

WETLAND DELINEATION REPORT

FOR

CITY OF MILL CREEK - SPORTS PARK MASTER PLAN MILL CREEK, WA

Wetland Resources, Inc. Project #24031

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1.0 Introduction

Wetland Resources, Inc. (WRI) conducted a delineation on March 27 and 29, 2024, to identify and evaluate wetlands and streams on and near the parcel assemblage 28053100102200, 28053100200500, 28053100201400, 28053100201700. The study area is 18.79 acres in size and is located at 13615, 13626 and 13723 North Creek Drive and 13716 Bothell-Everett Highway in the City of Mill Creek, Washington. The Public Land Survey System (PLSS) locator for the site is Section 31, Township 28N, Range 05E, W.M. The properties are located within the North Creek sub-basin of the Cedar Sammamish Watershed (WRIA 8.)

1.1 SITE DESCRIPTION

The site is located between North Creek Drive, Bothell-Everett Highway, and Dumas Road. Previously, the four parcels were developed for residential use and contained houses, outbuildings, and maintained yard/pasture areas. The central two properties (13615 and 13723 North Creek Drive) are used as a storage yard for various City of Mill Creek departments and an overflow parking area for the adjacent Mill Creek Sports Park. The other two parcels do not contain any buildings or infrastructure aside from access driveways.

The forested areas on the site are primarily vegetated with native plant species including Western red cedar (*Thuja plicata*), Douglas fir (*Pseudotsuga menziesii*), big leaf maple (*Acer macrophyllum*), red alder (*Alnus rubra*), vine maple (*Acer circinatum*), salmonberry (*Rubus spectabilis*), red elderberry (*Sambucus racemosa*), false lily of the valley (*Maianthemum dilatatum*), and sword fern (*Polystichum munitum*). Areas of maintained grass are present adjacent to the existing driveways and historical building locations. Topography of the site is varied, generally sloping to the west. Soils underlying the site are mapped by the Natural Resource Conservation Service (NRCS) Web Soil Survey as Alderwood gravelly sandy loam 0 to 8 percent slopes, and Mukilteo muck.



Figure 1 - Aerial view of the subject site.

Five wetlands were delineated during the March 2024 site investigations. The wetlands were rated using the Department of Ecology's Washington State Wetland Rating System for Western Washington, 2014

Update. The required wetland buffer widths were determined using Mill Creek Municipal Code (MCMC) 18.06.930.B Table IX.1.

Table 1 below lists the on-site wetlands and their required buffer widths. The Wetland Delineation Map (Attachment C) depicts the locations of the wetlands and their associated buffers on the property.

Wetland	Wetland Rating	Habitat Score	HGM Classification	Buffer Width
Wetland 1	Category III	4	Depressional	80 Feet
Wetland 2	Category III	4	Depressional	80 Feet
Wetland 4	Category II	4	Depressional	100 Feet
Wetland 5	Category III	4	Depressional	80 Feet
Wetland A	Category II	6	Depressional	150 Feet

Table 1 - Wetland Classifications and Buffer Widths

1.2 REVIEW OF EXISTING INFORMATION

Prior to conducting the site investigation, public resource information was reviewed to gather background information on the subject property and the surrounding area regarding wetlands, streams, and other critical areas. These sources include the following:

- <u>United States Fish and Wildlife Service National Wetlands Inventory (NWI):</u> NWI identifies a
 forested wetland containing Sitka Creek along the west site of the western parcel. No wetlands
 or streams are shown on the central or east parcels.
- <u>USDA/NRCS Web Soil Survey:</u> NRCS identifies the soils underlaying the site as Alderwood gravelly sandy loam (0 to 8 percent slopes) and Mukilteo muck.
- Washington Department of Fish and Wildlife (WDFW) SalmonScape Interactive Mapping System: This resource maps Sitka Creek in the northwest of the western parcel and the presence of resident Cutthroat Trout (Oncorhynchus clarkii) within this stream.
- <u>WDFW Priority Habitat and Species (PHS) Interactive Map:</u> PHS maps a wetland and Sitka Creek on the western parcel. Presence of resident Cutthroat Trout (*Oncorhynchus clarkii*) is documented in Sitka Creek.
- <u>Department of Natural Resources Forest Practices Application Mapping Tool (FPAMT):</u> This resource maps Sitka Creek as a Type F (fish-bearing) stream along the northwest area of the western parcel. No streams or wetlands are shown on or immediately adjacent to the other three parcels.
- Snohomish County PDS Map Portal: This resource shows a wetland on the west side of the western parcel. Sitka Creek is mapped within this wetland, crossing the northwest corner of the

western parcel. No wetlands or streams are shown on or immediately adjacent to the other three parcels.

2.0 WETLAND DETERMINATION

2.1 METHODOLOGY

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

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

2.1.1 Hydrophytic Vegetation Criteria

The 2010 Regional Supplement defines hydrophytic vegetation as "the community of macrophytes that occurs in areas where inundation or soil saturation is either permanent or of sufficient frequency and duration to exert a controlling influence of the plant species present." Field indicators were used to determine whether the vegetation meets the definition for hydrophytic vegetation.

2.1.2 Soils Criteria and Mapped Description

The National Technical Committee for Hydric Soils, as described in the 2010 Regional Supplement, defines hydric soils as "a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part." Field indicators were used to determine whether a given soil meets the definition for hydric soils.

The soils underlying this site are mapped by the NRCS as Alderwood gravelly sandy loam (0 to 8 percent slopes) and Mukilteo muck.

2.1.3 Hydrology Criteria

Wetland hydrology encompasses all hydrologic characteristics of areas that are periodically inundated or have soils saturated to the surface for a sufficient duration during the growing season. Areas with evident characteristics of wetland hydrology are those where the presence of water has an overriding influence on characteristics of vegetation and soils due to anaerobic and chemically reducing conditions, respectively.

Additionally, areas which are seasonally inundated and/or saturated to the surface for a consecutive number of days ≥ 12.5 percent of the growing season are wetlands, provided the soil and vegetation parameters are met. Areas inundated or saturated between five and 12.5 percent of the growing season in most years may or may not be wetlands. Areas saturated to the surface

for less than five percent of the growing season are non-wetlands. Field indicators were used to determine whether wetland hydrology parameters were met on this site.

2.2 BOUNDARY DETERMINATION FINDINGS AND CLASSIFICATIONS

Five wetlands were delineated during the March 2024 site investigations. The wetlands were rated using the Department of Ecology's *Washington State Wetland Rating System for Western Washington, 2014 Update.* The required wetland buffer widths were determined using Mill Creek Municipal Code (MCMC) 18.06.930.B Table IX.1.

2.2.1 Wetland 1

Cowardin classification: Palustrine, Forested Wetland, Broad-leaved Deciduous, Seasonally

Flooded

HGM Rating Class: Depressional

Category: III Habitat Score: 4 Buffer Width: 80 feet

Wetland 1 is a small depressional wetland located on the east parcel, near Bothell-Everett Highway, and extends off site to the north.



Figure 2 – Surface water and quaking aspen in Wetland 1.

Vegetation within Wetland 1 includes western red cedar (*Thuja plicata*; FAC), black cottonwood (*Populus balsamifera*; FAC), quaking aspen (*Populus tremuloides*; FACU), and twinberry (*Lonicera involucrata*; FACW). Dominant vegetation within the wetland is rated as facultative (FAC) or wetter and therefore the plant community within the wetland is considered hydrophytic.

Soils observed within Wetland 1 are black (10YR 2/1) silt loam in the upper layer. In the sublayer, the soils are dark yellowish brown (10YR 4/4) silt loam. During our March 2024 site visit, soils were saturated to the surface and surface water was observed in a portion of the wetland, meeting hydrology indicators Surface Water (A1) and Saturation (A3). While the soil profile in this wetland does not meet a hydric soil indicator, primary wetland hydrology indicators were observed during a period of normal precipitation.

2.2.2 Wetland 2

Cowardin classification: Palustrine, Forested Wetland, Broad-leaved Deciduous, Seasonally

Flooded/Saturated

HGM Rating Class: Depressional

Category: III Habitat Score: 4 Buffer Width: 80 feet

Wetland 2 is a depressional wetland located along the east side of the central parcels. Vegetation within Wetland 2 includes western red cedar (*Thuja plicata*; FAC), black cottonwood (*Populus balsamifera*; FAC), vine maple (*Acer circinatum*; FAC), salmonberry (*Rubus spectabilis*; FAC), and lady fern (*Athyrium filix-femina*; FAC). Dominant vegetation within the wetland is rated as facultative (FAC) or wetter and therefore the plant community within the wetland is considered hydrophytic.



Figure 3 – Near north end of Wetland 2, looking south.

Soils observed within Wetland 2 are black (10YR 2/1) sandy loam in the upper 18 inches. During the March 2024 site visit, the water table was observed at 4 inches below the surface and saturation was observed at 2 inches below the surface. Observed conditions within this wetland meet wetland hydrology indicators High Water Table (A2) and Saturation (A3).

2.2.3 Wetland 4

Cowardin classification: Palustrine, Forested Wetland, Broad-leaved Deciduous, Saturated

HGM Rating Class: Depressional

Category: II Habitat Score: 4 Buffer Width: 100 feet

Wetland 4 is a small depressional wetland located along the east side of North Creek Drive. Vegetation in this wetland includes red alder (*Alnus rubra*; FAC), willow (*Salix* sp.), Himalayan blackberry (*Rubus armeniacus*; FAC), and creeping buttercup (*Ranunculus repens*; FAC). Dominant vegetation within the wetland is rated as facultative (FAC) or wetter and therefore the plant community within the wetland is considered hydrophytic.



Figure 4 - Looking at Wetland 4 from North Creek Drive.

Soils within Wetland 4 are dark grayish brown (2.5Y 4/2) sandy loam in the upper layer with dark gray (10YR 4/1) sandy loam below. Redoximorphic features were observed in the second layer of the profile. This soil profile meets hydric soil indicator Depleted Matrix (F3). During our March 2024 site visit, soils in Wetland 4 were saturated at 4 inches below the surface and the water table was observed at 5 inches. These conditions meet hydrology indicators High Water Table (A2) and Saturation (A3).

2.2.4 Wetland 5

Cowardin classification: Palustrine, Forested Wetland, Broad-leaved Deciduous, Seasonally

Flooded/Saturated

HGM Rating Class: Depressional

Category: III Habitat Score: 4 Buffer Width: 80 feet

Wetland 5 is a very small depressional wetland in the west of the central parcels. This wetland is in an area that appears to have been excavated. Vegetation rooted within Wetland 5 is limited to a fringe along the perimeter of the wetland and includes Himalayan blackberry (*Rubus armeniacus*; FAC), salmonberry (*Rubus spectabilis*; FAC), and creeping buttercup (*Ranunculus repens*; FAC). Dominant vegetation within the wetland is rated as facultative (FAC) or wetter and therefore the plant community within the wetland is considered hydrophytic.



Figure 5 – Ponded water in Wetland 5.

Soils within Wetland 5 are very dark brown (10YR 2/2) in the upper layer, grayish brown (2.5Y 5/2) in the second layer, and black (10YR 2/1) in the third layer. Texture throughout the profile is sandy loam. During our March 2024 site visit, saturation was observed at 5 inches below the surface of the sampled area and standing water was present in the wetland. The conditions observed in Wetland 5 meet wetland hydrology indicators Saturation (A3) and Surface Water (A1).

2.2.5 Wetland A (Cook Wetland)

Cowardin classification: Palustrine, Forested Wetland, Needle-leaved Evergreen, Seasonally

Flooded/Saturated

HGM Rating Class: Depressional

Category: II Habitat Score: 6 Buffer Width: 150 feet

Wetland A is a large, depressional wetland associated with North Creek. This wetland extends offsite to the north, south, and west. Sitka Creek flows from northeast to southwest through Wetland A, crossing the northwest corner of the western parcel, and converges with North Creek southwest of the site.



Figure 6 – Surface water and skunk cabbage in Wetland A.

Vegetation within Wetland A includes western red cedar (*Thuja plicata*; FAC), salmonberry (*Rubus spectabilis*; FAC), Himalayan blackberry (*Rubus armeniacus*; FAC), lady fern (*Athyrium filix-femina*; FAC), and skunk cabbage (*Lysichiton americanus*; OBL). Dominant vegetation within the wetland is rated as facultative (FAC) or wetter and therefore the plant community within the wetland is considered hydrophytic.

Soils within Wetland A are black (10YR 2/1) silt loam throughout the profile. During our March 2024 site visit, the soils were saturated to the surface and the water table was observed at 6 inches below the soil surface. Wetland A meets wetland hydrology indicators High Water Table (A2) and Saturation (A3). While the soil profile in this wetland does not meet a hydric soil indicator, the low chroma of the soil is indicative of prolonged saturation/inundation.

2.2.6 Non-wetland

Vegetation within the forested, non-wetland areas across the site include western red cedar (*Thuja plicata*; FAC), Douglas fir (*Pseudotsuga menziesii*; FAC), western hemlock (*Tsuga heterophylla* FACU), big leaf maple (*Acer macrophyllum*; FACU), vine maple (*Acer circinatum*; FAC), red elderberry (*Sambucus racemosa*; FACU), beaked hazelnut (*Corylus cornuta*; FACU), sword fern (*Polystichum munitum*; FACU), and salal (*Gaultheria shallon*; FACU). Soils in non-wetland areas are generally black (10YR 2/1) or very dark brown (10YR 2/2) sandy loam in the upper layer and dark brown (10YR 3/3) sandy loam below. During the March 2024 site visit, soils in these areas did not meet wetland hydrology indicators.

3.0 Use of This Report

This Wetland Delineation Report has been prepared as a means of determining on-site wetland conditions. This report is based largely on readily observable conditions and, to a lesser extent, on readily ascertainable conditions. No attempt has been made to determine hidden or concealed conditions. Reports may be adversely affected due to the physical condition of the site and the difficulty of access, which may lead to observation or probing difficulties.

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

The work for this report has conformed to the standard of care employed by wetland ecologists. No other representation or warranty is made concerning the work or this report, and any implied representation or warranty is disclaimed.

Wetland Resources, Inc.

Meryl Kamowski, PWS

Senior Ecologist

4.0 REFERENCES

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WDFW. 2024b. SalmonScape online mapping tool. http://apps.wdfw.wa.gov/salmonscape/map.html.

WDNR. 2024. Forest Practices Application Mapping Tool. https://fpamt.dnr.wa.gov/default.aspx

ATTACHMENT A: USACE WETLAND DETERMINATION DATA FORMS

Project/Site: 24031 City of Mill Creek - Sports Park Mast	ter Plan	City/Count	ty: Mill Cree	ek/Snohomish Sa	ampling Date: 3/29/2	24
Applicant/Owner: City of Mill Creek				State: WA Sa	ampling Point: S1	
Investigator(s): ASW, MK			Section, To	ownship, Range: Sec 31, Tw	ρ 28N, Rge 05E	
				, convex, none): none): <u>7</u>
Subregion (LRR): LRR-A	_ Lat: 47.8	373850		Long: -122.216179	Datum: W	GS84
Soil Map Unit Name: Alderwood gravelly sandy loam, 0 t	o 8 percen	t slopes		NWI classification	ı: none	
Are climatic / hydrologic conditions on the site typical for this	time of yea	ır? Yes	✓ No (I	f no, explain in Remarks.)		
Are Vegetation, Soil, or Hydrology signifi	cantly distu	rbed?	Are "Nori	mal Circumstances" present?	Yes ✓ No	
Are Vegetation, Soil, or Hydrology natura	lly problema	atic?	(If needed	d, explain any answers in Rem	narks.)	
SUMMARY OF FINDINGS - Attach site map	showing	samplir	ng point l	ocations, transects, in	portant feature	etc.
Hydrophytic Vegetation Present? Yes V No		10.41	ha Camplad	I Avec		
Hydric Soil Present? Yes ✓ No			he Sampled hin a Wetlar		٦	
Wetland Hydrology Present? Yes ✓ No		With	illi a vvetiai	iu: rest not	_	
Remarks:						
Wetland 1 - in wetland, near WR 1-1						
VEGETATION – Use scientific names of plant	ts.					
-	Absolute	Dominan	t Indicator	Dominance Test workshe	et:	
Tree Stratum (Plot size: 5^m)	% Cover			Number of Dominant Speci	_	(4)
Popu us tremu o des Thuja plicata	70 20	<u>Y</u> Y	FACU FAC	That Are OBL, FACW, or FA	AC: 2	(A)
3. Populus balsamifera	15		FAC	Total Number of Dominant	3	(D)
4.				Species Across All Strata:	3	(B)
	100	= Total C	Cover	Percent of Dominant Species That Are OBL, FACW, or Face		(A/B)
Sapling/Shrub Stratum (Plot size: 3^m)		.,				(77.6)
1. Lon cera nvo ucrata	35	<u> </u>	FAC	Prevalence Index worksho		
2				Total % Cover of:		
3				OBL species		_
4. 5.				FAC species		_
3	35	= Total C	Cover	FACU species		_
Herb Stratum (Plot size: 1^m)		rotare	30101		x 5 = 0	_
1. None				l _	(A) 0	(B)
2						
3				Prevalence Index = E		
4				Hydrophytic Vegetation In		
5				Rapid Test for Hydroph Dominance Test is >50		
6				Prevalence Index is ≤3.		
7				Morphological Adaptation	-	rtina
8				data in Remarks or	on a separate sheet)
9 10				Wetland Non-Vascular	Plants ¹	
11				Problematic Hydrophyti	c Vegetation¹ (Expla	in)
	0	= Total C	Cover	¹ Indicators of hydric soil and		must
Woody Vine Stratum (Plot size: 1^m)				be present, unless disturbe	or problematic.	
1. None				Hydrophytic		
2				Vegetation	. —	
% Bare Ground in Herb Stratum 100	0	= Total C	Cover	Present? Yes	No	
Remarks:						

Depth	Matrix		pth needed to docui Redo	x Features	i			•
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-12	10YR 2/1	100					silt loam	
12-17	10YR 4/4	100					silt loam	
	-							
				-				
				- ·				
			1=Reduced Matrix, CS			ed Sand Gr	ains. ² Locat	tion: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appli	cable to al	I LRRs, unless othe	rwise note	d.)		Indicators	for Problematic Hydric Soils ³ :
Histosol	. ,		Sandy Redox (S				_	fluck (A10)
	pipedon (A2)		Stripped Matrix	, ,				arent Material (TF2)
_	stic (A3)		Loamy Mucky M	. ,	(except	MLRA 1)		hallow Dark Surface (TF12)
_ ` `	n Sulfide (A4)	(Δ11)	Loamy Gleyed I				✓ Other ((Explain in Remarks)
	d Below Dark Surfac ark Surface (A12)	Le (ATT)	Depleted Matrix Redox Dark Sui	. ,			³ Indicators	of hydrophytic vegetation and
=	fucky Mineral (S1)		Depleted Dark S	. ,	')			I hydrology must be present,
=	Bleyed Matrix (S4)		Redox Depress		,			disturbed or problematic.
	Layer (if present):			(. 0)				and an experience of the control of
Type:								
Depth (in	ches):						Hydric Soil Pi	resent? Yes 🗸 No
Remarks:								
While this	soil profile does	not maa	t a enocific indica	tor the r	rocono	o of curf	ace water du	ring the growing season and
								n extended period of time.
lile low cit	ionia oi ine insi	layel ol i	irie profile iridicat	e ii iis soi	15 5411	ırateu/iii	unualeu ioi ai	ir exterided period or time.
HYDROLC	GY							
Wetland Hy	drology Indicators	s:						
Primary Indi	cators (minimum of	one require	ed; check all that appl	y)			Seconda	ary Indicators (2 or more required)
✓ Surface	Water (A1)		☐ Water-Stai	ned Leave	s (B9) (e :	cept MLR	XA Wate	er-Stained Leaves (B9) (MLRA 1, 2,
✓ High Wa	iter Table (A2)		1, 2, 4	A, and 4B)				4A, and 4B)
✓ Saturation	on (A3)		Salt Crust	(B11)			Drai	nage Patterns (B10)
Water M	arks (B1)		Aquatic Inv	ertebrates/	(B13)		Dry-	Season Water Table (C2)
Sedimer Sedimer	nt Deposits (B2)		Hydrogen	Sulfide Odd	or (C1)		Satu	ration Visible on Aerial Imagery (C9)
Drift De	oosits (B3)		Oxidized R	Rhizosphere	es along	Living Roo	ts (C3) 🔲 Geo	morphic Position (D2)
Algal Ma	at or Crust (B4)		Presence	of Reduced	I Iron (C4	.)	Shal	llow Aquitard (D3)
Iron Dep	osits (B5)		Recent Iro	n Reductio	n in Tilled	d Soils (C6) 🔲 FAC	-Neutral Test (D5)
Surface	Soil Cracks (B6)		Stunted or	Stressed F	Plants (D	1) (LRR A)	Rais	sed Ant Mounds (D6) (LRR A)
Inundati	on Vis ble on Aerial	Imagery (B	7) Dother (Exp	lain in Ren	narks)		Fros	st-Heave Hummocks (D7)
Sparsely	Vegetated Concav	ve Surface ([B8)					
Field Obser	vations:							
Surface Wa	er Present?	Yes 🗸 N	o Depth (inches	s): <u>3"</u>				
Water Table	Present?	Yes 🔽 N	o Depth (inches	s):				
Saturation F	resent?	Yes 🔽 N	o Depth (inches	s): surface		Wetl	and Hydrology F	Present? Yes 🗸 No
	pillary fringe)							
Describe Re	corded Data (strear	m gauge, m	ionitoring well, aerial	photos, pre	evious ins	pections),	ıt available:	
Remarks:								

