WETLAND AND FISH AND WILDLIFE HABITAT ASSESSMENT REPORT

PROSPECTOR 6

MAY 2022



WETLAND AND FISH AND WILDLIFE HABITAT ASSESSMENT REPORT

PROSPECTOR 6

MAY 5, 2022

PROJECT LOCATION

5110 83rd Avenue Northeast Marysville, Washington 98270

PREPARED FOR

Groundhog Land Development Company, LLC $505\,106^{\text{th}}$ Avenue Northeast, Suite 110 Bellevue, Washington 98004

PREPARED BY

SOUNDVIEW CONSULTANTS LLC 2907 HARBORVIEW DRIVE GIG HARBOR, WASHINGTON 98335 (253) 514-8952



Executive Summary

Soundview Consultants LLC (SVC) has been assisting Groundhog Land Development Company, LLC (Applicant) with a wetland and fish and wildlife habitat assessment for a proposed residential development of an approximately 4.64-acre site located at 5110 83rd Avenue Northeast in the City of Marysville, Washington. The subject property consists of one parcel situated in the Southeast ½ of Section 35, Township 30 North, Range 5 East, W.M. (Snohomish County Tax Parcel Number 00590700010500).

SVC investigated the subject property for the presence of potentially-regulated wetlands, waterbodies, fish and wildlife habitat, and/or priority species in February of 2021. Using current methodology, the site investigations identified four potentially-regulated wetlands (Wetlands A-D) on the subject property. In addition, one potentially regulated offsite wetland (Offsite Wetland E) was identified within 150 feet south of the subject property. Wetlands A, B, D, and Offsite Wetland E are classified as Category III wetlands, which are subject to standard 75-foot buffers per Marysville Municipal Code (MMC) 22E.010.100(4). Wetland C is classified as Category IV wetland and is subject to a standard 35-foot buffer. However, Wetland C may be waived from the buffer and compensation requirements if the wetland meets the criteria under MMC 22E.010.080(c), including its small size (less than 0.10-acre), low habitat functions, and isolation in the landscape. No other potentially-regulated wetlands, waterbodies, or priority species were identified within 150 feet of the subject property during the site investigation.

The summary table below identifies the potential regulatory status of the identified critical areas by local, state, and federal agencies.

Feature Name	Size Onsite	Category ¹	Regulated Under MMC Chapter 22E.010	Regulated Under RCW 90.48	Regulated Under Clean Water Act
Wetland A	1,190 SF	III	Yes	Yes	Potentially
Wetland B	2,843 SF	III	Yes	Yes	Potentially
Wetland C	910 SF	IV	Yes	Yes	Potentially
Wetland D	8,876 SF	III	Yes	Yes	Potentially
Offsite Wetland E	N/A	III	Yes	Yes	Potentially

Note:

Current Washington State Department of Ecology (WSDOE) wetland rating system (Hruby, 2014) per MMC 22E.010.060.

Site Map

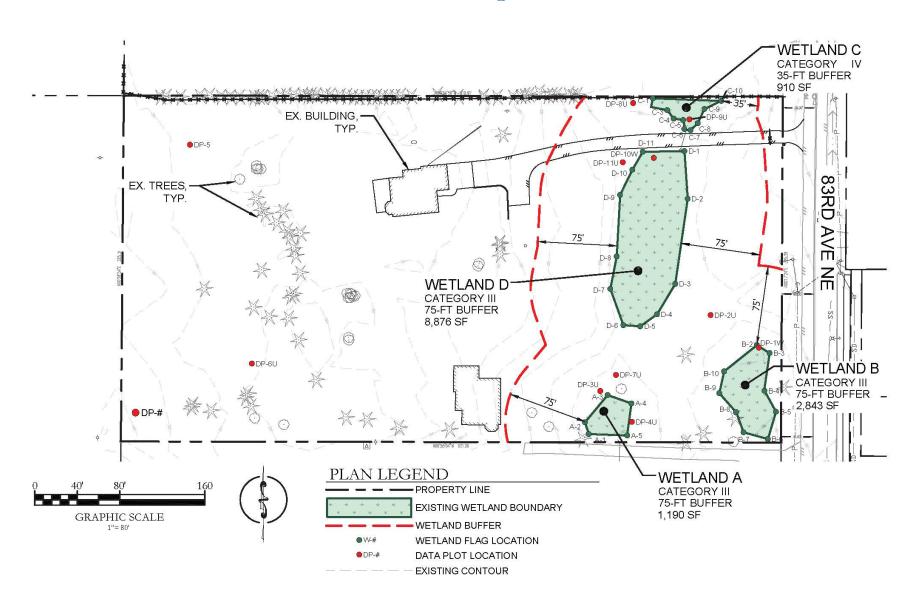


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Chapter 1. Introduction

Soundview Consultants LLC (SVC) has been assisting Groundhog Land Development Company, LLC (Applicant) with a wetland and fish and wildlife habitat assessment for a proposed residential development of an approximately 4.64-acre site located at 5110 83rd Avenue Northeast in the City of Marysville, Washington. The subject property consists of one parcel situated in the Southeast ¼ of Section 35, Township 30 North, Range 5 East, W.M. (Snohomish County Tax Parcel Number 00590700010500).

The purpose of this wetland, and fish and wildlife habitat assessment is to identify the presence of potentially-regulated wetlands, waterbodies, fish and wildlife habitat, and/or priority species on or near the subject site. All project details, proposed impacts, necessary code analytics, and mitigation strategy will be outlined in a Conceptual Mitigation Plan under a separate cover.

This report provides conclusions and recommendations regarding:

- Site description and area of assessment;
- Background research and identification of potentially-regulated critical areas within the vicinity of the proposed project;
- Identification and assessment of potentially-regulated wetlands and other aquatic features;
- Identification and assessment of potentially-regulated fish and wildlife habitat;
- Existing site map detailing identified critical areas and standard buffers and setbacks; and

1

• Supplemental information necessary for local regulatory review.

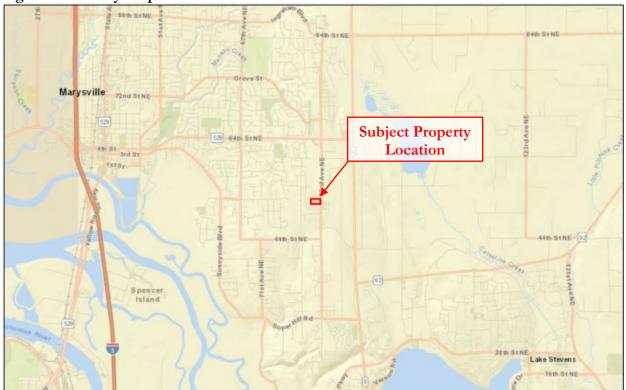
Chapter 2. Proposed Project Location

2.1 Project Location

The subject property consists of an approximately 4.64-acre site located at 5110 83rd Avenue Northeast in the City of Marysville, Washington. The subject property consists of one parcel situated in the Southeast ½ of Section 35, Township 30 North, Range 5 East, W.M. (Snohomish County Tax Parcel Number 00590700010500).

To access the subject site from Interstate-5 North from the Everett area, take exit 199 for State Route 528 East toward Marysville. Use the right two lanes to turn right onto 4th Street and continue onto 64th Street Northeast. After 2.3 miles, turn right onto 83rd Avenue Northeast. After 0.8 mile, the subject property will be located on the right.

Figure 1. Vicinity Map.



Chapter 3. Methods

SVC investigated, delineated, and assessed any potentially regulated wetlands, waterbodies, and other fish and wildlife habitat on and within 150 feet of the subject property in February of 2021. All determinations were made using observable vegetation, hydrology, and soils in conjunction with data from the U.S. Geological Survey (USGS) topographic maps, National Resource Conservation Service (NRCS) soil survey, Snohomish County and City of Marysville Geographic Information Systems (GIS) data, U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI), Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) and SalmonScape mapping tools, Washington State Department of Natural Resources (DNR) water typing system, and various orthophotographic resources (Appendix B). Appendix A contains further details for the methods and tools used to prepare this report.

Wetlands, streams, and select fish and wildlife habitats and species are regulated features per Marysville Municipal Code (MMC) Chapter 22E.010 Critical Areas Management and subject to restricted uses/activities under the same title. Wetland boundaries were determined in accordance with MMC 22E.010.060(1) and using the routine approach described in the U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual (Environmental Laboratory, 1987) and modified according to the guidelines established in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0) (USACE, 2010) and Field Indicators of Hydric Soils in the United States (NRCS, 2018). Qualified wetland scientists marked the boundary of the onsite wetland with orange surveyor's flagging labeled alpha-numerically and tied to 3-foot lath or vegetation along the wetland boundaries. Pink surveyor's flagging was labeled alpha-numerically and tied to 3-foot lath or vegetation at formal sampling locations to mark the points where detailed data was collected (DP-1 to DP-9). Additional tests pits were excavated at regular intervals inside and outside of the wetland boundaries to further confirm the delineations. Offsite wetlands were not flagged but rather estimated based on offsite observations coupled with aerial imagery and topographic data.

Wetlands were classified using both the hydrogeomorphic (Brinson, 1993) and Cowardin (Cowardin, 1979; Federal Geographic Data Committee, 2013) classification systems. Following classification and assessment, the wetland was rated and categorized using the *Washington State Wetlands Rating System for Western Washington—Washington Department of Ecology, 2014, Publication No. 04-06-029*, per MMC 22E.010.060.

The fish and wildlife habitat assessment was conducted during the same site visits by qualified fish and wildlife biologists. The experienced biologists made visual and auditory observations using stationary and walking survey methods for both aquatic and upland habitats noting any special habitat features and direct and indirect signs of fish and wildlife activity (e.g. nesting, foraging, and migration/movement). Special attention was given to assessing the presence of critical fish and wildlife species outlined under MMC 22E.010.170(1) and species of local importance per MMC 22E.010.170(2).

May 5, 2022

Chapter 4. Existing Conditions

4.1 Landscape Setting

The subject property is located in a residential setting in the City of Marysville (Figure 2). The subject property is currently developed with a single-family residence and associated infrastructure including a barn, paved driveway, and maintained lawn; the remainder of the site is otherwise undeveloped forest. The subject property abuts single-family residences to the north and south, a utility corridor to the west, 83rd Avenue Northeast to the east. Topography onsite is generally flat, with elevations ranging between approximately 395 feet above mean sea level (amsl) to 380 feet amsl. A Snohomish County contours map is provided in Appendix B1.



Figure 2. Aerial Image of the Subject Property.

4.2 Soils

The NRCS Soil Survey of Snohomish County, Washington identifies one soil series on the subject property: Tokul gravelly medial loam, 0 to 8 percent slopes. A soil map is provided in Appendix B2. Below is a detailed description of the soil profile.

Tokul gravelly medial loam, 0 to 8 percent slopes (72)

According to the NRCS survey, Tokul gravelly medial loam, 0 to 8 percent slopes is a moderately well drained soil formed in glacial till and volcanic ash. In a typical profile, the surface layer is approximately 4 inches thick and is a dark brown gravelly loam. From 4 to 22 inches the subsoil is a brown, strong brown and dark yellowish-brown gravelly loam. From 22 to 31 inches the soil is light olive brown

gravelly fine sandy loam. A hard pan is present at a depth of approximately 31 inches. Tokul gravelly medial loam, 0 to 8 percent slopes is listed as a non-hydric soil (NRCS, N.d.), but mapped areas may contain up to 5 percent of hydric inclusions of McKenna or Norma soils.

4.3 Vegetation

General upland forested vegetation on the subject property consists of a canopy dominated by Douglas fir (*Pseudotsuga menziesii*), bigleaf maple (*Acer macrophyllum*), and red alder (*Alnus rubra*) with an understory dominated by salmonberry (*Rubus spectabilis*), non-native invasive Himalayan blackberry (*Rubus armeniacus*), trailing blackberry (*Rubus ursinus*), and non-native invasive English ivy (*Hedera helix*).

4.4 Critical Area Inventories

The USFWS NWI map (Appendix B3), Snohomish County Stream and Wetland Inventory (Appendix B4), and City of Marysville Critical Areas map (Appendix B5) identify a potential wetland on the eastern portion of the subject property. The WDFW PHS map (Appendix B6) identifies a potential offsite to the north within 150 feet of the subject property. The WDFW SalmonScape map (Appendix B7) and DNR stream typing map (Appendix B8) do not identify any streams or fish presence on or in the vicinity of the subject property. No other potential wetlands, waterbodies, or priority habitats or species are documented on or within 150 feet of the subject property.

4.5 Precipitation

Precipitation data was acquired from the National Oceanic and Atmospheric Administration (NOAA) station at SeaTac International Airport in order to obtain percent of normal precipitation for the general Puget Sound region during and preceding the investigation. A summary of data collected is provided in Table 1.

Table 1. Precipitation Summary¹

Date	Day Of	Day Before	1 Week Prior	2 Weeks Prior	30 Days Prior (Observed/Normal)	Year to Date (Observed/Normal) ²	Percent of Normal ³
2/2/2021	0.61	0.88	2.29	2.51	8.11/5.69	25.05/22.02	143/114

Notes

Precipitation levels during the February 2021 site investigation were above normal for the prior 30 days (143 percent of normal) and within the normal range for the 2020/2021 water year (114 percent of normal). This precipitation data suggests that hydrologic conditions encountered may have been slightly wetter than normal. Such conditions were considered in making professional wetland boundary determinations.

^{1.} Precipitation levels provided in inches. Data obtained from NOAA (http://w2.weather.gov/climate/xmacis.php?wfo=sew) for SeaTac International Airport.

^{2.} Year-to-date precipitation is for the 2020/2021 water year from October 1 to the onsite date.

^{3.} Percent of normal is shown for the last 30 days and the 2019/2020 water year to date.

Chapter 5. Results

The February of 2021 site investigation identified four potentially-regulated wetlands (Wetlands A-D) on the subject property. In addition, one potentially regulated offsite wetland (Offsite Wetland E) was identified within 150 feet south of the subject property. No other potentially-regulated wetlands, waterbodies, or priority species were identified within 150 feet of the subject property during the site investigation.

5.1 Wetlands

5.1.1 Overview

The five identified wetlands contained a predominance of hydrophytic vegetation, hydric soils (presumed for Offsite Wetland E), and indicators of wetland hydrology according to current wetland delineation methodology. Data forms are provided in Appendix E; wetland rating forms are provided in Appendix F; and wetland rating maps are provided in Appendix G. Table 2 summarizes the wetlands identified during the site investigation.

Table 2.	Wetland	Summary
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	Predomina	Onsite Size	Buffer			
Wetland	Cowardin ¹	HGM ²	WSDOE ³	City of Marysville ⁴	(square feet)	Width (feet) ⁵
A	PSS/EMC	Depressional	III	III	1,190 SF	75
В	PFO/SSC	Depressional	III	III	2,840 SF	75
С	PEMA	Depressional	IV	IV	910 SF	35
D	PFO/EMAH	Depressional	III	III	8,880 SF	75
Offsite E	PEMC	Depressional	III	III	N/A	75

Notes:

- 1. Cowardin et al. (1979); Federal Geographic Data Committee (2013); class based on vegetation: PFO = Palustrine Forested; PSS = Palustrine Scrub-Shrub, PEM = Palustrine Emergent; Modifiers for Water Regime: A = Temporarily Flooded; C = Seasonally Flooded; H = Permanently Flooded.
- 2. Brinson, M. M. (1993).
- 3. Current WSDOE wetland rating system for Western Washington (Hruby, 2014).
- 4. MMC 22E.010.060(1) wetland definitions.
- 5. MMC 22E.010.100(4) wetland buffer standards.

Wetland A

Wetland A is approximately 1,190 square feet (0.03 acre) in size onsite and is located on the southeast portion of the subject property, extending slightly offsite to the south. Hydrology for Wetland A is provided by surface sheet flow from adjacent uplands, direct precipitation, and a seasonally high groundwater table. Wetland vegetation is dominated by red alder, salmonberry, fringed willowherb (*Epilobium ciliatum*), trailing blackberry, and creeping buttercup (*Ranunculus repens*). Wetland A is a Palustrine Scrub-Shrub/Emergent, Seasonally Flooded (PEMC) wetland. Per MMC 22E.010.060(1), Wetland A is a Category III depressional wetland. Table 3 summarizes Wetland A.

Wetland B

Wetland B is approximately 2,840 square feet (0.07 acre) in size onsite and is located on the southeastern portion of the subject property. Hydrology for Wetland B is provided by surface sheet flow from adjacent uplands, direct precipitation, and a seasonally high groundwater table. Wetland vegetation is dominated by red alder, salmonberry, non-native invasive Himalayan blackberry, and

sword fern. Wetland B is a Palustrine Forested/Scrub-Shrub, Seasonally Flooded (PSS/EMC) wetland. Wetland B is a Category III depressional wetland. Table 4 summarizes Wetland B.

Wetland C

Wetland C is approximately 910 square feet (0.02 acre) in size onsite and is located on the northeastern portion of the subject property. Hydrology for Wetland C is provided by surface sheet flow from adjacent uplands, direct precipitation, and a seasonally high groundwater table. Wetland vegetation is dominated by non-native reed canarygrass. Wetland C is a Palustrine Emergent, Temporarily Flooded (PEMA) wetland. Wetland C is a Category IV depressional wetland. Table 5 summarizes Wetland C.

Wetland D

Wetland D is approximately 8,880 square feet (0.20 acre) in size onsite and is located on the eastern portion of the subject property. Hydrology for Wetland D is provided by surface sheet flow from adjacent uplands, direct precipitation, and a seasonally high groundwater table. Wetland vegetation is dominated western red cedar (*Thuja plicata*), red alder, salmonberry, and Kentucky bluegrass. Wetland D is a Palustrine Forested/Emergent, Temporarily Flooded and Permanently Flooded (PFO/EMAH) wetland. Wetland D is a Category III depressional wetland. Table 6 summarizes Wetland D.

Offsite Wetland E

Offsite Wetland E is located entirely offsite, approximately 40 feet south of the subject property. Hydrology for Offsite Wetland E is likely provided by surface sheet flow from adjacent uplands, direct precipitation, and a seasonally high groundwater table. Wetland vegetation observed was primarily Kentucky bluegrass and creeping buttercup. Offsite Wetland E is a Palustrine Emergent, Seasonally Flooded (PEMC) wetland. Offsite Wetland E is a Category III depressional wetland. Due to the wetland's offsite location, no detailed table is provided.

Table 3. Wetland A Summary

	Table 3. Wetland A Summary WETLAND A – INFORMATION SUMMARY					
Location:						
Location:	Located of the southeast portion of the	Local Jurisdiction	City of Marysville			
		WRIA	7 – Snohomish			
		WSDOE Rating				
		(Hruby, 2014)	III			
		City of Marysville	111			
		Rating	III			
		City of Marysville	75 6			
		Buffer Width	75 feet			
	人 公司在中国和国立	Wetland Size	1,190 SF			
		Cowardin	PSS/EMC			
		Classification				
		HGM Classification	Depressional			
		Wetland Data Sheet(s)	DP-4W			
		Upland Data Sheet(s)	DP-3U, DP-7U			
		Boundary Flag color	Orange			
Dominant	Wetland vegetation is dominated by red alder, salmonberry, fringed willowherb, trailing					
Vegetation	blackberry, and creeping buttercup.					
Soils	Hydric soil indicators A11 (Depleted I observed.	,	,			
Hydrology	Hydrology for Wetland A is provided by surface sheet flow from adjacent uplands, direct precipitation, and a seasonally high groundwater table.					
Rationale for	Wetland boundaries were determined	d by slight topographic dro	op and a transition to a			
Delineation	hydrophytic plant community.					
Rationale for	Local rating is based upon Hruby (20	14) rating system per MMC	22E.010.060(1).			
Local Rating	XX/ .1 1 T	0				
	Wetland Function		1			
Water Quality	Wetland A has moderate potential to improve water quality due to the presence of an intermittent outlet, seasonal ponding in less than half of the unit to trap and filter pollutants, its proximity to land use that generates pollutants, and the presence of water quality issues within the sub-basin and watershed. Wetland A's score for Water Quality function is moderate (7).					
Hydrologic	Wetland A has moderate potential to provide hydrologic function due to the presence of an intermittent outlet, moderate flood storage depth, proximity to land uses that generate pollutants, and the presence of flooding problems downgradient. However, these functions are limited due to the units' minimal contribution to storage in the watershed. Wetland A's score for Hydrologic function is low (5).					
Habitat	Wetland A provides limited potential to provide habitat functions due to the lack of habitat complexity, low habitat interspersion and minimal accessible habitat within the highly developed surrounding landscape. However, the wetland does contain special habitat features and WDFW priority habitats. Wetland A's score for Habitat function is low (4).					
Buffer	The majority of the onsite buffer sur	rounding Wetland A is rela	tively intact with native			
Condition	vegetation.					

