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is > 50% <input type="checkbox"/> 3 – Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u><i>Ranunculus repens</i></u>	5	N	FAC		
3. <u><i>Equisetum telmateia</i></u>	15	Y	FACW		
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
<u>55</u> = Total Cover					
Woody Vine Stratum (Plot size: 3-m diameter)					
1. _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
2. _____					
<u>0</u> = Total Cover					
% Bare Ground in Herb Stratum: <u>45</u>					
Remarks:					

SOIL

Sampling Point: DP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-7	10YR 2/1	95	7.5YR 5/6	5	C	M	Silt loam	-
7-12	10YR 4/1	70	7.5YR 5/6	30	C	M	Sandy clay loam	-
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: PL=Pore Lining, M=Matrix.								
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)					Indicators for Problematic Hydric Soils³:			
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2cm Muck (A10)						
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)						
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)						
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)						
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.						
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)							
Restrictive Layer (if present):					Hydric soil present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Type: _____								
Depth (inches): _____								
Remarks:								

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)		
Primary Indicators (minimum of one required: check all that apply)						
<input type="checkbox"/> Surface water (A1)	<input type="checkbox"/> Water Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	<input type="checkbox"/> Water Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)				
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)				
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Water Marks (B1)	<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)				
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)				
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)				
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (explain in remarks)	<input type="checkbox"/> Frost-Heave Hummocks				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)						
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)						
Field Observations:				Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (in):	-			
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (in):	3"			
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (in):	Surface			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						
Remarks:						



**WETLAND DETERMINATION DATA FORM –
Western Mountains, Valleys, and Coast Region**

DP - 2

Project/Site: 9601 SE 36th Street (Parcel #2655500185) City/County: City of Mercer Island Sampling date: 03-20-2024
 Applicant/Owner: Northwest Studio State: WA Sampling Point: DP-2
 Investigator(s): S. Yuasa, B. Rutley Section, Township, Range: S7, T24N, R05E
 Landform (hillslope, terrace, etc): Hillslope Local relief (concave, convex, none): None Slope (%): 7%
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kitsap silt loam, 8 to 15 percent slopes. NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soils Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Wetland A out-pit.	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: 5-m diameter)					
1. <u><i>Alnus rubra</i></u>	10	Y	FAC	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>40%</u> (A/B)	
2. _____					
3. _____					
4. _____					
<u>10</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: (A) <u> </u> (B) <u> </u> Prevalence Index = B/A = <u> </u>	
Sapling/Shrub Stratum (Plot size: 3-m diameter)					
1. <u><i>Rubus bifrons</i></u>	70	Y	FAC		
2. <u><i>Oemleria cerasiformis</i></u>	20	Y	FACU		
3. _____					
4. _____					
5. _____					
<u>90</u> = Total Cover					
Herb Stratum (Plot size: 1-m diameter)					
1. <u><i>Polystichum munitum</i></u>	20	Y	FACU	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 – Dominance Test is > 50% <input type="checkbox"/> 3 – Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u><i>Hedera helix</i></u>	60	Y	FACU		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
<u>80</u> = Total Cover					
Woody Vine Stratum (Plot size: 3-m diameter)					
1. _____				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
2. _____					
<u>0</u> = Total Cover					
% Bare Ground in Herb Stratum: <u>20</u>					
Remarks:					



**WETLAND DETERMINATION DATA FORM –
Western Mountains, Valleys, and Coast Region**

DP - 3

Project/Site: 9601 SE 36th Street (Parcel #2655500185) City/County: City of Mercer Island Sampling date: 03-21-2024
 Applicant/Owner: Northwest Studio State: WA Sampling Point: DP-3
 Investigator(s): S. Yuasa, B. Rutley Section, Township, Range: S7, T24N, R05E
 Landform (hillslope, terrace, etc): Hillslope Local relief (concave, convex, none): None Slope (%): 10%
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kitsap silt loam, 8 to 15 percent slopes. NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soils Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Wetland B in-pit.	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: 5-m diameter)					
1. <u><i>Alnus rubra</i></u>	55	Y	FAC	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>4</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>75%</u> (A/B)	
2. _____					
3. _____					
4. _____					
<u>55</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____	
Sapling/Shrub Stratum (Plot size: 3-m diameter)					
1. <u><i>Rubus bifrons</i></u>	30	Y	FAC		
2. _____					
3. _____					
4. _____					
5. _____					
<u>30</u> = Total Cover					
Herb Stratum (Plot size: 1-m diameter)					
1. <u><i>Oenanthe sarmentosa</i></u>	25	Y	OBL	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is > 50% <input type="checkbox"/> 3 – Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u><i>Hedera helix</i></u>	25	Y	FACU		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
<u>50</u> = Total Cover					
Woody Vine Stratum (Plot size: 3-m diameter)					
1. _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
2. _____					
<u>0</u> = Total Cover					
% Bare Ground in Herb Stratum: <u>50</u>					
Remarks:					

Project/Site: 9601 SE 36th Street (Parcel #2655500185) City/County: City of Mercer Island Sampling date: 03-21-2024
 Applicant/Owner: Northwest Studio State: WA Sampling Point: DP-4
 Investigator(s): S. Yuasa, B. Rutley Section, Township, Range: S7, T24N, R05E
 Landform (hillslope, terrace, etc): Hillslope Local relief (concave, convex, none): None Slope (%): 8%
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kitsap silt loam, 8 to 15 percent slopes. NWI classification: None

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

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soils Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: Wetland B out-pit.					

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 5-m diameter)				
1. <u><i>Alnus rubra</i></u>	70	Y	FAC	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>67%</u> (A/B)
2. _____				
3. _____				
4. _____				
<u>70</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u><i>Rubus bifrons</i></u>	50	Y	FAC	Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: (A) <u> </u> (B) <u> </u> Prevalence Index = B/A = <u> </u>
2. _____				
3. _____				
4. _____				
5. _____				
<u>50</u> = Total Cover				
Herb Stratum (Plot size: 1-m diameter)				
1. <u><i>Hedera helix</i></u>	60	Y	FACU	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is > 50% <input type="checkbox"/> 3 – Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u><i>Tolmiea menziesii</i></u>	5	N	FAC	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
<u>65</u> = Total Cover				
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____				
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum: <u>35</u>				
Remarks:				

SOIL

Sampling Point: DP-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-10	10YR 3/2	100	-	-	-	-	Clay loam	-
10-16	10YR 3/1	60	-	-	-	-	Sandy loam	-
10-16	10YR 4/2	30	7.5YR 4/6	10	C	M	Sandy loam	Included depletions
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: PL=Pore Lining, M=Matrix.								
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)			Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)		
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric soil present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks:								

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required: check all that apply)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface water (A1)	<input type="checkbox"/> Water Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	<input type="checkbox"/> Frost-Heave Hummocks
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Other (explain in remarks)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (explain in remarks)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Frost-Heave Hummocks	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (in): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (in): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (in): _____ (includes capillary fringe)			
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			



**WETLAND DETERMINATION DATA FORM –
Western Mountains, Valleys, and Coast Region**

DP - 5

Project/Site: 9601 SE 36th Street (Parcel #2655500185) City/County: City of Mercer Island Sampling date: 03-21-2024
 Applicant/Owner: Northwest Studio State: WA Sampling Point: DP-5
 Investigator(s): S. Yuasa, B. Rutley Section, Township, Range: S7, T24N, R05E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): Concave Slope (%): 2%
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kitsap silt loam, 2 to 8 percent slopes. NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soils Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Wetland D in-pit.	

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u><i>Acer macrophyllum</i></u>	100	N*	FACU	Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A)
2. _____				Total Number of Dominant Species Across all Strata: <u>3</u> (B)
3. _____				Percent of Dominant Species that are OBL, FACW, or FAC: <u>67%</u> (A/B)
4. _____				
<u>100</u> = Total Cover				Prevalence Index worksheet:
<u>Sapling/Shrub Stratum</u> (Plot size: 3-m diameter)				<u>Total % Cover of:</u> <u>Multiply by:</u>
1. <u><i>Rubus bifrons</i></u>	90	Y	FAC	OBL species <u> </u> x 1 = <u> </u>
2. _____				FACW species <u> </u> x 2 = <u> </u>
3. _____				FAC species <u> </u> x 3 = <u> </u>
4. _____				FACU species <u> </u> x 4 = <u> </u>
5. _____				UPL species <u> </u> x 5 = <u> </u>
<u>90</u> = Total Cover				Column Totals: (A) (B)
<u>Herb Stratum</u> (Plot size: 1-m diameter)				Prevalence Index = B/A =
1. <u><i>Tolmiea menziesii</i></u>	15	Y	FAC	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is > 50% <input type="checkbox"/> 3 – Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u><i>Hedera helix</i></u>	15	Y	FACU	
3. <u><i>Urtica dioica</i></u>	5	N	FAC	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
<u>35</u> = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: 3-m diameter)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. _____				
2. _____				
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum: 65				
Remarks: *Rooted outside of wetland, canopy overhanging.				



**WETLAND DETERMINATION DATA FORM –
Western Mountains, Valleys, and Coast Region**

DP - 6

Project/Site: 9601 SE 36th Street (Parcel #2655500185) City/County: City of Mercer Island Sampling date: 03-21-2024
 Applicant/Owner: Northwest Studio State: WA Sampling Point: DP-1
 Investigator(s): S. Yuasa, B. Rutley Section, Township, Range: S7, T24N, R05E
 Landform (hillslope, terrace, etc): Hillslope Local relief (concave, convex, none): None Slope (%): 5%
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kitsap silt loam, 8 to 15 percent slopes. NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soils Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Wetland D out-pit.	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 5-m diameter)				
1. <u><i>Acer macrophyllum</i></u>	70	Y	FACU	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across all Strata: <u>4</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>25%</u> (A/B)
2. _____				
3. _____				
4. _____				
<u>70</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u><i>Rubus bifrons</i></u>	70	Y	FAC	Prevalence Index worksheet: Total % Cover of: <u>70</u> Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
2. _____				
3. _____				
4. _____				
5. _____				
<u>70</u> = Total Cover				
Herb Stratum (Plot size: 1-m diameter)				
1. <u><i>Hedera helix</i></u>	25	Y	FACU	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 – Dominance Test is > 50% <input type="checkbox"/> 3 – Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u><i>Polystichum munitum</i></u>	15	Y	FACU	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
<u>40</u> = Total Cover				
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. _____				
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum: <u>60</u>				
Remarks:				



**WETLAND DETERMINATION DATA FORM –
Western Mountains, Valleys, and Coast Region**

DP - 7

Project/Site: 9601 SE 36th Street (Parcel #2655500185) City/County: City of Mercer Island Sampling date: 03-21-2024
 Applicant/Owner: Northwest Studio State: WA Sampling Point: DP-7
 Investigator(s): S. Yuasa, B. Rutley Section, Township, Range: S7, T24N, R05E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): Concave Slope (%): 2%
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kitsap silt loam, 8 to 15 percent slopes. NWI classification: None

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

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soils Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks: Wetland E in-pit.					