Project/Site: 24031 City of Mill Creek - Sports Park Mast	ter Plan	City/Count	y: Mill Cree	ek/Snohomish	Sampling Date: 3/29/24	4			
Applicant/Owner: City of Mill Creek				State: WA	Sampling Point: S2				
Investigator(s): ASW, MK			Section, To	ownship, Range: Sec 31, ⁻	Гwp 28N, Rge 05E				
				, convex, none): none		7			
Subregion (LRR): LRR-A	_ Lat: 47.8	373822		Long: <u>-122.216226</u>	Datum: WG	S84			
Soil Map Unit Name: Alderwood gravelly sandy loam, 0 t	o 8 percen	t slopes		NWI classificat	tion: none				
Are climatic / hydrologic conditions on the site typical for this	time of yea	ır? Yes	✓ No (I	f no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology signifi	cantly distu	rbed?	Are "Nor	mal Circumstances" preser	nt? Yes ✔ No				
Are Vegetation, Soil, or Hydrology natura	Ily problema	atic?	(If needed	d, explain any answers in R	emarks.)				
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.									
Hydrophytic Vegetation Present?									
Hydric Soil Present? Yes No			ne Sampled						
Wetland Hydrology Present? Yes No		With	nin a Wetlar	nu? res No) <u> • </u>				
Remarks:									
Wetland 1 - Out near flag WR 1-1									
VEGETATION – Use scientific names of plant	ts.								
-	Absolute	Dominant	t Indicator	Dominance Test works	heet:				
Tree Stratum (Plot size: 5^m)	% Cover			Number of Dominant Sp					
Thuja p cata Populus tremuloides	30 20	<u>Y</u>	FAC FACU	That Are OBL, FACW, or	r FAC: 1	(A)			
			FACU	Total Number of Domina		(D)			
3				Species Across All Strata	a: <u>3</u>	(B)			
7-	50	= Total C	Cover	Percent of Dominant Spe		(A /D)			
Sapling/Shrub Stratum (Plot size: 3^m)		Total)OVC1	That Are OBL, FACW, or	FAC: <u>33</u>	(A/B)			
1. Cory us cornuta	50	Y	FACU	Prevalence Index work	sheet:				
2. Gaultheria shallon	5	N	FACU		Multiply by:				
3				OBL species		-			
4				FACW species		=			
5				FAC species		=			
Herb Stratum (Plot size: 1^m)	55	= Total C	Cover	FACU species		=			
1. None					x = 0 (A) 0	- (D)			
2				Column Totals: 0	(A) <u>0</u>	_ (B)			
3.				Prevalence Index	= B/A =				
4.				Hydrophytic Vegetation	ı Indicators:				
5				Rapid Test for Hydro	phytic Vegetation				
6				Dominance Test is >	50%				
7				Prevalence Index is:					
8				Morphological Adapt	ations ¹ (Provide supporti or on a separate sheet)	ing			
9				Wetland Non-Vascul					
10					arriants nytic Vegetation ¹ (Explair	۱)			
11				¹ Indicators of hydric soil		,			
Woody Vine Stratum (Plot size: 1^m)	0	= Total C	Cover	be present, unless distur		idot			
4 None									
2				Hydrophytic					
	0	= Total C	Cover	Vegetation Present? Yes	□ No 🗸				
% Bare Ground in Herb Stratum 100		. 5101			<u> </u>				
Remarks:									

Depth	Matrix			x Features		_		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-8	7.5YR 3/2	100					sandy oam	
8-16	7.5YR 4/4	100					sandy oam	
								
			-	_				
				_				
•			=Reduced Matrix, CS			ed Sand G		: PL=Pore Lining, M=Matrix.
		cable to all	LRRs, unless othe		ed.)		_	r Problematic Hydric Soils ³ :
Histosol	. ,		Sandy Redox (S				2 cm Muc	
_	oipedon (A2)		Stripped Matrix	. ,	\	MI DA 4)	_	nt Material (TF2)
_	stic (A3) n Sulfide (A4)		Loamy Mucky M			MILKA 1)		llow Dark Surface (TF12) plain in Remarks)
	in Suilide (A4) d Below Dark Surfac	co (Δ11)	Depleted Matrix					piairi iri Remarks)
	ark Surface (A12)	Se (ATT)	Redox Dark Sui	. ,			3Indicators of	hydrophytic vegetation and
=	lucky Mineral (S1)		Depleted Dark S	, ,	7)			drology must be present,
	Bleyed Matrix (S4)		Redox Depress	•	,			turbed or problematic.
Restrictive	Layer (if present):							
Type:								
Depth (in	ches):		 				Hydric Soil Pres	ent? Yes No ✔
Remarks:							1	
YDROLC	GY							
Wetland Hy	drology Indicators	s:						
Primary Indi	cators (minimum of	one require	d; check all that appl	y)			Secondary	Indicators (2 or more required)
Surface	Water (A1)		☐ Water-Stai	ned Leave	s (B9) (e	xcept MLF	XA Water-	Stained Leaves (B9) (MLRA 1, 2,
High Wa	iter Table (A2)		1, 2, 4/	A, and 4B)			4A,	and 4B)
Saturation	on (A3)		Salt Crust	(B11)			Draina	ge Patterns (B10)
Water M	arks (B1)		Aquatic Inv	vertebrates	(B13)		Dry-Se	ason Water Table (C2)
Sedimer	nt Deposits (B2)		Hydrogen	Sulfide Od	or (C1)		Satura	tion Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)		Oxidized R	Rhizospher	es along	Living Roo	ts (C3) 🔲 Geomo	orphic Position (D2)
Algal Ma	at or Crust (B4)		Presence	of Reduced	d Iron (C4	!)	Shallov	v Aquitard (D3)
Iron Dep	osits (B5)		Recent Iro	n Reductio	n in Tille	d Soils (C6) 🔲 FAC-N	eutral Test (D5)
Surface	Soil Cracks (B6)		Stunted or	Stressed F	Plants (D	1) (LRR A)	Raised	Ant Mounds (D6) (LRR A)
Inundati	on Vis ble on Aerial	Imagery (B	7)	lain in Rer	narks)		Frost-H	leave Hummocks (D7)
Sparsely	Vegetated Concav	e Surface (B8)					
Field Obse	vations:							
Surface Wa	er Present?	Yes No	Depth (inches	s):				
Water Table	Present?	Yes No	Depth (inches	s):				
Saturation F		Yes No	Depth (inches	s): <u>13</u>		Wetl	and Hydrology Pre	sent? Yes No
	pillary fringe)	m aquaa ==	onitoring wall cariet	nhotos ==	avious is	nootions)	if available:	
Describe Re	corded Data (streat	ııı gauge, m	onitoring well, aerial	priotos, pre	evious ins	spections),	ıı avalladie:	
Remarks:								

Project/Site: 24031 City of Mill Creek - Sports Park Mast	ter Plan (City/Coun	ty: Mill Cree	ek/Snohomish S	ampling Date: 3/27/	/24
Applicant/Owner: City of Mill Creek		State: WA Sampling Point: S3				
Investigator(s): ASW, MK			Section, To	ownship, Range: Sec 31, Tw	/p 28N, Rge 05E	
Landform (hillslope, terrace, etc.): LRR-A		Local rel	ief (concave,	, convex, none): Depression	Slope (%	o): <u>0-5</u>
Subregion (LRR): LRR-A	_ Lat: <u>47.8</u>	373160		Long: -122.217709	Datum: _W	/GS84
Soil Map Unit Name: Alderwood gravelly sandy loam, 0 t	o 8 percent	t slopes		NWI classificatio	n: none	
Are climatic / hydrologic conditions on the site typical for this	time of yea	r? Yes	✓ No (l	f no, explain in Remarks.)		
Are Vegetation, Soil, or Hydrology signifi	cantly distur	bed?	Are "Norr	mal Circumstances" present?	Yes 🗸 No	
Are Vegetation, Soil, or Hydrology natura	lly problema	ntic?	(If needed	d, explain any answers in Rer	narks.)	
SUMMARY OF FINDINGS - Attach site map	showing	sampliı	ng point l	ocations, transects, ir	nportant featur	es, etc.
Hydrophytic Vegetation Present? Yes ✔ No						
Hydric Soil Present? Yes V No			he Sampled		\neg	
Wetland Hydrology Present? Yes V No		Witi	hin a Wetlar	nd? Yes ✓ No	_	
Remarks:		•				
Wetland 2 - near WR2-15.						
VEGETATION – Use scientific names of plant	ts.					
Tue Obstance (Distance 5Am)			t Indicator	Dominance Test worksho	et:	
Tree Stratum (Plot size: 5^m) 1. Popu us ba sam fera	% Cover 20	Species	<u>Status</u> FAC	Number of Dominant Spec That Are OBL, FACW, or F		(A)
2. Acer circinatum	10	Y	FAC			(A)
3				Total Number of Dominant Species Across All Strata:	5	(B)
4				Percent of Dominant Speci	ioo	. ()
Carling/Charle Charles (Diet sing 3Am)	30	= Total (Cover	That Are OBL, FACW, or F		(A/B)
Sapling/Shrub Stratum (Plot size: 3^m) 1. Rubus spectab s	75	Υ	FAC	Prevalence Index worksh	 neet:	
2.		-		Total % Cover of:		
3.				OBL species		
4				FACW species	x 2 = 0	
5				FAC species		
Herb Stratum (Plot size: 1^m)	75	= Total (Cover	FACU species		
4 Geran um robert anum	2	Υ	FACU		x 5 = 0	—
2. Polystichum munitum	2	Y	FACU	Column Totals: 0	(A) <u>U</u>	(B)
3.				Prevalence Index =	B/A =	
4.				Hydrophytic Vegetation I	ndicators:	
5.				Rapid Test for Hydroph	nytic Vegetation	
6				Dominance Test is >50)%	
7				Prevalence Index is ≤3	.0 ¹	
8				Morphological Adaptati	ions ¹ (Provide suppo	orting
9					on a separate shee	t)
10		-	<u> </u>	Wetland Non-Vascular Problematic Hydrophyt		oin\
11				Indicators of hydric soil an		
14m)	4	= Total (Cover	be present, unless disturbe		must
Woody Vine Stratum (Plot size: 1^m) 1. None						
				Hydrophytic		
2	0	= Total (Cover	Vegetation Present? Yes	∕ No □	
% Bare Ground in Herb Stratum	<u> </u>	- Total (Cover	100		
Remarks:						
j						

Depth		to the dep	th needed to docur	nent the ii x Features		or confirm	the absence	of indicators.)
(inches)	Matrix Color (moist)	%	Color (moist)	x reatures %	Type ¹	Loc ²	Texture	Remarks
0-18	10YR 2/1	100					sandy oam	
			-					
	-							
	-			-				
	-	= 						
•			=Reduced Matrix, CS			ed Sand Gr		cation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appli	cable to all	LRRs, unless other	rwise note	ed.)		Indicato	ors for Problematic Hydric Soils ³ :
Histosol			Sandy Redox (S				_	Muck (A10)
	pipedon (A2)		Stripped Matrix	. ,			_	Parent Material (TF2)
Black Hi	` '		Loamy Mucky M			MLRA 1)		Shallow Dark Surface (TF12)
	n Sulfide (A4)	·	Loamy Gleyed N				✓ Othe	er (Explain in Remarks)
_ :	d Below Dark Surfac ark Surface (A12)	E (ATT)	Depleted Matrix Redox Dark Sur	` '			3Indicato	ors of hydrophytic vegetation and
	lucky Mineral (S1)		Depleted Dark S		7)			nd hydrology must be present,
	Gleyed Matrix (S4)		Redox Depressi		,			s disturbed or problematic.
	Layer (if present):		<u> </u>	,				·
Type:								
Depth (in	ches):						Hydric Soil	Present? Yes V No
Remarks:								<u></u>
While the	observed soil pr	ofile does	not meet a hydr	ic soil fie	eld indi	cator the	low chroma	present is indicative of wetland
conditions	•							process to management of monanta
HYDROLO								
	drology Indicators		d; check all that appl	w)			Soco	ndary Indicators (2 or more required)
		one require			- (DO) (-			
=	Water (A1) iter Table (A2)		Water-Stai		. , .	xcept wilk	ка Ц W	ater-Stained Leaves (B9) (MLRA 1, 2,
Saturation			Salt Crust	A, and 4B)				4A, and 4B) rainage Patterns (B10)
	arks (B1)		Aquatic Inv		(D13)			ry-Season Water Table (C2)
=	nt Deposits (B2)		Hydrogen		. ,		_	aturation Visible on Aerial Imagery (C9)
_	oosits (B3)		Oxidized R		` '	Living Poot		eomorphic Position (D2)
=	at or Crust (B4)		Presence of			_		nallow Aquitard (D3)
	osits (B5)		Recent Iron		`	,		AC-Neutral Test (D5)
	Soil Cracks (B6)		Stunted or			` ,		aised Ant Mounds (D6) (LRR A)
_	on Vis ble on Aerial	Imagery (B7	_		•	., (=::::7:,		rost-Heave Hummocks (D7)
_	Vegetated Concav		· —		,			(- ',
Field Obser								
Surface Wat		Yes∏ No	Depth (inches	s):				
Water Table		=	Depth (inches					
Saturation P		=	Depth (inches			Watls	and Hydrolog	y Present? Yes 🗸 No
(includes ca	pillary fringe)			,				,
Describe Re	corded Data (strear	n gauge, mo	onitoring well, aerial _l	photos, pre	evious ins	spections),	if available:	
Remarks:								

Project/Site: 24031 City of Mill Creek - Sports Park Mast	ter Plan	City/County	y: Mill Cree	ek/Snohomish Sampling Da	ite: 3/27/24
Applicant/Owner: City of Mill Creek		State: WA Sampling Po	int: S4		
Investigator(s): ASW, MK			Section, To	ownship, Range: Sec 31, Twp 28N, Rg	je 05E
				, convex, none): none	
Subregion (LRR): LRR-A	_ Lat: <u>47.8</u>	373077		Long: -122.217719 Da	atum: WGS84
Soil Map Unit Name: Alderwood gravelly sandy loam, 0 t	o 8 percent	tslopes		NWI classification: none	
Are climatic / hydrologic conditions on the site typical for this	time of yea	r? Yes	No (I	f no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology signifi	cantly distur	bed?	Are "Nori	mal Circumstances" present? Yes	No
Are Vegetation, Soil, or Hydrology natura	lly problema	atic?	(If needed	d, explain any answers in Remarks.)	
SUMMARY OF FINDINGS - Attach site map	showing	samplin	g point l	ocations, transects, important	features, etc.
Hydrophytic Vegetation Present? Yes V No					
Hydric Soil Present? Yes No			e Sampled		
Wetland Hydrology Present? Yes V No		with	in a Wetlar	nd? Yes No ✔	
Remarks:		·			
Wetland 2 - Out near WR2-15.					
VEGETATION – Use scientific names of plan	te				
VEGETATION - Use scientific flames of plan	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 5^m)	% Cover			Number of Dominant Species	
1. Popu us ba sam fera	25	Y	FAC	That Are OBL, FACW, or FAC: 2	(A)
2				Total Number of Dominant	
3				Species Across All Strata: 3	(B)
4				Percent of Dominant Species	
Sapling/Shrub Stratum (Plot size: 3^m)	25	= Total C	over	That Are OBL, FACW, or FAC:	(A/B)
1. Rubus spectab s	65	Υ	FAC	Prevalence Index worksheet:	
2. Lonicera involucrata	15	N	FAC	Total % Cover of: Mul	Itiply by:
3				OBL species x 1 =	
4.				FACW species x 2 =	
5.				FAC species x 3 = _(
	80	= Total C	over	FACU species x 4 = _(<u> </u>
Herb Stratum (Plot size: 1^m)				UPL species x 5 =	<u> </u>
1. Po yst chum mun tum		<u>Y</u>		Column Totals: 0 (A)	0(B)
2. Geranium robertianum		N	FAC	Drawalanca Inday - D/A -	
3				Prevalence Index = B/A =	
4				Rapid Test for Hydrophytic Vegeta	
5				Dominance Test is >50%	111011
6				Prevalence Index is ≤3.0¹	
7				Morphological Adaptations ¹ (Provi	de supportina
8 9				data in Remarks or on a separ	ate sheet)
10				Wetland Non-Vascular Plants ¹	
11			·	Problematic Hydrophytic Vegetation	ວກ¹ (Explain)
	45	= Total C	over	¹ Indicators of hydric soil and wetland h	
Woody Vine Stratum (Plot size: 1^m)		rotal o		be present, unless disturbed or proble	matic.
1. None				Hudrophytic	
2				Hydrophytic Vegetation	
0/ Page Oracyal in Hart Ottabar 55	0	= Total C	over	Present? Yes V No	
% Bare Ground in Herb Stratum 55 Remarks:					
romano.					

Depth	Matrix	·	oth needed to docur Redo	x Features	6			-
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-11	10YR 2/1	100	-				sandy oam	
11-18	7.5YR 3/3	100					sandy oam	gravelly
				-				
				-				-
	-		-					
				_				
				_				
•		•	=Reduced Matrix, CS			ed Sand Gr		cation: PL=Pore Lining, M=Matrix.
		cable to all	LRRs, unless other		ed.)			ors for Problematic Hydric Soils ³ :
Histosol	, ,		Sandy Redox (S				_	n Muck (A10)
_	oipedon (A2) stic (A3)		Stripped Matrix Loamy Mucky M	. ,) (oveen	MIDA 1\	_	Parent Material (TF2) y Shallow Dark Surface (TF12)
	en Sulfide (A4)		Loamy Gleyed N			. WILKA I)		er (Explain in Remarks)
- ' '	d Below Dark Surfac	ce (A11)	Depleted Matrix					от (ехрантит котпатко)
	ark Surface (A12)	,	Redox Dark Sur	. ,			³ Indicate	ors of hydrophytic vegetation and
= '	lucky Mineral (S1)		Depleted Dark S	•	7)			and hydrology must be present,
	Bleyed Matrix (S4)		Redox Depressi	ions (F8)			unles	ss disturbed or problematic.
Type:	Layer (if present):							
· · ·	ches):						Herdeia Cail	I Burnanda - Vaa - Na -
			 				Hydric Soil	I Present? Yes No ✔
Remarks:								
YDROLO	GY							
Wetland Hy	drology Indicators):						
Primary Indi	cators (minimum of	one require	d; check all that appl	y)			Seco	ndary Indicators (2 or more required)
Surface	Water (A1)		Water-Stai	ned Leave	es (B9) (e	xcept MLR	RA 🔲 W	Vater-Stained Leaves (B9) (MLRA 1, 2,
High Wa	iter Table (A2)		1, 2, 4	A, and 4B))		<u>—</u>	4A, and 4B)
Saturation	on (A3)		Salt Crust	(B11)			□ D	rainage Patterns (B10)
Water M	larks (B1)		Aquatic Inv	ertebrates	s (B13)		□ D	ry-Season Water Table (C2)
Sedimer	nt Deposits (B2)		Hydrogen :	Sulfide Od	or (C1)		□s	aturation Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)		Oxidized R	hizospher	es along	Living Roof	ts (C3) 🔲 G	eomorphic Position (D2)
=	at or Crust (B4)		Presence o	of Reduced	d Iron (C4	1)	∐s	hallow Aquitard (D3)
= '	oosits (B5)		Recent Iron			•	_	AC-Neutral Test (D5)
=	Soil Cracks (B6)		Stunted or			1) (LRR A)		aised Ant Mounds (D6) (LRR A)
=	on Vis ble on Aerial			lain in Rer	marks)		Ц٢	rost-Heave Hummocks (D7)
	/ Vegetated Concav	e Surrace (I	B8)					
Field Obse		Vaa 🖂 Ni	Dandh (in ahaa					
			Depth (inches					
Water Table			Depth (inches					
Saturation F (includes ca	resent? pillary fringe)	Yes ✓ No	Depth (inches	s): <u>' ' '</u>		Weti	and Hydrolog	y Present? Yes ✓ No
		m gauge, m	onitoring well, aerial	photos, pre	evious ins	spections),	if available:	
Remarks:								

Project/Site: 24031 City of Mill Creek - Sports Park Mas	ter Plan	City/County	/: Mill Cree	ek/Snohomish Sa	mpling Date: 3/29/24
Applicant/Owner: City of Mill Creek				State: WA Sa	impling Point: S5
Investigator(s): ASW, MK			Section, To	ownship, Range: Sec 31, Twr	28N, Rge 05E
				, convex, none): none	
Subregion (LRR): LRR-A	Lat: _47.8	374371		Long: -122.220247	Datum: WGS84
Soil Map Unit Name: Alderwood gravelly sandy loam, 0	to 8 percen	t slopes		NWI classification	: none
Are climatic / hydrologic conditions on the site typical for this	s time of yea	ır? Yes 🗸	No (I	f no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology signif	icantly distu	rbed?	Are "Nor	mal Circumstances" present?	Yes 🗸 No
Are Vegetation, Soil, or Hydrology natura	ally problema	atic?	(If needed	d, explain any answers in Rem	arks.)
SUMMARY OF FINDINGS – Attach site map	showing	samplin	g point l	ocations, transects, im	iportant features, etc.
Hydrophytic Vegetation Present? Yes V No		le the	a Camplad	I A was	
Hydric Soil Present? Yes V No			e Sampled in a Wetlar		٦
Wetland Hydrology Present? Yes ✓ No					-
Remarks:					
Wetland 4 - In near WR4-7.					
VEGETATION – Use scientific names of plan	ts.				
-	Absolute	Dominant		Dominance Test workshee	et:
Tree Stratum (Plot size: 5^m) 1. A nus rubra	% Cover	Species?	Status FAC	Number of Dominant Specie	
	15			That Are OBL, FACW, or FA	AC: 4 (A)
2 3				Total Number of Dominant Species Across All Strata:	4 (B)
4.					(-/
	15	= Total C	over	Percent of Dominant Species That Are OBL, FACW, or FA	
Sapling/Shrub Stratum (Plot size: 3^m)	40	V	E40		
1. Rubus armen acus		<u> </u>	FAC	Prevalence Index workshotout Total % Cover of:	
2				OBL species	
3				FACW species	
5				FAC species	
	10	= Total C	over	FACU species	x 4 = 0
Herb Stratum (Plot size: 1^m)	70	V	540	UPL species	x 5 = 0
1. *Agrost s sp. 2. Ranunculus repens	20	<u>Y</u> Y	FAC FAC	Column Totals: 0	_ (A) <u>0</u> (B)
-				Prevalence Index = B	i/A =
3 4				Hydrophytic Vegetation In	
5				Rapid Test for Hydrophy	
6.				Dominance Test is >50%	%
7.				Prevalence Index is ≤3.0	D ¹
8				Morphological Adaptation	ons ¹ (Provide supporting
9.					on a separate sheet)
10				Wetland Non-Vascular F	
11				Problematic Hydrophytic Indicators of hydric soil and	
Meady Vine Stratum (Diet size, 10m)	90	= Total C	over	be present, unless disturbed	
Woody Vine Stratum (Plot size: 1^m) 1. None					
1. Notice 2				Hydrophytic	
		= Total C	over	Vegetation Present? Yes ✓	No □
% Bare Ground in Herb Stratum 5					. <u> </u>
Remarks:					
*Not identified at species level, conservatively	presumed	FAC for	the purp	ose of the dominance te	st.