Table 4. Wetland B Summary

Location: Loc	wetland B – Inform cated on the southeastern portion	of the subject property.				
Location: Loc	cated on the southeastern portion					
		Local Jurisdiction City of Marysville				
等 一 等例		WRIA	7 – Snohomish			
			/ – Snonomisn			
		WSDOE Rating (Hruby, 2014)	III			
		City of Marysville Rating	III			
A TOP		City of Marysville Buffer Width	75 feet			
		Wetland Size	2,840 SF			
		Cowardin Classification	PFO/SSC			
	STATES OF THE SECOND	HGM Classification	Depressional			
	NAME OF THE PARTY	Wetland Data Sheet(s)	DP-1W			
		Upland Data Sheet(s)	DP-2U			
		Boundary Flag color	Orange			
	etland vegetation is dominated		y, non-native invasive			
	malayan blackberry, and sword feri					
	Hydric soil indicator F3 (Depleted Matrix) was observed.					
	drology for Wetland B is provided cipitation, and a seasonally high gr		adjacent uplands, direct			
	etland boundaries were determined tland hydrology.	by transition to a hydrophyt	ic plant community and			
Rationale for Local Rating	cal rating is based upon Hruby (20	14) rating system per MMC	22E.010.060(1).			
Wetland Functions Summary						
Water Quality per to l	Wetland B has moderate potential to improve water quality due to no outlet, presence of persistent, ungrazed plants and seasonal ponding in less than half of the unit, proximity to land uses that generate pollutants, and the presence of water quality issues within the sub-basin and watershed. Wetland B's score for Water Quality function is moderate (7).					
Hydrologic floo sma mo	Wetland B has moderate potential to provide hydrologic function due no outlet, moderate flood storage depth, proximity to land uses that generate pollutants, and presence of flooding problems down-gradient. However, these functions are limited due to the units' small size relative to the contributing basin. Wetland B's score for Hydrologic function is moderate (5).					
Habitat class hab hab surn	Wetland B provides potential for habitat functions due to the presence of two Cowardin classes and multiple special habitat features and WDFW priority habitats which increases habitat suitability and complexity. However, these functions are limited due to the low habitat interspersion and minimal accessible habitat within the highly developed surrounding landscape. Wetland B's score for Habitat function is low (4).					
Buffer The	e majority of the buffer surroun	_	with native vegetation;			
Condition how		to 83rd Avenue Northeast.				

Table 5. Wetland C Summary

Table 5. Wetlan	•					
WETLAND C – INFORMATION SUMMARY						
Location:	Located on the northeastern portion		0: (): "			
		Local Jurisdiction	City of Marysville			
		WRIA	7 – Snohomish			
		WSDOE Rating (Hruby, 2014)	IV			
		City of Marysville Rating	IV			
		City of Marysville Buffer Width	35 feet			
	NY MINE	Wetland Size	910 SF			
Service Control		Cowardin	PEMA			
		Classification	D : 1			
	And the second second	HGM Classification	Depressional			
KEN MELLEN SI		Wetland Data Sheet(s)	DP-9W			
		Upland Data Sheet(s)	DP-8U			
		Boundary Flag color	Orange			
Dominant	Wetland vegetation is dominated by Kentucky bluegrass, creeping buttercup, and non-					
Vegetation	native reed canarygrass.					
Soils	Hydric soil indicator A11 (Depleted Below Dark Surface) and F6 (Redox Dark Surface) were observed.					
Hydrology	Hydrology for Wetland A is provided by surface sheet flow from adjacent uplands, direct precipitation, and a seasonally high groundwater table.					
Rationale for	Wetland boundaries were determine		op and a transition to a			
Delineation	hydrophytic plant community.	, , , , , , , , , , , , , , , , , , , ,	1			
Rationale for	Local rating is based upon Hruby (2014) rating system per MMC 22E.010.060(1).					
Local Rating						
Wetland Functions Summary						
Water Quality	Wetland C has moderate potential to improve water quality due to the presence of an intermittent outlet, seasonal ponding in over half of the unit to trap and filter pollutants, its proximity to land use that generates pollutants, and the presence of water quality issues in the sub-basin and watershed. However, these functions are limited due to the minimal amount of persistent, ungrazed vegetation and lack of seasonal ponding to trap and filter pollutants. Wetland C's score for Water Quality functions is moderate (6).					
Hydrologic	Wetland C has moderate potential to provide hydrologic function due to the presence of intermittent outlet, proximity to land uses that generate pollutants, and presence of flooding problems down-gradient. However, these functions are limited due to the units' lack of flood storage and small size relative to the contributing basin. Wetland C's score for Hydrologic functions is low (5).					
Habitat	Wetland C provides limited potential for habitat functions due to the lack of habitat complexity, low habitat interspersion, and minimal accessible habitat within the highly developed surrounding landscape. Wetland C's score for Habitat function is low (3).					
Buffer	The majority of the buffer surrounding		e to the maintained lawn			
Condition	surrounding the unit and a paved driv	veway south of the unity.				

Table 6. Wetland D Summary

Table 0. Wettatio	Table 6. Wetland D Summary					
Location: WETLAND C – INFORMATION SUMMARY Located on the eastern portion of the subject property.						
Location:	Located on the eastern portion of the		City of Marrowill-			
		Local Jurisdiction	City of Marysville 7 – Snohomish			
		WRIA WSDOE Rating	/ — Snonomisn			
			III			
		(Hruby, 2014)				
		City of Marysville	III			
		Rating City of Marysville				
		Buffer Width	75 feet			
1000年,其		Wetland Size	8,880 SF			
		Cowardin	0,000 31			
		Classification	PFO/EMCH			
		HGM Classification	Depressional			
		Wetland Data Sheet(s)	DP-10W			
1 Strain	The state of the s	Upland Data Sheet(s)	DP11U			
		Spiana Data sineci(s)	Diffe			
		Boundary Flag color	Orange			
75 34	计图象文化区 文文	2 ourself 1 mg color	o runge			
	2000年4月1日第一日发					
Dominant	Wetland vegetation is dominated western red cedar, red alder, salmonberry, and Kentucky					
Vegetation	bluegrass.	,	,			
Soils	Hydric soil indicator F3 (Depleted Matrix) was observed.					
II-duala a	Hydrology for Wetland A is provided by surface sheet flow from adjacent uplands, direct					
Hydrology	precipitation, and a seasonally high gr	roundwater table.	· •			
Rationale for	Wetland boundaries were determined	d by slight topographic dro	p and a transition to a			
Delineation	hydrophytic plant community.					
Rationale for	Local rating is based upon Hruby (20	14) rating system per MMC	22E.010.060(1).			
Local Rating						
	Wetland Function	ns Summary				
	Wetland D has moderate potential	to improve water quality	due to presence of an			
	intermittent outlet, proximity to land uses that generate pollutants, and the presence of					
Water Quality	water quality issues in the sub-basin and watershed. However, these functions are limited					
	due to lack of seasonal ponding. Wetland D's score for Water Quality function is					
	moderate (6).	.,,,,,,,,,,				
	Wetland D has moderate potential to provide hydrologic function due to the presence of					
TT 1 1 .	an intermittent outlet, moderate flood storage depth, proximity to land uses that generate					
Hydrologic	pollutants, and presence of flooding problems down-gradient. However, these functions					
	are limited due to the units' small size relative to the contributing basin. Wetland D's					
	score for Hydrologic function is mod	eitet functione due to the	vo Correndia ala 1			
	Wetland D provides potential for habitat functions due to the two Cowardin classes and					
Habitat	presence of special habitat features and WDFW priority habitats, which increases habitat					
11abitat	suitability and complexity. However, these functions are limited due to the low habitat interspersion and minimal accessible habitat within the highly developed surrounding					
	0.	acveroped surrounding				
	landscape. Wetland D's score for Hal The majority of the buffer surrounding		raded to the maintained			
Buffer	lawn west of the unit and a paved dri					
Condition	portions of the buffer contain relative		ic castern and southern			
	Pornous or the putter contain relative	ay maci manye vegetanon.				

5.2 Fish and Wildlife Habitat Assessment

Per MMC 22E.010.170(1), primary fish and wildlife habitat conservation areas include species federally listed as threatened, endangered, and candidate species and state designated sensitive, threatened, and endangered species; state designated priority habitats and areas that are associated species with listed species previously described; and species and habitats of local importance as outlined under MMC 22E.010.170(2). The landscape surrounding the subject property review area consists primarily of residential development with limited accessible suitable habitat. No evidence of critical fish or wildlife habitats or species direct or indirect use were observed after walking several transects throughout the site. Therefore, no primary associated areas of critical species were identified that would designate part of the site as a fish and wildlife habitat conservation area per MMC 22E.010.170.

Chapter 6. Regulatory Considerations

The February of 2021 site investigation identified four potentially-regulated wetlands (Wetlands A-D) on the subject property. In addition, one potentially regulated offsite wetland (Offsite Wetland E) was identified within 150 feet south of the subject property. No other potentially-regulated wetlands, waterbodies, or priority species were identified within 150 feet of the subject property during the site investigation.

6.1 Local Considerations

6.1.1 Buffer Standards

MMC 22E.010.060(1) has adopted the current wetland rating system (Hruby, 2014). Category III wetlands generally provide a moderate level of function, have usually been disturbed in some way, and are often less diverse and/or more isolated in the landscape than Category II wetlands. Category III wetlands score between 16 and 19 points on the Revised Washington State Wetland Rating System for Western Washington (Hruby, 2014). Category IV wetlands generally provide low levels of function; they are often heavily disturbed, smaller, and/or more isolated in the landscape than Category I, II, or III wetlands. Category IV wetlands provide low levels of functions and score less than 16 points.

Wetlands A, B, D, and Offsite Wetland E are classified as Category III wetlands, which are subject to standard 75-foot buffers per MMC 22E.010.100(4). Wetland C is classified as Category IV wetland and is subject to a standard 35-foot buffer. However, Wetland C may be waived from the buffer and compensation requirements if the wetland meets the criteria under MMC 22E.010.080(c), including its small size (less than 0.10-acre), low habitat functions, and isolation in the landscape. An additional 15-foot building setback is also required from the outer edge of all critical area buffers or from the outer edge of all critical areas, when no buffer is required per MMC 22E.010.380.

6.2 State and Federal Considerations

In a December 2, 2008 memorandum from the Environmental Protection Agency (EPA) and USACE, joint guidance is provided that describes waters that are to be regulated under section 404 of the CWA (USACE, 2008). This memorandum was amended on February 2, 2012 where the EPA and USACE issued a final guidance letter on waters protected by the CWA.

The 2012 guidance describes the following waters where jurisdiction would be asserted: 1) traditional navigable waters, 2) interstate waters, 3) wetlands adjacent to traditional navigable waters, 4) non-navigable tributaries of traditional navigable waters that are relatively permanent meaning they contain water at least seasonally (e.g. typically three months and does not include ephemeral waters), and 5) wetlands that directly abut permanent waters. The regulated waters are those associated with naturally occurring waters and water courses and not artificial waters (i.e. stormwater pond outfalls).

The 2012 memorandum further goes on to describe waters where jurisdiction would likely require further analysis: 1) Tributaries to traditional navigable waters or interstate waters, 2) Wetlands adjacent to jurisdictional tributaries to traditional navigable waters or interstate waters, and 3) Waters that fall under the "other waters" category of the regulations.

In addition, the 2012 guidance identifies thirteen waters or areas where jurisdiction will not be asserted:

1) Wet areas that are not tributaries or open waters and do not meet the agencies regulatory definition of "wetlands", 2) Waters excluded from coverage under the CWA by existing regulations, 3) Waters that lack a "significant nexus: where one is required for a water to be jurisdictional, 4) Artificially irrigated areas that would revert to upland if the irrigation ceased, 5) Artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing, 6) Artificial reflecting pools or swimming pools excavated in uplands, 7) Small ornamental waters created by excavating and/or diking dry land to retain water for primarily aesthetic reasons, and puddles, 8) Water-filled depressions created incidental to construction activity, 9) Groundwater, including groundwater drained through subsurface drainage systems, 10) Erosional features (gullies and rills), 11) Non-wetland swales, 12) Ditches that are excavated wholly in uplands, drain only uplands or non-jurisdictional waters, and have no more than ephemeral flow, and 13) Ditches that do not contribute flow, either directly or through other waterbodies, to a traditional navigable water, interstate water, or territorial sea.

Wetlands A – B and Offsite Wetland E appear insolated in nature with no surface water connections and/or potential significant nexus to any jurisdictional waters. Wetland D flows both north and south into Wetlands A and C. Wetland C continues north through a culvert, flowing into a stormwater pond located north of the subject property. The pond does not provide surface water connections to any jurisdictional waters. As such, the identified wetlands are potentially not regulated by the USACE. However, all identified wetlands are considered natural waters and are regulated by the WSDOE through the Revised Code of Washington (RCW) 90.48.

Chapter 7. Closure

The findings and conclusions documented in this assessment report have been prepared for specific application to this project. These findings and conclusions have been developed in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area. The conclusions and recommendations presented in this assessment report are professional opinions based on an interpretation of information currently available to us and are made within the operation scope, budget, and schedule of this project. No warranty, expressed or implied, is made. In addition, changes in government codes, regulations, or laws may occur. Due to such changes, our observations and conclusions applicable to this assessment may need to be revised wholly or in part in the future.

Wetland status and boundaries identified by SVC are based on conditions present at the time of the site visit and considered preliminary until the flagged wetland boundaries are validated by the jurisdictional agencies. Validation of the wetland and jurisdictional status of such features by the regulatory agencies provides a certification, usually written, that the wetland determination and boundaries verified are the units that will be regulated by the agencies until a specific date or until the regulations are modified. Only the regulatory agencies can provide this certification.

As wetlands are dynamic communities affected by both natural and human activities, changes in boundaries may be expected; therefore, delineations cannot remain valid for an indefinite period of time. Regulatory agencies typically recognize the validity of wetland delineations for a period of 5 years after completion of an assessment report. Development activities on a site five years after the completion of this assessment report may require reassessment of the wetland boundaries. In addition, changes in government codes, regulations, or laws may occur. Due to such changes, our observations and conclusions applicable to this site may need to be revised wholly or in part.

Chapter 8. References

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Appendix A — Methods and Tools

Table A1. Methods and tools used to prepare the report.

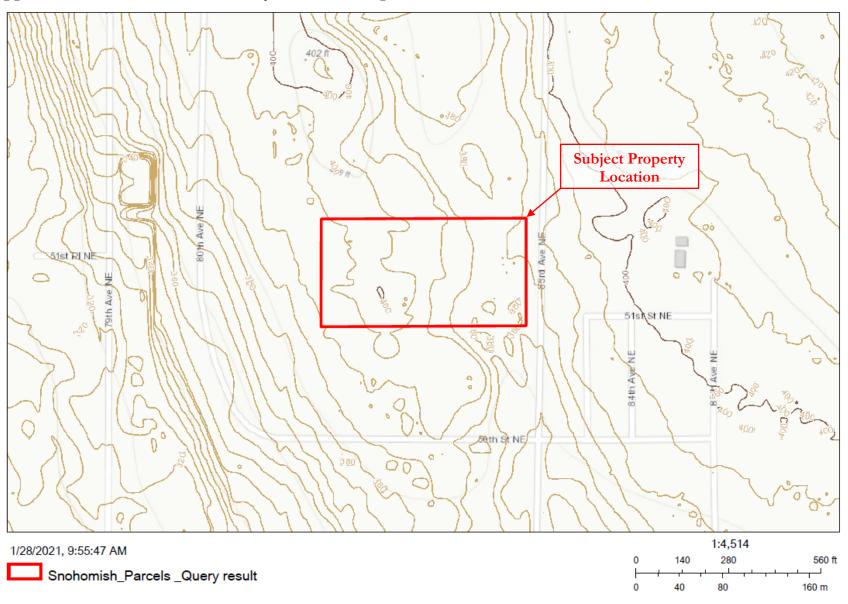
Parameter	Method or Tool	Website	Reference
Wetland Delineation	USACE 1987 Wetland Delineation Manual	http://el.erdc.usace.army.mi l/elpubs/pdf/wlman87.pdf	Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, US Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.
	Western Mountains, Valleys, and Coast Region Regional Supplement	http://www.usace.army.mil /Portals/2/docs/civilworks /regulatory/reg_supp/west _mt_finalsupp.pdf	U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-3. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
Wetland Classification	USFWS / Cowardin Classification System	http://www.fws.gov/wetlands/Documents/Classification-of-Wetlands-and-Deepwater-Habitats-of-the-United-States.pdf https://www.fgdc.gov/standards/projects/wetlands/nvcs-2013	Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. Government Printing Office, Washington, D.C. Federal Geographic Data Committee. 2013. Classification of Wetlands and Deepwater Habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC.
	Hydrogeomorphic Classification (HGM) System	http://el.erdc.usace.army.mi l/wetlands/pdfs/wrpde4.pd f	Brinson , M. M. (1993). "A hydrogeomorphic classification for wetlands," Technical Report WRP-DE-4, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
Wetland Rating	Washington State Wetland Rating System	http://www.ecy.wa.gov/bib lio/0406025.html	Hruby, T . 2014. Washington State wetland rating system for western Washington –Revised. Publication # 04-06-025.
Wetland Indicator Status	2016 National Wetland Plant List	https://www.fws.gov/wetla nds/documents/National- Wetland-Plant-List-2016- Wetland-Ratings.pdf	U.S. Army Corps of Engineers. 2018. National Wetland Plant List, version 3.4.
Plant Names and	USDA Plant Database	http://plants.usda.gov/	Website.
Identification	Flora of the Pacific Northwest http://www.pnwherbaria		Hitchcock, C.L. & A. Cronquist, Ed. by D. Giblin, B. Ledger, P. Zika, and R. Olmstead. 2018. Flora of the Pacific Northwest, 2nd Edition. U.W. Press and Burke Museum. Seattle, Washington.
Soils Data	NRCS Soil Survey	http://websoilsurvey.nrcs.u sda.gov/app/	Website GIS data based upon: Debose, Alfonso and M. W. Klungland. 1983. Soil Survey of Snohomish County Area, Washington. Soil Conservation Service United States Department of Agriculture, Soil Conservation Service, in cooperation with the