VEGETATION – Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Notes
Tree Stratum (Plot size: 5-m diameter)				
1. _____				Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____				
3. _____				
4. _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Rubus bifrons</u>	100	Y	FAC	Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: (A) <u> </u> (B) <u> </u> Prevalence Index = B/A = <u> </u>
2. _____				
3. _____				
4. _____				
5. _____				
<u>100</u> = Total Cover				
Herb Stratum (Plot size: 1-m diameter)				
1. _____				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is > 50% <input type="checkbox"/> 3 – Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
<u>0</u> = Total Cover				
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____				
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum: <u>100</u>				
Remarks:				



**WETLAND DETERMINATION DATA FORM –
Western Mountains, Valleys, and Coast Region**

DP - 8

Project/Site: 9601 SE 36th Street (Parcel #2655500185) City/County: City of Mercer Island Sampling date: 03-21-2024
 Applicant/Owner: Northwest Studio State: WA Sampling Point: DP-8
 Investigator(s): S. Yuasa, B. Rutley Section, Township, Range: S7, T24N, R05E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): Concave Slope (%): 2%
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kitsap silt loam, 8 to 15 percent slopes. NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soils Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Wetland C in-pit.	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: 5-m diameter)					
1. <u><i>Acer macrophyllum</i></u>	80	N*	FACU	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>67%</u> (A/B)	
2. _____					
3. _____					
4. _____					
<u>80</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: (A) <u> </u> (B) <u> </u> Prevalence Index = B/A = <u> </u>	
Sapling/Shrub Stratum (Plot size: 3-m diameter)					
1. <u><i>Rubus bifrons</i></u>	60	Y	FAC		
2. <u><i>Rubus spectabilis</i></u>	20	Y	FAC		
3. _____					
4. _____					
5. _____					
<u>80</u> = Total Cover					
Herb Stratum (Plot size: 1-m diameter)					
1. <u><i>Hedera helix</i></u>	20	Y	FACU	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is > 50% <input type="checkbox"/> 3 – Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
<u>20</u> = Total Cover					
Woody Vine Stratum (Plot size: 3-m diameter)					
1. _____					
2. _____					
<u>0</u> = Total Cover					
% Bare Ground in Herb Stratum: <u>80</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: *Rooted outside of wetland, canopy overhanging.					

SOIL

Sampling Point: DP-8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-4	10YR 3/1	100	-	-	-	-	Sandy loam	-
4-14	10YR 4/2	80	7.5YR 4/6	20	C	M	Sandy loam	-
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: PL=Pore Lining, M=Matrix.								
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)					Indicators for Problematic Hydric Soils³:			
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Redox Depressions (F8)					<input type="checkbox"/> 2cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)			
Restrictive Layer (if present): Type: _____ Depth (inches): _____					Hydric soil present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
Remarks:								

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)			
Primary Indicators (minimum of one required: check all that apply)							
<input type="checkbox"/> Surface water (A1)	<input type="checkbox"/> Water Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> FAC-Neutral Test (D5)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)	<input type="checkbox"/> Frost-Heave Hummocks
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Other (explain in remarks)	<input type="checkbox"/> Frost-Heave Hummocks		
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
Field Observations:							
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (in):	-	Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (in):	4"				
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (in):	Surface				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Remarks:							



**WETLAND DETERMINATION DATA FORM –
Western Mountains, Valleys, and Coast Region**

DP - 9

Project/Site: 9601 SE 36th Street (Parcel #2655500185) City/County: City of Mercer Island Sampling date: 03-21-2024
 Applicant/Owner: Northwest Studio State: WA Sampling Point: DP-9
 Investigator(s): S. Yuasa, B. Rutley Section, Township, Range: S7, T24N, R05E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): Concave Slope (%): 5%
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kitsap silt loam, 8 to 15 percent slopes. NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soils Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Wetland F in-pit.	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: 5-m diameter)					
1. <u><i>Alnus rubra</i></u>	30	Y	FAC	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>80%</u> (A/B)	
2. _____					
3. _____					
4. _____					
<u>30</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: (A) <u> </u> (B) <u> </u> Prevalence Index = B/A = <u> </u>	
Sapling/Shrub Stratum (Plot size: 3-m diameter)					
1. <u><i>Rubus spectabilis</i></u>	25	Y	FAC		
2. <u><i>Rubus bifrons</i></u>	25	Y	FAC		
3. _____					
4. _____					
5. _____					
<u>50</u> = Total Cover					
Herb Stratum (Plot size: 1-m diameter)					
1. <u><i>Hedera helix</i></u>	10	Y	FACU	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is > 50% <input type="checkbox"/> 3 – Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u><i>Ranunculus repens</i></u>	5	Y	FAC		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
<u>15</u> = Total Cover					
Woody Vine Stratum (Plot size: 3-m diameter)					
1. _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
2. _____					
<u>0</u> = Total Cover					
% Bare Ground in Herb Stratum: <u>85</u>					
Remarks:					

Wetland name or number: Wetland A

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland A

Date of site visit: 3/20/2024

Rated by: Sage Yuasa, Brent Rutley Trained by Ecology? Y N

Date of training: March 2021

HGM Class used for rating: Slope

Wetland has multiple HGM classes? Y N

NOTE: Form is not complete without the figures requested (figures can be combined).

Source of base aerial photo/map: DOE Water Quality Atlas, King County iMap, Google Earth Pro

OVERALL WETLAND CATEGORY IV (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	<u>L</u>	H	M	<u>L</u>	H	M	<u>L</u>	
Landscape Potential	H	<u>M</u>	L	H	<u>M</u>	L	H	M	<u>L</u>	
Value	H	M	<u>L</u>	H	M	<u>L</u>	<u>H</u>	M	L	
Score Based on Ratings	4			4			5			TOTAL 13

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: Wetland A

Maps and figures required to answer questions correctly for Western Washington

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	10
Hydroperiods	H 1.2	1
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	2
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to figure above</i>)	S 4.1	2
Boundary of 150 ft buffer (<i>can be added to another figure</i>)	S 2.1, S 5.1	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	11
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	12
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	13

Wetland name or number: Wetland 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	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	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: Wetland A

SLOPE WETLANDS

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

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

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

Record the rating on the first page

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

Rating of Landscape Potential If score is: 1-2 = M 0 = L

Record the rating on the first page

S 3.0. Is the water quality improvement provided by the site valuable to society?		
S 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? <input type="checkbox"/> Yes = 1 <input checked="" type="checkbox"/> No = 0		0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? <i>At least one aquatic resource in the basin is on the 303(d) list.</i> <input type="checkbox"/> Yes = 1 <input checked="" type="checkbox"/> No = 0		0
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? <i>Answer YES if there is a TMDL for the basin in which unit is found.</i> <input type="checkbox"/> Yes = 2 <input checked="" type="checkbox"/> No = 0		0
Total for S 3 Add the points in the boxes above		0

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

Record the rating on the first page

Wetland name or number: Wetland A

SLOPE WETLANDS

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

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

S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. *Stems of plants should be thick enough (usually >1/8_s in), or dense enough, to remain erect during surface flows.*

Dense, uncut, **rigid** plants cover > 90% of the area of the wetland points = 1

All other conditions points = 0

0

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

Record the rating on the first page

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

S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff? Yes = 1 No = 0

1

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

Record the rating on the first page

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

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

The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) points = 2

Surface flooding problems are in a sub-basin farther down-gradient points = 1

No flooding problems anywhere downstream points = 0

0

S 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 S 6 Add the points in the boxes above

0

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

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

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.*

- Aquatic bed 4 structures or more: points = 4
 - Emergent 3 structures: points = 2
 - Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1
 - Forested (areas where trees have > 30% cover) 1 structure: points = 0
- If the unit has a Forested class, check if:*
- 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

1

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*).

- Permanently flooded or inundated 4 or more types present: points = 3
- Seasonally flooded or inundated 3 types present: points = 2
- Occasionally flooded or inundated 2 types present: points = 1
- Saturated only 1 type present: points = 0
- Permanently flowing stream or river in, or adjacent to, the wetland
- Seasonally flowing stream in, or adjacent to, the wetland
- Lake Fringe wetland** **2 points**
- Freshwater tidal wetland** **2 points**

0

H 1.3. Richness of plant species

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

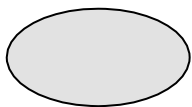
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle

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

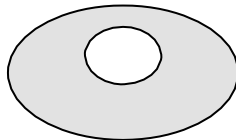
1

H 1.4. Interspersion of habitats

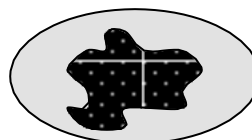
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always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



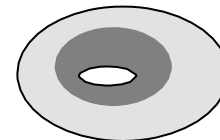
None = 0 points



Low = 1 point

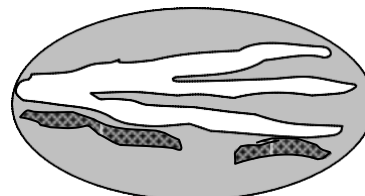
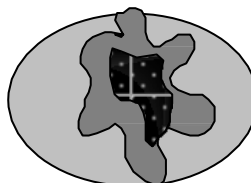
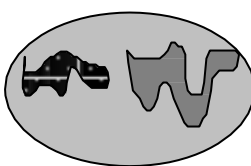