Sampling Point: S5

Profile Des	cription: (Describe	e to the de	pth needed to docu	ıment the	indicator	or confirn	n the absence of	f indicators.)		
Depth	Matrix			ox Feature						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks Programme Remarks		
0-3	2.5Y 4/2	100					sandy oam			
3-16	10YR 4/1	95	10YR 3/4	5	С	М	sandy oam			
			-							
			-							
			-							
¹ Type: C=C	oncentration, D=De	pletion, RN	M=Reduced Matrix, C	S=Covere	ed or Coat	ed Sand G	rains. ² Locat	tion: PL=Pore Lining, M=Matrix.		
Hydric Soil	Indicators: (Appli	cable to a	II LRRs, unless other	erwise no	ted.)		Indicators	for Problematic Hydric Soils ³ :		
Histosol			Sandy Redox				_	/luck (A10)		
	pipedon (A2)		Stripped Matrix	. ,			=	arent Material (TF2)		
Black Hi	, ,		Loamy Mucky			t MLRA 1)	_	hallow Dark Surface (TF12)		
	n Sulfide (A4) I Below Dark Surfa	ce (Δ11)	Loamy Gleyed Depleted Matri		<u>2)</u>		U Other	(Explain in Remarks)		
	ark Surface (A12)	Se (ATT)	Redox Dark Su	. ,)		3Indicators	of hydrophytic vegetation and		
	lucky Mineral (S1)		Depleted Dark	, ,				I hydrology must be present,		
	leyed Matrix (S4)		Redox Depres	sions (F8)	,			disturbed or problematic.		
Restrictive	Layer (if present):									
Type:										
Depth (in	ches):						Hydric Soil P	resent? Yes 🗸 No		
Remarks:										
HYDROLO	icv									
		_								
_	drology Indicators			-1			Canand	and Indicators (O as many as suited)		
		one require	ed; check all that app		(DO) (-			ary Indicators (2 or more required)		
_	Water (A1) ter Table (A2)					xcept MLF	_	er-Stained Leaves (B9) (MLRA 1, 2,		
Saturation	, ,		Salt Crus	A, and 4E	P)			4A, and 4B) nage Patterns (B10)		
	arks (B1)		_	vertebrate	se (R13)		=	Season Water Table (C2)		
_	nt Deposits (B2)			Sulfide O			—	uration Visible on Aerial Imagery (C9)		
_	posits (B3)		_ · ·			Living Roo	_	morphic Position (D2)		
=	it or Crust (B4)		_	of Reduce	_	-	· · · —	llow Aquitard (D3)		
	osits (B5)		_			, d Soils (C6		C-Neutral Test (D5)		
Surface	Soil Cracks (B6)					1) (LRR A)		sed Ant Mounds (D6) (LRR A)		
Inundati	on Vis ble on Aerial	Imagery (E	37) 🔲 Other (Ex	plain in Re	emarks)		Fros	st-Heave Hummocks (D7)		
Sparsely	Vegetated Concav	e Surface	(B8)							
Field Obser	vations:									
Surface Wat	er Present?	Yes N	lo 🔽 Depth (inche	es):						
Water Table	Present?	Yes🔽 N	lo Depth (inche	es): <u>5</u>						
Saturation P		Yes 🗸 N	lo Depth (inche	es): <u>4</u>		Wetl	and Hydrology I	Present? Yes 🗸 No		
	pillary fringe)	m aquaq m	nonitoring well, aeria	I nhotoo n	rovious in	anactiona)	if available:			
Describe Re	corucu Data (Streat	ıı yauye, II	ionitoring well, aefla	ι μποισε, β	revious in	apecuons),	ıı avallable.			
Domestics										
Remarks:										

Project/Site: 24031 City of Mill Creek - Sports Park Mast	ter Plan	City/Co	ounty	/: Mill Cree	ek/Snohomish	Sampling	Date: 3/29/2	24	
Applicant/Owner: City of Mill Creek					State: WA	Sampling	Point: S6		
Investigator(s): ASW, MK				Section, To	ownship, Range: Sec 31, 1	Гwp 28N,	Rge 05E		
					, convex, none): none): <u>0-5</u>	
Subregion (LRR): LRR-A	_ Lat: 47.8	374356	6		Long: -122.220291		Datum: W	GS84	
Soil Map Unit Name: Alderwood gravelly sandy loam, 0 t	o 8 percen	t slope	s		NWI classificat	ion: none	е		
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 signifi	cantly distu	rbed?		Are "Norr	mal Circumstances" preser	ıt? Yes	✓ No		
Are Vegetation, Soil, or Hydrology natura	Ily problema	atic?		(If needed	d, explain any answers in R	emarks.)			
SUMMARY OF FINDINGS - Attach site map	showing	samp	olin	g point l	ocations, transects,	importa	ent feature	es, etc.	
Hydrophytic Vegetation Present? Yes ✔ No									
Hydric Soil Present? Yes No				e Sampled					
Wetland Hydrology Present? Yes No		'	with	in a Wetlar	nd? Yes No) [
Remarks:		I							
Wetland 4 - Out near WR4-1									
VEGETATION – Use scientific names of plan	ts								
VEGETATION – Ose scientific flames of plan		Domir	nant	Indicator	Dominance Test works	heet:			
Tree Stratum (Plot size: 5^m)	% Cover				Number of Dominant Spe				
1. None					That Are OBL, FACW, or	FAC: 2	2	(A)	
2					Total Number of Domina	nt			
3					Species Across All Strata	a: <u>2</u>	2	(B)	
4					Percent of Dominant Spe	ecies			
Sapling/Shrub Stratum (Plot size: 3^m)	0	= Tot	al C	over	That Are OBL, FACW, or	FAC: 1	100	(A/B)	
1. Rubus armen acus	75	Υ		FAC	Prevalence Index work	sheet:			
2.					Total % Cover of:		Multiply by:		
3.					OBL species				
4.					FACW species				
5					FAC species	x 3	= 0		
4000	75	= Tot	al C	over	FACU species	x 4	= 0		
Herb Stratum (Plot size: 1^m)	65	Υ		EAC	UPL species	x 5			
1. Ranuncu us repens		-			Column Totals: 0	(A)	0	(B)	
2					Prevalence Index	= B/A =			
3					Hydrophytic Vegetation				
5					Rapid Test for Hydro				
6					Dominance Test is >		,		
7					Prevalence Index is :	≤3.0 ¹			
8.					Morphological Adapt	ations¹ (Pr	ovide suppo	rting	
9.					data in Remarks		parate sheet	:)	
10					Wetland Non-Vascul		1		
11					Problematic Hydroph		, .	,	
	65	= Tot	al C	over	¹ Indicators of hydric soil be present, unless distur			must	
Woody Vine Stratum (Plot size: 1^m)					, ,				
1. None					Hydrophytic				
2					Vegetation Present? Yes	✓ No	\neg		
% Bare Ground in Herb Stratum 35	0	= Tot	aı C	over	rieseitt: 162	E NO	_		
Remarks:					1				

Sampling Point: S6

Depth	Matrix		oth needed to docur Redo	x Features	S			•
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-10	10YR 2/2	100		_			sandy oam	
10-16	10YR 3/3	100					sandy oam	
			-					
				_	=			
				_				
¹ Type: C=C	oncentration, D=De	pletion, RM	=Reduced Matrix, CS	S=Covered	d or Coate	ed Sand Gi	rains. ² Loca	tion: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appli	cable to all	LRRs, unless other	rwise note	ed.)		Indicators	s for Problematic Hydric Soils ³ :
Histosol			Sandy Redox (S				_	Muck (A10)
	pipedon (A2)		Stripped Matrix	. ,	\	MI DA 4	_	arent Material (TF2)
_	istic (A3) en Sulfide (A4)		Loamy Mucky M Loamy Gleyed M			MLRA 1)		Shallow Dark Surface (TF12) (Explain in Remarks)
_ ` `	d Below Dark Surfac	ce (A11)	Depleted Matrix)			(Explain in Remarks)
	ark Surface (A12)	56 (7111)	Redox Dark Sur				³ Indicators	s of hydrophytic vegetation and
_	Mucky Mineral (S1)		Depleted Dark S	Surface (F	7)			d hydrology must be present,
	Gleyed Matrix (S4)		Redox Depressi	ions (F8)			unless	disturbed or problematic.
	Layer (if present):							
Type:								
Depth (ir	nches):						Hydric Soil P	resent? Yes No ✔
Remarks:								
IVDDOLG	NOV							
IYDROLO								
•	drology Indicators		ale ala a de a III Ala ak a cont				0	lande la diagram (O anno anno manufacal)
		one require	d; check all that appl		(50) (lary Indicators (2 or more required)
	Water (A1)		Water-Stair			xcept MLF		ter-Stained Leaves (B9) (MLRA 1, 2,
= -	ater Table (A2)			A, and 4B))			4A, and 4B) inage Patterns (B10)
Saturation	• •		Salt Crust (. ,	(D12)			• , ,
	larks (B1) nt Deposits (B2)		☐ Aquatic Inv		` ,			-Season Water Table (C2) uration Visible on Aerial Imagery (C9)
	oosits (B3)		Oxidized R		` '	Livina Poo		omorphic Position (D2)
_	at or Crust (B4)		Presence of	•	_	-	· · · —	illow Aquitard (D3)
_	posits (B5)		Recent Iron		•	'		C-Neutral Test (D5)
	Soil Cracks (B6)		Stunted or			`	′ =	sed Ant Mounds (D6) (LRR A)
_	on Vis ble on Aerial	Imagery (B	_			., (=::::,)	_	st-Heave Hummocks (D7)
=	y Vegetated Concav		· — · ·		,			(= 1)
Field Obse		•						
Surface Wa	ter Present?	Yes No	Depth (inches	s):				
Water Table			Depth (inches					
Saturation F			Depth (inches			Wetl	and Hydrology	Present? Yes No
(includes ca	pillary fringe)							
Describe Re	ecorded Data (stream	m gauge, m	onitoring well, aerial p	photos, pre	evious ins	spections),	if available:	
Remarks:								

Project/Site: 24031 City of Mill Creek - Sports Park Mas	ter Plan	City/Count	y: Mill Cree	ek/Snohomish Sa	mpling Date: 3/29/24				
Applicant/Owner: City of Mill Creek				State: WA Sa	mpling Point: S7				
Investigator(s): ASW, MK			Section, To	ownship, Range: Sec 31, Twr	28N, Rge 05E				
				, convex, none): none		6			
Subregion (LRR): LRR-A	Lat: _47.8	373786		Long: -122.219720	Datum: WGS	394			
Soil Map Unit Name: Alderwood gravelly sandy loam, 0	to 8 percen	t 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 signif	icantly distu	rbed?	Are "Nor	mal Circumstances" present?	Yes 🗸 No				
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)									
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.									
Hydrophytic Vegetation Present? Yes ✔ No									
Hydric Soil Present? Yes V No			ne Sampled nin a Wetlar		٦				
Wetland Hydrology Present? Yes V No		Witi	iiii a vvetiai	iu? res_v_ No_	_				
Remarks:		•							
Wetland 5 - In near WR5-3									
VEGETATION – Use scientific names of plan	ts.								
-		Dominant	t Indicator	Dominance Test workshee	 et:				
Tree Stratum (Plot size: 5^m)	% Cover	Species?		Number of Dominant Specie					
1. *A nus rubra	40		FAC	That Are OBL, FACW, or FA	AC: <u>3</u> ((A)			
2. *Tsuga heterophylla	15		FACU	Total Number of Dominant	0				
3				Species Across All Strata:	<u>3</u> (E	В)			
4		= Total C		Percent of Dominant Specie		• (5)			
Sapling/Shrub Stratum (Plot size: 3^m)		- Total C	ovei	That Are OBL, FACW, or FA	AC: <u>100</u> (A	A/B)			
1. Rubus spectab s	10	Y	FAC	Prevalence Index worksho	et:				
2. Rubus armeniacus	10	Υ	FAC	Total % Cover of:	Multiply by:				
3				OBL species					
4				FACW species					
5				FAC species					
Herb Stratum (Plot size: 1^m)	20	= Total C	Cover	FACU species					
1 Ranuncuus renens	10	Υ	FAC		_ x 5 = 0				
2				Column Totals: 0	_ (A) <u>0</u>	(B)			
3				Prevalence Index = B	/A =				
4				Hydrophytic Vegetation In					
5				Rapid Test for Hydrophy	tic Vegetation				
6.				Dominance Test is >50%	6				
7				Prevalence Index is ≤3.0) ¹				
8				Morphological Adaptation	ons ¹ (Provide supportin	ıg			
9				Wetland Non-Vascular F	on a separate sheet)				
10				Problematic Hydrophytic		`			
11				¹ Indicators of hydric soil and	• • • • •	<i>'</i>			
Woody Vine Stratum (Plot size: 1^m)	10	= Total C	Cover	be present, unless disturbed		Jot			
4 None									
1. Note 2				Hydrophytic					
	0	= Total C	Cover	Vegetation Present? Yes ✓	No□				
% Bare Ground in Herb Stratum					· -				
Remarks:									
*Species overhanging but rooted in separate h	ydrologic	condition	ns and are	e not included in the don	ninance test				

Depth	Matrix			x Features			m the absence of indicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-6	10YR 2/2	100					sandy oam
6-12	2.5Y 5/2	100					sandy oam
12-16	10YR 2/1	100					sandy oam
12 10	1011(2)1						
	-						
¹Type: C=C	oncentration, D=De	pletion, RM	1=Reduced Matrix, CS	S=Covered o	or Coate	d Sand Gr	Grains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appli	cable to al	I LRRs, unless other	rwise noted	l.)		Indicators for Problematic Hydric Soils ³ :
Histosol			Sandy Redox (S				2 cm Muck (A10)
	oipedon (A2)		Stripped Matrix	• •			Red Parent Material (TF2)
	stic (A3)		Loamy Mucky M		(except	MLRA 1)	
	en Sulfide (A4)	(8.4.4)	Loamy Gleyed N				Other (Explain in Remarks)
_ :	d Below Dark Surfac ark Surface (A12)	ce (A11)	Depleted Matrix Redox Dark Sur	. ,			³ Indicators of hydrophytic vegetation and
	Mucky Mineral (S1)		Depleted Dark Sur	` ,			wetland hydrology must be present,
_	Gleyed Matrix (S4)		Redox Depressi	` ,			unless disturbed or problematic.
	Layer (if present):		Redox Depressi	10113 (1 0)			unicas disturbed of problematic.
Type:							
Depth (ir	nches):						Hydric Soil Present? Yes V No
Remarks:	,						Tryunc don't resent: Tes F No
HYDROLO)GY						
	drology Indicators	<u>.</u>					
-			ed; check all that appl	v)			Secondary Indicators (2 or more required)
	Water (A1)			ned Leaves	(B9) (ex	cent MI R	
_	ater Table (A2)			A, and 4B)	(20) (02		4A, and 4B)
Saturati			Salt Crust				Drainage Patterns (B10)
=	larks (B1)		_	· vertebrates (B13)		Dry-Season Water Table (C2)
_	nt Deposits (B2)			Sulfide Odor	,		Saturation Visible on Aerial Imagery (CS
_	posits (B3)			thizospheres	` '	_iving Roo	
=	at or Crust (B4)		_	of Reduced	-	•	Shallow Aquitard (D3)
	posits (B5)		_	n Reduction	•	,	
= '	Soil Cracks (B6)		_	Stressed Pl		•	<i>'</i> = ` ` <i>'</i>
=	on Vis ble on Aerial	Imagery (B		lain in Rema		, ()	Frost-Heave Hummocks (D7)
_	y Vegetated Concav				,		
Field Obse		<u> </u>	,				
Surface Wa	ter Present?	Yes□ N	o Depth (inches	s):			
Water Table		=	o Depth (inches	,			
Saturation F		_	o Depth (inches			Wetl	land Hydrology Present? Yes 🗸 No
(includes ca	pillary fringe)			,			
Describe Re	ecorded Data (strear	m gauge, m	onitoring well, aerial	photos, prev	ious ins	pections),	, if available:
Domorko							
Remarks:							

Project/Site: 24031 City of Mill Creek - Sports Park Mast	ter Plan	City/Count	y: Mill Cree	ek/Snohomish Samp	oling Date: 3/29/2	24		
Applicant/Owner: City of Mill Creek				State: WA Samp	oling Point: S8			
Investigator(s): ASW, MK			Section, To	ownship, Range: Sec 31, Twp 2	8N, Rge 05E			
				, convex, none): none): 6		
Subregion (LRR): LRR-A	_ Lat: 47.8	73805		Long: -122.219677	Datum: W	GS84		
Soil Map Unit Name: Alderwood gravelly sandy loam, 0 t	o 8 percent	tslopes		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 signifi	cantly distur	bed?	Are "Nori	mal Circumstances" present? Ye	es 🗸 No			
Are Vegetation, Soil, or Hydrology natura	lly problema	itic?	(If needed	d, explain any answers in Remark	(s.)			
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.								
Hydrophytic Vegetation Present? Yes ✓ No								
Hydric Soil Present? Yes No			ne Sampled					
Wetland Hydrology Present? Yes No		with	nin a Wetlar	nd? Yes ✓ No ✓				
Remarks:								
Wetland 5 - Out near WR5-4								
VEGETATION – Use scientific names of plan	te							
VEGETATION GGG GOLONIANG NAMES OF PLAN	Absolute	Dominant	Indicator	Dominance Test worksheet:				
Tree Stratum (Plot size: 5^m)	% Cover			Number of Dominant Species				
1. A nus rubra	70	Y	FAC	That Are OBL, FACW, or FAC:	4	(A)		
2				Total Number of Dominant				
3				Species Across All Strata:	4	(B)		
4				Percent of Dominant Species				
Sapling/Shrub Stratum (Plot size: 3^m)	70	= Total C	Cover	That Are OBL, FACW, or FAC:	100	(A/B)		
1. Rubus spectab s	65	Υ	FAC	Prevalence Index worksheet:				
2. Rubus armeniacus	30	Y	FAC	Total % Cover of:				
3				OBL species				
4.				FACW species				
5.				FAC species	x 3 = 0			
	95	= Total C	Cover	FACU species	x 4 = 0			
Herb Stratum (Plot size: 1^m)	0.0		E40	UPL species	x 5 = 0	_		
1. Ranuncu us repens		<u>Y</u>		Column Totals: 0 ((A) <u>0</u>	(B)		
2. Geum macrophyllum	<u>5</u> 5	N	FAC	Prevalence Index = B/A	_			
Athyrium filix-femina Geranium robertianum	5	N	FAC FAC	Hydrophytic Vegetation Indic				
Decree of the Process		N	FACU	Rapid Test for Hydrophytic				
*·				Dominance Test is >50%	Vogotation			
6				Prevalence Index is ≤3.0 ¹				
7 8				Morphological Adaptations	1 (Provide suppor	rtina		
9				data in Remarks or on a	a separate sheet)		
10				Wetland Non-Vascular Plan				
11				Problematic Hydrophytic Vo	egetation¹ (Expla	in)		
	50	= Total C	Cover	¹ Indicators of hydric soil and we be present, unless disturbed or		must		
Woody Vine Stratum (Plot size: 1^m)				be present, unless disturbed of	problematic.			
1. None				Hydrophytic				
2				Vegetation				
0/ Para Cround in Harb Strature	0	= Total C	Cover	Present? Yes	4o			
% Bare Ground in Herb Stratum Remarks:								
Tomario.								

Sampling Point: S8

Depth	Matrix		Redo	x Features				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-5	10YR 2/1	100	-				sandy oam	
5-16	10YR 3/3	100					sandy oam	
					-			
	-		-	=				
				-				
				-				
				_				
•			=Reduced Matrix, CS			ed Sand Gr		: PL=Pore Lining, M=Matrix.
_		cable to all	LRRs, unless other		ed.)		_	r Problematic Hydric Soils ³ :
Histosol	, ,		Sandy Redox (S				2 cm Muc	· ·
_	oipedon (A2)		Stripped Matrix	. ,	\ (avaant	MI DA 4\	=	nt Material (TF2)
_	stic (A3) n Sulfide (A4)		Loamy Mucky M			WILKA 1)		low Dark Surface (TF12) plain in Remarks)
	d Below Dark Surfac	ce (A11)	Depleted Matrix		'		U Other (LX)	plant in Nemarks)
	ark Surface (A12)	50 (7111)	Redox Dark Sur	. ,			³ Indicators of	hydrophytic vegetation and
=	lucky Mineral (S1)		Depleted Dark S	` '	7)			drology must be present,
Sandy G	Bleyed Matrix (S4)		Redox Depressi	ions (F8)			unless dist	urbed or problematic.
estrictive	Layer (if present):							
Type:								
Depth (in	ches):						Hydric Soil Pres	ent? Yes No ✔
Remarks:								
YDROLC								
-	drology Indicators			,			0 1	
		one require	d; check all that appl					Indicators (2 or more required)
	Water (A1)		Water-Stai		. , .	xcept MLR		Stained Leaves (B9) (MLRA 1, 2,
=	iter Table (A2)			A, and 4B)			_	and 4B)
Saturation	` '		Salt Crust		(D.10)			ge Patterns (B10)
_	larks (B1)		Aquatic Inv		` ,			ason Water Table (C2)
_	nt Deposits (B2)		Hydrogen :		` '		_	ion Visible on Aerial Imagery (C9)
= '	posits (B3)		Oxidized R		_	-	· · · =	rphic Position (D2)
_	at or Crust (B4)		Presence o		,	,		Aquitard (D3)
= '	oosits (B5)		Recent Iron			,		eutral Test (D5)
=	Soil Cracks (B6)	Images (D)	Stunted or			I) (LKK A)	_	Ant Mounds (D6) (LRR A)
_	on Vis ble on Aerial			iain in Ker	narks)		Frost-H	eave Hummocks (D7)
ield Obse	/ Vegetated Concav	e Suriace (i	50)					
		Voo D N	Depth (inches					
Nater Table			Depth (inches			347-41	and Hedre Leve B	V N
Saturation F includes ca	resent? pillary fringe)	Yes No	Depth (inches	s): <u>13</u>		weti	and Hydrology Pre	sent? Yes No
		m gauge, m	onitoring well, aerial	photos, pre	evious ins	spections),	if available:	
Remarks:								
verridiks.								

Project/Site: 24031 City of Mill Creek - Sports Park Mas	ter Plan (City/County	y: Mill Cree	ek/Snohomish Sam	pling Date: 3/29/2	24			
Applicant/Owner: City of Mill Creek				State: WA Sam	Sampling Point: S9				
Investigator(s): ASW, MK	Investigator(s): ASW, MK Section, Township, Range: Sec 31, Twp 28N, Rge 05E								
				, convex, none): none): <u>4</u>			
Subregion (LRR): LRR-A	_ Lat: 47.8	374151		Long: -122.222047	Datum: W	GS84			
Soil Map Unit Name: Alderwood gravelly sandy loam, 0	to 8 percent	t slopes		NWI classification:	none				
Are climatic / hydrologic conditions on the site typical for this	s time of yea	ır? Yes	No (I	f no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology signif	icantly distur	rbed?	Are "Nori	mal Circumstances" present? Y	′es ✔ No				
Are Vegetation, Soil, or Hydrology natura	illy problema	atic?	(If needed	d, explain any answers in Remar	ks.)				
SUMMARY OF FINDINGS – Attach site map	SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.								
Hydrophytic Vegetation Present? Yes ✔ No									
Hydric Soil Present? Yes V No			ie Sampled iin a Wetlar						
Wetland Hydrology Present? Yes ✓ No		With	iii a vvetiai	id? rest No					
Remarks:									
Wetland A - In by WRA-11									
VEGETATION – Use scientific names of plan	ts.								
	Absolute	Dominant	Indicator	Dominance Test worksheet:					
Tree Stratum (Plot size: 5^m)	% Cover	-		Number of Dominant Species	_				
1. Thuja p cata	70	Y	FAC	That Are OBL, FACW, or FAC	<u>5</u>	(A)			
2. *Pseudotsuga menziesii	20			Total Number of Dominant	F				
3				Species Across All Strata:	5	(B)			
4	70	= Total C	over.	Percent of Dominant Species	100	(A (D)			
Sapling/Shrub Stratum (Plot size: 3^m)		- Total C	ovei	That Are OBL, FACW, or FAC	: <u>100</u>	(A/B)			
1. Rubus armen acus	30	Y	FAC	Prevalence Index worksheet	t:				
2. Rubus spectabilis	25	Y	FAC	Total % Cover of:					
3				OBL species		_			
4				FACW species		_			
5				FAC species		_			
Herb Stratum (Plot size: 1^m)	55	= Total C	over	FACU species					
4 Lysich ton americanum	40	Υ	OBI	UPL species		_			
Maianthemum dilatatum	0.5	Y	FAC	Column Totals: 0	(A) <u>0</u>	(B)			
3				Prevalence Index = B/A	. =				
4.				Hydrophytic Vegetation Indi					
5.				Rapid Test for Hydrophytic	c Vegetation				
6				Dominance Test is >50%					
7				Prevalence Index is ≤3.0 ¹					
8				Morphological Adaptations	(Provide suppor	rting			
9				data in Remarks or on Wetland Non-Vascular Pla)			
10				Problematic Hydrophytic V		in)			
11				¹ Indicators of hydric soil and w	-				
Woody Vine Stratum (Plot size: 1^m)	75	= Total C	over	be present, unless disturbed o		muət			
, None									
				Hydrophytic					
2		= Total C	nver	Vegetation Present? Yes ✓	No				
% Bare Ground in Herb Stratum									
Remarks:									
*Species overhanging but rooted in separate h	ydrologic	condition	ns thus no	ot counted towards the dor	minance test.				