Parameter	Method or Tool	Website	Reference
			Washington Agricultural Experiment Station. Natural Resource Conservation Service.
	Soil Color Charts		Munsell® Color. 2000. Munsell® Soil Color Charts. New Windsor, New York.
	Soil Data Access Hydric Soils List	https://www.nrcs.usda.gov /Internet/FSE_DOCUME NTS/nrcseprd1316620.html	Natural Resources Conservation Service. N.d. Soil Data Access Hydric Soils List (Soil Data Access Live).
	Field Indicators of Hydric Soils	https://www.nrcs.usda.gov /Internet/FSE_DOCUME NTS/nrcs142p2_053171.pd f	NRCS. 2018. Field Indictors of Hydric Soils in the United States, Version 8.2. L.M. Vasialas, G.W. Hurt, and C.V. Noble (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.
Threatened and Endangered Species	Washington Natural Heritage Program	http://data- wadnr.opendata.arcgis.com/ datasets/wnhp-current- element-occurrences	Washington Natural Heritage Program. Endangered, threatened, and sensitive plants of Washington. Washington State Department of Natural Resources, Washington Natural Heritage Program, Olympia, WA
	Washington Priority Habitats and Species	http://wdfw.wa.gov/hab/p hspage.htm	Priority Habitats and Species (PHS) Program Map of priority habitats and species in project vicinity. Washington Department of Fish and Wildlife.
Species of Local Importance	WDFW GIS Data	http://wdfw.wa.gov/mappi ng/salmonscape/	Website
Report Preparation	Marysville Municipal Code	https://www.codepublishin g.com/WA/Marysville#!/ht ml/Marysville22E/Marysvill e22E010.html	MMC Chapter 22E.010 – Critical Areas Management

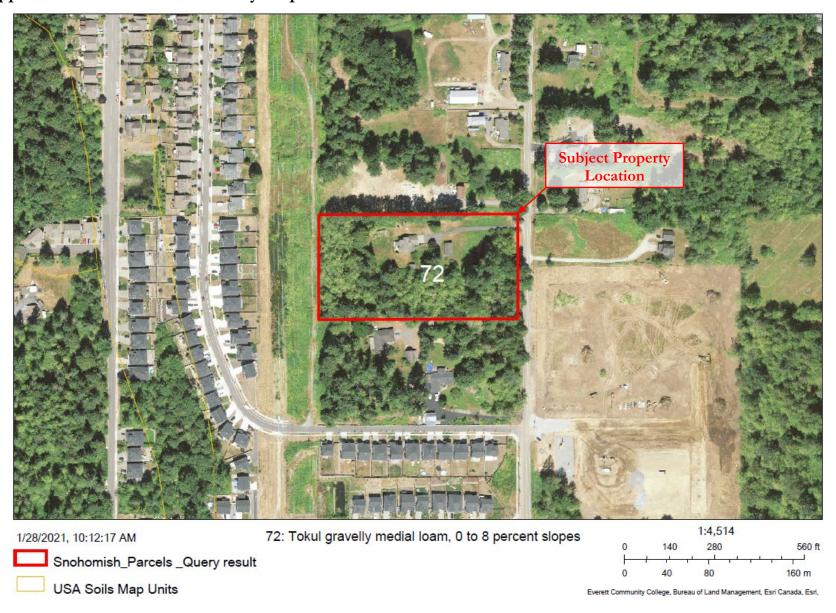
Appendix B — Background Information

This Appendix includes a Snohomish County Contours Map (B1); NRCS Soil Survey Map (B2); USFWS NWI Map (B3); Snohomish County Stream and Wetland Inventory (B4); City of Marysville Critical Areas Map (B5); WDFW PHS Map (B6); WDFW SalmonScape Map (B7); and DNR Stream Typing Map (B8).

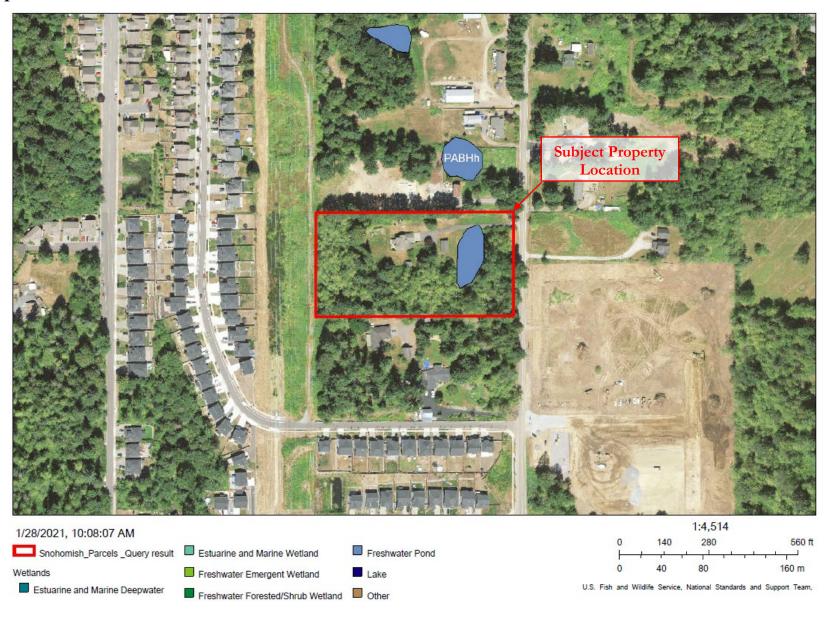
Appendix B1 — Snohomish County Contours Map



Appendix B2 — NRCS Soil Survey Map



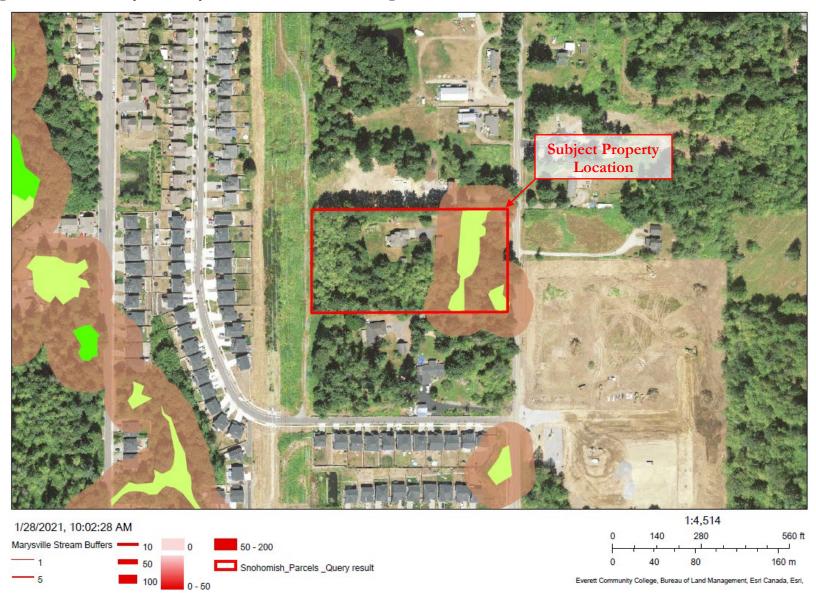
Appendix B3 — USFWS NWI



Appendix B4 — Snohomish County Stream and Wetland Inventory



Appendix B5 — City of Marysville Critical Areas Map



Appendix B6 — WDFW PHS Map



Appendix B7 — WDFW SalmonScape Map



Appendix B8 – DNR Stream Typing Map



Appendix C — Site Photographs

Photo 1: General upland conditions in the western portion of the subject property.



Photo 3: Utility corridor west of the subject property.



Photo 2: General upland conditions in the central portion of the subject property.



Photo 4: Soil Profile at DP-1W



Photo 5: Soil Profile at DP-2U



Photo 7: Soil Profile at DP-4W



Photo 6: Soil Profile at DP-3U



Photo 8: Soil Profile at DP-5U



Photo 9: Soil Profile at DP-6U



Photo 11: Soil Profile at DP-8U



Photo 10: Soil Profile at DP-7U



Photo 12: Wetland C, facing north.



Photo 13: Wetland D, facing south.

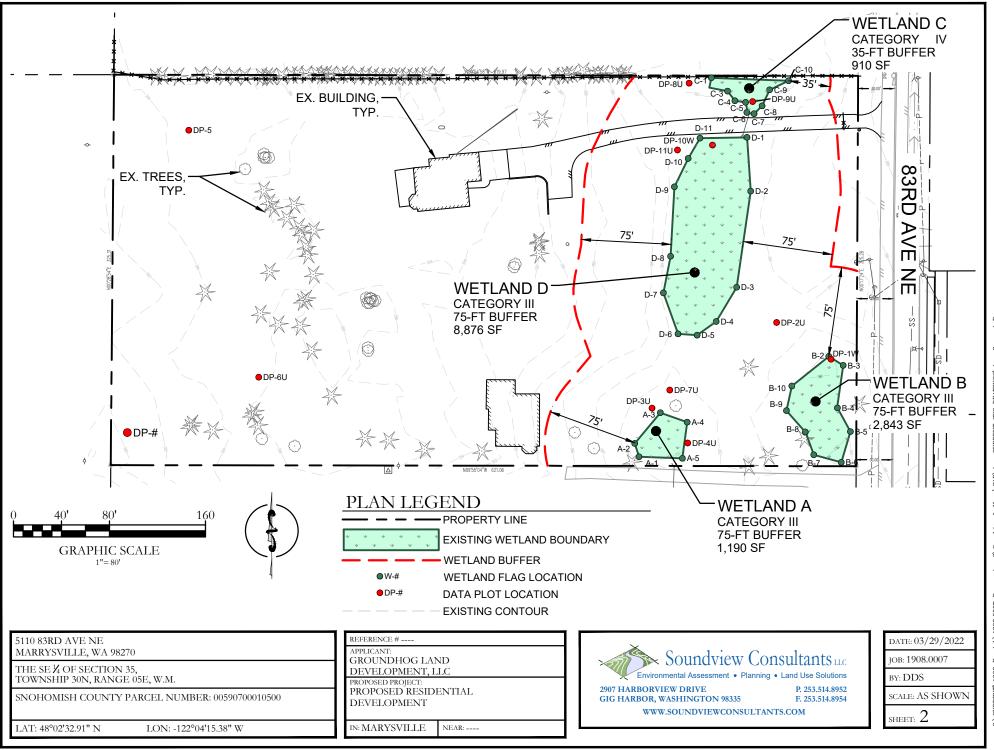


Photo 14: Soil Profile at DP-11U



Appendix D — Existing Conditions Exhibit

PROSPECTOR 6 - EXISTING CONDITIONS MAP



SA,CURRENYI, 1908 Perrick, 1908.0007 Prospector 6\Graphics & Maps\CAD\A - DNGA\1908.0007 (2022-03) base.dwg
Plotted March 31, 2022

Appendix E — Data Forms

Project/Site: 1908.0007 Prospector 6		City/Cou	_{nty:} Marysv	ville/Snohomish	Sampling	Date: 2/22/	21
Applicant/Owner: Groundhog Land Development C	company,	LLC		State: WA	Sampling	Point: DP-	10W
Investigator(s): Dustin Pringle, Harry Richardson, I	Rachael H	lyland	_ Section, To	ownship, Range: <u>35, 30</u>	North, 5	∃ast	
Landform (hillslope, terrace, etc.): Toe of Slope		Local re	elief (concave,	, convex, none): Conca	/e	_ Slope (%)): <u>1</u>
Subregion (LRR): A2	_ Lat: 48.0	042733	3	_ Long: -122.1202182	28	Datum: W	GS 84
Soil Map Unit Name: Tokul gravelly medial loam, 0							
Are climatic / hydrologic conditions on the site typical for this	s time of yea	r? Yes	× No ☐ (I	f no, explain in Remarks.)			
Are Vegetation, Soil, or Hydrology sign	nificantly dist	turbed?	Are "No	ormal Circumstances" pres	sent? Yes	⊠ No □	
Are Vegetation, Soil, or Hydrology natu	ırally probler	natic?	(If need	ed, explain any answers ir	n Remarks.)	1	
SUMMARY OF FINDINGS - Attach site map	showing	sampli	ing point le	ocations, transects,	, importa	nt feature	es, etc.
Lhydrophytic Vogetstien Brocent?							
Hydrophytic Vegetation Present? Yes ☒ No ☐ Hydric Soil Present? Yes ☒ No ☐			the Sampled				
Wetland Hydrology Present? Yes ☒ No ☐		wi	ithin a Wetlar	nd? Yes 🗷 N	io 🗌		
Remarks:							
All three wetland criteria met. Da	ta collec	ted in	Wetland	D.			
VEGETATION – Use scientific names of plan	ts.						
			int Indicator	Dominance Test works	sheet:		
Tree Stratum (Plot size: 30 ft) 1			s? Status	Number of Dominant Sp That Are OBL, FACW, o			(A)
2				Total Number of Domina			
3				Species Across All Stra	ta: <u>1</u>		(B)
4	^	= Total		Percent of Dominant Sp That Are OBL, FACW, of	ecies or FAC: <u>1</u>	00%	(A/B)
1				Prevalence Index work	sheet:		
2				Total % Cover of:		Multiply by:	
3				OBL species	x 1 =	=	_
4				FACW species			
5				FAC species			
Harle Christians (Dist sizes 40 ft)	0	= Total	Cover	FACU species			
Herb Stratum (Plot size: 10 ft) 1. Poa pratensis	55	Yes	FAC	UPL species			
2. Ranunculus repens	30	No	FAC	Column Totals:	(A)		(B)
3. Schedonorus arundinaceus	15	No	FAC	Prevalence Index	= B/A =		
4				Hydrophytic Vegetation	n Indicator	s:	
5				☐ Rapid Test for Hydro	ophytic Veg	etation	
6				➤ Dominance Test is a	>50%		
7				☐ Prevalence Index is			
8				☐ Morphological Adap data in Remarks			
9				☐ Wetland Non-Vascu			,
10				☐ Problematic Hydrop	hytic Vegeta	ation¹ (Expla	ıin)
11	100	= Total		¹ Indicators of hydric soil			must
Woody Vine Stratum (Plot size: 30 ft)	100	= 10(a)	Cover	be present, unless distu	rbed or prob	olematic.	
1				Hydrophytic			
2				Vegetation	- · · -	_	
% Bare Ground in Herb Stratum 0	0	= Total		Present? Yes	s× No 🗆	J	
Remarks:	augh Dam			1			
Hydrophytic vegetation criteria met thr	ougn Dom	iinance	e rest.				

Sampling Point: DP-10W

Depth	Matrix	•		Red	ox Featur	25			ence of indicators.)
(inches)	Color (moist)	%	Colo	or (moist)	<u>%</u>	Type ¹	Loc ²	Texture	e Remarks
0 - 11	10YR 4/1	97	7.5	YR 4/4	3	C	M/PL	GrLo	Gravelly loam
11 - 17	10YR 4/2	93	7.5	YR 5/6	7	С	M	GrLo	Gravelly loam
-									
	-								
¹Type: C=C	oncentration, D=D	enletion	RM=Rec	luced Matrix C	S=Cover	ed or Coat	ed Sand G	rains	² Location: PL=Pore Lining, M=Matrix.
	Indicators: (App						ca cana c		dicators for Problematic Hydric Soils ³ :
☐ Histosol				Sandy Redox (•			2 cm Muck (A10)
	oipedon (A2)			Stripped Matrix					Red Parent Material (TF2)
☐ Black His				Loamy Mucky	Mineral (F	1) (excep	t MLRA 1)		Very Shallow Dark Surface (TF12)
	n Sulfide (A4)			Loamy Gleyed		2)			Other (Explain in Remarks)
	d Below Dark Surfa	ace (A11)		Depleted Matri					
	ark Surface (A12)			Redox Dark Su	•			3In	dicators of hydrophytic vegetation and
-	lucky Mineral (S1)			Depleted Dark	•	-7)			wetland hydrology must be present, unless disturbed or problematic.
	leyed Matrix (S4) Layer (if present)	ı-		Redox Depress	SIONS (FO)			1	unless disturbed of problematic.
Type: No		·-							
Depth (in				-				Hydrid	Soil Present? Yes ⊠ No □
Remarks:								,	
	critoria mot th	rough in	dicato	· E2					
i iyunc son	criteria met th	rougii ii	iuicatoi	гэ.					
	-OV								
HYDROLO	GY								
Motland Us									
-	drology Indicator		uirod: ob	ook all that app	N/A				Secondary Indicators (2 or more required)
Primary India	drology Indicator cators (minimum c		uired; ch			(D0) (-			Secondary Indicators (2 or more required)
Primary India	drology Indicator cators (minimum o Water (A1)		uired; ch	☐ Water-Sta	ained Leav		except MLF		☐ Water-Stained Leaves (B9) (MLRA 1, 2,
Primary Indid ☐ Surface \(\mathbb{X} \) High Wa	drology Indicator cators (minimum c Water (A1) tter Table (A2)		uired; ch	☐ Water-Sta	ained Leav		except MLF		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Primary India Surface High Wa Saturation	drology Indicator cators (minimum o Water (A1) tter Table (A2) on (A3)		uired; ch	☐ Water-Sta 1, 2, 4 ☐ Salt Crust	ained Leav A, and 4I (B11)	3)	except MLF	RA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)□ Drainage Patterns (B10)
Primary India Surface Surface High Wa Saturatio	drology Indicator cators (minimum o Water (A1) Inter Table (A2) In (A3) In (A3)		uired; ch	☐ Water-Sta 1, 2, 4 ☐ Salt Crust ☐ Aquatic In	nined Leaven A., and 41 (B11) avertebrate	B) es (B13)	except MLF	RA	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2)
Primary India Surface High Wa Saturatio Water M Sedimen	drology Indicator cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2)		uired; ch	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen	ained Leaven A, and 41 (B11) avertebrate Sulfide C	es (B13) dor (C1)		RA	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9)
Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep	drology Indicator cators (minimum of Water (A1) tter Table (A2) on (A3) arks (B1) nt Deposits (B2) posits (B3)		uired; ch	Water-Sta 1, 2, 4 Salt Crust Aquatic Ir Hydrogen Oxidized	nined Leaver A.A., and 41 (1911) Experience of the control of the	es (B13) dor (C1) eres along	Living Roc	RA ots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2)
Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma	drology Indicators cators (minimum of Water (A1) tter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4)		uired; ch	Water-State 1, 2, 4 Salt Crust Aquatic Ir Hydrogen Oxidized Presence	ained Leav A, and 4I (B11) avertebrate Sulfide C Rhizosphe of Reduc	es (B13) dor (C1) eres along ed Iron (C	Living Roo 4)	era ots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3)
Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma	drology Indicator cators (minimum of Water (A1) tter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5)		uired; ch	Water-Star 1, 2, 4 1, 2, 4 Salt Crust Aquatic Ir Hydrogen Oxidized Presence Recent Iro	ained Leaver A.A., and 41 and	es (B13) dor (C1) eres along ed Iron (C- ion in Tille	Living Roo 4) d Soils (C6	RA ots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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Project/Site: 1908.0007 Prospector 6		City/C	ounty	. Marysv	rille/Snohomish	Sampling Date	: 2/22/21
Applicant/Owner: Groundhog Land Development C		-					
Investigator(s): Dustin Pringle, Harry Richardson, I							
Landform (hillslope, terrace, etc.): Hillslope							
Subregion (LRR): A2							
Soil Map Unit Name: Tokul gravelly medial loam, 0							
Are climatic / hydrologic conditions on the site typical for this	s time of yea	ar? Ye	s 🗷	No ☐ (I	f no, explain in Remarks	3.)	
Are Vegetation, Soil, or Hydrology sign	nificantly dis	turbed	!?	Are "No	ormal Circumstances" pr	resent? Yes 🗵	No 🗌
Are Vegetation, Soil, or Hydrology natu	rally probler	matic?		(If need	ed, explain any answers	in Remarks.)	
SUMMARY OF FINDINGS – Attach site map							eatures, etc.
Hydrophytic Vegetation Present?							
Hydrophytic Vegetation Present? Yes ☒ No ☐ Hydric Soil Present? Yes ☒ No ☒			Is the	e Sampled			
Wetland Hydrology Present? Yes ☒ No ☐			withi	n a Wetlar	nd? Yes 🗌	No 🗵	
Remarks:		1					
Not all three wetland criteria met	; lacking	g hyd	lric	soils. D	ata collected wes	t of Wetland	D.
VEGETATION – Use scientific names of plan	ts.						
	Absolute			Indicator	Dominance Test wor	rksheet:	
Tree Stratum (Plot size: 30 ft) 1	% Cover				Number of Dominant That Are OBL, FACW		(A)
2					Total Number of Dom	inant	
3					Species Across All St		(B)
4					Percent of Dominant	Species	
Sapling/Shrub Stratum (Plot size: 30 ft)	0	= To	tal Co	over	That Are OBL, FACW		<u>(A/B)</u>
1					Prevalence Index wo	orksheet:	
2.						: Multip	olv bv:
3					OBL species		
4.					FACW species		
5					FAC species		
	_	= To			FACU species	x 4 =	
Herb Stratum (Plot size: 10 ft)	40	V	_	E40	UPL species	x 5 =	
1. Poa sp.*	40				Column Totals:		
2. Ranunculus repens 3. Agrostis capillaris	30 25	Yes		FAC	Provolence Inde	ex = B/A =	
Agrostis capillaris Schedonorus arundinaceus	5	Yes No		FAC FAC	Hydrophytic Vegetat	<u> </u>	
-				1 AC	Rapid Test for Hy		on
5					➤ Dominance Test is	1 7 0	JII
6					☐ Prevalence Index		
7					☐ Morphological Ada		supporting
8						ks or on a separat	
9 10					☐ Wetland Non-Vas	cular Plants ¹	
11					☐ Problematic Hydro	ophytic Vegetation	¹ (Explain)
111.	100	= To	tal Co	over	¹ Indicators of hydric s		
Woody Vine Stratum (Plot size: 30 ft)			iai O	3701	be present, unless dis	turbed or problem	atic.
1					Hydrophytic		
2		<u> </u>			Vegetation		
0/ Para Craund in Harb Stratum	0	= To	tal Co	over	Present? Y	′es ⊠ No 🗌	
% Bare Ground in Herb Stratum							
Hydrophytic vegetation criteria met thr				est.			
*Poa sp. considered facultative for sco	ring purp	oses.					