Moderate = 2 points



All three diagrams in this row are

HIGH = 3points



1

Wetland name or number: Wetland A

<p>H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). <input checked="" type="checkbox"/> Standing snags (dbh > 4 in) within the wetland. <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). <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>). <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>). <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>). 	2
<p>Total for H 1 Add the points in the boxes above</p>	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>). <i>Calculate: % undisturbed habitat + [(%moderate and low intensity land uses)/2] = 0% + (0.8%/2) = 0.4%</i> If total accessible habitat is:</p> <ul style="list-style-type: none"> <input type="checkbox"/> > 1/3 (33.3%) of 1 km Polygon points = 3 <input type="checkbox"/> 20-33% of 1 km Polygon points = 2 <input type="checkbox"/> 10-19% of 1 km Polygon points = 1 <input checked="" type="checkbox"/> < 10% of 1 km Polygon points = 0 	0
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. <i>Calculate: % undisturbed habitat + [(%moderate and low intensity land uses)/2] = 0% + (24.2%/2) = 12.1%</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Undisturbed habitat > 50% of Polygon points = 3 <input type="checkbox"/> Undisturbed habitat 10-50% and in 1-3 patches points = 2 <input checked="" type="checkbox"/> Undisturbed habitat 10-50% and > 3 patches points = 1 <input type="checkbox"/> Undisturbed habitat < 10% of 1 km Polygon points = 0 	1
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> > 50% of 1 km Polygon is high intensity land use points = (- 2) <input type="checkbox"/> ≤ 50% of 1 km Polygon is high intensity points = 0 	-2
<p>Total for H 2 Add the points in the boxes above</p>	-1

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> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page) <input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) <input type="checkbox"/> It is mapped as a location for an individual WDFW priority species <input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources <input type="checkbox"/> It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan <input type="checkbox"/> Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1 <input type="checkbox"/> Site does not meet any of the criteria above points = 0 	2

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

Wetland name or number: Wetland 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.

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>	
<p>SC 1.0. Estuarine wetlands</p> <p>Does the wetland meet the following criteria for Estuarine wetlands?</p> <p><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 <input type="checkbox"/> Yes – Go to SC 1.1 <input checked="" type="checkbox"/> No = Not an estuarine wetland</p>	
<p>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? <input type="checkbox"/> Yes = Category I <input type="checkbox"/> No - Go to SC 1.2</p>	Cat. I
<p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two 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 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 un-mowed grassland. <input type="checkbox"/> The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. <input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Category II</p>	Cat. I Cat. II
<p>SC 2.0. Wetlands of High Conservation Value (WHCV)</p> <p>SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? <input checked="" type="checkbox"/> Yes – Go to SC 2.2 <input type="checkbox"/> No – Go to SC 2.3</p> <p>SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? http://www.dnr.wa.gov/NHPwetlandviewer <input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No = Not a WHCV</p> <p>SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://file.dnr.wa.gov/publications/amp_nh_wetlands_trs.pdf <input type="checkbox"/> Yes – Contact WNHP/WDNR and go to SC 2.4 <input type="checkbox"/> No = Not a WHCV</p> <p>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? <input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Not a WHCV</p>	Cat. I
<p>SC 3.0. Bogs</p> <p>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></p> <p>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? <input type="checkbox"/> Yes – Go to SC 3.3 <input checked="" type="checkbox"/> No – Go to SC 3.2</p> <p>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? <input type="checkbox"/> Yes – Go to SC 3.3 <input checked="" type="checkbox"/> No = Is not a bog</p> <p>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? <input type="checkbox"/> Yes = Is a Category I bog <input type="checkbox"/> 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.</p> <p>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? <input type="checkbox"/> Yes = Is a Category I bog <input type="checkbox"/> No = Is not a bog</p>	Cat. I

Wetland name or number: Wetland 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;"><input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No = Not a forested wetland for this section</p>	<p>Cat. I</p>
<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;"><input type="checkbox"/> Yes – Go to SC 5.1 <input checked="" type="checkbox"/> 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 un-mowed grassland.</p> <p><input type="checkbox"/> The wetland is larger than 1/10 ac (4350 ft²)</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Category II</p>	<p>Cat. I</p> <p>Cat. II</p>
<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;"><input type="checkbox"/> Yes – Go to SC 6.1 <input checked="" type="checkbox"/> 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)?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> 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?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category II <input type="checkbox"/> 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?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category III <input type="checkbox"/> No = Category IV</p>	<p>Cat I</p> <p>Cat. II</p> <p>Cat. III</p> <p>Cat. IV</p>
<p>Category of wetland based on Special Characteristics</p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	<p>NA</p>

^AWetland name or number: Wetland A

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Wetland^A name or number: Wetland A

Wetland name or number: Wetland B

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland B

Date of site visit: 3/21/2024

Rated by: Sage Yuasa, Brent Rutley Trained by Ecology? Y N

Date of training: March 2021

HGM Class used for rating: Slope

Wetland has multiple HGM classes? Y N

NOTE: Form is not complete without the figures requested (figures can be combined).

Source of base aerial photo/map: DOE Water Quality Atlas, King County iMap, Google Earth Pro

OVERALL WETLAND CATEGORY IV (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	<u>L</u>	H	M	<u>L</u>	H	M	<u>L</u>	
Landscape Potential	H	<u>M</u>	L	H	<u>M</u>	L	H	M	<u>L</u>	
Value	H	M	<u>L</u>	H	M	<u>L</u>	<u>H</u>	M	L	TOTAL
Score Based on Ratings	4			4			5			13

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: Wetland B

Maps and figures required to answer questions correctly for Western Washington

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	10
Hydroperiods	H 1.2	3
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	4
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to figure above</i>)	S 4.1	3
Boundary of 150 ft buffer (<i>can be added to another figure</i>)	S 2.1, S 5.1	3
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	11
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	12
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	13

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: Wetland B

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	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	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: Wetland B

SLOPE WETLANDS

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

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

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

Record the rating on the first page

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

Rating of Landscape Potential If score is: 1-2 = M 0 = L

Record the rating on the first page

S 3.0. Is the water quality improvement provided by the site valuable to society?		
S 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? <input type="checkbox"/> Yes = 1 <input checked="" type="checkbox"/> No = 0		0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? <i>At least one aquatic resource in the basin is on the 303(d) list.</i> <input type="checkbox"/> Yes = 1 <input checked="" type="checkbox"/> No = 0		0
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? <i>Answer YES if there is a TMDL for the basin in which unit is found.</i> <input type="checkbox"/> Yes = 2 <input checked="" type="checkbox"/> No = 0		0
Total for S 3 Add the points in the boxes above		0

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

Record the rating on the first page

Wetland name or number: Wetland B

SLOPE WETLANDS

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

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

S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. <i>Stems of plants should be thick enough (usually >1/8_s in), or dense enough, to remain erect during surface flows.</i> <input type="checkbox"/> Dense, uncut, rigid plants cover > 90% of the area of the wetland points = 1 <input checked="" type="checkbox"/> All other conditions points = 0	0
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Rating of Site Potential If score is: 1 = M 0 = L

Record the rating on the first page

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

S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff? <input checked="" type="checkbox"/> Yes = 1 <input type="checkbox"/> No = 0	1
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Rating of Landscape Potential If score is: 1 = M 0 = L

Record the rating on the first page

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

S 6.1. Distance to the nearest areas downstream that have flooding problems: <input type="checkbox"/> The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) points = 2 <input type="checkbox"/> Surface flooding problems are in a sub-basin farther down-gradient points = 1 <input checked="" type="checkbox"/> No flooding problems anywhere downstream points = 0	0
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S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? <input type="checkbox"/> Yes = 2 <input checked="" type="checkbox"/> No = 0	0
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Total for S 6	Add the points in the boxes above	0
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Rating of Value If score is: 2-4 = H 1 = M 0 = L

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

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.*

- Aquatic bed 4 structures or more: points = 4
 - Emergent 3 structures: points = 2
 - Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1
 - Forested (areas where trees have > 30% cover) 1 structure: points = 0
- If the unit has a Forested class, check if:*
- 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

1

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*).

- Permanently flooded or inundated 4 or more types present: points = 3
- Seasonally flooded or inundated 3 types present: points = 2
- Occasionally flooded or inundated 2 types present: points = 1
- Saturated only 1 type present: points = 0
- Permanently flowing stream or river in, or adjacent to, the wetland
- Seasonally flowing stream in, or adjacent to, the wetland
- Lake Fringe wetland** **2 points**
- Freshwater tidal wetland** **2 points**

0

H 1.3. Richness of plant species

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

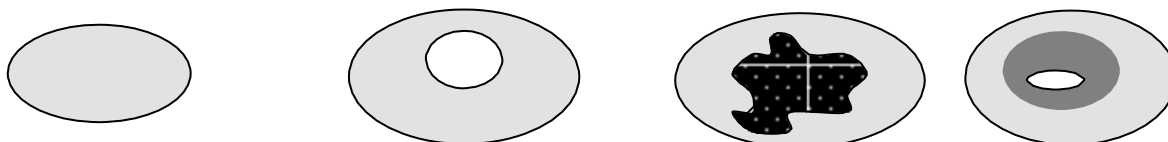
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle

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

1

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

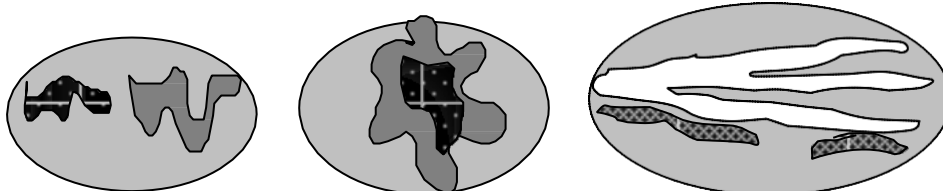
Low = 1 point

Moderate = 2 points

1

All three diagrams in this row are

HIGH = 3points



Wetland name or number: Wetland B

<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 checked="" 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>		2
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*

H 2.0. Does the landscape have the potential to support the habitat functions of the site?			
<p>H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>).</p> <p><i>Calculate:</i> % undisturbed habitat + [(%moderate and low intensity land uses)/2] = 0% + (0.8%/2) = 0.4%</p> <p>If total accessible habitat is:</p> <p><input 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 checked="" type="checkbox"/> < 10% of 1 km Polygon points = 0</p>			0
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p><i>Calculate:</i> % undisturbed habitat + [(%moderate and low intensity land uses)/2] = 0% + (24.2%/2) = 12.1%</p> <p><input 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 checked="" 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>			1
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p><input checked="" type="checkbox"/> > 50% of 1 km Polygon is high intensity land use points = (- 2)</p> <p><input type="checkbox"/> ≤ 50% of 1 km Polygon is high intensity points = 0</p>			-2
Total for H 2	Add the points in the boxes above	-1	

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?			
<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 checked="" 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 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>			2

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

Wetland name or number: Wetland B

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.