Depth	Matrix		Redo	x Features				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-18	10YR 2/1	100					silt loam	
	-			-				
	-							
								_
				_				_
				-				-
•		•	=Reduced Matrix, CS			ed Sand G		ocation: PL=Pore Lining, M=Matrix.
		icable to all	LRRs, unless other		ed.)			tors for Problematic Hydric Soils ³ :
Histosol			Sandy Redox (S				_	cm Muck (A10)
	oipedon (A2)		Stripped Matrix	. ,				ed Parent Material (TF2)
_	stic (A3)		Loamy Mucky M			MLRA 1)		ery Shallow Dark Surface (TF12)
_ ` `	n Sulfide (A4) d Below Dark Surfa	00 (111)	Loamy Gleyed Matrix)		✓ Ot	her (Explain in Remarks)
	ark Surface (A12)	ce (ATT)	Redox Dark Sur	. ,			3Indics	ators of hydrophytic vegetation and
_	fucky Mineral (S1)		Depleted Dark S		7)			tland hydrology must be present,
_	Gleyed Matrix (S4)		Redox Depressi	,	. ,			ess disturbed or problematic.
	Layer (if present):			(- /				
Type:			-					
Depth (in	ches):						Hydric So	oil Present? Yes ✔ No
Remarks:							,	
			d d.C.C					
	•	not meet	the definition of	any nyo	ric soli i	ieia inaid	cator, the i	ow chroma present is indicative of
wetland co	onditions.							
IYDROLC	GY							
Wetland Hy	drology Indicators	s:						
•			d; check all that appl	v)			Sec	condary Indicators (2 or more required)
_	Water (A1)	Ono roquiro	Water-Stai		s (RQ) (a	vcent MI F		Water-Stained Leaves (B9) (MLRA 1, 2,
	iter Table (A2)			A, and 4B)		ACEPT MILI	м П	4A, and 4B)
Saturation			Salt Crust		1			Drainage Patterns (B10)
	larks (B1)		Aquatic Inv		: (B13)			Dry-Season Water Table (C2)
	nt Deposits (B2)		Hydrogen		` ,		_	Saturation Visible on Aerial Imagery (C9)
	oosits (B3)		Oxidized R		` '	Living Poo		Geomorphic Position (D2)
= '	at or Crust (B4)		Presence of	•	-	•		Shallow Aquitard (D3)
_	oosits (B5)		Recent Iron		`	,		FAC-Neutral Test (D5)
= '	Soil Cracks (B6)		Stunted or			•		Raised Ant Mounds (D6) (LRR A)
=	on Vis ble on Aerial	Imagen/ (D	_			I) (LINK A)		Frost-Heave Hummocks (D7)
=	Vegetated Conca		<i>-</i> -	iaiii iii i\ci	ilaiks)		Ш	1 Tost-Heave Huminocks (D7)
Field Obser		ounace (JO)			<u> </u>		
		V	Dandh (in ab a					
Surface Wa			Depth (inches					
Water Table		_	Depth (inches					
Saturation F		Yes 🗸 No	Depth (inches	s): surface		Wetl	and Hydrolo	ogy Present? Yes ✓ No
	pillary fringe) corded Data (strea	m gauge. m	onitoring well, aerial	photos. pr	evious ins	spections)	if available:	
_ 555.155 7 (6		330, 111		F				
Domarka								
Remarks:								

Project/Site: 24031 City of Mill Creek - Sports Park Mas	ter Plan	City/County	y: Mill Cree	ek/Snohomish S	sampling Date: 3/29/24				
Applicant/Owner: City of Mill Creek		State: WA S	ampling Point:						
Investigator(s): ASW, MK			Section, To	ownship, Range: Sec 31, Tw	vp 28N, Rge 05E				
				, convex, none): none					
Subregion (LRR): LRR-A	_ Lat: 47.8	374221		Long: -122.221907	Datum: WGS84	4			
Soil Map Unit Name: Alderwood gravelly sandy loam, 0 to	o 8 percen	t slopes		NWI classificatio	n: 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 signif	cantly distu	rbed?	Are "Nori	mal Circumstances" present?	Yes ✓ No				
Are Vegetation, Soil, or Hydrology natura	Ily problema	atic?	(If needed	d, explain any answers in Rei	marks.)				
SUMMARY OF FINDINGS - Attach site map	showing	samplin	g point l	ocations, transects, ir	nportant features, e	tc.			
Hydrophytic Vegetation Present? Yes ✔ No									
Hydric Soil Present? Yes No			e Sampled		. . .				
Wetland Hydrology Present? Yes No		With	in a Wetlar	nd? Yes No					
Remarks:		•							
Wetland A - Out near WRA-11									
VEGETATION – Use scientific names of plan	ts.								
-	Absolute	Dominant	Indicator	Dominance Test worksho	eet:				
Tree Stratum (Plot size: 5^m)	% Cover			Number of Dominant Spec					
Thuja p cata Pseudotsuga menziesii	60 40	$\frac{Y}{Y}$	FACU	That Are OBL, FACW, or F	FAC: 3 (A)				
			TACO	Total Number of Dominant					
3				Species Across All Strata:	(B)				
Ţ.	100	= Total C	over	Percent of Dominant Spec		٠,			
Sapling/Shrub Stratum (Plot size: 3^m)		Total O	.0101	That Are OBL, FACW, or F	FAC: <u>75</u> (A/B	3)			
1. Acer c rc natum	45	Y	FAC	Prevalence Index worksh	ieet:				
2. Ilex aquifolium	5	N	FACU	Total % Cover of:					
3				OBL species					
4				FACW species					
5				FAC species					
Herb Stratum (Plot size: 1^m)	50	= Total C	over	FACU species					
1. Ma anthemum d atatum	40	Υ	FAC	UPL species		٠,			
2			-	Column Totals: 0	(A) <u>0</u> (B	3)			
3.				Prevalence Index =	B/A =				
4.				Hydrophytic Vegetation I	ndicators:				
5				Rapid Test for Hydroph	nytic Vegetation				
6				Dominance Test is >50					
7				Prevalence Index is ≤3	·				
8				Morphological Adaptat	ions ¹ (Provide supporting on a separate sheet)				
9				Wetland Non-Vascular					
10					tic Vegetation ¹ (Explain)				
11				¹ Indicators of hydric soil ar	,	ł			
Woody Vine Stratum (Plot size: 1^m)	40	= Total C	over	be present, unless disturbe					
4 None									
1. Note 2				Hydrophytic					
	0	= Total C	over	Vegetation Present? Yes	∕ No □				
% Bare Ground in Herb Stratum									
Remarks:									

Profile Desc	ription: (Describe	to the dept	h needed to docu	ment the ir	dicator	or confirm	the absenc	e of indicators.)
Depth	Matrix		Redo	x Features				
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	<u>Remarks</u>
1-8	7.5YR 2.5/2	100					silt loam	
8-16	7.5YR 3/3	100					sandy oam	
0 10	7.0111 0/0			-				- -
							-	
1- 0.0			5				. 2.	
	oncentration, D=Dep					ed Sand Gr		ocation: PL=Pore Lining, M=Matrix.
	Indicators: (Applic	able to all I	_		d.)		_	tors for Problematic Hydric Soils ³ :
Histosol		ļ	Sandy Redox (_	m Muck (A10)
	ipedon (A2)	ļ	Stripped Matrix					d Parent Material (TF2)
Black Hi	, ,	ļ	Loamy Mucky N		(except	MLRA 1)		ry Shallow Dark Surface (TF12)
	n Sulfide (A4)	ļ	Loamy Gleyed				☐ Oth	ner (Explain in Remarks)
	Below Dark Surface	e (A11)	Depleted Matrix					
	rk Surface (A12)	ļ	Redox Dark Su	rface (F6)				tors of hydrophytic vegetation and
	ucky Mineral (S1)	ļ	Depleted Dark	•)			and hydrology must be present,
	leyed Matrix (S4)		Redox Depress	ions (F8)			unle	ess disturbed or problematic.
Restrictive	Layer (if present):							
Type:								
Depth (in	ches):						Hydric So	il Present? Yes No ✔
Remarks:								
HYDROLO	GY							
•	drology Indicators:							
l —	cators (minimum of o	ne required	_					ondary Indicators (2 or more required)
_	Water (A1)			ined Leaves	s (B9) (e :	xcept MLR	RA LI	Water-Stained Leaves (B9) (MLRA 1, 2,
	ter Table (A2)			A, and 4B)			_	4A, and 4B)
Saturation	on (A3)		Salt Crust	(B11)				Orainage Patterns (B10)
Water M	arks (B1)		Aquatic In	vertebrates	(B13)			Dry-Season Water Table (C2)
Sedimer	t Deposits (B2)		Hydrogen	Sulfide Odd	or (C1)			Saturation Visible on Aerial Imagery (C9)
Drift Dec	osits (B3)		Oxidized F	Rhizosphere	es along	Livina Root	ts (C3)	Geomorphic Position (D2)
_	t or Crust (B4)		_	of Reduced	_	•		Shallow Aquitard (D3)
=	osits (B5)		_	n Reductio	•	•		FAC-Neutral Test (D5)
_	Soil Cracks (B6)		_	Stressed F		, ,		
			_			1) (LKK A)		Raised Ant Mounds (D6) (LRR A)
	on Vis ble on Aerial Ir			olain in Rem	iarks)		LJ 1	Frost-Heave Hummocks (D7)
	Vegetated Concave	Surface (B	8)			ı		
Field Obser		_	_					
Surface Wat	er Present? Y	es No	Depth (inche	s):				
Water Table	Present? Y	es No	Depth (inche	s):				
Saturation P	resent? Y	es No	Depth (inche	s): <u>14</u>		Wetla	and Hydrolo	gy Present? Yes No 🗸
(includes ca	oillary fringe)			,				
Describe Re	corded Data (stream	gauge, mo	nitoring well, aerial	photos, pre	vious ins	spections),	if available:	
Remarks:								

ATTACHMENT B: WETLAND RATING FORMS AND FIGURES

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 1	Date of site	Date of site visit: 3/29/24						
Rated by ASW, SS	_ Trained by Ecology? <u>√</u> YesNo	Date of training 6-22						
HGM Class used for rating Depressional	I Wetland has multiple HGM cla	asses? <u>Y</u> ✓N						
NOTE: Form is not complete witho Source of base aerial photo/map	out the required figures (figures can b Snohomish County	e combined).						
OVERALL WETLAND CATEGORY <u>I</u>	∐ (based on functions ✓ or specia	l characteristics)						
1. Category of wetland based on FUNCTIONS								
Category I – Total score	= 23 - 27	'aana fan aaab						
Category II - Total score	e = 20 - 22	core for each unction based						

FUNCTION	Improving Water Quality		Ну	drolo	gic	Habitat				
				C	ircle th	е арр	oropri	ate rati	ings	
Site Potential	Η	М	L	Н	M	L	Н	М	L	
Landscape Potential	Н	M	L	Н	M	L	Н	М	L	
Value	Н	М	L	Н	М	L	Н	M	L	TOTAL
Score Based on Ratings		8			7			4		19

✓ Category III – Total score = 16 - 19

Category IV - Total score = 9 - 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		√

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	1
Hydroperiods	D 1.4, H 1.2	1
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	1
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	1
Map of the contributing basin	D 4.3, D 5.3	2
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and total habitat	H 2.1, H 2.2, H 2.3	2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	3
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	4

Riverine Wetlands

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

Lake Fringe Wetlands

Zako i i ilgo vi otiali ao		
Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and total habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

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

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 sheet flow, 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).

Wetland name or number Welland	r number Wetland	or	name	land	Vet	V
--------------------------------	------------------	----	------	------	-----	---

- 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.

 NO go to 6

 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	П	Depressional
Riverine + Lake Fringe	靣	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 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 = 3 points = 3	3							
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.								
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 > ½ of area points = 3	5							
Wetland has persistent, ungrazed plants $\geq \frac{1}{10}$ of area points = 1								
Wetland has persistent, ungrazed plants $< \frac{1}{10}$ of area points = 0								
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	4							
Area seasonally ponded is ≥ ¼ total area of wetland points = 2	•							
Area seasonally ponded is < 1/2 total area of wetland points = 0								
Total for D 1 Add the points in the boxes above								
Rating of Site Potential If score is: ✓ 12-16 = H6-11 = M0-5 = L Record the rating on the j								
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	1							
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1							
D 2.3. Are there septic systems within 250 ft of the wetland?	0							
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source Yes = 1 No = 0	0							
Total for D 2 Add the points in the boxes above	2							
Rating of Landscape Potential If score is:3 or 4 = H1 or 2 = M0 = L Record the rating on the								
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?	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	1							
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? (Answer YES if there is a TMDL in development or in effect for the basin in which the unit is found.) Yes = $2 \text{ No} = 0$	2							
Total for D 3 Add the points in the boxes above	3							
Rating of Value If score is: ✓ 2-4 = H1 = M0 = L Record the rating on the								

DEPRESSIONAL AND FLATS WETLANDS Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradatio						
D 4.0. Does the site have the potential to reduce flooding and erosion?						
D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) Wetland has an intermittently flowing stream/ditch, OR highly constricted permanently flowing outlet points = 2 Wetland is a flat depression (question 7 on key), whose outlet is a permanently flowing ditch 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. Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 The wetland is a "headwater" wetland points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in)	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 area of the wetland unit itself. The area of the basin is less than 10 times the area of the unit The area of the basin is 10 to 100 times the area of the unit The area of the basin is more than 100 times the area of the unit Entire wetland is in the Flats class The less of the unit points = 5 The less of the unit points = 5	3					
Total for D 4 Add the points in the boxes above Rating of Site Potential If score is:12-16 = H√_6-11 = M0-5 = L Record the rating on the file.						
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?	, p g -					
D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	0					
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 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.)? Yes = 1 No = 0	1					
Total for D 5 Add the points in the boxes above						
Rating of Landscape Potential If score is:3 = H 1 or 2 = M0 = 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. Is the unit in a landscape that has flooding problems? Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met. The wetland captures surface water that would otherwise flow downgradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): Flooding occurs in a sub-basin that is immediately downgradient of unit. Surface flooding problems are in a sub-basin farther downgradient. Flooding from groundwater is an issue in the sub-basin. Flooding from groundwater is an issue in the sub-basin. The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why						
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = $2 No = 0 $	0					
Total for D 6 Add the points in the boxes above	2					

Rating of Value If score is: <u>√</u>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 if the unit is at least 2.5 ac, or more than 10% of the unit if it is smaller than 2.5 ac. Aquatic bedAquatic bedAtructures or more: points = 4Emergent	ĭ				
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 if the unit is < 2.5 ac, or ¼ ac if the unit is at least 2.5 ac to count (see text for descriptions of hydroperiods). Permanently flooded or inundated Permanently flooded or inundated Occasionally flooded or inundated Saturated only Permanently flowing stream or river in, or adjacent to, the wetland Intermittently or seasonally flowing stream in, or adjacent to, the wetland Lake Fringe wetland Preshwater tidal wetland 2 points Freshwater tidal wetland	1				
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, Canada thistle If you counted: > 19 species 5 - 19 species points = 1 5 - 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 = 3 points	1				

H 1.5. Special habitat features:								
Check the habitat features that are present in the wetland. The number of checks is the number of points.								
✓ Standing snags (dbh > 4 in.) within the wetland								
Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extend at least 3.3 ft (1 m)								
over open water or a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)								
Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree	2							
slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered								
where wood is exposed)								
At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are								
permanently or seasonally inundated (structures for egg-laying by amphibians)								
Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 above for the list of strata and H 1.5 in the manual for the list of aggressive plant species)								
Total for H 1 Add the points in the boxes above	6							
Rating of Site Potential If score is:15-18 = H7-14 = M ✓ 0-6 = L								
H 2.0. Does the landscape have the potential to support the habitat functions of the site?	e je p a ge							
· · · · · · · · · · · · · · · · · · · ·								
H 2.1. Accessible habitat (include only habitat polygons accessible from the wetland.								
Calculate: % relatively undisturbed habitat $0 + ((\% \text{ moderate and low intensity land uses})/2] 1 = 1 %$								
Total accessible habitat is:								
	0							
20-33% of 1 km Polygon points = 2								
10-19% of 1 km Polygon points = 1								
7 < 10% of 1 km Polygon points = 0								
H 2.2. Total habitat in 1 km Polygon around the wetland.								
Calculate: % relatively undisturbed habitat 2 + [(% moderate and low intensity land uses)/2] 38 = 40 %								
Total habitat > 50% of Polygon points = 3 Total habitat 10-50% and in 1-3 patches points = 2	1							
Total habitat 10-50% and in 1-3 patches points = 2 Total habitat 10-50% and > 3 patches points = 1								
Total habitat < 10% of 1 km Polygon points = 0								
H 2.3. Land use intensity in 1 km Polygon:								
> 50% of 1 km Polygon is high intensity land use points = (-2)	-2							
≤ 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 = H1-3 = M✓ < 1 = L								
	-							
H 3.0. Is the habitat provided by the site valuable to society?								
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score								
that applies to the wetland being rated.								
Site meets ANY of the following criteria: points = 2								
It has 3 or more Priority Habitats within 100 m (see next page)								
It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)								
It is mapped as a location for an individual WDFW Priority Species	1							
It is a Wetland of High Conservation Value as determined by the Department of Natural Resources data								
It has been categorized as an important habitat site in a local or regional comprehensive plan, in a								
Shoreline Master Plan, or in a watershed plan Site has 1 or 2 Priority Habitats (listed on next page) within 100 m points = 1								
Site does not meet any of the criteria above points = 0 Rating of Value If score is:2 = H√_1 = M0 = L Record the rating on	the first nage							
necold the rating of	and just page							

Wetland Rating System for Western WA: 2014 Update Rating Form – Version 2, July 2023

WDFW Priority Habitats

See complete descriptions of Priority Habitats listed by WDFW, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008 (current year, as revised). <u>Priority Habitat and Species List</u>. ¹³³ This list was updated for consistency with guidance from WDFW.

This question is independent of the land use between the wetland unit and the Priority Habitat. All vegetated wetlands are by definition a Priority Habitat but are not included in this list because they are addressed by this rating system.

Со	unt how many of the following Priority Habitats are within 330 ft (100 m) of the wetland unit:
	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. This habitat automatically counts if mapped on the PHS online map within 100m of the wetland. If not mapped, a determination can be made in the field.
	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.
	Fresh Deepwater: Lands permanently flooded with freshwater, including environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live. Substrate does not support emergent vegetation. Do not select if Instream habitat is also present, or if the entire Deepwater feature is included in the wetland unit being rated (such as a pond with a vegetated fringe).
	Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
	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. Do not select if Fresh Deepwater habitat is also present.
	Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore.
	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) diameter at breast height (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.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf
 Wetland Rating System for Western WA: 2014 Update
 Rating Form – Version 2, July 2023

We	tland name or number <u>Wetland</u> 1
	Oregon White Oak: Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important. For single oaks or oak stands <0.4 ha in urban areas, <u>WDFW's</u> <u>Management Recommendations for Oregon White Oak</u> ¹³⁴ provides more detail for determining if they are Priority Habitats
	Riparian: The area adjacent to freshwater aquatic systems with flowing or standing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
	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.
	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.
	Westside Prairies: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie.

https://wdfw.wa.gov/publications/00030/wdfw00030.pdf
 Wetland Rating System for Western WA: 2014 Update
 Rating Form – Version 2, July 2023

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category					
Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.						
SC 1.0. Estuarine wetlands						
Does the wetland meet the following criteria for Estuarine wetlands?						
The dominant water regime is tidal,						
Vegetated, and						
With a salinity greater than 0.5 ppt Yes – Go to SC 1.1 No= Not an estuarine wetland						
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area						
Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I					
Yes = Category I No – Go to SC 1.2						
SC 1.2. I <u>s th</u> e wetland unit at least 1 ac in size and meets at least two of the following three conditions?						
The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less	Cat. I					
than 10% cover of non-native plant species. If non-native species are <i>Spartina</i> , see chapter 4.8 in the	Cat.					
manual.						
At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland.	Cat. II					
The wetland has at least two of the following features: tidal channels, depressions with open water, or						
contiguous freshwater wetlands. Yes = Category I No = Category II						
	ļ					
SC 2.0. Wetlands of High Conservation Value (WHCV)						
SC 2.1. Does the wetland overlap with any known or historical rare plant or rare & high-quality ecosystem polygons	Cat. I					
on the WNHP <u>Data Explorer</u> ? ¹³⁵ Yes = Category I No – Go to SC 2.2						
SC 2.2. Does the wetland have a rare plant species, rare ecosystem (e.g., plant community), or high-quality common						
ecosystem that may qualify the site as a WHCV? Contact WNHP for resources to help determine the presence of these elements.						
Yes – <u>Submit data to WA Natural Heritage Program for determination</u> , ¹³⁶ Go to SC 2.3 No = Not a WHCV						
SC 2.3. Did WNHP review the site within 30 days and determine that it has a rare plant or ecosystem that meets their						
criteria?						
Yes = Category I No = Not a WHCV						
SC 3.0. Bogs						
Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key						
below. If you answer YES, you will still need to rate the wetland based on its functions.						
SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in.						
or more of the first 32 in. of the soil profile? Yes – Go to SC 3.3 No – Go to SC 3.2 SC 3.2 Does an area within the westland unit have organic soils either neats or mucks, that are less than 16 in door						
SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in. deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or						
pond? Yes – Go to SC 3.3 No = Not a bog						
SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30%						
cover of plant species listed in Table 4? Yes = Category I bog No – Go to SC 3.4						
NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by						
measuring the pH of the water that seeps into a hole dug at least 16 in. deep. If the pH is less than 5.0 and						
the plant species in Table 4 are present, the wetland is a bog.	Cat. I					
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar,						
western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the						
species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?						
Yes = Category I bog No = Not a bog						