Sampling Point: DP-11U

Depth	Matrix			Redo	x Feature	S			sence		
(inches)	Color (moist)	%	Colo	r (moist)	<u>%</u>	Type ¹	Loc ²	Textu	re	Remarks Remarks	
0 - 9	2.5YR 3/2	100	_		_			GrLo		Gravelly loam	
9 - 14+	10YR 5/4	95	-		-	-	-	GrLo		Gravelly loam; mixed matrix	
-	2.5Y 3/2	5	-		-	-	-	GrLo		Gravelly loam; mixed matrix	
					_						
	-				_				_		
	_	_			- -						
	-				- -						
					_						
	oncentration, D=De						ed Sand Gr			ation: PL=Pore Lining, M=Matrix.	
-	Indicators: (Appl	icable to				ed.)				rs for Problematic Hydric Soils ³ :	
Histosol	, ,			Sandy Redox (S				Ļ		Muck (A10)	
	oipedon (A2)			Stripped Matrix Loamy Mucky M	. ,	1) (avcant	MIDA 1	<u> </u>		Parent Material (TF2) Shallow Dark Surface (TF12)	
	en Sulfide (A4)			_oamy Gleyed N	•		. WILKA I)		_ ,	r (Explain in Remarks)	
	d Below Dark Surfa	ce (A11)		Depleted Matrix		,		_		(Explain in Remarks)	
	ark Surface (A12)	00 (7111)		Redox Dark Sur				3	ndicato	rs of hydrophytic vegetation and	
	fucky Mineral (S1)			Depleted Dark S		7)				nd hydrology must be present,	
-	Bleyed Matrix (S4)			Redox Depressi	•	,				s disturbed or problematic.	
	Layer (if present):										
Type: No				-							
Depth (in	ches):							Hydr	ic Soil	Present? Yes ☐ No ⊠	
Remarks:											
No hydric s	soil criteria met										
		-									
HYDROLO	ac v										
	drology Indicators	e.									
_	cators (minimum of		uired: che	eck all that anni							
	Water (A1)				v)				Secon	dary Indicators (2 or more required	d)
	iter Table (A2)		anca, one			es (B9) (e	xcent MI R	 RΔ		dary Indicators (2 or more required	
➤ Saturation			unou, on	☐ Water-Stai	ned Leav		xcept MLF	RA		ater-Stained Leaves (B9) (MLRA 1	
			anou, on	☐ Water-Stai	ned Leav		xcept MLF	RA	□ Wa	ater-Stained Leaves (B9) (MLRA 1 4A, and 4B)	
_	on (A3)		anca, one	☐ Water-Stai 1, 2, 44 ☐ Salt Crust	ned Leav A, and 4B (B11))	xcept MLF	RA	□ Wa	ater-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10)	
☐ Water M	on (A3) larks (B1)		anea, one	☐ Water-Stai 1, 2, 44 ☐ Salt Crust ☐ Aquatic Inv	ned Leave A, and 4B (B11) vertebrate	s (B13)	xcept MLF	RA	□ Wa	ater-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2)	, 2,
☐ Water M	on (A3) larks (B1) nt Deposits (B2)		anou, one	Water-Stai 1, 2, 44 Salt Crust Aquatic Inv	ned Leave A, and 4B (B11) vertebrate Sulfide Od	s (B13) dor (C1)				ater-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery	, 2,
☐ Water M ☐ Sedimen ☐ Drift Dep	on (A3) larks (B1) at Deposits (B2) posits (B3)		anou, one	Water-Stai 1, 2, 44 Salt Crust Aquatic Inv Hydrogen S Oxidized R	ned Leave A, and 4B (B11) vertebrate Sulfide Oct thizosphe	s (B13) dor (C1) res along	Living Roo		☐ Wa	ater-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2)	, 2,
☐ Water M ☐ Sedimen ☐ Drift Dep ☐ Algal Ma	on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		anou, one	Water-Stai 1, 2, 44 Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence C	ned Leave A, and 4B (B11) vertebrate Sulfide Oc chizosphe of Reduce	s (B13) dor (C1) res along	Living Roo 1)	ts (C3)	Dr Dr Sa	ater-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3)	, 2,
Water M Sedimen Drift Dep Algal Ma Iron Dep	on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)		anou, one	Water-Stai 1, 2, 44 Salt Crust Aquatic Inv Hydrogen Oxidized R Presence o	ned Leave A, and 4B (B11) vertebrate Sulfide Oo thizosphe of Reduce in Reduction	s (B13) dor (C1) res along d Iron (C4 on in Tille	Living Roo I) d Soils (C6	ts (C3)	☐ Wa	ater-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5)	, 2,
Water M Sedimen Drift Dep Algal Ma Iron Dep Surface	on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)	Imagery		Water-Stai 1, 2, 44 Salt Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iron Stunted or	ned Leave A, and 4B (B11) vertebrate Sulfide Octains thizosphe of Reduction Stressed	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D	Living Roo I) d Soils (C6	ts (C3)	 □ Wa □ Dr □ Dr □ Sa □ Ge □ Sh □ Ra 	atter-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) tised Ant Mounds (D6) (LRR A)	, 2,
Water M Sedimen Drift Dep Algal Ma Iron Dep Surface	on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial		[,] (B7)	Water-Stai 1, 2, 44 Salt Crust Aquatic Inv Hydrogen Oxidized R Presence o	ned Leave A, and 4B (B11) vertebrate Sulfide Octains thizosphe of Reduction Stressed	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D	Living Roo I) d Soils (C6	ts (C3)	 □ Wa □ Dr □ Dr □ Sa □ Ge □ Sh □ Ra 	ater-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5)	, 2,
Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundatio	on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concar		[,] (B7)	Water-Stai 1, 2, 44 Salt Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iron Stunted or	ned Leave A, and 4B (B11) vertebrate Sulfide Octains thizosphe of Reduction Stressed	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D	Living Roo I) d Soils (C6	ts (C3)	 □ Wa □ Dr □ Dr □ Sa □ Ge □ Sh □ Ra 	atter-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) tised Ant Mounds (D6) (LRR A)	, 2,
Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely	on (A3) larks (B1) nt Deposits (B2) losits (B3) at or Crust (B4) losits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concar evations:	ve Surfac	/ (B7) be (B8)	Water-Stai 1, 2, 44 Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence C Recent Iron Stunted or Other (Exp	ned Leave A, and 4B (B11) vertebrate Sulfide Oct thizosphe of Reduce n Reducti Stressed	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Roo I) d Soils (C6	ts (C3)	 □ Wa □ Dr □ Dr □ Sa □ Ge □ Sh □ Ra 	atter-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) tised Ant Mounds (D6) (LRR A)	, 2,
Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wat	on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concar evations: ter Present?	ve Surfac	/ (B7) ce (B8) No ⊠	Water-Stai 1, 2, 44 Salt Crust Aquatic Inv Hydrogen Oxidized R Presence o Recent Iron Stunted or Other (Exp	ned Leave A, and 4B (B11) vertebrate Sulfide Oo chizosphe of Reduce n Reducti Stressed plain in Re	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Roo I) d Soils (C6	ts (C3)	 □ Wa □ Dr □ Dr □ Sa □ Ge □ Sh □ Ra 	atter-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) tised Ant Mounds (D6) (LRR A)	, 2,
Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Water Table	on (A3) larks (B1) nt Deposits (B2) loosits (B3) at or Crust (B4) loosits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concar evations: leer Present? Present?	ve Surfac	/ (B7) ce (B8) No ⊠ No □	Water-Stai 1, 2, 44 Salt Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iron Stunted or Other (Exp	ned Leave A, and 4B (B11) vertebrate Sulfide Oo chizosphe of Reduce in Reducti Stressed slain in Re	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Roo I) d Soils (C6 1) (LRR A)	ts (C3)	☐ Wa	ater-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)	, 2,
Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes cap	on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial v Vegetated Concar evations: ter Present? Present? Present?	ve Surface Yes ☐ Yes ☒ Yes ☒	/ (B7) ce (B8) No ⊠ No □ No □	Water-Stai 1, 2, 44 Salt Crust Aquatic Inv Hydrogen 3 Oxidized R Presence C Recent Iron Stunted or Other (Exp Depth (inches Depth (inches	ned Leave A, and 4B (B11) vertebrate Sulfide Octhizosphe of Reduce n Reducti Stressed plain in Re (S): None (11) (S): 9	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Roo I) d Soils (C6 1) (LRR A)	ts (C3)	☐ Wa	atter-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) tised Ant Mounds (D6) (LRR A)	, 2,
Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes cap	on (A3) larks (B1) nt Deposits (B2) loosits (B3) at or Crust (B4) loosits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concar evations: leer Present? Present?	ve Surface Yes ☐ Yes ☒ Yes ☒	/ (B7) ce (B8) No ⊠ No □ No □	Water-Stai 1, 2, 44 Salt Crust Aquatic Inv Hydrogen 3 Oxidized R Presence C Recent Iron Stunted or Other (Exp Depth (inches Depth (inches	ned Leave A, and 4B (B11) vertebrate Sulfide Octhizosphe of Reduce n Reducti Stressed plain in Re (S): None (11) (S): 9	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Roo I) d Soils (C6 1) (LRR A)	ts (C3)	□ Wa	ater-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)	, 2,
Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes cap	on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial v Vegetated Concar evations: ter Present? Present? Present?	ve Surface Yes ☐ Yes ☒ Yes ☒	/ (B7) ce (B8) No ⊠ No □ No □	Water-Stai 1, 2, 44 Salt Crust Aquatic Inv Hydrogen 3 Oxidized R Presence C Recent Iron Stunted or Other (Exp Depth (inches Depth (inches	ned Leave A, and 4B (B11) vertebrate Sulfide Octhizosphe of Reduce n Reducti Stressed plain in Re (S): None (11) (S): 9	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Roo I) d Soils (C6 1) (LRR A)	ts (C3)	□ Wa	ater-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)	, 2,
Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes cap	on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial v Vegetated Concar evations: ter Present? Present? Present?	ve Surface Yes ☐ Yes ☒ Yes ☒	/ (B7) ce (B8) No ⊠ No □ No □	Water-Stai 1, 2, 44 Salt Crust Aquatic Inv Hydrogen 3 Oxidized R Presence C Recent Iron Stunted or Other (Exp Depth (inches Depth (inches	ned Leave A, and 4B (B11) vertebrate Sulfide Octhizosphe of Reduce n Reducti Stressed plain in Re (S): None (11) (S): 9	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Roo I) d Soils (C6 1) (LRR A)	ts (C3)	□ Wa	ater-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)	, 2,
Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundatic Sparsely Field Obser Surface Wat Water Table Saturation P (includes cap Describe Re	on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial v Vegetated Concar evations: ler Present? Present? Present? pillary fringe) ecorded Data (streat	Yes ☐ Yes ☒ Yes ☒ Yes ☒ m gauge	No 🔀 No 🖂 No 🗆 No 🗆	Water-Stai 1, 2, 44 Salt Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iron Stunted or Other (Exp Depth (inches Depth (inches	ned Leave A, and 4B (B11) vertebrate Sulfide Octhizosphe of Reduce n Reducti Stressed slain in Re (S): 11 (S): 9 photos, pr	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Roo I) d Soils (C6 1) (LRR A) Wetl. spections),	ts (C3) and Hye if availa	☐ Wa	ater-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)	(C9)
Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes cal Describe Re	on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial v Vegetated Concar vations: ler Present? Present? Present? pillary fringe) prorded Data (streat	Yes ☐ Yes ☒ Yes ☒ m gauge	No 🖾 No 🗆 No 🗆 No 🗆	Water-Stai 1, 2, 44 Salt Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iron Stunted or Other (Exp Depth (inches Depth (inches Depth (inches ing well, aerial)	ned Leave A, and 4B (B11) vertebrate Sulfide Octhizosphe of Reduce n Reducti Stressed slain in Re (S): None (11) (S): 9 (C)	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D marks) revious ins	Living Roo I) d Soils (C6 1) (LRR A) Wetl spections),	and Hydif availa	☐ Wall Dr ☐ Dr ☐ Sa ☐ Ge ☐ Sh ☐ Fa ☐ Free ☐ Bree ☐ Free ☐ Bree ☐	ater-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery emorphic Position (D2) allow Aquitard (D3) a.C-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ast-Heave Hummocks (D7)	(C9)

Project/Site: 1908.0007 Prospector 6	(City/County	_{/:} Marysv	rille/Snohomish	Sampling Date: <u>2/22/21</u>
Applicant/Owner: Groundhog Land Development C	ompany,	LLC		State: WA	Sampling Point: DP-1W
Investigator(s): Dustin Pringle, Harry Richardson, F	Rachael H	lyland	Section, To	ownship, Range: <u>35, 30 l</u>	North, 5 East
Landform (hillslope, terrace, etc.): Hillslope		Local relie	ef (concave,	, convex, none): Concav	e Slope (%): 1
Subregion (LRR): A2	_ Lat: 48.0	042243		Long: <u>-122.1197307</u>	8 Datum: WGS 84
Soil Map Unit Name: Tokul gravelly medial loam, 0 to	o 8 perce	nt slopes	5	NWI classificat	tion: N/A
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 sign	ificantly dist	turbed?	Are "No	ormal Circumstances" pres	ent? Yes ☒ No ☐
Are Vegetation, Soil, or Hydrology natu	rally problen	natic?	(If need	ed, explain any answers in	Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	samplin	g point le	ocations, transects,	important features, 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:				_	-
All three wetland criteria met. Da	ta collec	ted in V	Vetland .	В.	
VEGETATION – Use scientific names of plant	ts.				
		Dominant		Dominance Test works	heet:
Tree Stratum (Plot size: 30 ft) 1. Alnus rubra	% Cover 70	Yes	FAC	Number of Dominant Spo That Are OBL, FACW, or	
2				Total Number of Domina Species Across All Strata	_
4				'	
Sapling/Shrub Stratum (Plot size: 30 ft)	70	= Total C	over	Percent of Dominant Spe That Are OBL, FACW, or	r FAC: <u>67%</u> (A/B)
1. Rubus spectabilis	85	Yes	FAC	Prevalence Index work	sheet:
2					Multiply by:
3					x 1 =
4				· ·	x 2 =
5					x 3 =
Herb Stratum (Plot size: 10 ft)	85	= Total C	over		x 4 =
4 Polystichum munitum	5	Yes	FACU	· ·	x 5 =
2. Rubus ursinus	1	No	FACU	Column rotals:	(A) (B)
3				Prevalence Index	= B/A =
4				Hydrophytic Vegetation	n Indicators:
5				☐ Rapid Test for Hydro	phytic Vegetation
6				■ Dominance Test is >	50%
7				☐ Prevalence Index is :	≤3.0 ¹
8					ations ¹ (Provide supporting or on a separate sheet)
9				☐ Wetland Non-Vascul	. ,
10				☐ Problematic Hydroph	nytic Vegetation¹ (Explain)
11	6				and wetland hydrology must
Woody Vine Stratum (Plot size: 30 ft)		= Total C		be present, unless distur	bed or problematic.
1				Hydrophytic	
2	0	= Total C	over	Vegetation Present? Yes	⊠ No □
% Bare Ground in Herb Stratum 94		_ 10tai C	O 4 G I	100	
Remarks: Hydrophytic vegetation met through Do	minance	Test.			
, i i, , ii igammi maagii 20					

Depth	cription: (Descril Matrix		орин поос		x Feature		0. 00			or marcatoroly
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks
0 - 7	10YR 2/2	100			-			SaLo		Sandy loam
7 - 14+	2.5Y 4/2	95	7.5YF	R 4/4	5	С	M	GrSaLo	0	Gravelly sandy loam
-					-					
					-					
		 -	-				-			
									2.	
	oncentration, D=D Indicators: (App						ed Sand G			ation: PL=Pore Lining, M=Matrix.
		ilicable to a				iea.)				rs for Problematic Hydric Soils ³ :
☐ Histosol	(A1) pipedon (A2)			ndy Redox (S ipped Matrix (Muck (A10) Parent Material (TF2)
☐ Black Hi	. , ,			amy Mucky M	. ,	1) (excen	t MI RA 1)			Shallow Dark Surface (TF12)
	en Sulfide (A4)			amy Gleyed N			t WILIXA I)			(Explain in Remarks)
	d Below Dark Surf	ace (A11)		pleted Matrix	•	.,			•	(274) and in terms in the
	ark Surface (A12)	, ,		dox Dark Surl	. ,			³ Inc	dicator	s of hydrophytic vegetation and
☐ Sandy M	lucky Mineral (S1))		pleted Dark S		7)		,	wetlan	nd hydrology must be present,
	Sleyed Matrix (S4)		☐ Re	dox Depressi	ons (F8)				unless	disturbed or problematic.
	Layer (if present)):								
Type: No										
Depth (in	iches):							Hydric	Soil I	Present? Yes ⊠ No 🗌
Remarks:										
Hydric soil	criteria met th	rough inc	licators .	A11 and F	3.					
HYDROLO	GY.									
	drology Indicator	re-								
•	cators (minimum o		red: check	all that annly	٨			c	Secon	dary Indicators (2 or more required)
		one requi				aa (DO) (a	waant MI			<u> </u>
Surface	ater Table (A2)		L	Water-Stair	ied Leav i, and 4 B		except will	KA L	vva	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
➤ Saturation				I, 2, 4 A] Salt Crust (•	"		г	¬ ¬	ainage Patterns (B10)
	larks (B1)		_	Aquatic Inv		e (B13)				y-Season Water Table (C2)
	nt Deposits (B2)] Hydrogen S		` '				turation Visible on Aerial Imagery (C9)
	posits (B3)		_	Oxidized R			Living Poo			omorphic Position (D2)
	at or Crust (B4)			Presence o		_	-	_		allow Aquitard (D3)
_	oosits (B5)			Recent Iron				_		C-Neutral Test (D5)
	Soil Cracks (B6)			Stunted or			,	,		ised Ant Mounds (D6) (LRR A)
	on Visible on Aeria	al Imagery (B7) [Other (Expl			., (=	, <u> </u>		ost-Heave Hummocks (D7)
	/ Vegetated Conca					,		-		(2.7)
Field Obser			· -/							
Surface Wat		Yes 🛭	No 🔲 🏻 🗈	Depth (inches): Surfa	ice				
Water Table				Depth (inches		ace				
Saturation P			No 🔲 🛚	Depth (inches	› Surfa	ice	Wet	land Hydr	ology	Present? Yes ⊠ No □
(includes ca	pillary fringe)									Tresent. Tes Es Ite Es
Describe Re	ecorded Data (stream	am gauge,	monitoring	well, aerial p	hotos, p	revious in	spections),	, if availabl	le:	
Remarks:										
Wetland h	ydrology met t	hrough pi	rimary ir	ndicators A	1, A2, a	and A3.				
		• .	•							
			•							