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>	
<p>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 <input type="checkbox"/> Yes – Go to SC 1.1 <input checked="" type="checkbox"/> No = Not an estuarine wetland</p>	
<p>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? <input type="checkbox"/> Yes = Category I <input type="checkbox"/> No - Go to SC 1.2</p>	Cat. I
<p>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 un-mowed grassland. <input type="checkbox"/> The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. <input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Category II</p>	Cat. I Cat. II
<p>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? <input checked="" type="checkbox"/> Yes – Go to SC 2.2 <input type="checkbox"/> No – Go to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? http://www.dnr.wa.gov/NHPwetlandviewer <input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No = Not a WHCV SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://file.dnr.wa.gov/publications/amp_nh_wetlands_trs.pdf <input type="checkbox"/> Yes – Contact WNHP/WDNR and go to SC 2.4 <input type="checkbox"/> 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? <input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Not a WHCV</p>	Cat. I
<p>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? <input type="checkbox"/> Yes – Go to SC 3.3 <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes – Go to SC 3.3 <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes = Is a Category I bog <input type="checkbox"/> 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? <input type="checkbox"/> Yes = Is a Category I bog <input type="checkbox"/> No = Is not a bog</p>	Cat. I

Wetland name or number: Wetland B

<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;"><input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No = Not a forested wetland for this section</p>	<p>Cat. I</p>
<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;"><input type="checkbox"/> Yes – Go to SC 5.1 <input checked="" type="checkbox"/> 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 un-mowed grassland.</p> <p><input type="checkbox"/> The wetland is larger than 1/10 ac (4350 ft²)</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Category II</p>	<p>Cat. I</p> <p>Cat. II</p>
<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;"><input type="checkbox"/> Yes – Go to SC 6.1 <input checked="" type="checkbox"/> 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)?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> 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?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category II <input type="checkbox"/> 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?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category III <input type="checkbox"/> No = Category IV</p>	<p>Cat I</p> <p>Cat. II</p> <p>Cat. III</p> <p>Cat. IV</p>
<p>Category of wetland based on Special Characteristics</p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	<p>NA</p>

^AWetland name or number: Wetland B

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Wetland^A name or number: Wetland B

Wetland name or number: Wetland C

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland C

Date of site visit: 03/21/2024

Rated by: Sage Yuasa, Brent Rutley

Trained by Ecology? Y N

Date of training: March 2021

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: DOE Water Quality Atlas, King County iMap, Google Earth Pro

OVERALL WETLAND CATEGORY IV (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 <u>M</u> L	H <u>M</u> L	H M <u>L</u>	
Landscape Potential	H <u>M</u> L	H <u>M</u> L	H M <u>L</u>	
Value	H M <u>L</u>	H M <u>L</u>	<u>H</u> M L	TOTAL
Score Based on Ratings	5	5	5	15

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

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

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: Wetland C

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	10
Hydroperiods	D 1.4, H 1.2	5
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	5
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	5
Map of the contributing basin	D 4.3, D 5.3	9
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	11
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	12
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	13

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: Wetland C

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	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	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.*

Depressional, Riverine, Slope

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:**

- Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3
- Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2
- Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing. points = 1
- Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1

3

D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0

0

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

- Wetland has persistent, ungrazed, plants > 95% of area points = 5
- Wetland has persistent, ungrazed, plants > 1/2 of area points = 3
- Wetland has persistent, ungrazed plants > 1/10 of area points = 1
- Wetland has persistent, ungrazed plants < 1/10 of area points = 0

3

D 1.4. Characteristics of seasonal ponding or inundation:*This is the area that is ponded for at least 2 months. See description in manual.*

- Area seasonally ponded is > ½ total area of wetland points = 4
- Area seasonally ponded is > ¼ total area of wetland points = 2
- Area seasonally ponded is < ¼ total area of wetland points = 0

0

Total for D 1

Add the points in the boxes above

6

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 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 No = 0

1

D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0

0

D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source: [Click here to enter text.](#) Yes = 1 No = 0

0

Total for D 2

Add the points in the boxes above

1

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

Record the rating on the first page

D 3.0. Is the water quality improvement provided by the site valuable to society?**D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?** Yes = 1 No = 0

0

D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0

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 basin in which the unit is found)? Yes = 2 No = 0

0

Total for D 3

Add the points in the boxes above

0

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

Record the rating on the first page

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 checked="" type="checkbox"/> Wetland is a depression or flat depression with no surface water leaving it (no outlet).	points = 4	4
<input 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	0
<input type="checkbox"/> Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet.	points = 5	
<input 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 checked="" 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	7

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?	<input type="checkbox"/> Yes = 1 <input checked="" type="checkbox"/> No = 0	0
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	<input checked="" type="checkbox"/> Yes = 1 <input type="checkbox"/> No = 0	1
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.)?	<input checked="" type="checkbox"/> Yes = 1 <input type="checkbox"/> No = 0	1
Total for D 5	Add the points in the boxes above	2

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

Record the rating on the first page

D 6.0. Are the hydrologic functions provided by the site valuable to society?		
D 6.1. The 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	0
• <input 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.		
<i>Explain why:</i> ___	points = 0	
<input checked="" 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?		
	<input type="checkbox"/> Yes = 2 <input checked="" type="checkbox"/> No = 0	0
Total for D 6	Add the points in the boxes above	0

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

Record the rating on the first page

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.*

- Aquatic bed 4 structures or more: points = 4
 - Emergent 3 structures: points = 2
 - Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1
 - Forested (areas where trees have > 30% cover) 1 structure: points = 0
- If the unit has a Forested class, check if:*
- 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

0

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*).

- Permanently flooded or inundated 4 or more types present: points = 3
- Seasonally flooded or inundated 3 types present: points = 2
- Occasionally flooded or inundated 2 types present: points = 1
- Saturated only 1 type present: points = 0
- Permanently flowing stream or river in, or adjacent to, the wetland
- Seasonally flowing stream in, or adjacent to, the wetland
- Lake Fringe wetland** **2 points**
- Freshwater tidal wetland** **2 points**

0

H 1.3. Richness of plant species

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

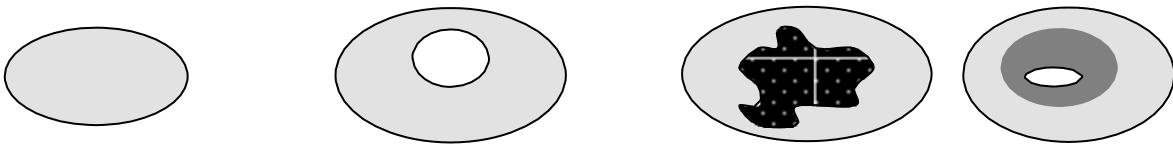
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle

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

1

H 1.4. Interspersion of habitats

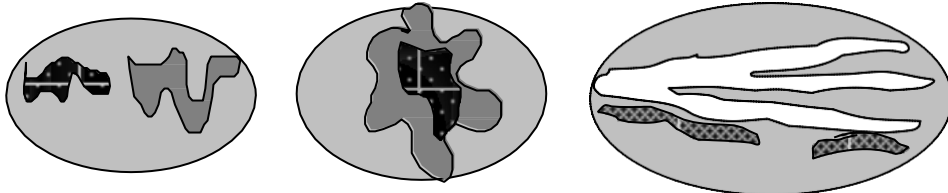
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always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



None = 0 points

Low = 1 point

Moderate = 2 points



All three diagrams in this row are

HIGH = 3points

0

Wetland name or number: Wetland C

<p>H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). <input type="checkbox"/> Standing snags (dbh > 4 in) within the wetland. <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). <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>). <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>). <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>). 		0
Total for H 1	Add the points in the boxes above	1

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>). <i>Calculate: % undisturbed habitat + [(% moderate and low intensity land uses)/2] = 0% + [0.8%/2] = 0.4%</i> If total accessible habitat is:</p> <ul style="list-style-type: none"> <input type="checkbox"/> > 1/3 (33.3%) of 1 km Polygon points = 3 <input type="checkbox"/> 20-33% of 1 km Polygon points = 2 <input type="checkbox"/> 10-19% of 1 km Polygon points = 1 <input checked="" type="checkbox"/> < 10% of 1 km Polygon points = 0 		0
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. <i>Calculate: % undisturbed habitat + [(% moderate and low intensity land uses)/2] = 0% + (24.2%/2) = 12.1%</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Undisturbed habitat > 50% of Polygon points = 3 <input type="checkbox"/> Undisturbed habitat 10-50% and in 1-3 patches points = 2 <input checked="" type="checkbox"/> Undisturbed habitat 10-50% and > 3 patches points = 1 <input type="checkbox"/> Undisturbed habitat < 10% of 1 km Polygon points = 0 		1
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> > 50% of 1 km Polygon is high intensity land use points = (- 2) <input type="checkbox"/> ≤ 50% of 1 km Polygon is high intensity points = 0 		-2
Total for H 2	Add the points in the boxes above	-1

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> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page) <input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) <input type="checkbox"/> It is mapped as a location for an individual WDFW priority species <input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources <input type="checkbox"/> It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan <input type="checkbox"/> Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1 <input type="checkbox"/> Site does not meet any of the criteria above points = 0 		2

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

Wetland name or number: Wetland C

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.