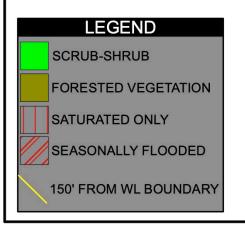
¹³⁵ https://www.dnr.wa.gov/NHPdata

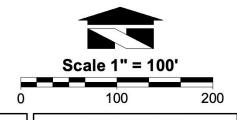
¹³⁶ https://www.dnr.wa.gov/Publications/amp_nh_sighting_form.pdf Wetland Rating System for Western WA: 2014 Update Rating Form – Version 2, July 2023

SC 4.0. Forested Wetlands				
Does the wetland have at least 1 contiguous acre 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>				
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.				
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).				
Yes = Category I No = Not a forested wetland for this section	Cat. I			
SC 5.0. Wetlands in Coastal Lagoons				
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?				
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				
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 (needs to be measured near the bottom)				
The lagoon retains some of its surface water at low tide during spring tides				
Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon	Cat. I			
SC 5.1. Does the wetland meet all of the following three conditions?				
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 in H 1.5 in the manual).				
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.	Cat. II			
The wetland is larger than $^{1}/_{10}$ ac (4350 ft ²)				
Yes = Category I No = Category II				
SC 6.0. Interdunal Wetlands				
Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If you answer YES, you will still need to rate the wetland based on its habitat functions.				
In practical terms that means the following geographic areas: Long Beach Peninsula: Lands west of SR 103				
Grayland-Westport: Lands west of SR 105	Cat I			
Ocean Shores-Copalis: Lands west of SR 115 and SR 109 and Ocean Shores Blvd SW, including lands west of E. Oceans Shores Blvd SW.				
Yes – Go to SC 6.1 No = Not an interdunal wetland for rating	C-+ II			
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	Cat. II			
for the three aspects of function)? Yes = Category I No – Go to SC 6.2 SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?	Cat. III			
Yes = Category II No – Go to SC 6.3				
SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?				
Yes = Category III No = Category IV	Cat. IV			
Category of wetland based on Special Characteristics				
If you answered No for all types, enter "Not Applicable" on Summary Form				

CITY OF MILL CREEK - SPORTS PARK MASTER PLAN WETLAND RATING FIGURE 1- WETLAND 1







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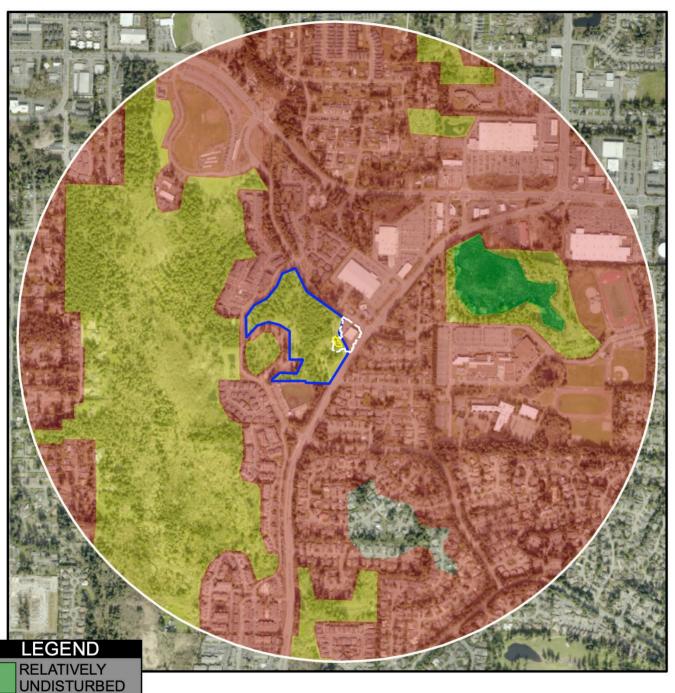
Fax: (425) 337-3045

Email: mailbox@wetlandresources.com

WETLAND RATING Wetland 1

Figure 1-1 WRI Job # 24031 Rated by: ASW

CITY OF MILL CREEK - SPORTS PARK MASTER PLAN WETLAND RATING FIGURE 2- WETLAND 1



RELATIVELY
UNDISTURBED
LOW/MOD.
INTENSITY
HIGH
INTENSITY
ACCESSIBLE
HABITAT

WETLAND

1 KM FROM WETLAND CONTRIBUTING BASIN CONTRIBUTING BASIN AREA RELATIVE TO WETLAND UNIT IS 13:1

Scale 1" = 1,000' 0 1,000 2,000

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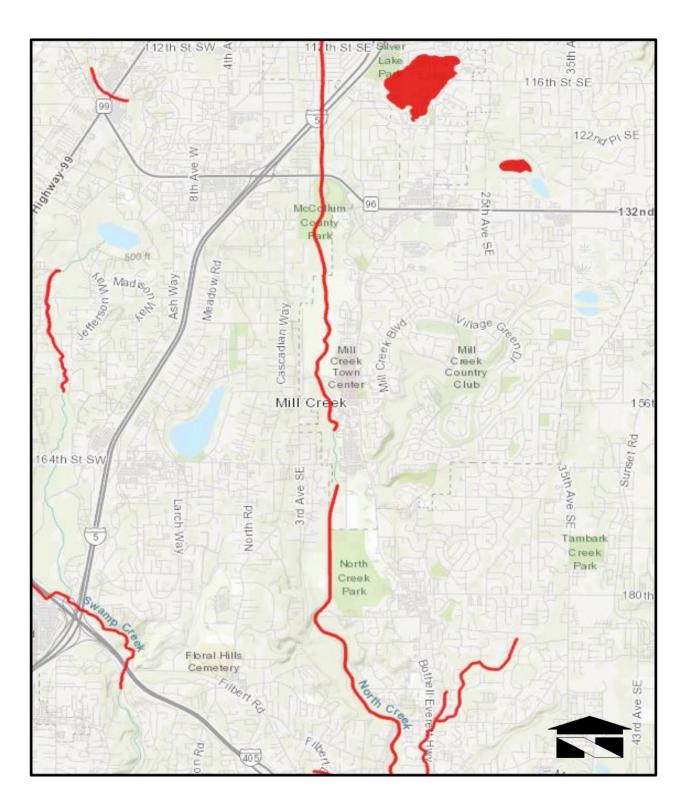
Phone: (425) 337-317 Fax: (425) 337-3045

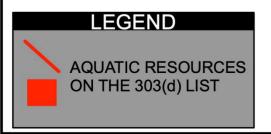
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WETLAND RATING
Wetland 1

Figure 1-2 WRI Job # 24031 Rated by: ASW

CITY OF MILL CREEK - SPORTS PARK MASTER PLAN WETLAND RATING FIGURE 3- WETLAND 1







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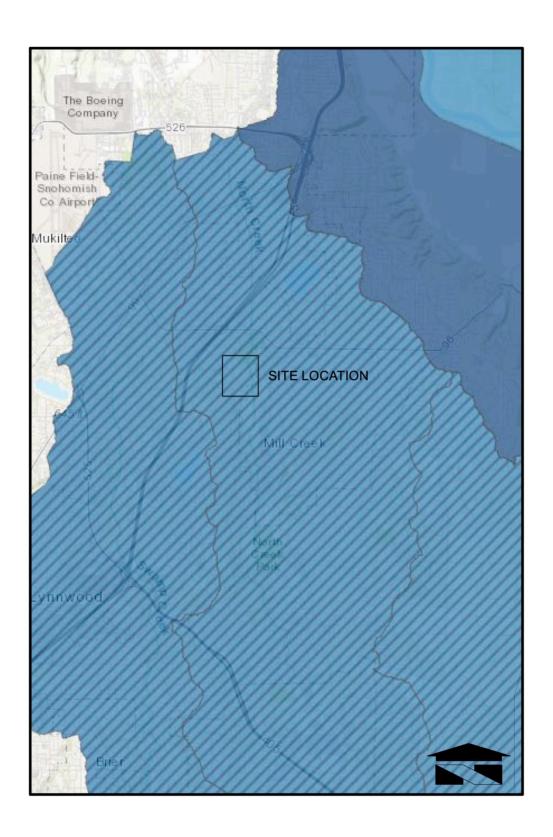
Phone: (425) 337-317 Fax: (425) 337-3045

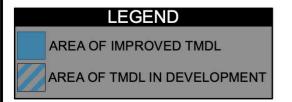
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WETLAND RATING Wetland 1

Figure 1-3 WRI Job # 24031 Rated by: ASW

CITY OF MILL CREEK - SPORTS PARK MASTER PLAN WETLAND RATING FIGURE 4- WETLAND 1







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WETLAND RATING Wetland 1

Figure 1-4 WRI Job # 24031 Rated by: ASW

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 2	Date of site visit: <u>3/29/</u> 24									
Rated by_ASW, SS	_ Trained by Ecology? ✓ YesNo Date of training 6-22									
HGM Class used for rating Depressiona	Metland has multiple HGM classes?Y _✓_N									
NOTE: Form is not complete without the required figures (figures can be combined). Source of base aerial photo/map Snohomish County										
OVERALL WETLAND CATEGORY (based on functions or special characteristics)										
1. Category of wetland based on FUNCTIONS										
Category I – Total score	= 23 - 27 Score for each									

FUNCTION	Improving Water Quality		Ну	drolo	gic	ŀ	labita	t		
				C	ircle th	е арр	oropri	ate rat	ings	
Site Potential	Н	M	L	Н	M	L	Н	М	L	
Landscape Potential	Н	M	L	Н	M	L	Н	М	L	
Value	Н	М	L	Н	М	L	Н	M	L	TOTAL
Score Based on Ratings		7			7			4		18

_Category II - Total score = 20 - 22

Category IV - Total score = 9 - 15

✓ Category III – Total score = 16 - 19

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY	
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		√

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	1
Hydroperiods	D 1.4, H 1.2	1
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	1
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	1
Map of the contributing basin	D 4.3, D 5.3	2
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and total habitat	H 2.1, H 2.2, H 2.3	2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	3
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	4

Riverine Wetlands

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

Lake Fringe Wetlands

Euke TTHISE TVOIIGHAS		
Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and total habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

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

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 sheet flow, 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).

W	etland	name	or num	ber Wetl	and 2

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

stream or river, The overbank flooding occurs at least once every 2 years. 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 7YES – 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. YES - The wetland class is Depressional NO - go to 8 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.

The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that

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		HGM class to
being rated		use in rating
Slope + Riverine		Riverine
Slope + Depressional		Depressional
Slope + Lake Fringe		Lake Fringe
Depressional + Riverine along stream		Depressional
within boundary of depression		
Depressional + Lake Fringe		Depressional
Riverine + Lake Fringe		Riverine
Salt Water Tidal Fringe and any other		Treat as
class of freshwater wetland	Ш	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 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 = 3 points = 3	3
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	
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 > ½ of area points = 3	5
Wetland has persistent, ungrazed plants $\geq 1/10$ of area points = 1	
Wetland has persistent, ungrazed plants $<^1/_{10}$ of area points = 0	
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	0
Area seasonally ponded is ≥ ¼ total area of wetland points = 2	
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 = H6-11 = M0-5 = 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 $No = 0$	0
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 $No = 0$	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source Yes = 1 No = 0	1
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 = M0 = 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 = $1 \text{ No} = 0$	0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = $1 \text{ No} = 0$	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? (Answer YES if there is a TMDL in development or in effect for the basin in which the unit is found.) Yes = $2 \text{ No} = 0$	2
Total for D 3 Add the points in the boxes above	3
Rating of Value If score is: √2-4 = H1 = M0 = L Record the rating on the	first page

DEPRESSIONAL AND FLATS WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradat	ion
D 4.0. Does the site have the potential to reduce flooding and erosion?	
D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4 Wetland has an intermittently flowing stream/ditch, OR highly constricted permanently flowing outlet points = 2 Wetland is a flat depression (question 7 on key), whose outlet is a permanently flowing ditch points = 1 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	4
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part. Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 The wetland is a "headwater" wetland points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in) points = 0	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 area of the wetland unit itself. The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire wetland is in the Flats class	3
Total for D 4 Add the points in the boxes above	
Rating of Site Potential If score is:12-16 = H√_6-11 = M0-5 = L	Jirst page
D 5.0. Does the landscape have the potential to support hydrologic functions of the site? D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	l o
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	1
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0	0
Total for D 5 Add the points in the boxes above	1
Rating of Landscape Potential If score is:3 = H√_1 or 2 = M0 = L	first page
D 6.0. Are the hydrologic functions provided by the site valuable to society?	
D 6.1. Is the unit in a landscape that has flooding problems? Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met. The wetland captures surface water that would otherwise flow downgradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): I points = 2 Surface flooding problems are in a sub-basin farther downgradient. points = 1 Flooding from groundwater is an issue in the sub-basin. points = 1 The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why points = 0 There are no problems with flooding downstream of the wetland.	2
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for D 6 Add the points in the boxes above	2

Rating of Value If score is: <u>√</u> 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 if the unit is at least 2.5 ac, or more than 10% of the unit if it is smaller than 2.5 ac. Aquatic bedAquatic bedAt structures or more: points = 4Bmergent	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 if the unit is < 2.5 ac, or ⅓ ac if the unit is at least 2.5 ac to count (see text for descriptions of hydroperiods). Permanently flooded or inundated Permanently flooded or inundated Seasonally flooded or inundated Occasionally flooded or inundated Saturated only Permanently flowing stream or river in, or adjacent to, the wetland Intermittently or seasonally flowing stream in, or adjacent to, the wetland Lake Fringe wetland Preshwater tidal wetland 2 points Freshwater tidal wetland	2
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, Canada thistle If you counted: > 19 species 5 - 19 species points = 1 5 - 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 = 3 points	0

H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. The number of checks is the number of points.	
✓ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft long).	
Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extend at least 3.3 ft (1 m)	
over open water or a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)	
Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree	2
slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered	
where wood is exposed)	
At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are	
permanently or seasonally inundated (structures for egg-laying by amphibians)	
Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 above for the list of strata and H 1.5 in the manual for the list of aggressive plant species)	
Total for H 1 Add the points in the boxes above	6
Rating of Site Potential If score is:15-18 = H7-14 = M ✓ 0-6 = L	
	-
H 2.0. Does the landscape have the potential to support the habitat functions of the site?	r
H 2.1. Accessible habitat (include only habitat polygons accessible from the wetland.	
Calculate: % relatively undisturbed habitat $0 + ((\% \text{ moderate and low intensity land uses})/2] 1 = 1 %$	
Total accessible habitat is:	
$ > \frac{1}{3} (33.3\%) \text{ of } 1 \text{ km Polygon} $ points = 3	0
20-33% of 1 km Polygon points = 2	
10-19% of 1 km Polygon points = 1	
<pre></pre>	
H 2.2. Total habitat in 1 km Polygon around the wetland.	
Calculate: % relatively undisturbed habitat 2 + [(% moderate and low intensity land uses)/2] 36 = 38 %	
Total habitat > 50% of Polygon points = 3	1
Total habitat 10-50% and in 1-3 patches points = 2	
Total habitat 10-50% and > 3 patches points = 1	
Total habitat < 10% of 1 km Polygon points = 0 H 2.3. Land use intensity in 1 km Polygon:	
> 50% of 1 km Polygon is high intensity land use points = (-2)	-2
≤ 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 = H1-3 = M✓ < 1 = L	
H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score	
that applies to the wetland being rated.	
Site meets ANY of the following criteria: points = 2	
It has 3 or more Priority Habitats within 100 m (see next page)	
It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)	
It is mapped as a location for an individual WDFW Priority Species	1
It is a Wetland of High Conservation Value as determined by the Department of Natural Resources data	
It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan	
Site has 1 or 2 Priority Habitats (listed on next page) within 100 m	
Site does not meet any of the criteria above points = 0 Rating of Value If score is:2 = H√_1 = M0 = L Record the rating on	the first nage
necold the rating of	and just page

Wetland Rating System for Western WA: 2014 Update Rating Form – Version 2, July 2023

WDFW Priority Habitats

See complete descriptions of Priority Habitats listed by WDFW, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008 (current year, as revised). <u>Priority Habitat and Species List</u>. ¹³³ This list was updated for consistency with guidance from WDFW.

This question is independent of the land use between the wetland unit and the Priority Habitat. All vegetated wetlands are by definition a Priority Habitat but are not included in this list because they are addressed by this rating system.

Со	unt how many of the following Priority Habitats are within 330 ft (100 m) of the wetland unit:
	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. This habitat automatically counts if mapped on the PHS online map within 100m of the wetland. If not mapped, a determination can be made in the field.
	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.
	Fresh Deepwater: Lands permanently flooded with freshwater, including environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live. Substrate does not support emergent vegetation. Do not select if Instream habitat is also present, or if the entire Deepwater feature is included in the wetland unit being rated (such as a pond with a vegetated fringe).
	Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
	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. Do not select if Fresh Deepwater habitat is also present.
	Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore.
	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) diameter at breast height (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.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf
 Wetland Rating System for Western WA: 2014 Update
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Wetl	land name or number Wetland 2
t <u>N</u>	Dregon White Oak: Woodland stands of pure oak or oak/conifer associations where canopy coverage of he oak component is important. For single oaks or oak stands <0.4 ha in urban areas, <u>WDFW's</u> <u>Management Recommendations for Oregon White Oak</u> 134 provides more detail for determining if they are Priority Habitats
	Riparian: The area adjacent to freshwater aquatic systems with flowing or standing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
c h	Sinags 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 neight of > 20 in. (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 n. (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.
b	Falus: Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of pasalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
	Westside Prairies: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

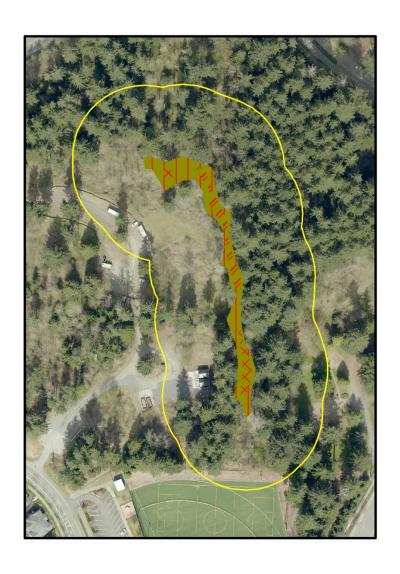
Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	
SC 1.0. Estuarine wetlands	
Does the wetland meet the following criteria for Estuarine wetlands?	
The dominant water regime is tidal,	
Vegetated, and	
With a salinity greater than 0.5 ppt Yes – Go to SC 1.1 No= Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	
Yes = Category I No – Go to SC 1.2	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
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 chapter 4.8 in the	Cat. I
manual.	
At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-	Cat. II
mowed grassland.	Cat. II
The wetland has at least two of the following features: tidal channels, depressions with open water, or	
contiguous freshwater wetlands. Yes = Category I No = Category II	
SC 2.0. Wetlands of High Conservation Value (WHCV)	
SC 2.1. Does the wetland overlap with any known or historical rare plant or rare & high-quality ecosystem polygons	C-4 1
on the WNHP <u>Data Explorer</u> ? ¹³⁵ Yes = Category I No – Go to SC 2.2	Cat. I
SC 2.2. Does the wetland have a rare plant species, rare ecosystem (e.g., plant community), or high-quality common	
ecosystem that may qualify the site as a WHCV? Contact WNHP for resources to help determine the presence of these elements.	
Yes – <u>Submit data to WA Natural Heritage Program for determination</u> , ¹³⁶ Go to SC 2.3 No = Not a WHCV	
SC 2.3. Did WNHP review the site within 30 days and determine that it has a rare plant or ecosystem that meets their	
criteria?	
Yes = Category I No = Not a WHCV	
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</i>	
below. If you answer YES, you will still need to rate the wetland based on its functions.	
SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in.	
or more of the first 32 in. of the soil profile? Yes – Go to SC 3.3 No – Go to SC 3.2	
SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in. deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or	
pond? Yes – Go to SC 3.3 No = Not a bog	
SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30%	
cover of plant species listed in Table 4? Yes = Category I bog No – Go to SC 3.4	
NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by	
measuring the pH of the water that seeps into a hole dug at least 16 in. deep. If the pH is less than 5.0 and	
the plant species in Table 4 are present, the wetland is a bog.	Cat. I
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar,	
western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	
Yes = Category I bog No = Not a bog	

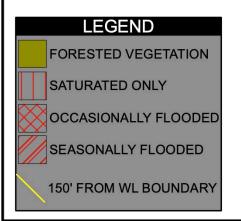
¹³⁵ https://www.dnr.wa.gov/NHPdata

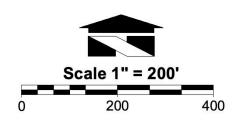
¹³⁶ https://www.dnr.wa.gov/Publications/amp_nh_sighting_form.pdf Wetland Rating System for Western WA: 2014 Update Rating Form – Version 2, July 2023

SC 4.0. Forested Wetlands	
Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as Priority Habitats? If you answer YES, you will still need to rate the wetland based on its functions. 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. 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). Yes = Category I No = Not a forested wetland for this section	Cat. I
SC 5.0. Wetlands in Coastal Lagoons	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
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	
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 (needs to be measured near the bottom)	
The lagoon retains some of its surface water at low tide during spring tides	
Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon	Cat. I
SC 5.1. Does the wetland meet all of the following three conditions?	
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 in H 1.5 in the manual).	
At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland.	Cat. II
The wetland is larger than $^{1}/_{10}$ ac (4350 ft ²)	
Yes = Category I No = Category II	
SC 6.0. Interdunal Wetlands	
Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If you answer YES, you will still need to rate the wetland based on its habitat functions.	
In practical terms that means the following geographic areas:	
Long Beach Peninsula: Lands west of SR 103	
Grayland-Westport: Lands west of SR 105	Cat I
Ocean Shores-Copalis: Lands west of SR 115 and SR 109 and Ocean Shores Blvd SW, including lands west of E. Oceans Shores Blvd SW.	
Yes – Go to SC 6.1 No = Not an interdunal wetland for rating	
<u> </u>	Cat. II
SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M	
for the three aspects of function)? Yes = Category I No – Go to SC 6.2	Cat. III
SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = Category II No – Go to SC 6.3	•
SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?	
Yes = Category III No = Category IV	Cat. IV
Category of wetland based on Special Characteristics	
If you answered No for all types, enter "Not Applicable" on Summary Form	

CITY OF MILL CREEK - SPORTS PARK MASTER PLAN WETLAND RATING FIGURE 1- WETLAND 2







Wetland Resources, Inc.