Project/Site: 1908.0007 Prospector 6		City/C	ounty:	Marysv	rille/Snohomish	Samplir	ng Date: 2/22	2/21
Applicant/Owner: Groundhog Land Development C								
Investigator(s): Dustin Pringle, Harry Richardson, F								
Landform (hillslope, terrace, etc.): Top of slope		Loca	relief	(concave,	convex, none): Conc	ave	Slope (%	6): 0
Subregion (LRR): A2								
Soil Map Unit Name: Tokul gravelly medial loam, 0 t								
Are climatic / hydrologic conditions on the site typical for this	time of yea	ar? Ye	s 🗷	No ☐ (I	f no, explain in Remark	s.)		
Are Vegetation, Soil, or Hydrology sign	ificantly dis	turbed	l?	Are "No	ormal Circumstances" p	resent? Ye	es 🗵 No 🗆	J
Are Vegetation, Soil, or Hydrology natu	rally probler	matic?		(If neede	ed, explain any answer	s in Remark	s.)	
SUMMARY OF FINDINGS - Attach site map	showing	sam	pling	point lo	ocations, transec	ts, impor	tant featur	res, etc.
Hydrophytic Vegetation Present? Yes ☐ No 🗵								
Hydric Soil Present? Yes ☒ No ☐				Sampled				
Wetland Hydrology Present? Yes ☐ No 🗵			withi	n a Wetlar	nd? Yes 🗌	No 🔀		
Remarks:	:1	t)	11 4 4		D 1	1 CW /	1 1 D
Not all three wetland criteria met; only hydri	c sous pres	sent. 1	Jata C	сопестеа г	forthwest of wetland	B and sout	neast of wet	land D.
VEGETATION – Use scientific names of plant	ts.							
	Absolute	Domi	inant	Indicator	Dominance Test wo	rksheet:		
Tree Stratum (Plot size: 30 ft)	% Cover				Number of Dominant			
1. Acer macrophyllum	50	Yes		FACU	That Are OBL, FACW	/, or FAC:	2	_ (A)
2. Alnus rubra	35	Yes		FAC	Total Number of Dom	ninant		
3		· 			Species Across All S	trata:	4	_ (B)
4	05				Percent of Dominant	Species		
Sapling/Shrub Stratum (Plot size: 30 ft)	85	= To	tal Co	over	That Are OBL, FACW	I, or FAC:	50%	_ (A/B)
1. Rubus spectabilis	10	Yes	3	FAC	Prevalence Index w	orksheet:		
2.					Total % Cover of	:	Multiply by:	
3.					OBL species	x	1 =	
4					FACW species	x	2 =	
5					FAC species	x	3 =	
	10	= To	tal Co	over	FACU species	x	4 =	
Herb Stratum (Plot size: 10 ft)	30	Vac	_	FACIL	UPL species	x	5 =	
1. Rubus ursinus		1 0	<u> </u>	FACU	Column Totals:	(A)	(B)
2					Prevalence Inde	ov – R/A –		
3					Hydrophytic Vegeta			
4					Rapid Test for Hy			
5					☐ Dominance Test	' '	ogolalion	
6					☐ Prevalence Index			
8					☐ Morphological Ad		Provide supp	ortina
9					data in Rema			
10.					☐ Wetland Non-Vas	cular Plants	s ¹	
11					☐ Problematic Hydr	. ,		,
	20	= To	tal Co	over	¹ Indicators of hydric s be present, unless di			y must
Woody Vine Stratum (Plot size: 30 ft) 1								
2					Hydrophytic			
	0	= To	tal Co	over	Vegetation Present?	res □ No	×	
% Bare Ground in Herb Stratum 70		- 10	itai Oc	,,,,,			_	
Remarks: No hydrophytic vegetation criteria met.	Prevalen	nce in	ıdex	not warr	anted due to lack o	of wetland	l hydrology	
. 10 s. spiry no vogotation omena met.	Svaloi	.00 111		Hair	and add to lack t		, ar clogy	•

Sampling Point: DP-2U

Depth	Matrix				dox Featur		1 2	T	Description
(inches) 0 - 7	Color (moist) 10YR 3/1	<u>%</u> 100	<u>Cold</u> -	or (moist)	<u>%</u> -	Type ¹	<u>Loc²</u>	Texture SaLo	<u>Remarks</u> Sandy Ioam
7 - 10	5GY 6/	$-\frac{100}{60}$	7.5	SYR 4/6	40			CI	Clay
	10YR 3/2			7111 4/0					Gravelly loam
10 - 16+	101K 3/2	100	- <u>-</u>					GrLo	Gravelly loans
¹Type: C=C	oncentration, D=D	epletion, l	RM=Rec	luced Matrix, (CS=Cover	ed or Coa	ted Sand G	rains.	² Location: PL=Pore Lining, M=Matrix.
	Indicators: (App								dicators for Problematic Hydric Soils ³ :
☐ Histosol	(A1)			Sandy Redox	(S5)				2 cm Muck (A10)
	oipedon (A2)			Stripped Matri	` '				,
☐ Black Hi				Loamy Mucky			t MLRA 1)	_	, , , , , , , , , , , , , , , , , , , ,
	n Sulfide (A4) d Below Dark Surfa	200 (111)		Loamy Gleyed Depleted Matr	,	2)		Ш	Other (Explain in Remarks)
	ark Surface (A12)	ace (ATT)		Redox Dark S	. ,)		³ In	dicators of hydrophytic vegetation and
	lucky Mineral (S1)	ı		Depleted Dark	,	,			wetland hydrology must be present,
-	Bleyed Matrix (S4)			Redox Depres					unless disturbed or problematic.
	Layer (if present)):							
Туре: <u>No</u>				-					
Depth (in	ches):			-				Hydri	c Soil Present? Yes 区 No □
Remarks:									
	els of disturbar	nce with	in this	area.					
HYDROLO	GY								
-	drology Indicator		uirod: ch	ook all that an	oly)				Secondary Indicators (2 or more required)
Primary Indi	cators (minimum c		uired; ch			(00 (PO) (Dyoont MI I		Secondary Indicators (2 or more required)
Primary Indi	cators (minimum c		uired; ch	☐ Water-St	ained Lea		except MLI		□ Water-Stained Leaves (B9) (MLRA 1, 2,
Primary Indi Surface High Wa	cators (minimum c Water (A1) ater Table (A2)		uired; ch	☐ Water-St	ained Lea		except MLI		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Primary Indi Surface High Wa Saturation	cators (minimum c Water (A1) ster Table (A2) on (A3)		uired; ch	☐ Water-St 1, 2, 4	ained Lea 4A, and 4 st (B11)	В)	except MLI		 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10)
Primary Indi Surface High Wa Saturation Water M	cators (minimum c Water (A1) ater Table (A2) on (A3) larks (B1)		uired; ch	☐ Water-St	ained Lea 4A, and 4 at (B11) nvertebrat	B) es (B13)	except MLI	RA	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2)
Primary Indi Surface High Wa Saturatio Water M Sedimer	cators (minimum c Water (A1) ster Table (A2) on (A3)		uired; ch	☐ Water-St 1, 2, 4 ☐ Salt Crus ☐ Aquatic II ☐ Hydroger	ained Lea 4A, and 4 t (B11) nvertebrat n Sulfide C	es (B13) Odor (C1)	except MLI	RA	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10)
Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep	cators (minimum c Water (A1) Inter Table (A2) Ion (A3) Iarks (B1) Int Deposits (B2)		uired; ch	Water-St 1, 2, 4 Salt Crus Aquatic li Hydroger Oxidized	ained Lea 4A, and 4 t (B11) nvertebrat n Sulfide C	es (B13) Odor (C1) eres along	Living Roc	RA ots (C3)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9)
Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma	cators (minimum c Water (A1) Inter Table (A2) In (A3) Intraction (B1) Int Deposits (B2) Intraction (B2)		uired; ch	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized Presence	ained Lea 4A, and 4 it (B11) invertebrat in Sulfide C Rhizospha e of Reduc	es (B13) Odor (C1) eres along ed Iron (C	Living Roc	RA ots (C3)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2)
Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma	cators (minimum c Water (A1) ster Table (A2) on (A3) larks (B1) ot Deposits (B2) osits (B3) at or Crust (B4)		uired; ch	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir	ained Lea 4A, and 4 at (B11) envertebrat a Sulfide C Rhizospha e of Reduction Reduction	es (B13) Odor (C1) eres along ed Iron (C	Living Roo 4)	RA obts (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundation	cators (minimum of Water (A1) ater Table (A2) on (A3) arks (B1) at Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6) on Visible on Aeria	of one requ	(B7)	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir	ained Lea 4A, and 4 at (B11) envertebrat a Sulfide C Rhizospha e of Reduction Reduction	es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (E	Living Roc 4) ed Soils (C6	RA obts (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely	cators (minimum of Water (A1) Inter Table (A2) Inter Table (A2) Inter Table (A2) Inter Table (B1) Int Deposits (B2) Inter Table (B3) Inter Table (B4) Inter Tab	of one requ	(B7)	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir	ained Lea 4A, and 4 at (B11) envertebrat a Sulfide C Rhizosphe of Reduction Reduction Stresser	es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (E	Living Roc 4) ed Soils (C6	RA obts (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely	cators (minimum of Water (A1) ster Table (A2) on (A3) larks (B1) on t Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Concar of Vations:	of one requ	(B7) e (B8)	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted of	ained Lea 4A, and 4 at (B11) nvertebrat a Sulfide C Rhizospha e of Reduct on Reduct or Stresses xplain in R	es (B13) Dodor (C1) eres along ed Iron (C cion in Tille d Plants (E emarks)	Living Roc 4) ed Soils (C6	RA obts (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely	cators (minimum of Water (A1) ster Table (A2) on (A3) larks (B1) on t Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Concar of Vations:	of one requ	(B7) de (B8) No ⊠	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted C Other (Ex	ained Lea 4A, and 4 at (B11) nvertebrat a Sulfide C Rhizospho e of Reduct on Reduct on Reduct or Stressed cplain in R	es (B13) Dodor (C1) Deres along ed Iron (C ction in Tille d Plants (E emarks)	Living Roc 4) ed Soils (C6	RA obts (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely	cators (minimum of Water (A1) ater Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Conca	of one requ al Imagery ave Surfac	(B7) e (B8)	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted C Other (Ex	ained Lea 4A, and 4 at (B11) nvertebrat n Sulfide C Rhizospho e of Reduc- on Reduc- on Reduc- or Stresser xplain in R	es (B13) Dodor (C1) Deres along ed Iron (C Diction in Tille d Plants (E Demarks) E Demarks	Living Roc 4) ed Soils (C6	RA obts (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indi Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatic Sparsely Field Obser Surface Wat Water Table Saturation P	cators (minimum of Water (A1) water Table (A2) on (A3) larks (B1) on Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Concar vations: eer Present? Present?	al Imagery ave Surfac	(B7) de (B8) No ⊠	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted C Other (Ex	ained Lea 4A, and 4 at (B11) nvertebrat n Sulfide C Rhizospho e of Reduc- on Reduc- on Reduc- or Stresser xplain in R	es (B13) Dodor (C1) Deres along ed Iron (C Diction in Tille d Plants (E Demarks) E Demarks	Living Roc 4) dd Soils (C6 01) (LRR A	RA (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca	cators (minimum of Water (A1) Inter Table (A2) Inter Table (A2) Inter Table (A2) Inter Table (A2) Inter Table (B3) Inter Table (B3) Inter Table (B4) Inter Tabl	al Imagery ave Surface Yes Yes Yes Yes Yes Yes Yes	(B7) se (B8) No 🗵 No 🗵 No 🗵	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted C Other (Ex	ained Lea 4A, and 4 it (B11) nvertebrat n Sulfide C Rhizosph e of Reduct on Reduct on Reduct or Stresse xplain in R es): Non es): Non Non	es (B13) Dodor (C1) Deres along ed Iron (C Diction in Tille d Plants (E Demarks) Demarks	Living Roc 4) ed Soils (C6 01) (LRR A	RA ots (C3) 6) land Hyd	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca	cators (minimum of Water (A1) water Table (A2) on (A3) larks (B1) on Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Conca vations: ere Present? Present? Present? pillary fringe)	al Imagery ave Surface Yes Yes Yes Yes Yes Yes Yes	(B7) se (B8) No 🗵 No 🗵 No 🗵	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted C Other (Ex	ained Lea 4A, and 4 it (B11) nvertebrat n Sulfide C Rhizosph e of Reduct on Reduct on Reduct or Stresse xplain in R es): Non es): Non Non	es (B13) Dodor (C1) Deres along ed Iron (C Diction in Tille d Plants (E Demarks) Demarks	Living Roc 4) ed Soils (C6 01) (LRR A	RA ots (C3) 6) land Hyd	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca Describe Re	cators (minimum of Water (A1) water Table (A2) on (A3) larks (B1) on Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Conca vations: ere Present? Present? Present? pillary fringe)	al Imagery ave Surface Yes Yes Yes Area Yes Area Area	(B7) se (B8) No 🗵 No 🗵 No 🗵	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted C Other (Ex	ained Lea 4A, and 4 it (B11) nvertebrat n Sulfide C Rhizosph e of Reduct on Reduct on Reduct or Stresse xplain in R es): Non es): Non Non	es (B13) Dodor (C1) Deres along ed Iron (C Diction in Tille d Plants (E Demarks) Demarks	Living Roc 4) ed Soils (C6 01) (LRR A	RA ots (C3) 6) land Hyd	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca Describe Re	cators (minimum of Water (A1) ater Table (A2) on (A3) arks (B1) on Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Concar ovations: are Present? Present? pillary fringe) corded Data (streat	al Imagery ave Surface Yes Yes Yes Area Yes Area Area	(B7) se (B8) No 🗵 No 🗵 No 🗵	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted C Other (Ex	ained Lea 4A, and 4 it (B11) nvertebrat n Sulfide C Rhizosph e of Reduct on Reduct on Reduct or Stresse xplain in R es): Non es): Non Non	es (B13) Dodor (C1) Deres along ed Iron (C Diction in Tille d Plants (E Demarks) Demarks	Living Roc 4) ed Soils (C6 01) (LRR A	RA ots (C3) 6) land Hyd	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)

Project/Site: 1908.0007 Prospector 6	(City/Co	ounty	Marysv	rille/Snohomish	Samplir	ng Date: 2/22	2/21
Applicant/Owner: Groundhog Land Development C		-	-				-	
Investigator(s): Dustin Pringle, Harry Richardson, F								
Landform (hillslope, terrace, etc.): Toe of slope								 _{6):} 1
Subregion (LRR): A2								
Soil Map Unit Name: Tokul gravelly medial loam, 0 t								
Are climatic / hydrologic conditions on the site typical for this	time of yea	ar? Ye	s 🛚	No 🗌 (I	f no, explain in Remark	s.)		
Are Vegetation, Soil, or Hydrology sign	ificantly dist	turbed	?	Are "No	ormal Circumstances" p	resent? Ye	es 🗵 No 🗌	j
Are Vegetation, Soil, or Hydrology natu	rally probler	natic?		(If neede	ed, explain any answer	s in Remark	(s.)	
SUMMARY OF FINDINGS - Attach site map	showing	samı	pling	g point lo	ocations, transec	ts, impor	tant featur	es, etc.
Hydrophytic Vegetation Present? Yes ☒ No ☐								
Hydric Soil Present? Yes ☐ No 🗵				Sampled				
Wetland Hydrology Present? Yes ☒ No ☐			withi	n a Wetlar	nd? Yes 🗌	No 🔀		
Remarks:		••	Τ.		1 .1 (337/ .1 1		.1 CW/ .1	1.0
Not all three wetland criteria met; lacking	ng hydric	soils.	Dat	a collecte	ed north of Wetland	A and so	uth of Wetla	and D.
VEGETATION – Use scientific names of plant	ts.							
	Absolute			Indicator	Dominance Test wo	rksheet:		
Tree Stratum (Plot size: 30 ft) 1. Alnus rubra	<u>% Cover</u> 80	Spec Yes		Status FAC	Number of Dominant That Are OBL, FACW		3	(A)
2.					Total Number of Dom			- 、 /
3					Species Across All S		3	_ (B)
4					Percent of Dominant	Species		
	80	= To	tal Co	over	That Are OBL, FACW		100%	_ (A/B)
Sapling/Shrub Stratum (Plot size: 30 ft) 1. Rubus spectabilis	100	Yes	3	FAC	Prevalence Index w	orkshoot:		
2					Total % Cover of		Multiply by:	
3					OBL species			
4					FACW species			
5					FAC species			
	100	= To	tal Co	over	FACU species	X	4 =	
Herb Stratum (Plot size: 10 ft)	1	Vac		E A C	UPL species	x	5 =	
1. Ranunculus repens					Column Totals:	(A)	(B)
2					Prevalence Inde	ex = B/A =		
3					Hydrophytic Vegeta			
4. 5.					Rapid Test for Hy			
6.					■ Dominance Test		J	
7					☐ Prevalence Index	is ≤3.0¹		
8					☐ Morphological Ad			
9.					data in Rema		•	et)
10					☐ Wetland Non-Vas			
11					Problematic Hydr	. ,		,
Woody Vine Stratum (Plot size: 30 ft)	1	= To	tal Co	over	¹ Indicators of hydric s be present, unless di			/ must
1								
2					Hydrophytic Vegetation			
% Bare Ground in Herb Stratum 99	0	= To	tal Co	over		∕es⊠ No	, 🗆	
				4	l .			
Remarks: Hydrophytic vegetation criteria met thro	ougn Dom	ıınan	ce I	est.				