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>	
<p>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 <input type="checkbox"/> Yes –Go to SC 1.1 <input checked="" type="checkbox"/> No= Not an estuarine wetland</p>	
<p>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? <input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No - Go to SC 1.2</p>	Cat. I
<p>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 un-mowed grassland. <input type="checkbox"/> The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. <input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No= Category II</p>	Cat. I Cat. II
<p>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? <input checked="" type="checkbox"/> Yes – Go to SC 2.2 <input type="checkbox"/> No – Go to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? http://www.dnr.wa.gov/NHPwetlandviewer <input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No = Not a WHCV SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://file.dnr.wa.gov/publications/amp_nh_wetlands_trs.pdf <input type="checkbox"/> Yes – Contact WNHP/WDNR and go to SC 2.4 <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No = Not a WHCV</p>	Cat. I
<p>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? <input type="checkbox"/> Yes – Go to SC 3.3 <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes – Go to SC 3.3 <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes = Is a Category I bog <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes = Is a Category I bog <input checked="" type="checkbox"/> No = Is not a</p>	Cat. I

<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;"><input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No = Not a forested wetland for this section</p>	<p>Cat. I</p>
<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;"><input type="checkbox"/> Yes – Go to SC 5.1 <input checked="" type="checkbox"/> 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 un-mowed grassland.</p> <p><input type="checkbox"/> The wetland is larger than 1/10 ac (4350 ft²)</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Category II</p>	<p>Cat. I</p> <p>Cat. II</p>
<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;"><input type="checkbox"/> Yes – Go to SC 6.1 <input checked="" type="checkbox"/> 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)?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> 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?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category II <input type="checkbox"/> 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?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category III <input type="checkbox"/> No = Category IV</p>	<p>Cat I</p> <p>Cat. II</p> <p>Cat. III</p> <p>Cat. IV</p>
<p>Category of wetland based on Special Characteristics</p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	<p>NA</p>

Wetland name or number: Wetland C

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Wetland name or number: Wetland C

Wetland name or number: Wetland D

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland D

Date of site visit: 03/21/2024

Rated by: Sage Yuasa, Brent Rutley

Trained by Ecology? Y N

Date of training: March 2021

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: DOE Water Quality Atlas, King County iMap, Google Earth Pro

OVERALL WETLAND CATEGORY IV (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 <u>M</u> L	H <u>M</u> L	H M <u>L</u>	
Landscape Potential	H <u>M</u> L	H <u>M</u> L	H M <u>L</u>	
Value	H M <u>L</u>	H M <u>L</u>	<u>H</u> M L	TOTAL
Score Based on Ratings	5	5	5	15

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

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

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: Wetland D

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	10
Hydroperiods	D 1.4, H 1.2	6
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	6
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	6
Map of the contributing basin	D 4.3, D 5.3	9
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	11
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	12
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	13

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: Wetland D

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	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	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.*

Depressional, Riverine, Slope

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 checked="" type="checkbox"/> Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3		3
<input 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). <input type="checkbox"/> Yes = 4 <input checked="" type="checkbox"/> No = 0		0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes):		
<input checked="" type="checkbox"/> Wetland has persistent, ungrazed, plants > 95% of area points = 5		5
<input type="checkbox"/> Wetland has persistent, ungrazed, plants > 1/2 of area points = 3		
<input 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		0
<input type="checkbox"/> Area seasonally ponded is > ¼ total area of wetland points = 2		
<input checked="" type="checkbox"/> Area seasonally ponded is < ¼ total area of wetland points = 0		
Total for D 1	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 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?	<input type="checkbox"/> Yes = 1 <input checked="" 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?	<input checked="" type="checkbox"/> Yes = 1 <input type="checkbox"/> No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?	<input type="checkbox"/> Yes = 1 <input checked="" 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: Click here to enter text.	<input type="checkbox"/> Yes = 1 <input checked="" type="checkbox"/> No = 0	0
Total for D 2	Add the points in the boxes above	1

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

D 3.0. Is the water quality improvement provided by the site valuable to society?		
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?	<input type="checkbox"/> Yes = 1 <input checked="" 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 checked="" type="checkbox"/> No = 0	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 basin in which the unit is found)?	<input type="checkbox"/> Yes = 2 <input checked="" type="checkbox"/> No = 0	0
Total for D 3	Add the points in the boxes above	0

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

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 checked="" type="checkbox"/> Wetland is a depression or flat depression with no surface water leaving it (no outlet).	points = 4	4
<input 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	0
<input type="checkbox"/> Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet.	points = 5	
<input 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 checked="" 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	7

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?	<input type="checkbox"/> Yes = 1 <input checked="" type="checkbox"/> No = 0	0
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	<input checked="" type="checkbox"/> Yes = 1 <input type="checkbox"/> No = 0	1
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.)?	<input checked="" type="checkbox"/> Yes = 1 <input type="checkbox"/> No = 0	1
Total for D 5	Add the points in the boxes above	2

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

D 6.0. Are the hydrologic functions provided by the site valuable to society?		
D 6.1. The 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	0
• <input 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.		
<i>Explain why:</i> ___	points = 0	
<input checked="" 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?		
	<input type="checkbox"/> Yes = 2 <input checked="" type="checkbox"/> No = 0	0
Total for D 6	Add the points in the boxes above	0

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

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.*

- Aquatic bed 4 structures or more: points = 4
 - Emergent 3 structures: points = 2
 - Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1
 - Forested (areas where trees have > 30% cover) 1 structure: points = 0
- If the unit has a Forested class, check if:*
- 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

0

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*).

- Permanently flooded or inundated 4 or more types present: points = 3
- Seasonally flooded or inundated 3 types present: points = 2
- Occasionally flooded or inundated 2 types present: points = 1
- Saturated only 1 type present: points = 0
- Permanently flowing stream or river in, or adjacent to, the wetland
- Seasonally flowing stream in, or adjacent to, the wetland
- Lake Fringe wetland** **2 points**
- Freshwater tidal wetland** **2 points**

0

H 1.3. Richness of plant species

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

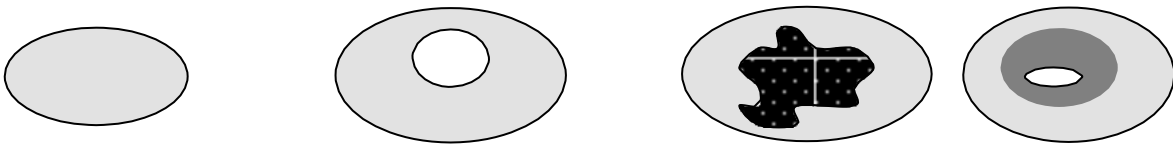
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle

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

1

H 1.4. Interspersion of habitats

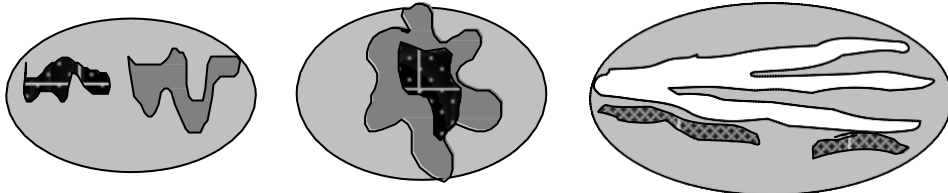
Decide from the diagrams below whether interspersions among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always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



None = 0 points

Low = 1 point

Moderate = 2 points



All three diagrams in this row are

HIGH = 3 points

0

Wetland name or number: Wetland D

<p>H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). <input checked="" type="checkbox"/> Standing snags (dbh > 4 in) within the wetland. <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). <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>). <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>). <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>). 	2
<p>Total for H 1 Add the points in the boxes above</p>	3

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>). <i>Calculate: % undisturbed habitat + [(% moderate and low intensity land uses)/2] = 0% + [0.8%/2] = 0.4%</i> If total accessible habitat is:</p> <ul style="list-style-type: none"> <input type="checkbox"/> > 1/3 (33.3%) of 1 km Polygon points = 3 <input type="checkbox"/> 20-33% of 1 km Polygon points = 2 <input type="checkbox"/> 10-19% of 1 km Polygon points = 1 <input checked="" type="checkbox"/> < 10% of 1 km Polygon points = 0 	0
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. <i>Calculate: % undisturbed habitat + [(% moderate and low intensity land uses)/2] = 0% + (24.2%/2) = 12.1%</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Undisturbed habitat > 50% of Polygon points = 3 <input type="checkbox"/> Undisturbed habitat 10-50% and in 1-3 patches points = 2 <input checked="" type="checkbox"/> Undisturbed habitat 10-50% and > 3 patches points = 1 <input type="checkbox"/> Undisturbed habitat < 10% of 1 km Polygon points = 0 	1
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> > 50% of 1 km Polygon is high intensity land use points = (- 2) <input type="checkbox"/> ≤ 50% of 1 km Polygon is high intensity points = 0 	-2
<p>Total for H 2 Add the points in the boxes above</p>	-1

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> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page) <input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) <input type="checkbox"/> It is mapped as a location for an individual WDFW priority species <input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources <input type="checkbox"/> It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan <input type="checkbox"/> Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1 <input type="checkbox"/> Site does not meet any of the criteria above points = 0 	2

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

Wetland name or number: Wetland D

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.

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>	
<p>SC 1.0. Estuarine wetlands</p> <p>Does the wetland meet the following criteria for Estuarine wetlands?</p> <p><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 <input type="checkbox"/> Yes –Go to SC 1.1 <input checked="" type="checkbox"/> No= Not an estuarine wetland</p>	
<p>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?</p> <p><input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No - Go to SC 1.2</p>	Cat. I
<p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two 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 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 un-mowed grassland. <input type="checkbox"/> The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.</p> <p><input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No= Category II</p>	Cat. I Cat. II
<p>SC 2.0. Wetlands of High Conservation Value (WHCV)</p> <p>SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? <input checked="" type="checkbox"/> Yes – Go to SC 2.2 <input type="checkbox"/> No – Go to SC 2.3</p> <p>SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? http://www.dnr.wa.gov/NHPwetlandviewer <input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No = Not a WHCV</p> <p>SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://file.dnr.wa.gov/publications/amp_nh_wetlands_trs.pdf <input type="checkbox"/> Yes – Contact WNHP/WDNR and go to SC 2.4 <input checked="" type="checkbox"/> No = Not a WHCV</p> <p>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? <input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No = Not a WHCV</p>	Cat. I
<p>SC 3.0. Bogs</p> <p>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></p> <p>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? <input type="checkbox"/> Yes – Go to SC 3.3 <input checked="" type="checkbox"/> No – Go to SC 3.2</p> <p>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? <input type="checkbox"/> Yes – Go to SC 3.3 <input checked="" type="checkbox"/> No = Is not a bog</p> <p>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? <input type="checkbox"/> Yes = Is a Category I bog <input checked="" type="checkbox"/> No – Go to SC 3.4</p> <p>NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog.</p> <p>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? <input type="checkbox"/> Yes = Is a Category I bog <input checked="" type="checkbox"/> No = Is not a</p>	Cat. I