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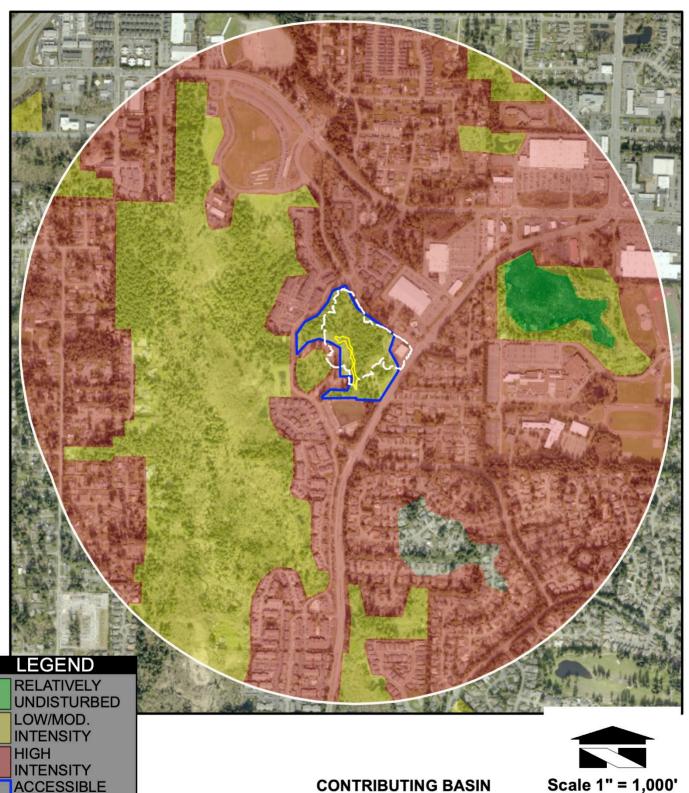
Fax: (425) 337-3045

Email: mailbox@wetlandresources.com

WETLAND RATING Wetland 2

Figure 2-1 WRI Job # 24031 Rated by: ASW

CITY OF MILL CREEK - SPORTS PARK MASTER PLAN WETLAND RATING FIGURE 2- WETLAND 2



CONTRIBUTING BASIN AREA RELATIVE TO WETLAND UNIT IS 26:1 Scale 1" = 1,000'

Wetland Resources, Inc.

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Phone: (425) 337-317 Fax: (425) 337-3045

HABITAT

WETLAND

WETLAND

BASIN

1 KM FROM

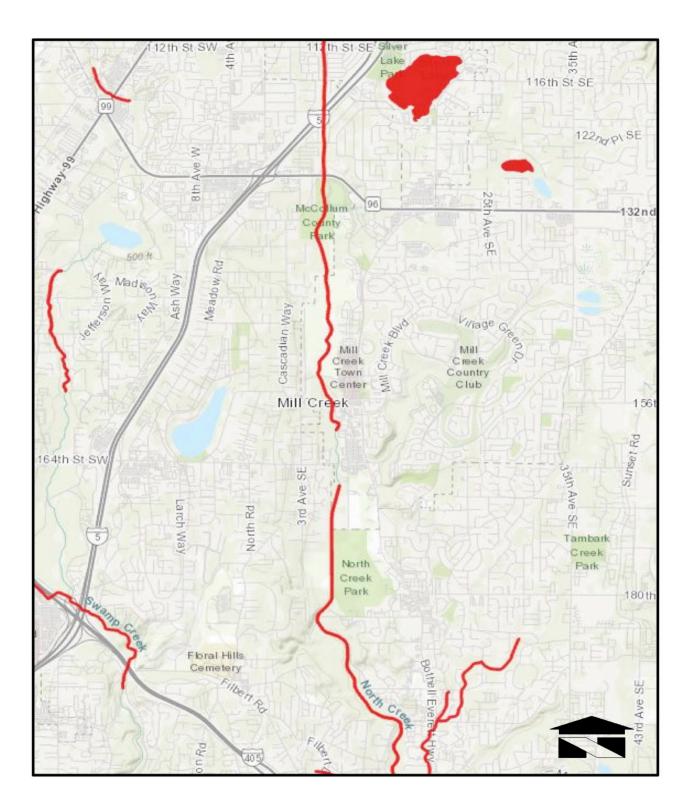
CONTRIBUTING

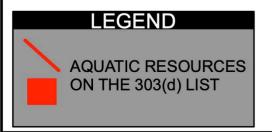
Email: mailbox@wetlandresources.com

WETLAND RATING Wetland 2

Figure 2-2 WRI Job # 24031 Rated by: ASW

CITY OF MILL CREEK - SPORTS PARK MASTER PLAN WETLAND RATING FIGURE 3- WETLAND 2







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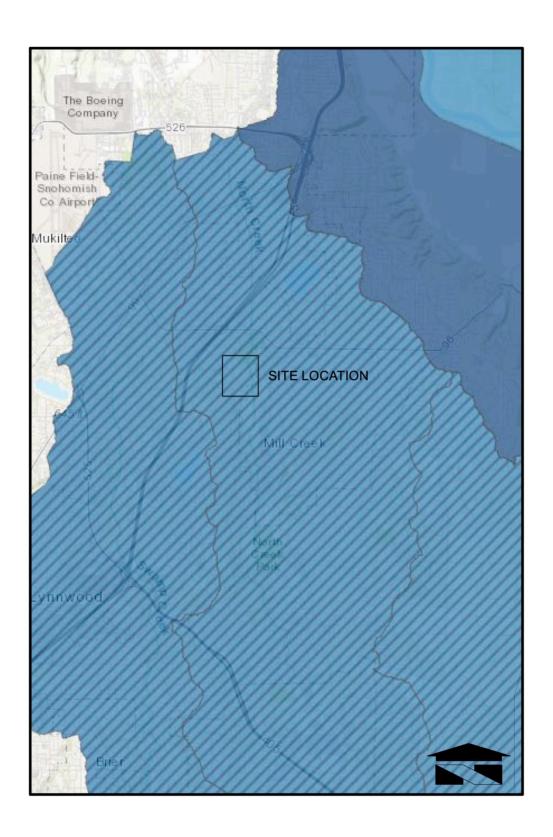
Phone: (425) 337-317 Fax: (425) 337-3045

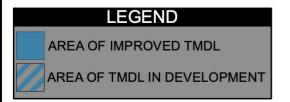
Email: mailbox@wetlandresources.com

WETLAND RATING Wetland 2

Figure 2-3 WRI Job # 24031 Rated by: ASW

CITY OF MILL CREEK - SPORTS PARK MASTER PLAN WETLAND RATING FIGURE 4- WETLAND 2







9505 19th Avenue S.E. Suite 106 Everett, Washington 98208 Phone: (425) 337-3174

Fax: (425) 337-3045

Email: mailbox@wetlandresources.com

WETLAND RATING Wetland 2

Figure 2-4 WRI Job # 24031 Rated by: ASW

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 4	Date of site visit: <u>3/29/</u> 24					
Rated by_ASW, SS	Trained by Ecology? 🗹 YesNo Date of training 6-22					
HGM Class used for rating Depressional	Wetland has multiple HGM classes?Y ✓ N					
NOTE: Form is not complete without Source of base aerial photo/map	ut the required figures (figures can be combined). Snohomish County					
OVERALL WETLAND CATEGORYII (based on functions or special characteristics)						
1. Category of wetland based on FU	NCTIONS					
Category I – Total score = 23 - 27						
Category II – Total score	Score for each function based					
Category III – Total score	e = 16 - 19 on three ratings					

FUNCTION	Improving Water Quality		Water		ŀ	labita	t			
Circle the appropriate ratings										
Site Potential	Н	M	L	Н	M	L	Н	М	L	
Landscape Potential	Н	М	L	Н	М	L	Н	М	L	
Value	Н	М	L	Н	М	L	Н	M	L	TOTAL
Score Based on Ratings		8			8			4		20

_Category IV - Total score = 9 - 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		√	

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	1
Hydroperiods	D 1.4, H 1.2	1
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	1
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	1
Map of the contributing basin	D 4.3, D 5.3	2
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and total habitat	H 2.1, H 2.2, H 2.3	2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	3
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	4

Riverine Wetlands

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

Lake Fringe Wetlands

Zako i i ingo vi o namao		
Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and total habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

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

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 sheet flow, 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).

W	etlan	d name	or numbe	r Wetland 4
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- 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.

 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		HGM class to
being rated		use in rating
Slope + Riverine		Riverine
Slope + Depressional		Depressional
Slope + Lake Fringe		Lake Fringe
Depressional + Riverine along stream		Depressional
within boundary of depression		
Depressional + Lake Fringe		Depressional
Riverine + Lake Fringe		Riverine
Salt Water Tidal Fringe and any other		Treat as
class of freshwater wetland	ш	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 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	3	
Wetland has all disconstricted, or singlify constricted, surface outlet that is permanently flowing boints = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1 D 1.2. The soil 2 in. below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 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 Wetland has persistent, ungrazed plants > ½ of area Wetland has persistent, ungrazed plants ≥ ½ of area Wetland has persistent, ungrazed plants ≥ ½ of area 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 Area seasonally ponded is ≥ ¼ total area of wetland Area seasonally ponded is < ¼ total area of wetland Area seasonally ponded is < ¼ total area of wetland points = 0	2	
Total for D 1 Add the points in the boxes above	8	
Rating of Site Potential If score is:12-16 = H6-11 = M0-5 = L	ne 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	1	
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1	
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	0	
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source Yes = 1 No = 0	1	
Total for D 2 Add the points in the boxes above	3	
Rating of Landscape Potential If score is:3 or 4 = H1 or 2 = M0 = L Record the rating on the	ne 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 = $1 \text{ No} = 0$	1	
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? (Answer YES if there is a TMDL in development or in effect for the basin in which the unit is found.) Yes = 2 No = 0	2	
Total for D 3 Add the points in the boxes above	3	
Rating of Value If score is: \checkmark 2-4 = H1 = M0 = L Record the rating on the	ne 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: Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4 Wetland has an intermittently flowing stream/ditch, OR highly constricted permanently flowing outlet points = 2 Wetland is a flat depression (question 7 on key), whose outlet is a permanently flowing ditch points = 1 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	4	
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part. Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 The wetland is a "headwater" wetland points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in) points = 0	3	
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 area of the wetland unit itself. The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 0 The area of the basin is more than 100 times the area of the unit points = 0 Entire wetland is in the Flats class	3	
Total for D 4 Add the points in the boxes above	10	
Rating of Site Potential If score is:12-16 = H6-11 = M0-5 = L		
D 5.0. Does the landscape have the potential to support hydrologic functions of the site? D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	1	
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0 D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0	1	
Total for D 5 Add the points in the boxes above	3	
Rating of Landscape Potential If score is: 		
D 6.0. Are the hydrologic functions provided by the site valuable to society?		
D 6.1. Is the unit in a landscape that has flooding problems? Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met. The wetland captures surface water that would otherwise flow downgradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): Flooding occurs in a sub-basin that is immediately downgradient of unit. Surface flooding problems are in a sub-basin farther downgradient. Flooding from groundwater is an issue in the sub-basin. Flooding from groundwater is an issue in the sub-basin. The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why points = 0 There are no problems with flooding downstream of the wetland.	2	
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 $No = 0$	0	
Total for D 6 Add the points in the boxes above	2	

Rating of Value If score is: <u>√</u> 2-4 = H ___1 = M ___0 = L

Record the rating on the first page

These questions apply to wetlands HABITAT FUNCTIONS - Indicators that site functions to provide	
H 1.0. Does the site have the potential to provide habitat?	
H 1.1. Structure of plant community: Indicators are Cowardin classes and st Cowardin plant classes in the wetland. Up to 10 patches may be com of ¼ ac if the unit is at least 2.5 ac, or more than 10% of the unit if it Aquatic bed✓ EmergentScrub-shrub (areas where shrubs have > 30% cover)✓ Forested (areas where trees have > 30% cover) If the unit has a Forested class, check if:The Forested class has 3 out of 5 strata (canopy, sub-canopy, sh each cover 20% within the Forested polygon	abined for each class to meet the threshold is smaller than 2.5 ac. 4 structures or more: points = 4 3 structures: points = 2 2 structures: points = 1 1 structure: points = 0
H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the more than 10% of the wetland if the unit is < 2.5 ac, or ¼ ac if the unit descriptions of hydroperiods). Permanently flooded or inundated Seasonally flooded or inundated Occasionally flooded or inundated Saturated only Permanently flowing stream or river in, or adjacent to, the wetland intermittently or seasonally flowing stream in, or adjacent to, the Lake Fringe wetland Freshwater tidal wetland	4 or more types present: points = 3 3 types present: points = 2 2 types present: points = 1 1 type present: points = 0 and
H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least Different patches of the same species can be combined to meet the same the species. Do not include Eurasian milfoil, reed canarygrass If you counted: > 19 species 5 - 19 species < 5 species	size threshold and you do not have to
H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowathe classes and unvegetated areas (can include open water or mudfle have four or more plant classes or three classes and open water, the None = 0 points Low = 1 point All three diagrams in this row are High = 3 points	ardin plants classes (described in H 1.1), or ats) is high, moderate, low, or none. If you

H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. The number of checks is the number of points.	
✓ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft long).	
Standing snags (dbh > 4 in.) within the wetland	
Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extend at least 3.3 ft (1 m)	
over open water or a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)	
Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree	1
slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered	
where wood is exposed)	
At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians)	
Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 above for the	
list of strata and H 1.5 in the manual for the list of aggressive plant species)	
Total for H 1 Add the points in the boxes above	5
Rating of Site Potential If score is:15-18 = H7-14 = M✓_0-6 = L	the first page
H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include only habitat polygons accessible from the wetland.	
Calculate: % relatively undisturbed habitat 0 + [(% moderate and low intensity land uses)/2] 1 = 1 %	
Total accessible habitat is:	
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3	0
20-33% of 1 km Polygon points = 2	
10-19% of 1 km Polygon points = 1	
< 10% of 1 km Polygon points = 0	
H 2.2. Total habitat in 1 km Polygon around the wetland.	
Calculate: % relatively undisturbed habitat $\frac{2}{3}$ + [(% moderate and low intensity land uses)/2] $\frac{38}{3}$ = $\frac{40}{3}$ %	
Total habitat > 50% of Polygon points = 3	
Total habitat 10-50% and in 1-3 patches points = 2	1
Total habitat 10-50% and > 3 patches points = 1	
Total habitat < 10% of 1 km Polygon points = 0	
H 2.3. Land use intensity in 1 km Polygon:	
> 50% of 1 km Polygon is high intensity land use points = (- 2)	-2
≤ 50% of 1 km Polygon is high intensity points = 0	
Total for H 2 Add the points in the boxes above	-1
Rating of Landscape Potential If score is:4-6 = H1-3 = M✓ < 1 = L Record the rating on the	he first page
H 3.0. Is the habitat provided by the site valuable to society?	•
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score	•
that applies to the wetland being rated.	
Site meets ANY of the following criteria: points = 2	
It has 3 or more Priority Habitats within 100 m (see next page)	
It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)	
It is mapped as a location for an individual WDFW Priority Species	1
It is a Wetland of High Conservation Value as determined by the Department of Natural Resources data	
It has been categorized as an important habitat site in a local or regional comprehensive plan, in a	
Shoreline Master Plan, or in a watershed plan Site has 1 or 2 Priority Habitats (listed on next page) within 100 m points = 1	
Site does not meet any of the criteria above points = 0 Rating of Value If score is:2 = H√_1 = M0 = L Record the rating on	4h - E:+ :
Rating of value it score is: J = H J = IVI II = I Record the rating on	ine tirst baae

Wetland Rating System for Western WA: 2014 Update Rating Form – Version 2, July 2023

WDFW Priority Habitats

See complete descriptions of Priority Habitats listed by WDFW, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008 (current year, as revised). <u>Priority Habitat and Species List</u>. ¹³³ This list was updated for consistency with guidance from WDFW.

This question is independent of the land use between the wetland unit and the Priority Habitat. All vegetated wetlands are by definition a Priority Habitat but are not included in this list because they are addressed by this rating system.

Со	unt how many of the following Priority Habitats are within 330 ft (100 m) of the wetland unit:
	Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
V	Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various species of native fish and wildlife. This habitat automatically counts if mapped on the PHS online map within 100m of the wetland. If not mapped, a determination can be made in the field.
	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.
	Fresh Deepwater: Lands permanently flooded with freshwater, including environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live. Substrate does not support emergent vegetation. Do not select if Instream habitat is also present, or if the entire Deepwater feature is included in the wetland unit being rated (such as a pond with a vegetated fringe).
	Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
	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. Do not select if Fresh Deepwater habitat is also present.
	Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore.
	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) diameter at breast height (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.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf
 Wetland Rating System for Western WA: 2014 Update
 Rating Form – Version 2, July 2023

Wetland name or number Wetland 4
Oregon White Oak: Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important. For single oaks or oak stands <0.4 ha in urban areas, WDFW's Management Recommendations for Oregon White Oak 134 provides more detail for determining if they are Priority Habitats
Riparian: The area adjacent to freshwater aquatic systems with flowing or standing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
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.
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.
Westside Prairies: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

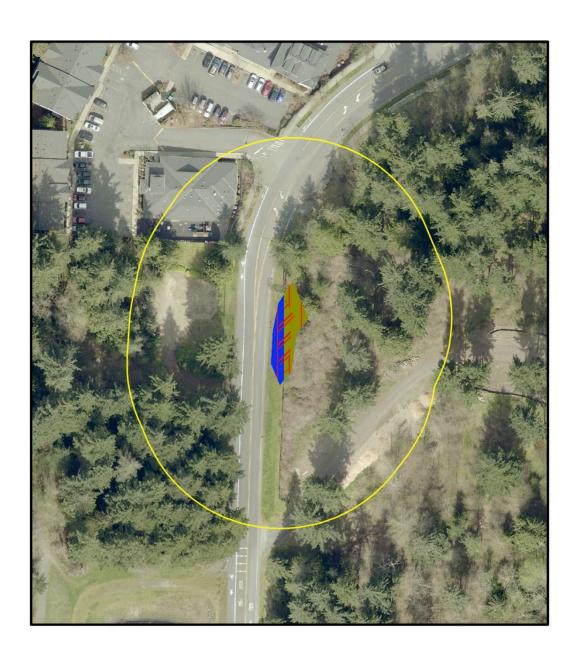
Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	
SC 1.0. Estuarine wetlands	
Does the wetland meet the following criteria for Estuarine wetlands?	
The dominant water regime is tidal,	
Vegetated, and	
With a salinity greater than 0.5 ppt Yes – Go to SC 1.1 No= Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I No – Go to SC 1.2	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
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 chapter 4.8 in themanual.	Cat. I
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.	Cat. II
The wetland has at least two of the following features: tidal channels, depressions with open water, or	
contiguous freshwater wetlands. Yes = Category I No = Category II	
SC 2.0. Wetlands of High Conservation Value (WHCV)	
SC 2.1. Does the wetland overlap with any known or historical rare plant or rare & high-quality ecosystem polygons	
on the WNHP <u>Data Explorer</u> ? ¹³⁵ Yes = Category I No – Go to SC 2.2	Cat. I
SC 2.2. Does the wetland have a rare plant species, rare ecosystem (e.g., plant community), or high-quality common	
ecosystem that may qualify the site as a WHCV? Contact WNHP for resources to help determine the presence of these elements.	
Yes – Submit data to WA Natural Heritage Program for determination, ¹³⁶ Go to SC 2.3 No = Not a WHCV	
SC 2.3. Did WNHP review the site within 30 days and determine that it has a rare plant or ecosystem that meets their	
criteria? Yes = Category I No = Not a WHCV	
The carry of the mera miles	
SC 3.0. Bogs	
Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key	
below. If you answer YES, you will still need to rate the wetland based on its functions. SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in.	
or more of the first 32 in. of the soil profile? Yes – Go to SC 3.3 No – Go to SC 3.2	
SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in. deep	
over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to SC 3.3 No = Not a bog	
SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30%	
cover of plant species listed in Table 4? Yes = Category I bog No – Go to SC 3.4	
NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by	
measuring the pH of the water that seeps into a hole dug at least 16 in. deep. If the pH is less than 5.0 and	Cat. I
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,	Cat.
western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the	
species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	
Yes = Category I bog No = Not a bog	

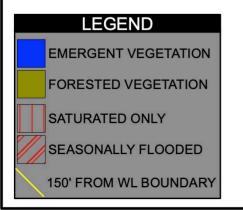
¹³⁵ https://www.dnr.wa.gov/NHPdata

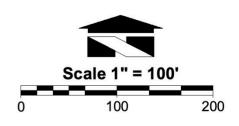
¹³⁶ https://www.dnr.wa.gov/Publications/amp_nh_sighting_form.pdf Wetland Rating System for Western WA: 2014 Update Rating Form – Version 2, July 2023

SC 4.0. Forested Wetlands	
Does the wetland have at least 1 contiguous acre 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>	
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.	
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).	
Yes = Category I No = Not a forested wetland for this section	Cat. I
SC 5.0. Wetlands in Coastal Lagoons	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
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	
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 (needs to be measured near the bottom)	
The lagoon retains some of its surface water at low tide during spring tides	
Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon	Cat. I
SC 5.1. Does the wetland meet all of the following three conditions?	
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 in H 1.5 in the manual).	
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.	Cat. II
The wetland is larger than $^{1}/_{10}$ ac (4350 ft ²)	
Yes = Category I No = Category II	
SC 6.0. Interdunal Wetlands	
Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If you answer YES, you will still need to rate the wetland based on its habitat functions.	
In practical terms that means the following geographic areas: Long Beach Peninsula: Lands west of SR 103	
Grayland-Westport: Lands west of SR 105	Cat I
Ocean Shores-Copalis: Lands west of SR 115 and SR 109 and Ocean Shores Blvd SW, including lands west of E. Oceans Shores Blvd SW.	
Yes – Go to SC 6.1 No = Not an interdunal wetland for rating	C-+ II
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	Cat. II
for the three aspects of function)? Yes = Category I No – Go to SC 6.2 SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?	Cat. III
Yes = Category II No – Go to SC 6.3	
SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?	
Yes = Category III No = Category IV	Cat. IV
Category of wetland based on Special Characteristics	
If you answered No for all types, enter "Not Applicable" on Summary Form	

CITY OF MILL CREEK - SPORTS PARK MASTER PLAN WETLAND RATING FIGURE 1- WETLAND 4







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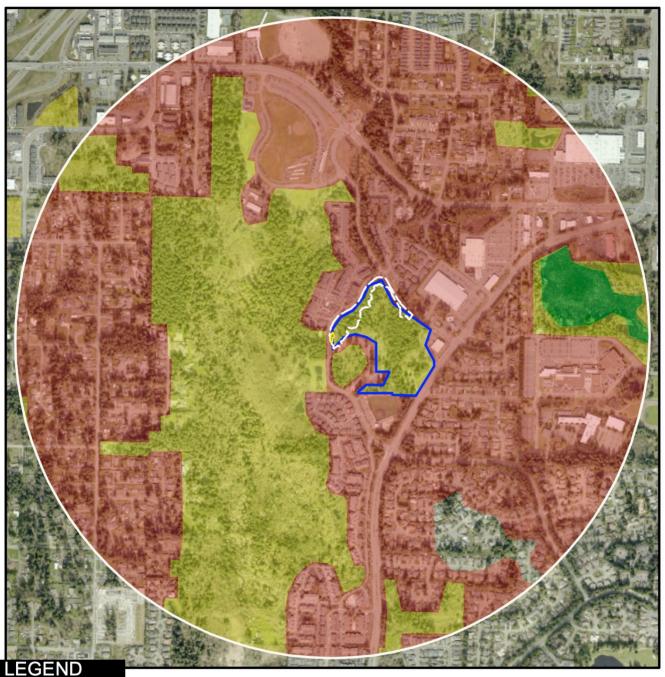
Phone: (425) 337-317 Fax: (425) 337-3045