Sampling Point: DP-3U

Depth	Matrix			Redo	x Features	;					
(inches)	Color (moist)	%	Colo	r (moist)	<u>%</u>	Type ¹	Loc ²	Textu	<u>e</u>	<u>Remarks</u>	
0 - 14+	10YR 3/1	100	-		-	-	-	SiLo		Silty loam	
	-										
	-										
	-										
¹Type: C=C	Concentration, D=De	epletion, R	RM=Red	uced Matrix, C	S=Covered	or Coate	ed Sand G	rains.	² Loc	ation: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators: (Appl	icable to	all LRR	s, unless othe	rwise note	ed.)		In		rs for Problematic Hydric Soils ³ :	
☐ Histosol	(A1)			Sandy Redox (S5)] 2 cm	Muck (A10)	
☐ Histic E	pipedon (A2)			Stripped Matrix	(S6)				Red	Parent Material (TF2)	
	istic (A3)			_oamy Mucky N		(except	MLRA 1)] Very	Shallow Dark Surface (TF12)	
	en Sulfide (A4)			_oamy Gleyed] Othe	r (Explain in Remarks)	
-	d Below Dark Surfa	ice (A11)		Depleted Matrix							
	ark Surface (A12)			Redox Dark Su	, ,	_,		3 1		rs of hydrophytic vegetation and	
-	Mucky Mineral (S1)			Depleted Dark	•	()				nd hydrology must be present,	
	Gleyed Matrix (S4) Layer (if present):	-		Redox Depress	ions (F8)				unies	s disturbed or problematic.	
Type: No		•									
	nches):			-				1			
								Hydr	ic Soil	Present? Yes ☐ No 区	
Remarks:											
No hydric	soil criteria met										
HYDROLO	OGY										
		e·									
Wetland Hy	drology Indicator		irod: obe	ook all that ann	l A				Sagan	dan/Indicators /2 or more required)	
Wetland Hy Primary Indi	drology Indicators		ired; che			(50) (dary Indicators (2 or more required)	•
Wetland Hy Primary Indi Surface	drology Indicators icators (minimum of Water (A1)		ired; che	☐ Water-Sta	ined Leave		xcept MLF	RA		ater-Stained Leaves (B9) (MLRA 1,	•
Wetland Hy Primary Indi	rdrology Indicators icators (minimum of Water (A1) ater Table (A2)		ired; che	☐ Water-Sta	ined Leave A, and 4B)		xcept MLF	RA	☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 4A, and 4B)	•
Wetland Hy Primary Indi Surface High Wa Saturation	rdrology Indicators icators (minimum of Water (A1) ater Table (A2) on (A3)		ired; che	☐ Water-Sta 1, 2, 4	ined Leave A, and 4B) (B11)		xcept MLF	RA	□ Wa	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10)	•
Wetland Hy Primary Indi Surface High Wa Saturati Water M	rdrology Indicators icators (minimum of Water (A1) ater Table (A2) on (A3) flarks (B1)		ired; che	Water-Sta 1, 2, 4 Salt Crust Aquatic In	ined Leave A, and 4B) (B11) vertebrates	(B13)	xcept MLF	RA	□ Wa	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2)	2,
Wetland Hy Primary Indi Surface High Wa Saturation Water M Sedimen	vdrology Indicators icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2)		ired; che	Water-Sta 1, 2, 4 Salt Crust Aquatic In	ined Leave A, and 4B) (B11) vertebrates Sulfide Ode	(B13) or (C1)			□ Wa□ Dr□ Dr□ Sa	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) atturation Visible on Aerial Imagery (C	2,
Wetland Hy Primary Indi Surface High Wa Saturation Water M Sedimen Drift Dep	rdrology Indicators icators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3)		ired; che	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F	ined Leave A, and 4B) (B11) vertebrates Sulfide Ode Rhizosphere	(B13) or (C1) es along	Living Roo		☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 24A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) atturation Visible on Aerial Imagery (Ca) atturation Position (D2)	2,
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimen □ Drift Dep Algal Ma	rdrology Indicators icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		ired; che	Water-Sta 1, 2, 4. Salt Crust Aquatic In Hydrogen Oxidized F Presence	ined Leave A, and 4B) (B11) vertebrates Sulfide Ode Rhizosphere of Reduced	(B13) or (C1) es along l Iron (C4	Living Roo l)	ots (C3)	☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 24A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) atturation Visible on Aerial Imagery (Ca) comorphic Position (D2) allow Aquitard (D3)	2,
Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedimen Drift Dep Algal Ma Iron Dep	rdrology Indicators icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)		ired; che	Water-Sta 1, 2, 4. Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	ned Leave A, and 4B) (B11) vertebrates Sulfide Ode Rhizosphere of Reduced n Reductio	(B13) or (C1) es along d Iron (C4 n in Tilled	Living Roo I) d Soils (C6	ots (C3)		ater-Stained Leaves (B9) (MLRA 1, 24A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) attration Visible on Aerial Imagery (Ca) ecomorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5)	2,
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Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Der Algal Ma Iron Der Surface Inundati Sparsely Field Obser Saturation F (includes ca Describe Re	rdrology Indicators icators (minimum of Water (A1) ater Table (A2) on (A3) flarks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial by Vegetated Concar rvations: ter Present? Present? apillary fringe) pecorded Data (streat	I Imagery ve Surface Yes 🔀 Yes 🔀 Yes 🖾 m gauge,	(B7) e (B8) No No No No monitor	Water-Sta 1, 2, 4. Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp Depth (inche Depth (inche ing well, aerial	ined Leave A, and 4B) (B11) vertebrates Sulfide Odd Rhizosphere of Reduced n Reductio Stressed Folain in Ren Si: Surfac Si: Surfac photos, pre	(B13) or (C1) es along d Iron (C4 n in Tilled Plants (D narks) Ce ce ce evious ins	Living Roo Soils (C6 Calculate the control of the	ots (C3)	☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 24A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) atturation Visible on Aerial Imagery (Ca) acomorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) acst-Heave Hummocks (D7)	2,

Project/Site: 1908.0007 Prospector 6		City/Cou	_{nty:} Marysv	rille/Snohomish	Sampling Date: 2/22/21
Applicant/Owner: Groundhog Land Development C	Company,	LLC		State: WA	Sampling Point: DP-4W
Investigator(s): Dustin Pringle, Harry Richardson,					
Landform (hillslope, terrace, etc.): Depression		Local re	elief (concave,	, convex, none): Conca	Slope (%): 1
					741 Datum: WGS 84
Soil Map Unit Name: Tokul gravelly medial loam, 0					
Are climatic / hydrologic conditions on the site typical for this	s time of yea	ar? Yes [× No □ (I	f no, explain in Remarks	.)
Are Vegetation, Soil, or Hydrology sig	nificantly dis	turbed?	Are "No	ormal Circumstances" pre	esent? Yes 🗵 No 🗌
Are Vegetation, Soil, or Hydrology nat	urally proble	matic?	(If need	ed, explain any answers	in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	sampli	ing point le	ocations, transects	s, important features, etc.
Hydrophytic Vegetation Present? Yes ☒ No ☐					
Hydric Soil Present? Yes ☒ No ☐			the Sampled		Na 🗆
Wetland Hydrology Present? Yes ☒ No ☐		WI	thin a Wetlar	nd? Yes ☒	NO [
Remarks: All three wetland criteria met. Da	rta collec	ted in	Wetland	Δ	
All three wettand enteria met. Da	ita Concc	icu iii	w Chang	A.	
VEGETATION – Use scientific names of plan	ıts.				
- (5) (5)	Absolute		nt Indicator	Dominance Test wor	ksheet:
Tree Stratum (Plot size: 30 ft) 1. Alnus rubra	% Cover 70	Yes	s? Status FAC	Number of Dominant S	
2. Thuja plicata	5	No		That Are OBL, FACVV,	or FAC: <u>4</u> (A)
3	-			Total Number of Domi Species Across All Str	_
4				,	
	75	= Total	Cover	Percent of Dominant S That Are OBL, FACW.	Species or FAC: <u>80%</u> (A/B)
Sapling/Shrub Stratum (Plot size: 30 ft)					
1. Rubus spectabilis	· ·		<u>FAC</u>	Prevalence Index wo	
2					Multiply by: x 1 =
3					x 2 =
4. 5.		-			x 3 =
3	60	= Total	Cover		x 4 =
Herb Stratum (Plot size: 10 ft)				*	x 5 =
1. Rubus ursinus	2		FACU	Column Totals:	(A) (B)
2. Ranunculus repens	1	Yes	FAC		
3. Epilobium ciliatum		Yes	FACW		x = B/A =
4				Hydrophytic Vegetati	
5				☐ Rapid Test for Hyd ■ Dominance Test is	drophytic Vegetation
6				☐ Prevalence Index i	
7 8					aptations ¹ (Provide supporting
9.					ks or on a separate sheet)
10				☐ Wetland Non-Vaso	
11					phytic Vegetation ¹ (Explain)
	1	= Total	Cover	¹ Indicators of hydric so be present, unless dist	oil and wetland hydrology must
Woody Vine Stratum (Plot size: 30 ft)				be present, unless dist	
1				Hydrophytic	
2				Vegetation	N
% Bare Ground in Herb Stratum 96	0	= Total	Cover	Present? Ye	es 🗵 No 🗌
Remarks:			Tast	1	
Hydrophytic vegetation criteria met the	ougn Don	nınance	e rest.		

Depth (inches)	Matrix Color (moist)	%	Color (r		Feature %	<u>es</u> Type¹	Loc ²	Textu	re	Remarks
0 - 6	10YR 3/2	100	-		-	-	-	GrSa		Gravelly sandy loam
6 - 14+	10YR 4/2	60	7.5YF	R 5/4	10	C	M	GrSa	Lo	Gravelly sandy loam; mixed matrix
-	10YR 3/2	30			_		_	GrSa	Lo	Gravelly sandy loam; mixed matrix
¹Tvpe: C=C	Concentration, D=D	epletion. R	M=Reduce	ed Matrix. CS=	=Covere	ed or Coat	ed Sand G	rains.	² Lo	cation: PL=Pore Lining, M=Matrix.
	Indicators: (App									ors for Problematic Hydric Soils ³ :
☐ Histosol	(A1)		☐ Sar	ndy Redox (S5	5)] 2 cm	n Muck (A10)
	pipedon (A2)			pped Matrix (S	,					Parent Material (TF2)
	istic (A3)			ımy Mucky Miı			t MLRA 1)			Shallow Dark Surface (TF12)
	en Sulfide (A4) d Below Dark Surfa	000 (111)		my Gleyed Matrix (•	2)		L] Othe	er (Explain in Remarks)
-	ark Surface (A12)	ace (ATT)		oleted Matrix (dox Dark Surfa)		3	ndicato	ors of hydrophytic vegetation and
	//ucky Mineral (S1))		oleted Dark Su		•				and hydrology must be present,
-	Gleyed Matrix (S4)			dox Depressio						ss disturbed or problematic.
	Layer (if present)):								
Type: No										
Depth (in	nches):_ 							Hydr	ic Soil	Present? Yes ⊠ No □
Remarks:								•		
Hydric soil	criteria met th	rough ind	dicators /	A11 and F3	i.					
		Ü								
HYDROLO)GV									
	drology Indicator	re:								
_	icators (minimum c		ired: check	all that apply)	١				Seco	ndary Indicators (2 or more required)
-	Water (A1)	<u> </u>		Water-Stain		/es (B9) (e	xcent MI F	2Δ		/ater-Stained Leaves (B9) (MLRA 1, 2,
	ater Table (A2)			1, 2, 4A,		` , `	xcept iiiLi	\A	_ ''	4A, and 4B)
➤ Saturation	, ,			Salt Crust (E		-,			Πр	rainage Patterns (B10)
☐ Water M	` '			Aquatic Inve	,	es (B13)				ry-Season Water Table (C2)
	nt Deposits (B2)			Hydrogen S						aturation Visible on Aerial Imagery (C9)
	posits (B3)			Oxidized Rh			Living Roo	ts (C3)		eomorphic Position (D2)
☐ Algal Ma	at or Crust (B4)			Presence of	Reduc	ed Iron (C	4)		□s	hallow Aquitard (D3)
					D = -14				_	
	oosits (B5)			Recent Iron	Reduct	ion in Tille	d Soils (C6	6)	∐ F	AC-Neutral Test (D5)
☐ Iron Dep	oosits (B5) Soil Cracks (B6)			Recent Iron Stunted or S			,	,		AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
☐ Iron Dep		al Imagery	(B7)		Stressec	d Plants (D	,	,	☐ R	
☐ Iron Dep☐ Surface☐ Inundati	Soil Cracks (B6)			Stunted or S	Stressec	d Plants (D	,	,	☐ R	aised Ant Mounds (D6) (LRR A)
☐ Iron Dep☐ Surface☐ Inundati	Soil Cracks (B6) on Visible on Aeria y Vegetated Conca		e (B8)	Stunted or S Other (Expla	Stressed	d Plants (D emarks)	,	,	☐ R	aised Ant Mounds (D6) (LRR A)
☐ Iron Dep ☐ Surface ☐ Inundati ☐ Sparsely Field Obser	Soil Cracks (B6) on Visible on Aeria y Vegetated Conca	ave Surface	(B8)	Stunted or S Other (Explain	Stressed ain in Re	d Plants (Demarks)	,	,	☐ R	aised Ant Mounds (D6) (LRR A)
☐ Iron Dep ☐ Surface ☐ Inundati ☐ Sparsely Field Obser	Soil Cracks (B6) on Visible on Aeria y Vegetated Concarvations: ter Present?	Yes	e (B8) No ☑ □ □	Stunted or S Other (Explain Depth (inches): Depth (inches):	Stressed ain in Ro None	d Plants (Demarks)	,	,	☐ R	aised Ant Mounds (D6) (LRR A)
☐ Iron Dep☐ Surface☐ Inundati☐ Sparsely Field Obsel Surface Water Table Saturation F	Soil Cracks (B6) on Visible on Aeria y Vegetated Concarvations: ter Present? Present?	Yes Yes X	e (B8) No ☑ □ □	Stunted or S Other (Explain	Stressed ain in Ro None	d Plants (Demarks)	1) (LRR A)	, ,	□ R	aised Ant Mounds (D6) (LRR A)
☐ Iron Dep ☐ Surface ☐ Inundati ☐ Sparsely Field Obset Surface Water Table Saturation F (includes ca	Soil Cracks (B6) on Visible on Aeria v Vegetated Concarvations: ter Present? Present? pillary fringe)	Yes Yes X	No 🔀 🗆 E	Stunted or S Other (Explain Depth (inches): Depth (inches): Depth (inches):	None Surfa	e e e e e e e e e e e e e e e e e e e	1) (LRR A	and Hy	□ R □ F	aised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
☐ Iron Dep ☐ Surface ☐ Inundati ☐ Sparsely Field Obset Surface Water Table Saturation F (includes ca	Soil Cracks (B6) on Visible on Aeria y Vegetated Concarvations: ter Present? Present?	Yes Yes X	No 🔀 🗆 E	Stunted or S Other (Explain Depth (inches): Depth (inches): Depth (inches):	None Surfa	e e e e e e e e e e e e e e e e e e e	1) (LRR A	and Hy	□ R □ F	aised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
☐ Iron Dep ☐ Surface ☐ Inundati ☐ Sparsely Field Obsel Surface Wa Water Table Saturation F (includes ca Describe Re	Soil Cracks (B6) on Visible on Aeria v Vegetated Concarvations: ter Present? Present? pillary fringe)	Yes Yes X	No 🔀 🗆 E	Stunted or S Other (Explain Depth (inches): Depth (inches): Depth (inches):	None Surfa	e e e e e e e e e e e e e e e e e e e	1) (LRR A	and Hy	□ R □ F	aised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
☐ Iron Dep☐ Surface☐ Inundati☐ Sparsely Field Obset Surface War Water Table Saturation F (includes ca Describe Re	Soil Cracks (B6) on Visible on Aeria y Vegetated Conca rvations: ter Present? e Present? Present? upillary fringe) ecorded Data (strea	Yes Yes Yes Yes Yes Yes Yes Am gauge,	No X C No C No C C No C C T T T T T T T T T T T T T T T T T T	Other (Explainment) Depth (inches): Depth (inches): Depth (inches): Well, aerial pl	None Surfa Surfa notos, p	e ace previous in	Wetl	and Hy	□ R □ F	aised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
☐ Iron Dep☐ Surface☐ Inundati☐ Sparsely Field Obset Surface War Water Table Saturation F (includes ca Describe Re	Soil Cracks (B6) on Visible on Aeria v Vegetated Concarvations: ter Present? Present? pillary fringe)	Yes Yes Yes Yes Yes Yes Yes Am gauge,	No X C No C No C C No C C T T T T T T T T T T T T T T T T T T	Other (Explainment) Depth (inches): Depth (inches): Depth (inches): Well, aerial pl	None Surfa Surfa notos, p	e ace previous in	Wetl	and Hy	□ R □ F	aised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
☐ Iron Dep ☐ Surface ☐ Inundati ☐ Sparsely Field Obset Surface Water Table Saturation F (includes ca Describe Re	Soil Cracks (B6) on Visible on Aeria y Vegetated Conca rvations: ter Present? e Present? Present? upillary fringe) ecorded Data (strea	Yes Yes Yes Yes Yes Yes Yes Am gauge,	No X C No C No C C No C C T T T T T T T T T T T T T T T T T T	Other (Explainment) Depth (inches): Depth (inches): Depth (inches): Well, aerial pl	None Surfa Surfa notos, p	e ace previous in	Wetl	and Hy	☐ R ☐ F	aised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)

Project/Site: 1908.0007 Prospector 6	(City/County	_{y:} Marysv	rille/Snohomish	Sampling Date: <u>2/22/21</u>
Applicant/Owner: Groundhog Land Development C	ompany,	LLC		State: WA	Sampling Point: DP-5U
Investigator(s): Dustin Pringle, Harry Richardson, F	Rachael H	lyland	Section, To	ownship, Range: 35, 30 l	North, 5 East
Landform (hillslope, terrace, etc.): Top of Slope		Local relie	ef (concave,	, convex, none): Concav	e Slope (%): 1
Subregion (LRR): A2	Lat: 48.0	042771		Long: -122.1219848	7 Datum: WGS 84
Soil Map Unit Name: Tokul gravelly medial loam, 0 to	o 8 perce	nt slope:	S	NWI classificat	tion: N/A
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 sign	ificantly dist	turbed?	Are "No	ormal Circumstances" pres	ent? Yes ☒ No ☐
Are Vegetation, Soil, or Hydrology natu	rally problen	natic?	(If need	ed, explain any answers in	Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	samplin	g point le	ocations, transects,	important features, 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) <u>X</u>
Remarks: Not all three wetland criteria met; only wetlan	d hydrolog	v present	Data collec	eted in the northwest porti	ion of the subject property
Too an ence weaming enterm men, only weaming	u ny urorog.	y present.	Data conce	seed in the northwest ports	ion of the subject property.
VEGETATION – Use scientific names of plant	ts.				
	Absolute	Dominant		Dominance Test works	heet:
Tree Stratum (Plot size: 30 ft) 1. Alnus rubra	% Cover 70	Species? Yes	Status FAC	Number of Dominant Spo	
2. Acer macrophyllum	30	Yes	FACU	That Are OBL, FACW, or	r FAC: <u>2</u> (A)
3		100	17100	Total Number of Domina Species Across All Strata	
4.				Species Across Ali Strate	а. <u>4</u> (В)
	100	= Total C	over	Percent of Dominant Spe That Are OBL, FACW, or	
Sapling/Shrub Stratum (Plot size: 30 ft)			=		` ` ,
1. Rubus spectabilis	80	Yes	FAC	Prevalence Index work	
2. Rubus armeniacus	1	No	FAC		Multiply by:
3					x 1 =
4					x 2 = x 3 =
5	81	= Total C	·over		x 4 =
Herb Stratum (Plot size: 10 ft)	<u> </u>	= 10(a) 0	ovei		x 5 =
1. Rubus ursinus	10	Yes	FACU	· ·	(A) (B)
2					
3					= B/A =
4				Hydrophytic Vegetation	
5				Rapid Test for Hydro	· · ·
6				☐ Dominance Test is >	
7				Prevalence Index is:	
8					ations ¹ (Provide supporting or on a separate sheet)
9				☐ Wetland Non-Vascul	ar Plants ¹
10				☐ Problematic Hydroph	nytic Vegetation¹ (Explain)
11	10	= Total C	·ovor		and wetland hydrology must
Woody Vine Stratum (Plot size: 30 ft)		= Total C	ovei	be present, unless distur	bed or problematic.
1				Hydrophytic	
2				Vegetation	
% Bare Ground in Herb Stratum 90	0	= Total C	over	Present? Yes	□ No ⊠
Remarks:	Dec. : !			antad de colo 1 1 1 11	
No hydrophytic vegetation criteria met.	Prevalen	ce index	not warr	anted due to lack of h	yarıc soils.