<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;"><input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No = Not a forested wetland for this section</p>	<p>Cat. I</p>
<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;"><input type="checkbox"/> Yes – Go to SC 5.1 <input checked="" type="checkbox"/> 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 un-mowed grassland.</p> <p><input type="checkbox"/> The wetland is larger than 1/10 ac (4350 ft²)</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Category II</p>	<p>Cat. I</p> <p>Cat. II</p>
<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;"><input type="checkbox"/> Yes – Go to SC 6.1 <input checked="" type="checkbox"/> 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)?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> 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?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category II <input type="checkbox"/> 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?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category III <input type="checkbox"/> No = Category IV</p>	<p>Cat I</p> <p>Cat. II</p> <p>Cat. III</p> <p>Cat. IV</p>
<p>Category of wetland based on Special Characteristics</p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	<p>NA</p>

Wetland name or number: Wetland D

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Wetland name or number: Wetland D

Wetland name or number: Wetland E

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland E

Date of site visit: 03/21/2024

Rated by: Sage Yuasa, Brent Rutley

Trained by Ecology? Y N

Date of training: March 2021

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: DOE Water Quality Atlas, King County iMap, Google Earth Pro

OVERALL WETLAND CATEGORY IV (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 <u>M</u> L	H <u>M</u> L	H M <u>L</u>	
Landscape Potential	H <u>M</u> L	H <u>M</u> L	H M <u>L</u>	
Value	H M <u>L</u>	H M <u>L</u>	<u>H</u> M L	TOTAL
Score Based on Ratings	5	5	5	15

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

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

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: Wetland E

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	10
Hydroperiods	D 1.4, H 1.2	7
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	7
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	7
Map of the contributing basin	D 4.3, D 5.3	9
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	11
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	12
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	13

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: Wetland E

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	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	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.*

Depressional, Riverine, Slope

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:**

- Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3
- Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2
- Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing. points = 1
- Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1

3

D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0

0

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

- Wetland has persistent, ungrazed, plants > 95% of area points = 5
- Wetland has persistent, ungrazed, plants > 1/2 of area points = 3
- Wetland has persistent, ungrazed plants > 1/10 of area points = 1
- Wetland has persistent, ungrazed plants < 1/10 of area points = 0

5

D 1.4. Characteristics of seasonal ponding or inundation:*This is the area that is ponded for at least 2 months. See description in manual.*

- Area seasonally ponded is > ½ total area of wetland points = 4
- Area seasonally ponded is > ¼ total area of wetland points = 2
- Area seasonally ponded is < ¼ total area of wetland points = 0

0

Total for D 1

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 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 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 No = 0

1

D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0

0

D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source: [Click here to enter text.](#) Yes = 1 No = 0

0

Total for D 2

Add the points in the boxes above

1

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

Record the rating on the first page

D 3.0. Is the water quality improvement provided by the site valuable to society?**D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?** Yes = 1 No = 0

0

D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0

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 basin in which the unit is found)? Yes = 2 No = 0

0

Total for D 3

Add the points in the boxes above

0

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

Record the rating on the first page

Wetland name or number: Wetland E

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 checked="" type="checkbox"/> Wetland is a depression or flat depression with no surface water leaving it (no outlet). points = 4		4
<input 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		0
<input type="checkbox"/> Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet. points = 5		
<input 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 checked="" 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	7

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?	<input type="checkbox"/> Yes = 1 <input checked="" type="checkbox"/> No = 0	0
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	<input checked="" type="checkbox"/> Yes = 1 <input type="checkbox"/> No = 0	1
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.)?	<input checked="" type="checkbox"/> Yes = 1 <input type="checkbox"/> No = 0	1
Total for D 5	Add the points in the boxes above	2

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

D 6.0. Are the hydrologic functions provided by the site valuable to society?		
D 6.1. The 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		0
• <input 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.		
<i>Explain why:</i> ___ points = 0		
<input checked="" 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?	<input type="checkbox"/> Yes = 2 <input checked="" type="checkbox"/> No = 0	0
Total for D 6	Add the points in the boxes above	0

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

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.*

- Aquatic bed 4 structures or more: points = 4
 - Emergent 3 structures: points = 2
 - Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1
 - Forested (areas where trees have > 30% cover) 1 structure: points = 0
- If the unit has a Forested class, check if:*
- 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

0

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*).

- Permanently flooded or inundated 4 or more types present: points = 3
- Seasonally flooded or inundated 3 types present: points = 2
- Occasionally flooded or inundated 2 types present: points = 1
- Saturated only 1 type present: points = 0
- Permanently flowing stream or river in, or adjacent to, the wetland
- Seasonally flowing stream in, or adjacent to, the wetland
- Lake Fringe wetland** **2 points**
- Freshwater tidal wetland** **2 points**

0

H 1.3. Richness of plant species

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

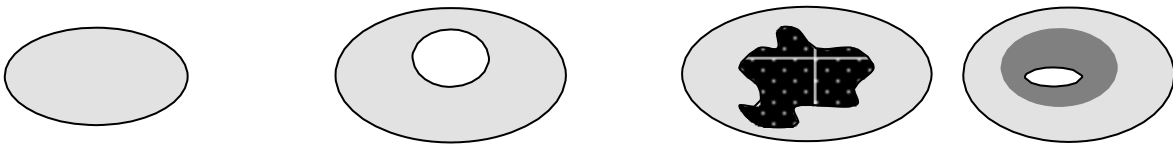
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle

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

1

H 1.4. Interspersion of habitats

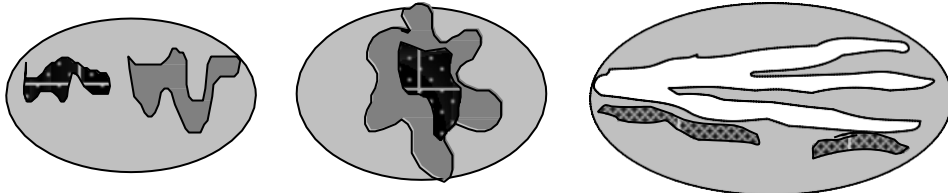
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always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



None = 0 points

Low = 1 point

Moderate = 2 points



All three diagrams in this row are

HIGH = 3points

0

Wetland name or number: Wetland E

<p>H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). <input type="checkbox"/> Standing snags (dbh > 4 in) within the wetland. <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). <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>). <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>). <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>). 	0	
Total for H 1	Add the points in the boxes above	1

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

H 2.0. Does the landscape have the potential to support the habitat functions of the site?		
<p>H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>).</p> <p><i>Calculate:</i> % undisturbed habitat + [(% moderate and low intensity land uses)/2] = 0% + [0.8%/2] = 0.4%</p> <p>If total accessible habitat is:</p> <ul style="list-style-type: none"> <input type="checkbox"/> > 1/3 (33.3%) of 1 km Polygon points = 3 <input type="checkbox"/> 20-33% of 1 km Polygon points = 2 <input type="checkbox"/> 10-19% of 1 km Polygon points = 1 <input checked="" type="checkbox"/> < 10% of 1 km Polygon points = 0 	0	
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p><i>Calculate:</i> % undisturbed habitat + [(% moderate and low intensity land uses)/2] = 0% + (24.2%/2) = 12.1%</p> <ul style="list-style-type: none"> <input type="checkbox"/> Undisturbed habitat > 50% of Polygon points = 3 <input type="checkbox"/> Undisturbed habitat 10-50% and in 1-3 patches points = 2 <input checked="" type="checkbox"/> Undisturbed habitat 10-50% and > 3 patches points = 1 <input type="checkbox"/> Undisturbed habitat < 10% of 1 km Polygon points = 0 	1	
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> > 50% of 1 km Polygon is high intensity land use points = (- 2) <input type="checkbox"/> ≤ 50% of 1 km Polygon is high intensity points = 0 	-2	
Total for H 2	Add the points in the boxes above	-1

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?		
<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> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page) <input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) <input type="checkbox"/> It is mapped as a location for an individual WDFW priority species <input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources <input type="checkbox"/> It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan <input type="checkbox"/> Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1 <input type="checkbox"/> Site does not meet any of the criteria above points = 0 	2	

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

Wetland name or number: Wetland E

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.

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>	
<p>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 <input type="checkbox"/> Yes –Go to SC 1.1 <input checked="" type="checkbox"/> No= Not an estuarine wetland</p>	
<p>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? <input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No - Go to SC 1.2</p>	Cat. I
<p>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 un-mowed grassland. <input type="checkbox"/> The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. <input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No= Category II</p>	Cat. I Cat. II
<p>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? <input checked="" type="checkbox"/> Yes – Go to SC 2.2 <input type="checkbox"/> No – Go to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? http://www.dnr.wa.gov/NHPwetlandviewer <input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No = Not a WHCV SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://file.dnr.wa.gov/publications/amp_nh_wetlands_trs.pdf <input type="checkbox"/> Yes – Contact WNHP/WDNR and go to SC 2.4 <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No = Not a WHCV</p>	Cat. I
<p>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? <input type="checkbox"/> Yes – Go to SC 3.3 <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes – Go to SC 3.3 <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes = Is a Category I bog <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes = Is a Category I bog <input checked="" type="checkbox"/> No = Is not a</p>	Cat. I

Wetland name or number: Wetland E

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Wetland name or number: Wetland E

Wetland name or number: Wetland F

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland F

Date of site visit: 03/21/2024

Rated by: Sage Yuasa, Brent Rutley

Trained by Ecology? Y N

Date of training: March 2021

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: DOE Water Quality Atlas, King County iMap, Google Earth Pro

OVERALL WETLAND CATEGORY IV (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 <u>M</u> L	H <u>M</u> L	H M <u>L</u>	
Landscape Potential	H <u>M</u> L	H <u>M</u> L	H M <u>L</u>	
Value	H M <u>L</u>	H M <u>L</u>	<u>H</u> M L	TOTAL
Score Based on Ratings	5	5	5	15

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

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

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: Wetland F

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	10
Hydroperiods	D 1.4, H 1.2	8
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	8
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	8
Map of the contributing basin	D 4.3, D 5.3	9
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	11
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	12
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	13

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: Wetland F

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	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	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.*