Email: mailbox@wetlandresources.com

WETLAND RATING Wetland 4

Figure 4-1 WRI Job # 24031 Rated by: ASW

CITY OF MILL CREEK - SPORTS PARK MASTER PLAN WETLAND RATING FIGURE 2- WETLAND 4



RELATIVELY UNDISTURBED LOW/MOD. INTENSITY HIGH INTENSITY

ACCESSIBLE HABITAT

WETLAND

1 KM FROM WETLAND CONTRIBUTING BASIN CONTRIBUTING BASIN AREA RELATIVE TO WETLAND UNIT IS 60:1

Scale 1" = 1,000' 0 1,000

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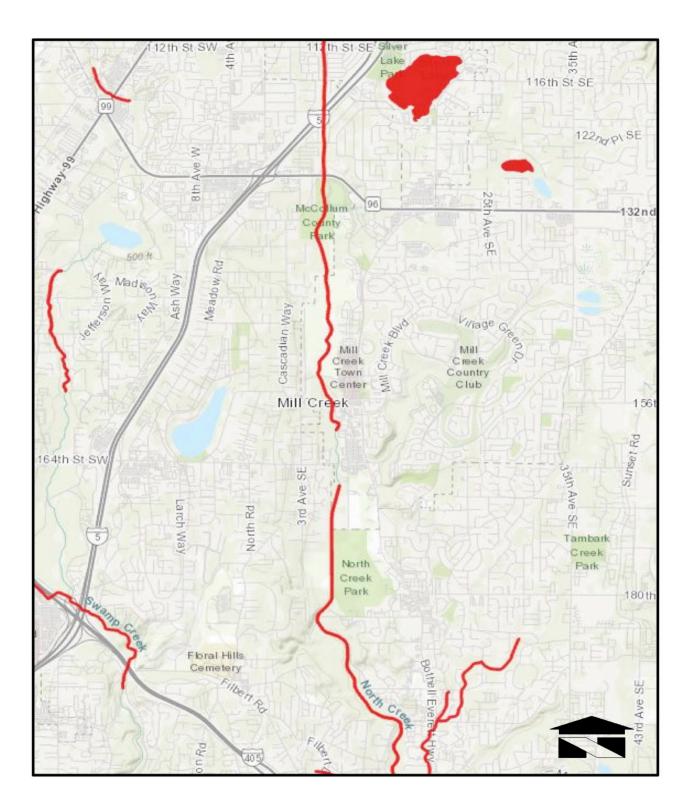
Email: mailbox@wetlandresources.com

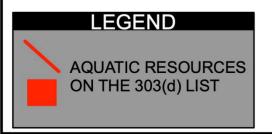
WETLAND RATING Wetland 4

Figure 4-2 WRI Job # 24031 Rated by: ASW

2,000

CITY OF MILL CREEK - SPORTS PARK MASTER PLAN WETLAND RATING FIGURE 3- WETLAND 4







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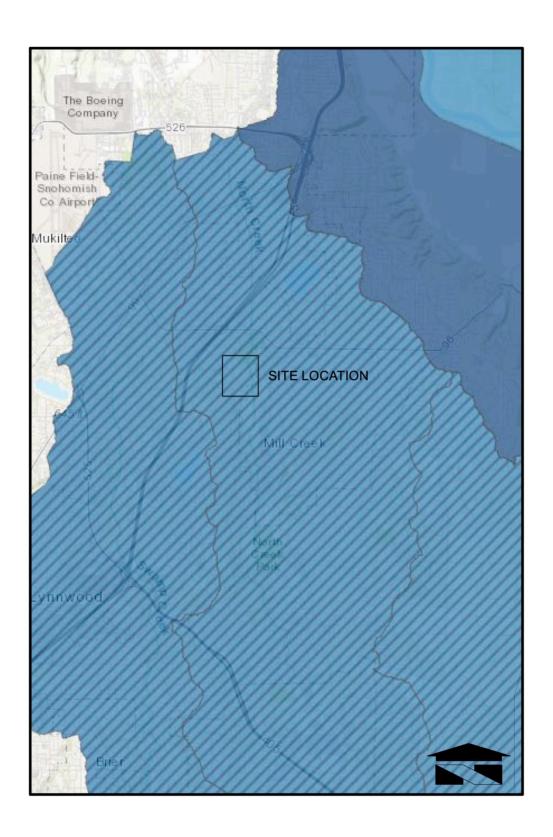
Phone: (425) 337-317 Fax: (425) 337-3045

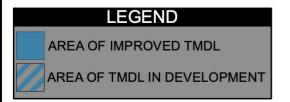
Email: mailbox@wetlandresources.com

WETLAND RATING Wetland 4

Figure 4-3 WRI Job # 24031 Rated by: ASW

CITY OF MILL CREEK - SPORTS PARK MASTER PLAN WETLAND RATING FIGURE 4- WETLAND 4







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Fax: (425) 337-3045

Email: mailbox@wetlandresources.com

WETLAND RATING Wetland 4

Figure 4-4 WRI Job # 24031 Rated by: ASW

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 5	Date of site visit: <u>3/29/</u> 24
Rated by ASW, SS	_ Trained by Ecology? ✓ YesNo Date of training 6-22
HGM Class used for rating Depressiona	Wetland has multiple HGM classes? ✓ YN
NOTE: Form is not complete without Source of base aerial photo/ma	out the required figures (figures can be combined). Snohomish County
OVERALL WETLAND CATEGORY _	(based on functions ✓ or special characteristics_)
1. Category of wetland based on Fl	JNCTIONS
Category I – Total score	e = 23 - 27 Score for each
Category II – Total scor	e = 20 - 22 function based
✓Category III – Total sco	re = 16 - 19 on three

FUNCTION	Improving Water Quality		Hydrologic		Habitat					
				C	ircle th	е арр	oropri	ate rati	ings	
Site Potential	Н	M	L	Ι	М	L	Н	М	L	
Landscape Potential	Н	M	L	Н	M	L	Н	М	L	
Value	Н	М	L	Н	М	L	Н	M	L	TOTAL
Score Based on Ratings		7			8			4		19

Category IV - Total score = 9 - 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		√

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	1
Hydroperiods	D 1.4, H 1.2	1
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	1
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	1
Map of the contributing basin	D 4.3, D 5.3	2
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and total habitat	H 2.1, H 2.2, H 2.3	2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	3
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	4

Riverine Wetlands

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

Lake Fringe Wetlands

Zako i i ingo vi otiai i ao		
Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and total habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

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

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 sheet flow, 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).

Wetland	name	or number	Wetland 5
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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.
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		HGM class to
being rated		use in rating
Slope + Riverine		Riverine
Slope + Depressional		Depressional
Slope + Lake Fringe		Lake Fringe
Depressional + Riverine along stream		Depressional
within boundary of depression		
Depressional + Lake Fringe		Depressional
Riverine + Lake Fringe		Riverine
Salt Water Tidal Fringe and any other		Treat as
class of freshwater wetland	ш	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 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.	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 Wetland has persistent, ungrazed plants > ½ of area Wetland has persistent, ungrazed plants ≥ ¹/₁₀ of area Wetland has persistent, ungrazed plants <¹/₁₀ of area 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 Area seasonally ponded is ≥ ¼ total area of wetland Area seasonally ponded is < ¼ total area of wetland points = 2 points = 0	2		
Total for D 1 Add the points in the boxes above	10		
Rating of Site Potential If score is:12-16 = H	Jirst 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 D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	1		
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source Yes = 1 No = 0	0		
Total for D 2 Add the points in the boxes above	1		
Rating of Landscape Potential If score is:3 or 4 = H1 or 2 = M0 = 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	1		
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? (Answer YES if there is a TMDL in development or in effect for the basin in which the unit is found.) Yes = 2 No = 0	2		
Total for D 3 Add the points in the boxes above	3		
Rating of Value If score is: ✓ 2-4 = H1 = M0 = 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: Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4 Wetland has an intermittently flowing stream/ditch, OR highly constricted permanently flowing outlet points = 2 Wetland is a flat depression (question 7 on key), whose outlet is a permanently flowing ditch points = 1 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	4		
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part. Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 The wetland is a "headwater" wetland points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in) points = 0	5		
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 area of the wetland unit itself. The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire wetland is in the Flats class	5		
Total for D 4 Add the points in the boxes above	14		
Rating of Site Potential If score is:12-16 = H6-11 = M0-5 = L	Jirst page		
D 5.0. Does the landscape have the potential to support hydrologic functions of the site? D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	0		
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 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.)? Yes = 1 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 = M0 = L	first page		
D 6.0. Are the hydrologic functions provided by the site valuable to society?			
D 6.1. Is the unit in a landscape that has flooding problems? Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met. The wetland captures surface water that would otherwise flow downgradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): Flooding occurs in a sub-basin that is immediately downgradient of unit. Surface flooding problems are in a sub-basin farther downgradient. Flooding from groundwater is an issue in the sub-basin. Flooding from groundwater is an issue in the sub-basin. The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why points = 0 There are no problems with flooding downstream of the wetland.	2		
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0			
Total for D 6 Add the points in the boxes above	2		

Rating of Value If score is: <u>√</u> 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 if the unit is at least 2.5 ac, or more than 10% of the unit if it is smaller than 2.5 ac. Aquatic bed4 structures or more: points = 4Emergent3 structures: points = 2Scrub-shrub (areas where shrubs have > 30% cover)2 structures: points = 1	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 if the unit is < 2.5 ac, or ¼ ac if the unit is at least 2.5 ac to count (see text for descriptions of hydroperiods). Permanently flooded or inundated Permanently flooded or inundated Occasionally flooded or inundated V Saturated only Permanently flowing stream or river in, or adjacent to, the wetland Intermittently or seasonally flowing stream in, or adjacent to, the wetland Lake Fringe wetland Permanently flowing stream in, or adjacent to, the wetland Lake Fringe wetland Permanently flowing stream in, or adjacent to, the wetland Lake Fringe wetland Permanently flowing stream in, or adjacent to, the wetland Lake Fringe wetland Permanently flowing stream in, or adjacent to, the wetland Permanently flowing stream in, or adjacent to, the wetland Permanently flowing stream in, or adjacent to, the wetland Permanently flowing stream in, or adjacent to, the wetland Permanently flowing stream in, or adjacent to, the wetland Permanently flowing stream in, or adjacent to, the wetland Permanently flowing stream in, or adjacent to, the wetland Permanently flowing stream in, or adjacent to, the wetland	1
Count the number of plant species in the wetland that cover at least 10 ft ² . 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, Canada thistle If you counted: > 19 species 5 - 19 species points = 1 < 5 species points = 0	0
H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. None = 0 points Low = 1 point Moderate = 2 points All three diagrams in this row are High = 3 points	0

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. The number of checks is the number of points. Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft long). Standing snags (dbh > 4 in.) within the wetland Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extend at least 3.3 ft (1 m) over open water or a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) 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 (cut shrubs or trees that have not yet weathered where wood is exposed) At least ½ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians) Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 above for the	0
list of strata and H 1.5 in the manual for the list of aggressive plant species)	
Total for H 1 Add the points in the boxes above	1
Rating of Site Potential If score is:15-18 = H7-14 = M✓_0-6 = L Record the rating on a	the first page
H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include only habitat polygons accessible from the wetland. Calculate: % relatively undisturbed habitat 0 + [(% moderate and low intensity land uses)/2] 0 = 0 % Total accessible habitat is: > ¹/₃ (33.3%) of 1 km Polygon points = 3 20-33% of 1 km Polygon points = 1 10-19% of 1 km Polygon points = 1 10-10% of 1 km Polygon points = 0 H 2.2. Total habitat in 1 km Polygon around the wetland. Calculate: % relatively undisturbed habitat 2 + [(% moderate and low intensity land uses)/2] 40 = 42 % Total habitat > 50% of Polygon points = 3 Total habitat 10-50% and in 1-3 patches Total habitat 10-50% and > 3 patches Total habitat < 10% of 1 km Polygon points = 0 H 2.3. Land use intensity in 1 km Polygon: > 50% of 1 km Polygon is high intensity land use points = 0	1 -2
Total for H 2 Add the points in the boxes above	-1
Rating of Landscape Potential If score is:4-6 = H1-3 = M✓<1 = L	ne first page
H 3.0. Is the habitat provided by the site valuable to society?	_
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score that applies to the wetland being rated. Site meets ANY of the following criteria: points = 2 It has 3 or more Priority Habitats within 100 m (see next page) It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) It is mapped as a location for an individual WDFW Priority Species It is a Wetland of High Conservation Value as determined by the Department of Natural Resources data It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 Priority Habitats (listed on next page) within 100 m points = 1 Site does not meet any of the criteria above	1

Rating of Value If score is: __2 = H ____1 = M ____0 = L

Record the rating on the first page

WDFW Priority Habitats

See complete descriptions of Priority Habitats listed by WDFW, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008 (current year, as revised). <u>Priority Habitat and Species List</u>. ¹³³ This list was updated for consistency with guidance from WDFW.

This question is independent of the land use between the wetland unit and the Priority Habitat. All vegetated wetlands are by definition a Priority Habitat but are not included in this list because they are addressed by this rating system.

Со	ount how many of the following Priority Habitats are within 330 ft (100 m) of the wetland unit:
	Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
V	Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various species of native fish and wildlife. This habitat automatically counts if mapped on the PHS online map within 100m of the wetland. If not mapped, a determination can be made in the field.
	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.
	\Box cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
	Fresh Deepwater: Lands permanently flooded with freshwater, including environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live. Substrate does not support emergent vegetation. Do not select if Instream habitat is also present, or if the entire Deepwater feature is included in the wetland unit being rated (such as a pond with a vegetated fringe).
	Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
	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. Do not select if Fresh Deepwater habitat is also present.
	Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore.
	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) diameter at breast height (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.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf
 Wetland Rating System for Western WA: 2014 Update
 Rating Form – Version 2, July 2023

Wetl	land name or number <u>Wetland</u> 5
t	Dregon White Oak: Woodland stands of pure oak or oak/conifer associations where canopy coverage of he oak component is important. For single oaks or oak stands <0.4 ha in urban areas, <u>WDFW's</u> <u>Management Recommendations for Oregon White Oak</u> 134 provides more detail for determining if they are Priority Habitats
	Riparian: The area adjacent to freshwater aquatic systems with flowing or standing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
c	Sinags 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 neight of > 20 in. (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 n. (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.
b	Falus: Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of pasalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
	Westside Prairies: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie.

https://wdfw.wa.gov/publications/00030/wdfw00030.pdf
 Wetland Rating System for Western WA: 2014 Update
 Rating Form – Version 2, July 2023

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	
SC 1.0. Estuarine wetlands	
Does the wetland meet the following criteria for Estuarine wetlands?	
The dominant water regime is tidal,	
Vegetated, and	
With a salinity greater than 0.5 ppt Yes – Go to SC 1.1 No= Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	
Yes = Category I No – Go to SC 1.2	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
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 chapter 4.8 in the	Cat. I
manual.	
At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-	Cat. II
mowed grassland.	Cat. II
The wetland has at least two of the following features: tidal channels, depressions with open water, or	
contiguous freshwater wetlands. Yes = Category I No = Category II	
SC 2.0. Wetlands of High Conservation Value (WHCV)	
SC 2.1. Does the wetland overlap with any known or historical rare plant or rare & high-quality ecosystem polygons	C-4 1
on the WNHP <u>Data Explorer</u> ? ¹³⁵ Yes = Category I No – Go to SC 2.2	Cat. I
SC 2.2. Does the wetland have a rare plant species, rare ecosystem (e.g., plant community), or high-quality common	
ecosystem that may qualify the site as a WHCV? Contact WNHP for resources to help determine the presence of these elements.	
Yes – <u>Submit data to WA Natural Heritage Program for determination</u> , ¹³⁶ Go to SC 2.3 No = Not a WHCV	
SC 2.3. Did WNHP review the site within 30 days and determine that it has a rare plant or ecosystem that meets their	
criteria?	
Yes = Category I No = Not a WHCV	
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</i>	
below. If you answer YES, you will still need to rate the wetland based on its functions.	
SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in.	
or more of the first 32 in. of the soil profile? Yes – Go to SC 3.3 No – Go to SC 3.2	
SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in. deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating o <u>n top of a lake or</u>	
pond? Yes – Go to SC 3.3 No = Not a bog	
SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30%	
cover of plant species listed in Table 4? Yes = Category I bog No – Go to SC 3.4	
NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by	
measuring the pH of the water that seeps into a hole dug at least 16 in. deep. If the pH is less than 5.0 and	
the plant species in Table 4 are present, the wetland is a bog.	Cat. I
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar,	
western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	
Yes = Category I bog No = Not a bog	

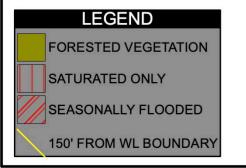
¹³⁵ https://www.dnr.wa.gov/NHPdata

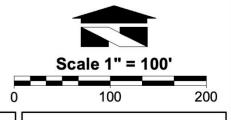
¹³⁶ https://www.dnr.wa.gov/Publications/amp_nh_sighting_form.pdf Wetland Rating System for Western WA: 2014 Update Rating Form – Version 2, July 2023

SC 4.0. Forested Wetlands	
Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as Priority Habitats? If you answer YES, you will still need to rate the wetland based on its functions. 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. 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). Yes = Category I No = Not a forested wetland for this section	Cat. I
SC 5.0. Wetlands in Coastal Lagoons	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
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	
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 (needs to be measured near the bottom)	
The lagoon retains some of its surface water at low tide during spring tides	
Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon	Cat. I
SC 5.1. Does the wetland meet all of the following three conditions?	
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 in H 1.5 in the manual).	
At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland.	Cat. II
The wetland is larger than $^{1}/_{10}$ ac (4350 ft ²)	
Yes = Category I No = Category II	
SC 6.0. Interdunal Wetlands	
Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If you answer YES, you will still need to rate the wetland based on its habitat functions.	
In practical terms that means the following geographic areas:	
Long Beach Peninsula: Lands west of SR 103	
Grayland-Westport: Lands west of SR 105	Cat I
Ocean Shores-Copalis: Lands west of SR 115 and SR 109 and Ocean Shores Blvd SW, including lands west of E. Oceans Shores Blvd SW.	
Yes – Go to SC 6.1 No = Not an interdunal wetland for rating	
<u> </u>	Cat. II
SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M	
for the three aspects of function)? Yes = Category I No – Go to SC 6.2	Cat. III
SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = Category II No – Go to SC 6.3	•
SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?	
Yes = Category III No = Category IV	Cat. IV
Category of wetland based on Special Characteristics	
If you answered No for all types, enter "Not Applicable" on Summary Form	

CITY OF MILL CREEK - SPORTS PARK MASTER PLAN WETLAND RATING FIGURE 1- WETLAND 5







Wetland Resources, Inc.

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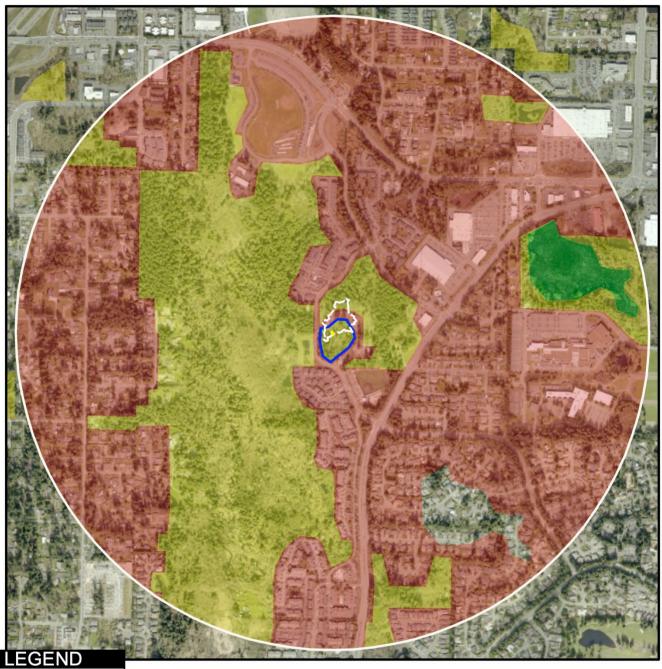
Phone: (425) 337-317-Fax: (425) 337-3045

Email: mailbox@wetlandresources.com

WETLAND RATING
Wetland 5

Figure 5-1 WRI Job # 24031 Rated by: ASW

CITY OF MILL CREEK - SPORTS PARK MASTER PLAN WETLAND RATING FIGURE 2- WETLAND 5



RELATIVELY
UNDISTURBED
LOW/MOD.
INTENSITY
HIGH
INTENSITY
ACCESSIBLE
HABITAT

WETLAND

1 KM FROM WETLAND CONTRIBUTING BASIN

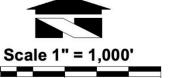


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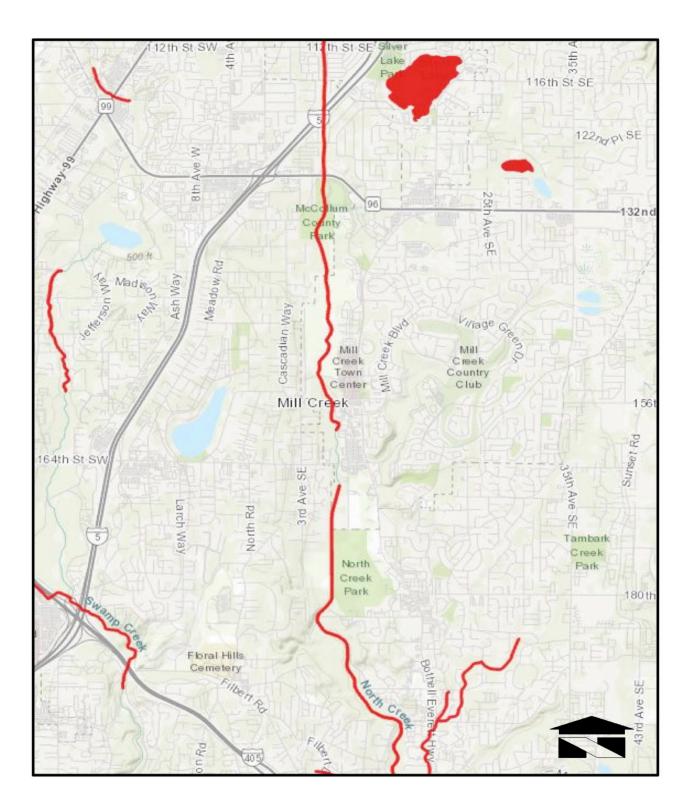
WETLAND RATING
Wetland 5

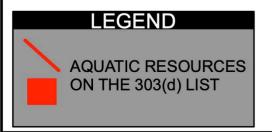
1,000

Figure 5-2 WRI Job # 24031 Rated by: ASW

2,000

CITY OF MILL CREEK - SPORTS PARK MASTER PLAN WETLAND RATING FIGURE 3- WETLAND 5







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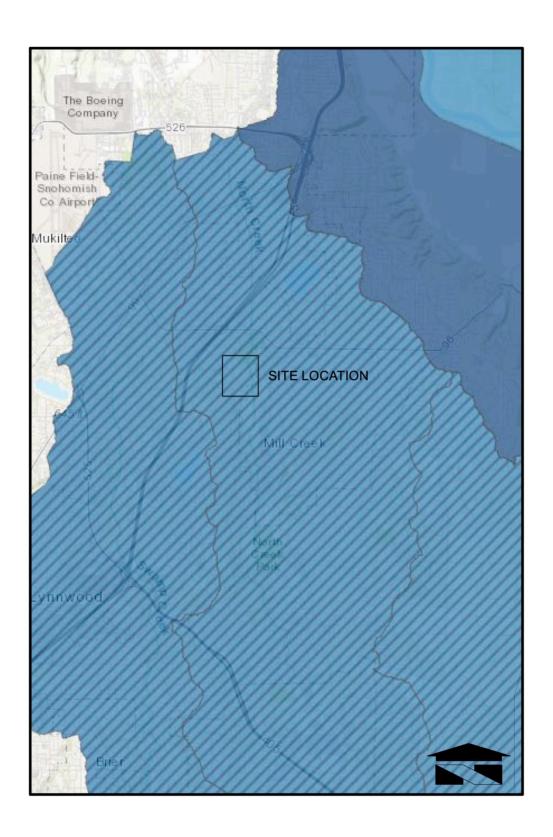
Fax: (425) 337-3045

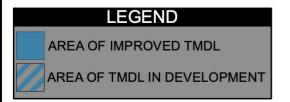
Email: mailbox@wetlandresources.com

WETLAND RATING Wetland 5

Figure 5-3 WRI Job # 24031 Rated by: ASW

CITY OF MILL CREEK - SPORTS PARK MASTER PLAN WETLAND RATING FIGURE 4- WETLAND 5







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WETLAND RATING Wetland 5

Figure 5-4 WRI Job # 24031 Rated by: ASW

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland A	Date of site	visit: <u>3-29-2</u> 4		
Rated by ASW, SS	_ Trained by Ecology? <u> </u>	Date of training 6-22		
HGM Class used for rating Depressiona	Wetland has multiple HGM cla	asses? <u>✓</u> YN		
NOTE: Form is not complete without the required figures (figures can be combined). Source of base aerial photo/map Snohomish County				
OVERALL WETLAND CATEGORY	∐ (based on functions ✓ or specia	l characteristics)		
1. Category of wetland based on FU	JNCTIONS			
Category I – Total score	e = 23 - 27	f		
Category II − Total score	e = 20 - 22 f	core for each unction based		
Category III – Total scor		on three atings		
Category IV – Total scor	re = 0 - 15	order of ratings		

FUNCTION	,	iprovii Water Quality	•	Ну	drolo	gic	Н	labita	t	
				C	ircle th	е арр	oropri	ate rat	ings	
Site Potential	Н	M	L	Н	M	L	Н	M	L	
Landscape Potential	Н	М	L	H	М	L	Н	М	一	
Value	Н	М	L	Н	М	L	Н	М	L	TOTAL
Score Based on Ratings		8	·		8	·		6		22

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	САТ	EGORY
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		√

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	1
Hydroperiods	D 1.4, H 1.2	1
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	1
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	1
Map of the contributing basin	D 4.3, D 5.3	2
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and total habitat	H 2.1, H 2.2, H 2.3	2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	3
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	4

Riverine Wetlands

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

Lake Fringe Wetlands

Zako i i ingo vi otiai i ao		
Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and total habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

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

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 sheet flow, 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).