Sampling Point: DP-5U

Depth	Matrix	٠,	_ 		dox Featur		1 2	T			D '	
(inches)	Color (moist)	<u>%</u>	_ Colo	r (moist)	%	Type ¹	Loc ²	Textu		Condul	Remarks	<u>i</u>
0 - 5	10YR 3/2	100					<u>-</u>	SaLo		Sandy lo		
5 - 13+	10YR 3/4	95	10\	/R 5/8	5	<u>C</u>	<u>M</u>	GrLo		Gravelly	loam	
			_									
	Concentration, D=D						ed Sand G					g, M=Matrix.
ydric Soil	Indicators: (Appl	icable to	all LRR	s, unless oth	nerwise no	oted.)		In	dicato	rs for Prol	blematic H	ydric Soils³:
Histosol	` '			Sandy Redox						Muck (A1	,	
	pipedon (A2)			Stripped Matri		- 4) /	(MI DA 4)	Ļ			terial (TF2)	
_	istic (A3) en Sulfide (A4)			_oamy Mucky _oamy Gleyed	,	, · · -	t MLRA 1)				ark Surface	, ,
	d Below Dark Surfa	ca (Δ11)		Depleted Matr		۷)			_ Othe	(Explail)	in Remarks)
	ark Surface (A12)	icc (ATT)		Redox Dark S		5)		³ 1	ndicato	rs of hydro	phytic vege	etation and
	Mucky Mineral (S1)			Depleted Dark	,	•		•		•	gy must be	
-	Gleyed Matrix (S4)			Redox Depres		. ,			unless	disturbed	l or problen	natic.
	Layer (if present):	:		-							-	
Type: No	one											
Depth (in	nches):							Hydr	ic Soil	Present?	Yes □	No ⊠
om orlini												
emarks: o hydric	soil criteria met											
o hydric	OGY											
O hydric	OGY vdrology Indicator	s:							0			
O hydric OROLO Tetland Hy rimary Indi	OGY rdrology Indicator icators (minimum o	s:	uired; che			(00)						more required)
DROLO /PEROLO /etland Hy rimary Indi] Surface	OGY rdrology Indicator icators (minimum o Water (A1)	s:	uired; che	☐ Water-St	tained Lea		except MLF	RA.		ater-Staine	ed Leaves (more required) B9) (MLRA 1, 2
DROLO /DROLO /etland Hy rimary Indi Surface High Wa	OGY rdrology Indicator icators (minimum o Water (A1) ater Table (A2)	s:	uired; che	☐ Water-St	tained Lea		except MLF	RA	☐ Wa	ater-Staine	ed Leaves (4B)	B9) (MLRA 1, 2
DROLO Vetland Hy rimary Indi Surface High Wa Saturatio	OGY rdrology Indicator icators (minimum o Water (A1) ater Table (A2) on (A3)	s:	uired; che	☐ Water-St 1, 2,	tained Lea 4A, and 4 st (B11)	В)	except MLF	RA	□ Wa	ater-Staine 4A, and ainage Pat	ed Leaves (4B) tterns (B10	B9) (MLRA 1, 2
TDROLO Tetland Hyrimary Indi Surface High Wa Saturatio Water M	ody rdrology Indicator icators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1)	s:	uired; che	☐ Water-St 1, 2, ☐ Salt Crus ☐ Aquatic I	tained Lea 4A, and 4 at (B11) nvertebrat	B) es (B13)	except MLF	RA	□ Wa	ater-Staine 4A, and ainage Par y-Season	ed Leaves (4B) tterns (B10 Water Tabl	B9) (MLRA 1, 2) e (C2)
TDROLO Tetland Hyrimary Indi Surface High Wa Saturatio Water M Sedimer	order variable (A2) on (A3) Marks (B1) on Deposits (B2)	s:	uired; che	☐ Water-St 1, 2, 4 ☐ Salt Crus ☐ Aquatic I ☐ Hydroger	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C	es (B13) Odor (C1)			□ Wa□ Dra□ Dra□ Sa	ater-Staine 4A, and 4 ainage Pate y-Season Vi turation Vi	ed Leaves (4B) tterns (B10 Water Tabl sible on Ae	B9) (MLRA 1, 2) e (C2) erial Imagery (C
TDROLO Tetland Hy rimary Indi Surface High Wa Saturati Water M Sedimer Drift Dep	order variable (A2) on (A3) larks (B1) on the Deposits (B2) posits (B3)	s:	uired; che	Water-St 1, 2, Salt Crus Aquatic I Hydroger Oxidized	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C Rhizosph	es (B13) Odor (C1) eres along	Living Roo		☐ Wa	ater-Staine 4A, and 4 ainage Par y-Season Vi turation Vi comorphic	ed Leaves (4 B) tterns (B10 Water Tablesible on Ae Position (D	B9) (MLRA 1, 2) e (C2) erial Imagery (C
DROLO TOROLO Tetland Hy rimary Indi Surface High Wa Saturatia Water M Sedimer Drift Dep	variology Indicator icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) ant Deposits (B2) posits (B3) at or Crust (B4)	s:	uired; che	Water-St 1, 2, Salt Crus Aquatic I Hydroger Oxidized Presence	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C Rhizosph e of Reduc	es (B13) Odor (C1) eres along and Iron (C	Living Roo 4)	ots (C3)	☐ Wa	ater-Staine 4A, and ainage Par y-Season turation Vi comorphic allow Aqui	ed Leaves (4B) tterns (B10 Water Tablisible on Ae Position (D itard (D3)	B9) (MLRA 1, 2) e (C2) erial Imagery (C
/DROLO /etland Hy rimary Indi Surface High Wa Saturati Water M Sedimer Drift Dep Algal Ma Iron Dep	or various Indicator (cators (minimum of Water (A1)) ater Table (A2) on (A3) (farks (B1)) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	s:	uired; che	Water-St 1, 2, Salt Crus Aquatic I Hydrogel Oxidized Presence Recent In	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C Rhizosph e of Reduct ron Reduct	es (B13) Odor (C1) eres along ced Iron (C- tion in Tille	Living Roo 4) d Soils (C6	ots (C3)	☐ Wa	ater-Staine 4A, and ainage Par y-Season Vituration Vite comorphic allow Aqui C-Neutral	ed Leaves (4B) tterns (B10 Water Tablisible on Ae Position (D itard (D3) Test (D5)	B9) (MLRA 1, 2) e (C2) erial Imagery (C2)
/DROLO /etland Hy rimary Indi Surface High Wa Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep	order of the control	s: f one requ		Water-St 1, 2, Salt Crus Aquatic I Hydrogel Oxidized Presence Recent II	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C Rhizosph e of Reduct ron Reduct or Stresse	es (B13) Odor (C1) eres along ced Iron (C- tion in Tille d Plants (C	Living Roo 4)	ots (C3)	Dr. Dr. Sa Gee	ater-Staine 4A, and 4 ainage Par y-Season Vituration Vite comorphic allow Aqui C-Neutral ised Ant M	ed Leaves (4B) tterns (B10 Water Tablesible on Ae Position (D3) Test (D5) Mounds (D6	B9) (MLRA 1, 2) e (C2) erial Imagery (C2 2)
TOROLO Tetland Hyrimary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati	order of the control	s: f one requ	· (B7)	Water-St 1, 2, Salt Crus Aquatic I Hydrogel Oxidized Presence Recent II	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C Rhizosph e of Reduct ron Reduct	es (B13) Odor (C1) eres along ced Iron (C- tion in Tille d Plants (C	Living Roo 4) d Soils (C6	ots (C3)	Dr. Dr. Sa Gee	ater-Staine 4A, and 4 ainage Par y-Season Vituration Vite comorphic allow Aqui C-Neutral ised Ant M	ed Leaves (4B) tterns (B10 Water Tablisible on Ae Position (D itard (D3) Test (D5)	B9) (MLRA 1, 2) e (C2) erial Imagery (C2 2)
/DROLO /etland Hy rimary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely	order variable (A2) on (A3) variable (B2) on (A3) variable (B2) on (B3) variable (B4) on (B4) on (B4) on (B4) on (B4) on (B4) on (B5)	s: f one requ	· (B7)	Water-St 1, 2, Salt Crus Aquatic I Hydrogel Oxidized Presence Recent II	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C Rhizosph e of Reduct ron Reduct or Stresse	es (B13) Odor (C1) eres along ced Iron (C- tion in Tille d Plants (C	Living Roo 4) d Soils (C6	ots (C3)	Dr. Dr. Sa Gee	ater-Staine 4A, and 4 ainage Par y-Season Vituration Vite comorphic allow Aqui C-Neutral ised Ant M	ed Leaves (4B) tterns (B10 Water Tablesible on Ae Position (D3) Test (D5) Mounds (D6	B9) (MLRA 1, 2) e (C2) erial Imagery (C2 2)
/ DROLO //etland Hy rimary Indi Surface High Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely ield Observation	or various Indicator (Cators (minimum of Water (A1)) ater Table (A2) on (A3) darks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria by Vegetated Conca	s: f one required for the second seco	(B7) be (B8)	Water-St 1, 2, Salt Crus Aquatic I Hydrogei Oxidized Presence Recent II Stunted of Other (Ex	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C Rhizosph e of Reduct ron Reduct or Stresse xplain in R	es (B13) Odor (C1) eres along ced Iron (C- tion in Tille d Plants (C- emarks)	Living Roo 4) d Soils (C6	ots (C3)	Dr. Dr. Sa Gee	ater-Staine 4A, and 4 ainage Par y-Season Vituration Vite comorphic allow Aqui C-Neutral ised Ant M	ed Leaves (4B) tterns (B10 Water Tablesible on Ae Position (D3) Test (D5) Mounds (D6	B9) (MLRA 1, 2) e (C2) erial Imagery (C2 2)
/DROLO /etland Hy rimary Indi Surface High Wa Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely ield Observation	order of the control	s: f one required in the second secon	(B7) ce (B8) No ⊠	Water-St 1, 2, Salt Crus Aquatic I Hydrogel Oxidized Presence Recent II Stunted o Other (E:	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C Rhizosph e of Reduct ron Reduct or Stresse xplain in R es): Non	es (B13) Odor (C1) eres along ced Iron (C- tion in Tille d Plants (C- emarks)	Living Roo 4) d Soils (C6	ots (C3)	Dr. Dr. Sa Gee	ater-Staine 4A, and 4 ainage Par y-Season Vituration Vite comorphic allow Aqui C-Neutral ised Ant M	ed Leaves (4B) tterns (B10 Water Tablesible on Ae Position (D3) Test (D5) Mounds (D6	B9) (MLRA 1, 2) e (C2) erial Imagery (C2 2)
/DROLO /etland Hy rimary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely ield Observator	order of the control	s: f one required in the second secon	(B7) ce (B8) No ⊠ No □	Water-St 1, 2, Salt Crus Aquatic I Hydrogel Oxidized Presence Recent II Stunted of Other (E: Depth (inch	tained Lea 4A, and 4 at (B11) nvertebrat n Sulfide C Rhizosph e of Reduct ron Reduct or Stresse xplain in R es): Non es): 5	es (B13) Odor (C1) eres along ced Iron (C- tion in Tille d Plants (C- emarks)	Living Roo 4) d Soils (C6 01) (LRR A	ots (C3)	☐ Wa	ater-Staine 4A, and 4 ainage Pat y-Season V turation Vi comorphic allow Aqui C-Neutral ised Ant M ost-Heave	ed Leaves (4B) tterns (B10 Water Tablesible on Ae Position (D fitard (D3) Test (D5) Mounds (D6 Hummocks	B9) (MLRA 1, 2) e (C2) erial Imagery (C2 2) () (LRR A) is (D7)
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Vetland Hy rimary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely ield Obser water Table	order of the control	s: f one required in the second secon	No 🔀 No 🗆	Water-St 1, 2, Salt Crus Aquatic I Hydroges Oxidized Presences Recent II Stunted of Other (E: Depth (inch	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C Rhizosph e of Reduct ron Reduct or Stresse xplain in R es): Non es): 5 es): 3	es (B13) Ddor (C1) eres along ced Iron (C- tion in Tille d Plants (C- emarks)	Living Roo 4) d Soils (C6 01) (LRR A	ots (C3) S))	☐ Wa	ater-Staine 4A, and 4 ainage Pat y-Season V turation Vi comorphic allow Aqui C-Neutral ised Ant M ost-Heave	ed Leaves (4B) tterns (B10 Water Tablesible on Ae Position (D fitard (D3) Test (D5) Mounds (D6 Hummocks	B9) (MLRA 1, 2) e (C2) erial Imagery (C2 2) () (LRR A) is (D7)
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Drift Deplements of Saturation Processing Sparsely (ater Table atturation Processing Research) Processing Research Research Research Research Processing Research Research Processing Research Research Processing Research Proces	order of the control	s: f one required from the requirement of the requi	No 🔀 No 🗖 No 🗖	Water-St 1, 2, Salt Crus Aquatic I Hydrogel Oxidized Presence Recent II Stunted o Other (E: Depth (inch Depth (inch	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C Rhizosph e of Reduct ron Reduct or Stresse xplain in R es): Non es): 5 es): 3 al photos, I	es (B13) Ddor (C1) eres along ced Iron (C- tion in Tille d Plants (D- emarks) e	Living Roo 4) ad Soils (C6 01) (LRR A) Wetl	ots (C3) S) Iand Hyo	☐ Wa	AA, and Aainage Par y-Season Vituration Viteromorphic allow Aqui C-Neutral ised Ant Most-Heave	ed Leaves (4B) Itterns (B10 Water Table sible on Ae Position (D itard (D3) Test (D5) Hounds (D6 Hummocks	B9) (MLRA 1, 2) e (C2) erial Imagery (C2 2) s) (LRR A) s (D7)
DROLO etland Hy imary Indi Surface High Wa Saturatio Sedimer Orift Dep Algal Ma Iron Dep Surface Inundati Sparsely eld Obser atter Table atturation Facilides ca	ordrology Indicator icators (minimum or Water (A1) ater Table (A2) on (A3) flarks (B1) at or Crust (B4) posits (B5) soil Cracks (B6) on Visible on Aeria y Vegetated Concarvations: ter Present? Present? Present? pillary fringe)	s: f one required from the requirement of the requi	No 🗵 No 🗆 No 🗆 nrough	Water-St 1, 2, Salt Crus Aquatic I Hydrogei Oxidized Presence Recent II Stunted o Other (E: Depth (inch Depth (inch Depth (inch	tained Lea 4A, and 4 at (B11) nvertebrat n Sulfide C Rhizosph e of Reduct ron Reduct or Stresse xplain in R es): Non es): 5 es): 3 al photos, I	es (B13) Ddor (C1) eres along ded Iron (C- tion in Tille d Plants (C- emarks) e previous in	Living Roo 4) d Soils (C6 01) (LRR A) Wetl spections),	ots (C3) S) land Hydir if availa	☐ Wa ☐ Dr. ☐ Dr. ☐ Sa ☐ Ge ☐ Sh ☐ FA ☐ Ra ☐ Fro	ater-Staine 4A, and 4 ainage Par y-Season V turation Vi comorphic allow Aqui C-Neutral ised Ant N ost-Heave	tterns (B10 Water Table sible on Ae Position (D itard (D3) Test (D5) Mounds (D6 Hummocks	B9) (MLRA 1, 2) e (C2) erial Imagery (C2 2) i) (LRR A) is (D7) No t observed

Project/Site: 1908.0007 Prospector 6	(City/County	_{y:} Marysv	rille/Snohomish	Sampling Date: 2/22/21
Applicant/Owner: Groundhog Land Development C	ompany, l	LLC		State: WA	Sampling Point: DP-6U
Investigator(s): Dustin Pringle, Harry Richardson, F	Rachael H	yland	Section, To	ownship, Range: <u>35, 30 l</u>	North, 5 East
Landform (hillslope, terrace, etc.): Hillslope		Local relie	ef (concave,	convex, none): Convex	Slope (%): 1
Subregion (LRR): A2	Lat: 48.0	042169		Long: -122.1217296	9 Datum: WGS 84
Soil Map Unit Name: Tokul gravelly medial loam, 0 t	o 8 perce	nt slopes	S	NWI classificat	tion: N/A
Are climatic / hydrologic conditions on the site typical for this	time of yea	r? Yes 🗷	No ☐ (If	f no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology sign	ificantly dist	urbed?	Are "No	ormal Circumstances" pres	ent? Yes ☒ No ☐
Are Vegetation, Soil, or Hydrology natu	rally problen	natic?	(If neede	ed, explain any answers in	Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	samplin	g point lo	ocations, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes ☒ No ☐					
Hydric Soil Present? Yes ☐ No 🗵			e Sampled		_
Wetland Hydrology Present? Yes ☐ No 🗵		with	in a Wetlan	nd? Yes □ No) X
Remarks: Not all three wetland criteria met; only hydrog	- h -veti a vva a a t	ation muo	omt Data a	calleges of the courthwest	om montion of the subject
property.	mytic veget	ation pres	eni. Data c	onected in the southwest	an portion of the subject
VEGETATION – Use scientific names of plant	s.				
	Absolute	Dominant		Dominance Test works	heet:
Tree Stratum (Plot size: 30 ft)	<u>% Cover</u> 85	Species? Yes	Status FAC	Number of Dominant Spo	
1. Alnus rubra 2. Thuja plicata	15	No	FAC	That Are OBL, FACW, or	r FAC: <u>2</u> (A)
		INU	170	Total Number of Domina	
3				Species Across All Strata	a: <u>3</u> (B)
4	100	= Total C	over	Percent of Dominant Spe	
Sapling/Shrub Stratum (Plot size: 30 ft)		- 101010	0001	That Are OBL, FACW, or	FAC: <u>07 /0</u> (A/B)
1. Rubus spectabilis	65	Yes	FAC	Prevalence Index work	sheet:
2					Multiply by:
3					x 1 =
4					x 2 =
5					x 3 =
Herb Stratum (Plot size: 10 ft)	65	= Total C	over		x 4 =
4 Rubus ursinus	30	Yes	FACU		x 5 =
2. Ilex aquifolium	1	No	FACU	Column Totals:	(A) (B)
3				Prevalence Index	= B/A =
4.				Hydrophytic Vegetation	n Indicators:
5				☐ Rapid Test for Hydro	phytic Vegetation
6				▼ Dominance Test is >	50%
7				☐ Prevalence Index is :	≤3.0 ¹
8					ations ¹ (Provide supporting or on a separate sheet)
9				☐ Wetland Non-Vascul	•
10					nytic Vegetation¹ (Explain)
11	31				and wetland hydrology must
Woody Vine Stratum (Plot size: 30 ft)	31	= Total C	over	be present, unless distur	
1				Hydrophytic	
2				Vegetation	
% Bare Ground in Herb Stratum 69	0	= Total C	over	Present? Yes	× No □
Remarks:			_		
Hydrophytic vegetation criteria met thro	ough Dom	ninance T	Γest.		