Depressional, Riverine, Slope

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:**

- Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3
- Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2
- Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing. points = 1
- Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1

3

D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0

0

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

- Wetland has persistent, ungrazed, plants > 95% of area points = 5
- Wetland has persistent, ungrazed, plants > 1/2 of area points = 3
- Wetland has persistent, ungrazed plants > 1/10 of area points = 1
- Wetland has persistent, ungrazed plants < 1/10 of area points = 0

5

D 1.4. Characteristics of seasonal ponding or inundation:*This is the area that is ponded for at least 2 months. See description in manual.*

- Area seasonally ponded is > ½ total area of wetland points = 4
- Area seasonally ponded is > ¼ total area of wetland points = 2
- Area seasonally ponded is < ¼ total area of wetland points = 0

0

Total for D 1

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 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 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 No = 0

1

D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0

0

D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source: [Click here to enter text.](#) Yes = 1 No = 0

0

Total for D 2

Add the points in the boxes above

1

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

Record the rating on the first page

D 3.0. Is the water quality improvement provided by the site valuable to society?**D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?** Yes = 1 No = 0

0

D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0

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 basin in which the unit is found)? Yes = 2 No = 0

0

Total for D 3

Add the points in the boxes above

0

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

Record the rating on the first page

Wetland name or number: Wetland F

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 checked="" type="checkbox"/> Wetland is a depression or flat depression with no surface water leaving it (no outlet).	points = 4	4
<input 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	0
<input type="checkbox"/> Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet.	points = 5	
<input 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 checked="" 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	7

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?	<input type="checkbox"/> Yes = 1 <input checked="" type="checkbox"/> No = 0	0
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	<input checked="" type="checkbox"/> Yes = 1 <input type="checkbox"/> No = 0	1
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.)?	<input checked="" type="checkbox"/> Yes = 1 <input type="checkbox"/> No = 0	1
Total for D 5	Add the points in the boxes above	2

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

D 6.0. Are the hydrologic functions provided by the site valuable to society?		
D 6.1. The 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	0
• <input 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.		
<i>Explain why:</i> ___	points = 0	
<input checked="" 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?		
	<input type="checkbox"/> Yes = 2 <input checked="" type="checkbox"/> No = 0	0
Total for D 6	Add the points in the boxes above	0

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

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.*

Aquatic bed 4 structures or more: points = 4
 Emergent 3 structures: points = 2
 Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1
 Forested (areas where trees have > 30% cover) 1 structure: points = 0
If the unit has a Forested class, check if:
 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

0

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*).

Permanently flooded or inundated 4 or more types present: points = 3
 Seasonally flooded or inundated 3 types present: points = 2
 Occasionally flooded or inundated 2 types present: points = 1
 Saturated only 1 type present: points = 0
 Permanently flowing stream or river in, or adjacent to, the wetland
 Seasonally flowing stream in, or adjacent to, the wetland
 Lake Fringe wetland **2 points**
 Freshwater tidal wetland **2 points**

0

H 1.3. Richness of plant species

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

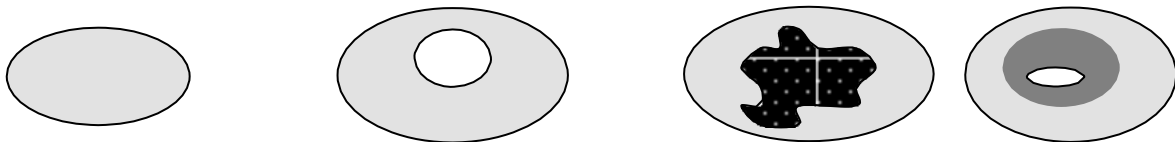
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle

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

1

H 1.4. Interspersion of habitats

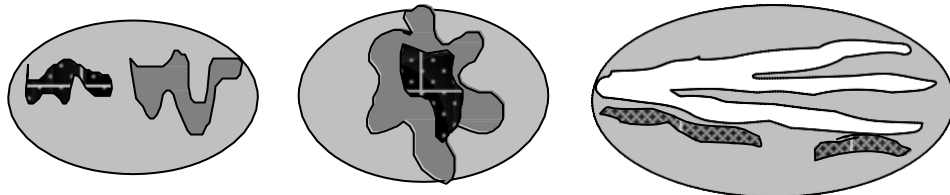
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always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



None = 0 points

Low = 1 point

Moderate = 2 points



All three diagrams in this row are

HIGH = 3points

0

Wetland name or number: Wetland F

<p>H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). <input type="checkbox"/> Standing snags (dbh > 4 in) within the wetland. <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). <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>). <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>). <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>). 		0
Total for H 1	Add the points in the boxes above	1

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

H 2.0. Does the landscape have the potential to support the habitat functions of the site?		
<p>H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>).</p> <p><i>Calculate:</i> % undisturbed habitat + [(%moderate and low intensity land uses)/2] = 0% + [0.8%/2] = 0.4%</p> <p>If total accessible habitat is:</p> <ul style="list-style-type: none"> <input type="checkbox"/> > 1/3 (33.3%) of 1 km Polygon points = 3 <input type="checkbox"/> 20-33% of 1 km Polygon points = 2 <input type="checkbox"/> 10-19% of 1 km Polygon points = 1 <input checked="" type="checkbox"/> < 10% of 1 km Polygon points = 0 		0
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p><i>Calculate:</i> % undisturbed habitat + [(%moderate and low intensity land uses)/2] = 0% + (24.2%/2) = 12.1%</p> <ul style="list-style-type: none"> <input type="checkbox"/> Undisturbed habitat > 50% of Polygon points = 3 <input type="checkbox"/> Undisturbed habitat 10-50% and in 1-3 patches points = 2 <input checked="" type="checkbox"/> Undisturbed habitat 10-50% and > 3 patches points = 1 <input type="checkbox"/> Undisturbed habitat < 10% of 1 km Polygon points = 0 		1
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> > 50% of 1 km Polygon is high intensity land use points = (- 2) <input type="checkbox"/> ≤ 50% of 1 km Polygon is high intensity points = 0 		-2
Total for H 2	Add the points in the boxes above	-1

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?		
<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> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page) <input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) <input type="checkbox"/> It is mapped as a location for an individual WDFW priority species <input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources <input type="checkbox"/> It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan <input type="checkbox"/> Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1 <input type="checkbox"/> Site does not meet any of the criteria above points = 0 		2

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

Wetland name or number: Wetland F

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.

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>	
<p>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 <input type="checkbox"/> Yes –Go to SC 1.1 <input checked="" type="checkbox"/> No= Not an estuarine wetland</p>	
<p>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? <input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No - Go to SC 1.2</p>	Cat. I
<p>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 un-mowed grassland. <input type="checkbox"/> The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. <input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No= Category II</p>	Cat. I Cat. II
<p>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? <input checked="" type="checkbox"/> Yes – Go to SC 2.2 <input type="checkbox"/> No – Go to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? http://www.dnr.wa.gov/NHPwetlandviewer <input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No = Not a WHCV SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://file.dnr.wa.gov/publications/amp_nh_wetlands_trs.pdf <input type="checkbox"/> Yes – Contact WNHP/WDNR and go to SC 2.4 <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No = Not a WHCV</p>	Cat. I
<p>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? <input type="checkbox"/> Yes – Go to SC 3.3 <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes – Go to SC 3.3 <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes = Is a Category I bog <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes = Is a Category I bog <input checked="" type="checkbox"/> No = Is not a</p>	Cat. I

<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;"><input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No = Not a forested wetland for this section</p>	<p>Cat. I</p>
<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;"><input type="checkbox"/> Yes – Go to SC 5.1 <input checked="" type="checkbox"/> 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 un-mowed grassland.</p> <p><input type="checkbox"/> The wetland is larger than 1/10 ac (4350 ft²)</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Category II</p>	<p>Cat. I</p> <p>Cat. II</p>
<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;"><input type="checkbox"/> Yes – Go to SC 6.1 <input checked="" type="checkbox"/> 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)?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> 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?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category II <input type="checkbox"/> 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?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category III <input type="checkbox"/> No = Category IV</p>	<p>Cat I</p> <p>Cat. II</p> <p>Cat. III</p> <p>Cat. IV</p>
<p>Category of wetland based on Special Characteristics</p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	<p>NA</p>

Wetland name or number: Wetland F

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Wetland name or number: Wetland F

2014 Ecology Wetland Rating Form Figures

9601 AND 9611 SE 36TH STREET
(PARCELS #2655500185 AND #2655500075)

Wetland A (Slope)	1
Figure 1. Hydroperiods and 150-foot area – H1.2, S2.1, S5.1	1
Figure 2. Plant cover of dense and rigid trees, shrubs, and herbaceous plants – S1.3, S4.1	2
Wetland B (Slope)	3
Figure 3. Hydroperiods and 150-foot area – H1.2, S2.1, S5.1	3
Figure 4. Plant cover of dense and rigid trees, shrubs, and herbaceous plants – S1.3, S4.1	4
Wetland C (Depressional)	5
Figure 5. Hydroperiods, outlet(s), and 150-ft area – D1.1, D1.4, H1.2, D2.2, D5.2.....	5
Wetland D (Depressional)	6
Figure 6. Hydroperiods, outlet(s), and 150-ft area – D1.1, D1.4, H1.2, D2.2, D5.2.....	6
Wetland E (Depressional)	7
Figure 7. Hydroperiods, outlet(s), and 150-ft area – D1.1, D1.4, H1.2, D2.2, D5.2.....	7
Wetland F (Depressional).....	8
Figure 8. Hydroperiods, outlet(s), and 150-ft area – D1.1, D1.4, H1.2, D2.2, D5.2.....	8
Wetlands C - F (Depressional).....	9
Figure 9. Map of the contributing basin – D4.3, D5.3	9
Combined Figures (Wetlands A – F).....	10
Figure 10. Cowardin plant classes – H1.1, H1.4, D1.3	10
Figure 11. Undisturbed habitat and moderate-low intensity land uses within 1 km from wetland edge including polygon for accessible habitat – H2.1, H2.2, H2.3.....	11
Figure 12. Screen-capture of 303(d) listed waters in basin – S3.1, S3.2	12
Figure 13. Map of TMDL for WRIA in which unit is found – S3.3	13

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WETLAND A (SLOPE)



Figure 1. Hydroperiods and 150-foot area – H1.2, S2.1, S5.1

Features depicted are not to scale. Sketches are based on available data and best professional judgment.