Wetland name or number Wetland A

- 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.

 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		HGM class to
being rated		use in rating
Slope + Riverine		Riverine
Slope + Depressional		Depressional
Slope + Lake Fringe		Lake Fringe
Depressional + Riverine along stream		Depressional
within boundary of depression		
Depressional + Lake Fringe		Depressional
Riverine + Lake Fringe		Riverine
Salt Water Tidal Fringe and any other		Treat as
class of freshwater wetland	ш	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 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.	1
D 1.2. The soil 2 in. below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0	4
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 Wetland has persistent, ungrazed plants > ½ of area Wetland has persistent, ungrazed plants ≥ ¹/₁₀ of area Wetland has persistent, ungrazed plants <¹/₁₀ of area 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 Area seasonally ponded is ≥ ¼ total area of wetland Area seasonally ponded is < ¼ total area of wetland Points = 2 points = 0	0
Total for D 1 Add the points in the boxes above	10
Rating of Site Potential If score is:12-16 = H	Jirst 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	_
	1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0 D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	1
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source Yes = 1 No = 0	1
Total for D 2 Add the points in the boxes above	3
Rating of Landscape Potential If score is: √3 or 4 = H1 or 2 = M0 = 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	1
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	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? (Answer YES if there is a TMDL in development or in effect for the basin in which the unit is found.) Yes = 2 No = 0	2
Total for D 3 Add the points in the boxes above	4
Rating of Value If score is: ✓ 2-4 = H1 = M0 = L Record the rating on the	first page

DEPRESSIONAL AND FLATS WETLANDS Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradate	ion
D 4.0. Does the site have the potential to reduce flooding and erosion?	
D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) Wetland has an intermittently flowing stream/ditch, OR highly constricted permanently flowing outlet points = 2 Wetland is a flat depression (question 7 on key), whose outlet is a permanently flowing ditch Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	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. Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 The wetland is a "headwater" wetland points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in)	5
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 area of the wetland unit itself. The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire wetland is in the Flats class points = 5	3
Total for D 4 Add the points in the boxes above Rating of Site Potential If score is:12-16 = H√_6-11 = M0-5 = L Record the rating on the	first nage
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?	- Just page
D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	1
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	1
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0	1
Total for D 5 Add the points in the boxes above	3
Rating of Landscape Potential If score is: <u>√</u> 3 = H <u>1 or 2 = M</u> <u>0 = L</u> Record the rating on the	first page
D 6.0. Are the hydrologic functions provided by the site valuable to society?	
D 6.1. Is the unit in a landscape that has flooding problems? Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met. The wetland captures surface water that would otherwise flow downgradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): Flooding occurs in a sub-basin that is immediately downgradient of unit. points = 2 Surface flooding problems are in a sub-basin farther downgradient. Flooding from groundwater is an issue in the sub-basin. Flooding from groundwater is an issue in the sub-basin. The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why points = 0 There are no problems with flooding downstream of the wetland.	2
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = $2 \text{ No} = 0$	0
Total for D 6 Add the points in the boxes above	2

Rating of Value If score is: <u>√</u> 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 if the unit is at least 2.5 ac, or more than 10% of the unit if it is smaller than 2.5 ac. Aquatic bed	4
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 if the unit is < 2.5 ac, or ¼ ac if the unit is at least 2.5 ac to count (see text for descriptions of hydroperiods). Permanently flooded or inundated Permanently flooded or inundated Occasionally flooded or inundated Y Saturated only Permanently flowing stream or river in, or adjacent to, the wetland Intermittently or seasonally flowing stream in, or adjacent to, the wetland Lake Fringe wetland Preshwater tidal wetland 2 points	2
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, Canada thistle If you counted: > 19 species 5 - 19 species points = 1 < 5 species points = 0	2
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 = 3 points	2

H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. The number of checks is the number of points.	
✓ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft long).	
✓ Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extend at least 3.3 ft (1 m)	
over open water or a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)	
Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree	3
slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered	
where wood is exposed)	
At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are	
permanently or seasonally inundated (structures for egg-laying by amphibians)	
Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 above for the list of strata and H 1.5 in the manual for the list of aggressive plant species)	
Total for H 1 Add the points in the boxes above	13
Rating of Site Potential If score is:15-18 = H√_7-14 = M0-6 = L	
	jə. p.age
H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include only habitat polygons accessible from the wetland.	
Calculate: % relatively undisturbed habitat $0 + (\% \text{ moderate and low intensity land uses})/2] 3 = 3 %$	
Total accessible habitat is:	
	0
20-33% of 1 km Polygon points = 2	
10-19% of 1 km Polygon points = 1	
7 < 10% of 1 km Polygon points = 0	
H 2.2. Total habitat in 1 km Polygon around the wetland.	
Calculate: % relatively undisturbed habitat $\frac{1}{2}$ + [(% moderate and low intensity land uses)/2] $\frac{13}{2}$ = $\frac{14}{2}$ % Total habitat > 50% of Polygon points = 3	
Total habitat > 50% of Polygon points = 3 Total habitat 10-50% and in 1-3 patches points = 2	1
Total habitat 10-50% and > 3 patches points = 1	
Total habitat < 10% of 1 km Polygon points = 0	
H 2.3. Land use intensity in 1 km Polygon:	
> 50% of 1 km Polygon is high intensity land use points = (-2)	-2
≤ 50% of 1 km Polygon is high intensity points = 0	_
Total for H 2 Add the points in the boxes above	-1
Rating of Landscape Potential If score is:4-6 = H1-3 = M✓ < 1 = L	he first page
H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score	
that applies to the wetland being rated.	
Site meets ANY of the following criteria: points = 2	
It has 3 or more Priority Habitats within 100 m (see next page)	
It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)	
It is mapped as a location for an individual WDFW Priority Species	2
It is a Wetland of High Conservation Value as determined by the Department of Natural Resources data	
It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan	
Site has 1 or 2 Priority Habitats (listed on next page) within 100 m	
Site does not meet any of the criteria above points = 0	
5.55 4565 Hot most any of the distorte above	

Wetland Rating System for Western WA: 2014 Update Rating Form – Version 2, July 2023

WDFW Priority Habitats

See complete descriptions of Priority Habitats listed by WDFW, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008 (current year, as revised). <u>Priority Habitat and Species List</u>. ¹³³ This list was updated for consistency with guidance from WDFW.

This question is independent of the land use between the wetland unit and the Priority Habitat. All vegetated wetlands are by definition a Priority Habitat but are not included in this list because they are addressed by this rating system.

Со	unt how many of the following Priority Habitats are within 330 ft (100 m) of the wetland unit:
	Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
V	Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various species of native fish and wildlife. This habitat automatically counts if mapped on the PHS online map within 100m of the wetland. If not mapped, a determination can be made in the field.
	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.
	Fresh Deepwater: Lands permanently flooded with freshwater, including environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live. Substrate does not support emergent vegetation. Do not select if Instream habitat is also present, or if the entire Deepwater feature is included in the wetland unit being rated (such as a pond with a vegetated fringe).
	Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
V	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. Do not select if Fresh Deepwater habitat is also present.
	Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore.
	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) diameter at breast height (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.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf
 Wetland Rating System for Western WA: 2014 Update
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We	tland name or number <u>Wetland</u> A
	Oregon White Oak: Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important. For single oaks or oak stands <0.4 ha in urban areas, <u>WDFW's</u> <u>Management Recommendations for Oregon White Oak</u> 134 provides more detail for determining if they are Priority Habitats
	Riparian: The area adjacent to freshwater aquatic systems with flowing or standing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
	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.
	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.
	Westside Prairies: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

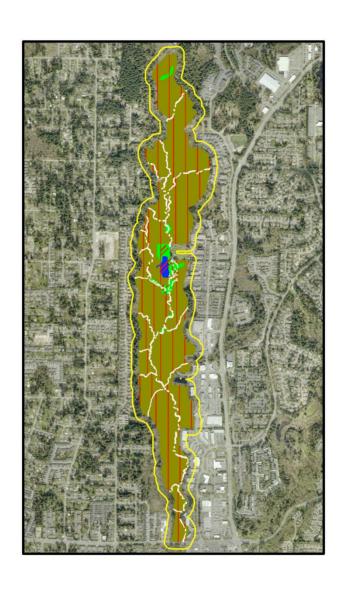
Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	
SC 1.0. Estuarine wetlands	
Does the wetland meet the following criteria for Estuarine wetlands?	
The dominant water regime is tidal,	
Vegetated, and	
With a salinity greater than 0.5 ppt Yes – Go to SC 1.1 No= Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area	
Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
Yes = Category I No – Go to SC 1.2	
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less	Cat. I
than 10% cover of non-native plant species. If non-native species are <i>Spartina</i> , see chapter 4.8 in the	Cat.
manual.	
At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland.	Cat. II
The wetland has at least two of the following features: tidal channels, depressions with open water, or	
contiguous freshwater wetlands. Yes = Category I No = Category II	
	ļ
SC 2.0. Wetlands of High Conservation Value (WHCV)	
SC 2.1. Does the wetland overlap with any known or historical rare plant or rare & high-quality ecosystem polygons	Cat. I
on the WNHP Data Explorer? 135 Yes = Category I No – Go to SC 2.2	Cat.
SC 2.2. Does the wetland have a rare plant species, rare ecosystem (e.g., plant community), or high-quality common	
ecosystem that may qualify the site as a WHCV? Contact WNHP for resources to help determine the presence of these elements.	
Yes – <u>Submit data to WA Natural Heritage Program for determination</u> , ¹³⁶ Go to SC 2.3 No = Not a WHCV	
SC 2.3. Did WNHP review the site within 30 days and determine that it has a rare plant or ecosystem that meets their	
criteria?	
Yes = Category I No = Not a WHCV	
SC 3.0. Bogs	
Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key	
below. If you answer YES, you will still need to rate the wetland based on its functions.	
SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in.	
or more of the first 32 in. of the soil profile? Yes – Go to SC 3.3 No – Go to SC 3.2 SC 3.2 Does an area within the westland unit have organic soils either neats or mucks, that are less than 16 in door	
SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in. deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or	
pond? Yes – Go to SC 3.3 No = Not a bog	
SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30%	
cover of plant species listed in Table 4? Yes = Category I bog No – Go to SC 3.4	
NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by	
measuring the pH of the water that seeps into a hole dug at least 16 in. deep. If the pH is less than 5.0 and	
the plant species in Table 4 are present, the wetland is a bog.	Cat. I
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar,	
western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the	
species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	
Yes = Category I bog No = Not a bog	

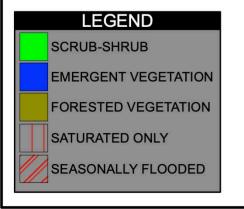
¹³⁵ https://www.dnr.wa.gov/NHPdata

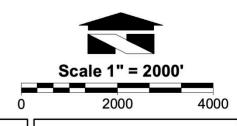
¹³⁶ https://www.dnr.wa.gov/Publications/amp_nh_sighting_form.pdf Wetland Rating System for Western WA: 2014 Update Rating Form – Version 2, July 2023

SC 4.0. Forested Wetlands	
Does the wetland have at least 1 contiguous acre 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>	
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.	
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).	
Yes = Category I No = Not a forested wetland for this section	Cat. I
SC 5.0. Wetlands in Coastal Lagoons	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
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	
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 (needs to be measured near the bottom)	
The lagoon retains some of its surface water at low tide during spring tides	
Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon	Cat. I
SC 5.1. Does the wetland meet all of the following three conditions?	
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 in H 1.5 in the manual).	
At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland.	Cat. II
The wetland is larger than $^{1}/_{10}$ ac (4350 ft ²)	
Yes = Category I No = Category II	
SC 6.0. Interdunal Wetlands	
Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If you answer YES, you will still need to rate the wetland based on its habitat functions.	
In practical terms that means the following geographic areas: Long Beach Peninsula: Lands west of SR 103	
Grayland-Westport: Lands west of SR 105	Cat I
Ocean Shores-Copalis: Lands west of SR 115 and SR 109 and Ocean Shores Blvd SW, including lands west of E. Oceans Shores Blvd SW.	
Yes – Go to SC 6.1 No = Not an interdunal wetland for rating	C-+ II
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	Cat. II
for the three aspects of function)? Yes = Category I No – Go to SC 6.2 SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?	Cat. III
Yes = Category II No – Go to SC 6.3	
SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?	
Yes = Category III No = Category IV	Cat. IV
Category of wetland based on Special Characteristics	
If you answered No for all types, enter "Not Applicable" on Summary Form	

CITY OF MILL CREEK - SPORTS PARK MASTER PLAN WETLAND RATING FIGURE 1- WETLAND A







Wetland Resources, Inc.

Delineation / Mitigation / Restoration / Habitat Creation / Permit Assistance 9505 19th Avenue S.E. Suite 106 Everett, Washington 98208 Phone: (425) 337-3174

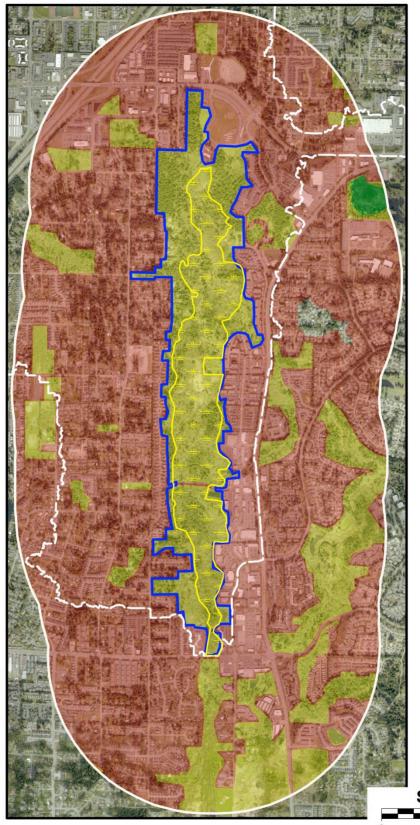
Phone: (425) 337-3174 Fax: (425) 337-3045

Email: mailbox@wetlandresources.com

WETLAND RATING Wetland A

Figure A-1 WRI Job # 24031 Rated by: ASW

CITY OF MILL CREEK - SPORTS PARK MASTER PLAN WETLAND RATING FIGURE 2- WETLAND A



CONTRIBUTING BASIN AREA RELATIVE TO WETLAND UNIT IS 13:1



1,000

2,000

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Fax: (425) 337-3045

Email: mailbox@wetlandresources.com

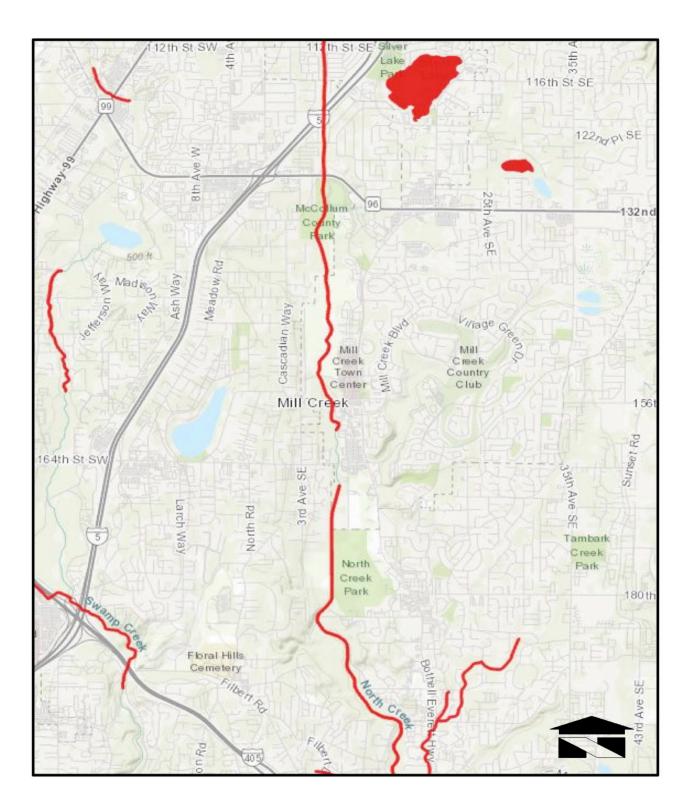
WETLAND RATING Wetland A

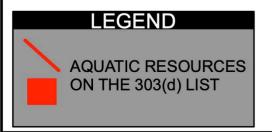
Figure A-2 WRI Job # 24031 Rated by: ASW

RELATIVELY **UNDISTURBED** LOW/MOD. **INTENSITY** HIGH **INTENSITY ACCESSIBLE HABITAT WETLAND** 1 KM FROM **WETLAND** CONTRIBUTING **BASIN**

LEGEND

CITY OF MILL CREEK - SPORTS PARK MASTER PLAN WETLAND RATING FIGURE 3- WETLAND A







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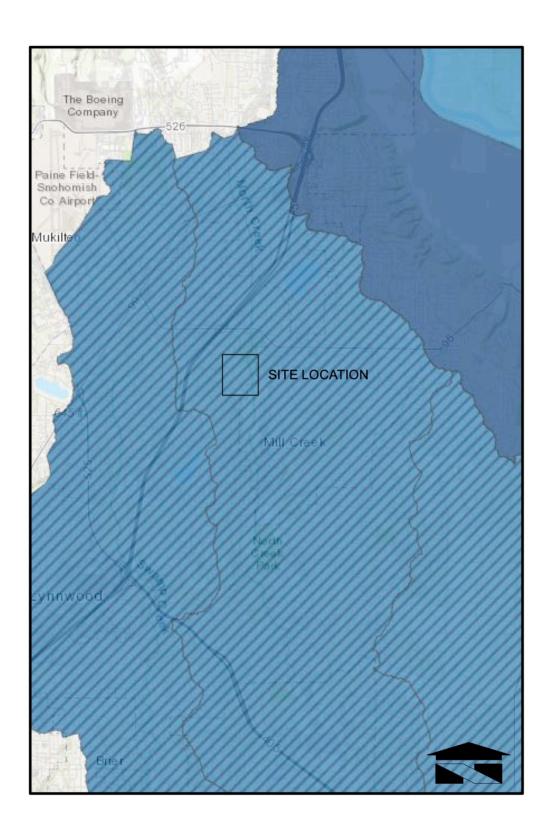
Phone: (425) 337-317 Fax: (425) 337-3045

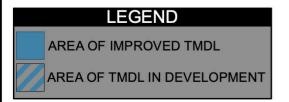
Email: mailbox@wetlandresources.com

WETLAND RATING Wetland A

Figure A-3 WRI Job # 24031 Rated by: ASW

CITY OF MILL CREEK - SPORTS PARK MASTER PLAN WETLAND RATING FIGURE 4- WETLAND A







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Email: mailbox@wetlandresources.com

WETLAND RATING Wetland A

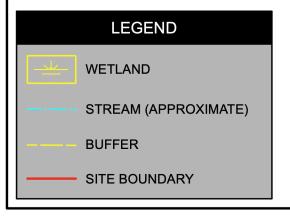
Figure A-4 WRI Job # 24031 Rated by: ASW

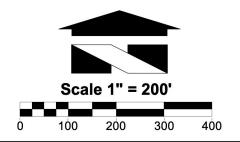
ATTACHMENT C: WETLAND DELINEATION MAP

WETLAND DELINEATION MAP <u>CITY OF MILL CREEK - SPORTS PARK MASTER PLAN</u>

PORTION OF SECTION 31, TOWNSHIP 28N, RANGE 5E, W.M.









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WETLAND DELINEATION MAP <u>CITY OF MILL CREEK-</u> SPORTS PARK MASTER PLAN

City of Mill Creek Attn: Justin Horn 15728 Main St Mill Creek, WA 98012

Sheet 1/1 WRI #: 24031 Drawn by: MK Date: 05/17/2024