Figure 2. Plant cover of dense and rigid trees, shrubs, and herbaceous plants – S1.3, S4.1

Features depicted are not to scale. Sketches are based on available data and best professional judgment.

WETLAND B (SLOPE)



Figure 3. Hydroperiods and 150-foot area – H1.2, S2.1, S5.1

Features depicted are not to scale. Sketches are based on available data and best professional judgment.



Figure 4. Plant cover of dense and rigid trees, shrubs, and herbaceous plants – S1.3, S4.1

Features depicted are not to scale. Sketches are based on available data and best professional judgment.

WETLAND C (DEPRESSIONAL)



Figure 5. Hydroperiods, outlet(s), and 150-ft area – D1.1, D1.4, H1.2, D2.2, D5.2

Features depicted are not to scale. Sketches are based on available data and best professional judgment.

WETLAND D (DEPRESSIONAL)



Figure 6. Hydroperiods, outlet(s), and 150-ft area – D1.1, D1.4, H1.2, D2.2, D5.2

Features depicted are not to scale. Sketches are based on available data and best professional judgment.

WETLAND E (DEPRESSIONAL)



Figure 7. Hydroperiods, outlet(s), and 150-ft area – D1.1, D1.4, H1.2, D2.2, D5.2

Features depicted are not to scale. Sketches are based on available data and best professional judgment.

WETLAND F (DEPRESSIONAL)



Figure 8. Hydroperiods, outlet(s), and 150-ft area – D1.1, D1.4, H1.2, D2.2, D5.2

Features depicted are not to scale. Sketches are based on available data and best professional judgment.

WETLANDS C - F (DEPRESSIONAL)



Figure 9. Map of the contributing basin – D4.3, D5.3

Features depicted are not to scale. Sketches are based on available data and best professional judgment.

COMBINED FIGURES (WETLANDS A – F)



Figure 10. Cowardin plant classes – H1.1, H1.4, D1.3

Features depicted are not to scale. Sketches are based on available data and best professional judgment.

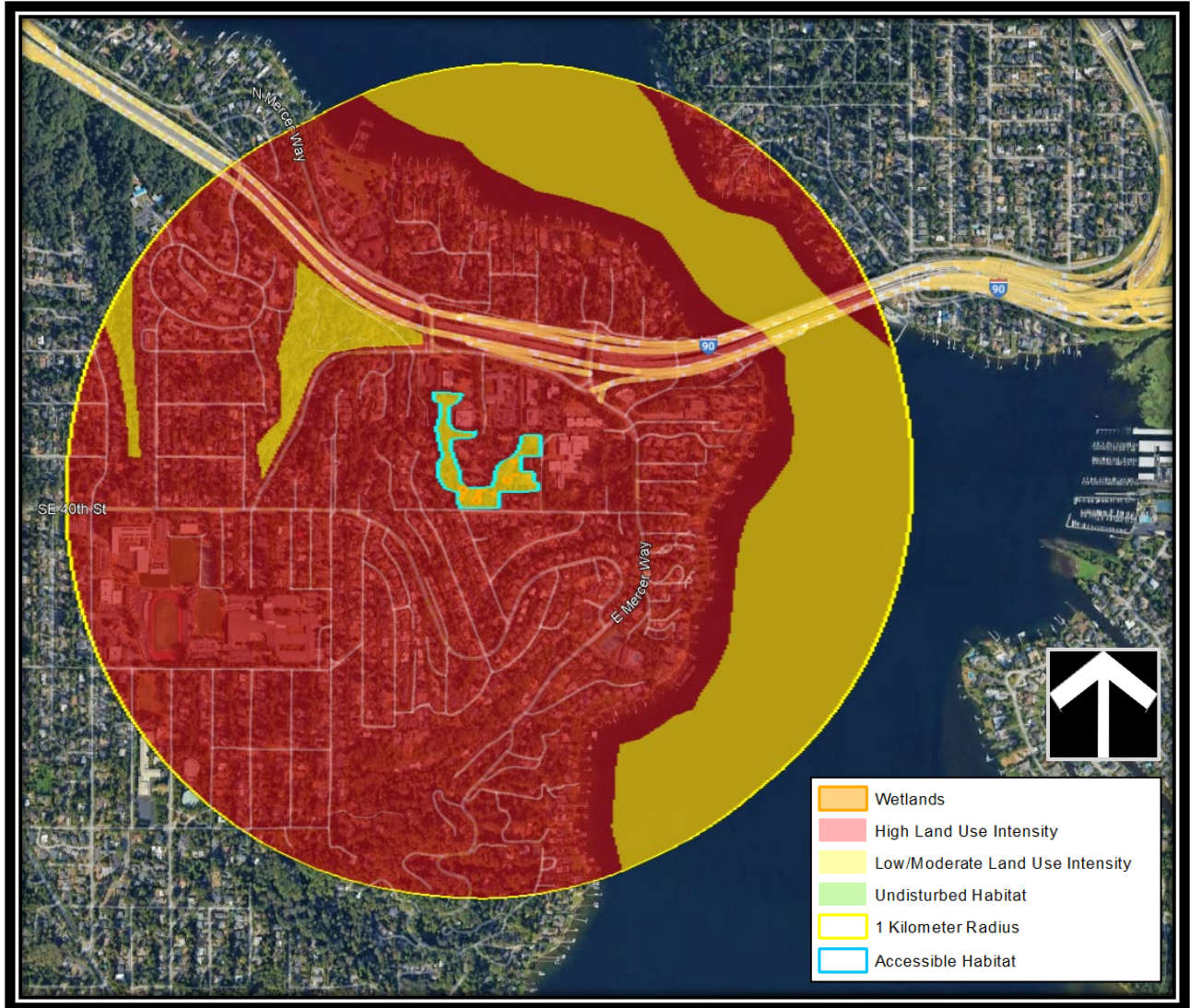


Figure 11. Undisturbed habitat and moderate-low intensity land uses within 1 km from wetland edge including polygon for accessible habitat – H2.1, H2.2, H2.3

Features depicted are not to scale. Sketches are based on available data and best professional judgment.

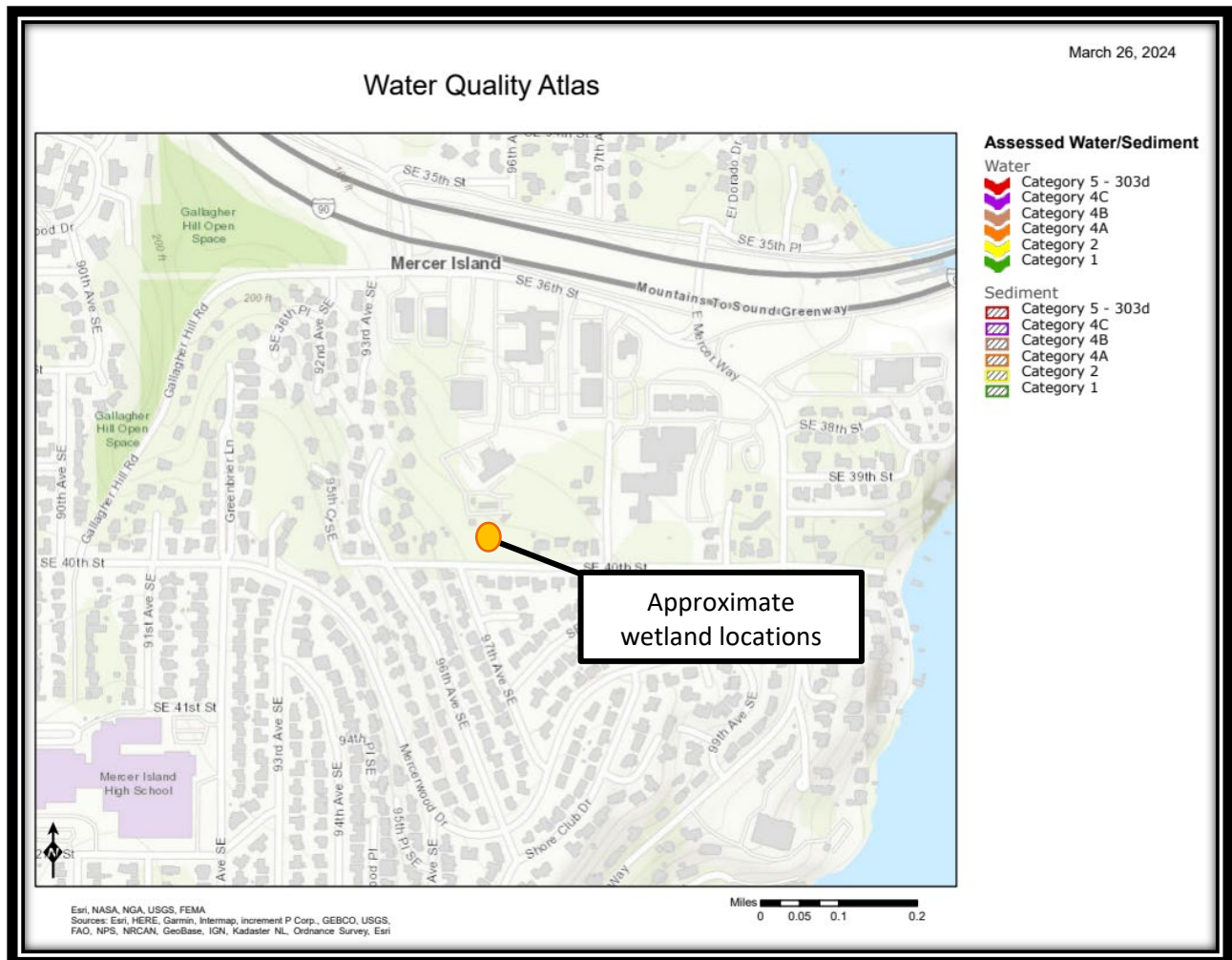


Figure 12. Screen-capture of 303(d) listed waters in basin – S3.1, S3.2

Features depicted are not to scale. Sketches are based on available data and best professional judgment.



Figure 13. Map of TMDL for WRIA in which unit is found – S3.3

Features depicted are not to scale. Sketches are based on available data and best professional judgment.