Sampling Point: DP-6U

Depth	NA - tube			D1	🗖						
(inches)	Matrix Color (moist)	%	Colo	Redo or (moist)	ox Feature: %	<u>S</u> Type ¹	Loc ²	Textu	re	Remarks	
0 - 13+	7.5YR 3/4	100	-	n (moist)		<u>- Type</u>	-	Lo	_	Loam	
	1101111 0/ 1										_
											_
											_
		_	_								_
<u> </u>	-										_
·											_
	-										
¹Type: C=C	oncentration, D=De	epletion, F	RM=Red	luced Matrix, C	S=Covered	d or Coate	ed Sand Gr	rains.	² Loc	ation: PL=Pore Lining, M=Matrix.	
	Indicators: (Appli									rs for Problematic Hydric Soils ³ :	
☐ Histosol	(A1)		□ ;	Sandy Redox (S5)] 2 cm	Muck (A10)	
☐ Histic Ep	pipedon (A2)			Stripped Matrix					Red I	Parent Material (TF2)	
☐ Black His				Loamy Mucky N	Mineral (F1) (except	MLRA 1)] Very	Shallow Dark Surface (TF12)	
	n Sulfide (A4)			Loamy Gleyed] Other	r (Explain in Remarks)	
-	d Below Dark Surface	ce (A11)		Depleted Matrix	. ,			2.			
	ark Surface (A12)			Redox Dark Su	, ,	- 7\		٩lı		rs of hydrophytic vegetation and	
	Mucky Mineral (S1) Bleyed Matrix (S4)			Depleted Dark Redox Depress	•	7)				nd hydrology must be present, s disturbed or problematic.	
-	Layer (if present):			Nedox Depless	sions (Fo)				uniess	s disturbed of problematic.	
Type: No	• • • •										
Depth (in				_				Hydr	ic Sail I	Present? Yes □ No ⊠	
Remarks:	,			•				пуш	ic 30ii	Fresent: Tes NO M	
	11 16										
No nyaric s	soil criteria met.										
HYDROLO	GY										
Wetland Hy	drology Indicators	S:									
Primary Indi	cators (minimum of										
		one requ	ired; ch	eck all that app	ıly)				Secon	dary Indicators (2 or more required)	
□ Surface	Water (A1)	one requ	ired; ch	eck all that app		es (B9) (e	xcept MLR	RA		dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2	·,
_	Water (A1) ater Table (A2)	one requ	ired; ch	☐ Water-Sta			xcept MLR	RA		<u> </u>	<u>,</u>
_	iter Table (A2)	one requ	iired; ch	☐ Water-Sta	ined Leave A, and 4B)		xcept MLR	RA	☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 2),
☐ High Wa	iter Table (A2)	one requ	ired; ch	☐ Water-Sta	ined Leave A, and 4B) (B11))	xcept MLR	 RA	☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)	·,
☐ High Wa☐ Saturatio☐ Water M	nter Table (A2) on (A3)	one requ	ired; ch	☐ Water-Sta 1, 2, 4 ☐ Salt Crust	ined Leave A, and 4B) (B11) vertebrates	s (B13)	xcept MLR	RA	☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10)	
High Wa Saturation Water M Sedimer	ater Table (A2) on (A3) larks (B1)	one requ	ired; ch	☐ Water-Sta 1, 2, 4 ☐ Salt Crust ☐ Aquatic In	ined Leave A, and 4B) (B11) vertebrates Sulfide Od	s (B13) lor (C1)			☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2)	
High Wa Saturation Water M Sedimer Drift Dep	on (A3) larks (B1) on Deposits (B2)	one requ	ired; ch	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen	ined Leave A, and 4B) (B11) vertebrates Sulfide Od Rhizospher	s (B13) lor (C1) es along	Living Roo		☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (CS	
High Wa Saturatio Water M Sedimer Drift Dep Algal Ma	on (A3) larks (B1) on Deposits (B2) oosits (B3)	one requ	ired; ch	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence	ined Leave A, and 4B; (B11) vertebrates Sulfide Od Rhizospher of Reduce	s (B13) lor (C1) es along d Iron (C4	Living Roo	ts (C3)	☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (Cs	
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High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface	on (A3) larks (B1) nt Deposits (B2) loosits (B3) at or Crust (B4) loosits (B5)			Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	ined Leave A, and 4B, (B11) vertebrates Sulfide Od Rhizospher of Reduced on Reduction	s (B13) for (C1) es along d Iron (C4 on in Tilled Plants (D	Living Roo I) d Soils (C6	ts (C3)		ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (Cs ecomorphic Position (D2) allow Aquitard (D3) to C-Neutral Test (D5)	
High Wa Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep Surface	on (A3) larks (B1) on Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6)	Imagery	(B7)	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted on	ined Leave A, and 4B, (B11) vertebrates Sulfide Od Rhizospher of Reduced on Reduction	s (B13) for (C1) es along d Iron (C4 on in Tilled Plants (D	Living Roo I) d Soils (C6	ts (C3)		atter-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) tturation Visible on Aerial Imagery (Cseomorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)	
High Wa Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep Surface	atter Table (A2) on (A3) larks (B1) on Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concav	Imagery	(B7)	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or	ined Leave A, and 4B, (B11) vertebrates Sulfide Od Rhizospher of Reduce on Reduction stressed	s (B13) for (C1) es along d Iron (C4 on in Tilled Plants (D	Living Roo I) d Soils (C6	ts (C3)		atter-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) tturation Visible on Aerial Imagery (Cseomorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)	
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High Wall Saturation Water M Sedimer Drift Dep Algal Mall Iron Dep Surface Inundation Sparsely Field Obser	on (A3) larks (B1) on (A3) larks (B1) on Deposits (B2) losits (B3) at or Crust (B4) losits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concaverations: lare Present?	Imagery ve Surface Yes □	(B7) e (B8)	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp	ined Leave A, and 4B, (B11) vertebrates Sulfide Oc Rhizospher of Reduces on Reduction r Stressed blain in Res s): None	s (B13) for (C1) es along d Iron (C4 on in Tilled Plants (D	Living Roo I) d Soils (C6	ts (C3)		atter-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) tturation Visible on Aerial Imagery (Cseomorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)	
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High Wall Saturation Saturation Water M Sedimer Drift Dep Algal Mall Iron Dep Surface Inundation Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca) Describe Re	on (A3) larks (B1) on (A3) larks (B1) on (B2) larks (B3) at or Crust (B4) losits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concaverations: lare Present? Present? laresent?	Imagery ve Surface Yes Yes Yes Yes m gauge,	(B7) e (B8) No 🗷 No 🗷 No 🗷 monitor	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp	ined Leave A, and 4B; (B11) vertebrates Sulfide Od Rhizospher of Reduced on Reduction r Stressed blain in Rei s): None S): None None	s (B13) or (C1) es along d Iron (C4 on in Tilled Plants (D marks)	Living Roo i) d Soils (C6 1) (LRR A)	ts (C3)) and Hyo	☐ Wa ☐ Dra ☐ Dra ☐ Ge ☐ Sh ☐ FA ☐ Ra ☐ Fro	atter-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (Cs comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) bost-Heave Hummocks (D7)	
High Wall Saturation Saturation Water M Sedimer Drift Dep Algal Mall Iron Dep Surface Inundation Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca) Describe Re	atter Table (A2) on (A3) larks (B1) on t Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concaverations: are Present? Present? Present?	Imagery ve Surface Yes Yes Yes Yes m gauge,	(B7) e (B8) No 🗷 No 🗷 No 🗷 monitor	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp	ined Leave A, and 4B; (B11) vertebrates Sulfide Od Rhizospher of Reduced on Reduction r Stressed blain in Rei s): None S): None None	s (B13) or (C1) es along d Iron (C4 on in Tilled Plants (D marks)	Living Roo i) d Soils (C6 1) (LRR A)	ts (C3)) and Hyo	☐ Wa ☐ Dra ☐ Dra ☐ Ge ☐ Sh ☐ FA ☐ Ra ☐ Fro	atter-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (Cs comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) bost-Heave Hummocks (D7)	
High Wall Saturation Saturation Water M Sedimer Drift Dep Algal Mall Iron Dep Surface Inundation Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca) Describe Re	on (A3) larks (B1) on (A3) larks (B1) on (B2) larks (B3) at or Crust (B4) losits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concaverations: lare Present? Present? laresent?	Imagery ve Surface Yes Yes Yes Yes m gauge,	(B7) e (B8) No 🗷 No 🗷 No 🗷 monitor	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp	ined Leave A, and 4B; (B11) vertebrates Sulfide Od Rhizospher of Reduced on Reduction r Stressed blain in Rei s): None S): None None	s (B13) or (C1) es along d Iron (C4 on in Tilled Plants (D marks)	Living Roo i) d Soils (C6 1) (LRR A)	ts (C3)) and Hyo	☐ Wa ☐ Dra ☐ Dra ☐ Ge ☐ Sh ☐ FA ☐ Ra ☐ Fro	atter-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (Cs comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) bost-Heave Hummocks (D7)	

Project/Site: 1908.0007 Prospector 6	(City/Count	_{y:} Marysv	rille/Snohomish	Sampling Date: <u>2/22/21</u>
Applicant/Owner: Groundhog Land Development C	ompany,	LLC		State: WA	Sampling Point: DP-7U
Investigator(s): Dustin Pringle, Harry Richardson, F	Rachael H	lyland	Section, To	ownship, Range: <u>35, 30 l</u>	North, 5 East
Landform (hillslope, terrace, etc.): Hillslope		Local reli	ef (concave,	, convex, none): Concav	e Slope (%): 2
Subregion (LRR): A2	_ Lat: 48.0	042180		Long: -122.1202821	4 Datum: WGS 84
Soil Map Unit Name: Tokul gravelly medial loam, 0 to	to 8 perce	nt slope	s	NWI classificat	tion: N/A
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 sign	nificantly dist	turbed?	Are "No	ormal Circumstances" pres	ent? Yes ☒ No ☐
Are Vegetation, Soil, or Hydrology natu	rally problen	natic?	(If need	ed, explain any answers in	Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	samplin	ng point le	ocations, 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) X
Remarks: Not all three wetland criteria met; lacking hyd	luia soila D	ata aollog	tod in a drai	inaga araa lagatad narth a	of Watland A and south of
Wetland D.	ine sons. D	ata conec	icu iii a urai	mage area located flortif o	1 wedand A and south of
VEGETATION – Use scientific names of plant	ts.				
Tree Stratum (Plot size: 30 ft)	Absolute % Cover		t Indicator	Dominance Test works	
1. Populus balsamifera	75	Yes	FAC	Number of Dominant Spe That Are OBL, FACW, or	
2. Alnus rubra	25	Yes	FAC		
3				Total Number of Domina Species Across All Strata	
4.				'	
Continue (Charles Charles (Charles CO (t)	100	= Total C	Cover	Percent of Dominant Spe That Are OBL, FACW, or	
Sapling/Shrub Stratum (Plot size: 30 ft) 1. Rubus spectabilis	85	Yes	FAC	Prevalence Index work	sheet:
2					Multiply by:
3					x 1 =
4.					x 2 =
5				FAC species	x 3 =
	85	= Total C	Cover	FACU species	x 4 =
Herb Stratum (Plot size: 10 ft) 1. Athyrium cyclosorum	15	Yes	EAC	· ·	x 5 =
2. Ranuculus repens	1	No	FAC	Column Totals:	(A) (B)
3				Prevalence Index	= B/A =
4				Hydrophytic Vegetation	
5.				Rapid Test for Hydro	
6				■ Dominance Test is >	50%
7				☐ Prevalence Index is :	≤3.0 ¹
8					rations ¹ (Provide supporting or on a separate sheet)
9				☐ Wetland Non-Vascul	•
10					nytic Vegetation ¹ (Explain)
11	16				and wetland hydrology must
Woody Vine Stratum (Plot size: 30 ft)	16	= Total C	Cover	be present, unless distur	
1				Hydrophytic	
2				Vegetation	₩ Na □
% Bare Ground in Herb Stratum 84	0	= Total C	Cover	Present? Yes	⊠ No □
Remarks:	ough Da	·inonas i	Toot	l	
Hydrophytic vegetation criteria met thro	ougn Dom	imance	rest.		

Sampling Point: DP-7U

Depth	Matrix				x Featur						
(inches)	Color (moist)	%_	Colo	r (moist)	%	Type ¹	Loc ²	<u>Textu</u>		Remarks	
0 - 7	10YR 3/2	100						SaLo		Sandy loam	
7 - 14+	10YR 3/3	95	7.5	YR 4/4	_ 5	_ <u>C</u>	<u>M</u>	GrLo		Gravelly loam	
			_								
	oncentration, D=De Indicators: (Appli						ed Sand G			ation: PL=Pore Lining	
☐ Histosol		icable to				neu.)				Muck (A10)	dile sons .
	oipedon (A2)			Sandy Redox (S Stripped Matrix						Parent Material (TF2)	
☐ Black Hi				Loamy Mucky N	` '	1) (except	MLRA 1)	, ,		Shallow Dark Surface	(TF12)
	en Sulfide (A4)			oamy Gleyed			,	_	-	r (Explain in Remarks)	
	d Below Dark Surfa	ce (A11)		Depleted Matrix		,				,	
☐ Thick Da	ark Surface (A12)		☐ F	Redox Dark Su	rface (F6	j)		3	ndicato	rs of hydrophytic veget	tation and
☐ Sandy M	Mucky Mineral (S1)			Depleted Dark	Surface (F7)			wetla	nd hydrology must be p	oresent,
	Bleyed Matrix (S4)		☐ F	Redox Depress	ions (F8))			unles	s disturbed or problem	atic.
	Layer (if present):										
Type: <u>No</u>				-							
Depth (in	ches):							Hydr	ic Soil	Present? Yes □	No ⊠
Remarks:								•			
NO HYUNC	soil criteria met.										
,											
IYDROLO											
HYDROLO Wetland Hy)GY	S:	uired; che	eck all that app	ly)				Secon	idary Indicators (2 or m	nore required)
HYDROLO Wetland Hy Primary Indi	OGY drology Indicators	S:	uired; che	eck all that app		ves (B9) (e	xcept MLF	RA		ndary Indicators (2 or mater-Stained Leaves (E	
HYDROLO Wetland Hy Primary Indi	OGY drology Indicators cators (minimum of	S:	uired; che	☐ Water-Sta			xcept MLF				
IYDROLO Wetland Hy Primary Indi	ogy drology Indicators cators (minimum of Water (A1) ater Table (A2)	S:	uired; che	☐ Water-Sta	ined Lea		xcept MLF	RA	□ W	ater-Stained Leaves (E	
HYDROLO Wetland Hy Primary Indi Surface High Wa	ogy drology Indicators cators (minimum of Water (A1) ater Table (A2)	S:	uired; che	☐ Water-Sta	ined Lea A, and 4 l (B11)	В)	xcept MLF	RA	□ W	ater-Stained Leaves (E	39) (MLRA 1, 2,
Wetland Hy Primary Indi Surface High Wa Saturatio Water M	ody rdrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3)	S:	uired; che	☐ Water-Sta 1, 2, 4	ined Lea A, and 4 (B11) vertebrat	B) es (B13)	xcept MLF	RA	□ W	ater-Stained Leaves (E 4A, and 4B) ainage Patterns (B10)	89) (MLRA 1, 2,
Wetland Hy Primary Indi Surface High Wa Saturatic Water M Sedimer	ody drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1)	S:	uired; che	☐ Water-Sta 1, 2, 4. ☐ Salt Crust ☐ Aquatic In	ined Leaven A, and 4 leaven (B11) Vertebrate Sulfide C	es (B13) Odor (C1)			☐ W ☐ Di ☐ Di ☐ Sa	ater-Stained Leaves (E 4A, and 4B) ainage Patterns (B10) y-Season Water Table	89) (MLRA 1, 2, c (C2) rial Imagery (C9)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep	edrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2)	S:	uired; che	Water-Sta 1, 2, 4 Salt Crust Aquatic In	ined Lear A, and 4I (B11) vertebrat Sulfide C	es (B13) Odor (C1) eres along	Living Roo		W Di Si	ater-Stained Leaves (E 4A, and 4B) ainage Patterns (B10) y-Season Water Table aturation Visible on Aer	89) (MLRA 1, 2, (C2) rial Imagery (C9)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma	oddy drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3)	S:	uired; che	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F	ined Lear A, and 4I (B11) vertebrate Sulfide C Rhizospho of Reduce	es (B13) Odor (C1) eres along red Iron (C4	Living Roo 1)	ots (C3)	W Di Di Sa Si	ater-Stained Leaves (E 4A, and 4B) ainage Patterns (B10) y-Season Water Table atturation Visible on Aer eomorphic Position (D2	89) (MLRA 1, 2, (C2) rial Imagery (C9)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	S:	uired; che	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence	ined Lear A, and 4I (B11) vertebrate Sulfide C Rhizospho of Reduct n Reduct	es (B13) Odor (C1) eres along red Iron (C4	Living Roo 1) d Soils (C6	ots (C3)	☐ W ☐ Di ☐ Di ☐ Si ☐ Gi ☐ Si ☐ Fi	ater-Stained Leaves (E 4A, and 4B) ainage Patterns (B10) y-Season Water Table aturation Visible on Aer ecomorphic Position (D2 nallow Aquitard (D3)	(C2) rial Imagery (C9)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	s: one requ		Water-Sta 1, 2, 4. Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	ined Lear A, and 4I (B11) vertebrat Sulfide C Rhizospho of Reduct n Reduct	es (B13) Odor (C1) eres along ed Iron (C4 tion in Tille d Plants (D	Living Roo 1) d Soils (C6	ots (C3)	Di Di Si Si F/	ater-Stained Leaves (E 4A, and 4B) ainage Patterns (B10) y-Season Water Table aturation Visible on Aer ecomorphic Position (D2 allow Aquitard (D3) AC-Neutral Test (D5)	(C2) rial Imagery (C9) (LRR A)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface	edory Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6)	s: one requ	(B7)	Water-Sta 1, 2, 4. Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or	ined Lear A, and 4I (B11) vertebrat Sulfide C Rhizospho of Reduct n Reduct	es (B13) Odor (C1) eres along ed Iron (C4 tion in Tille d Plants (D	Living Roo 1) d Soils (C6	ots (C3)	Di Di Si Si F/	ater-Stained Leaves (E 4A, and 4B) ainage Patterns (B10) y-Season Water Table aturation Visible on Aer ecomorphic Position (D2 hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6)	(C2) rial Imagery (C9) (LRR A)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundation	or Crust (B4) costs (B5) Soil Cracks (B6) on Visible on Aerial or Vegetated Concav	s: one requ	(B7)	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp	ined Lear A, and 4I (B11) vertebrat Sulfide C Rhizospho of Reduc n Reduct Stressed	es (B13) Odor (C1) eres along ed Iron (C4 tion in Tille d Plants (D emarks)	Living Roo 1) d Soils (C6	ots (C3)	Di Di Si Si F/	ater-Stained Leaves (E 4A, and 4B) ainage Patterns (B10) y-Season Water Table aturation Visible on Aer ecomorphic Position (D2 hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6)	(C2) (LRR A)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concaveryations:	s: one requ	(B7)	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp	ined Lear A, and 4I (B11) vertebrat Sulfide C Rhizospho of Reduc n Reduct Stressed	es (B13) Odor (C1) eres along ed Iron (C4 tion in Tille d Plants (D emarks)	Living Roo 1) d Soils (C6	ots (C3)	Di Di Si Si F/	ater-Stained Leaves (E 4A, and 4B) ainage Patterns (B10) y-Season Water Table aturation Visible on Aer ecomorphic Position (D2 hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6)	(C2) (LRR A)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concaveryations: ater Present?	one required in the second sec	(B7) be (B8)	Water-Sta 1, 2, 4. Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or	ined Lear A, and 4I (B11) vertebrat Sulfide C Rhizospho of Reduc n Reduct Stressed blain in R	es (B13) Dodor (C1) eres along ed Iron (C4 tion in Tille d Plants (D emarks)	Living Roo 1) d Soils (C6	ots (C3)	Di Di Si Si F/	ater-Stained Leaves (E 4A, and 4B) ainage Patterns (B10) y-Season Water Table aturation Visible on Aer ecomorphic Position (D2 hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6)	(C2) rial Imagery (C9) (LRR A)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatic Water M Sedimer Algal Ma Iron Dep Surface Inundatic Sparsely Field Obser	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concave reations: ter Present?	one requirements of the second	(B7) ce (B8) No 🗷	Water-Sta 1, 2, 4. Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp	ined Lear A, and 4I (B11) vertebrat Sulfide C Rhizospho of Reduct of Reduct Stressed blain in R s): Non Surf.	es (B13) Dodor (C1) eres along ed Iron (C4 tion in Tille d Plants (D emarks) e ace	Living Roo I) d Soils (C6 1) (LRR A)	ots (C3) 6))	W	ater-Stained Leaves (E 4A, and 4B) ainage Patterns (B10) y-Season Water Table atturation Visible on Aer comorphic Position (D2 nallow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) ost-Heave Hummocks	(C2) rial Imagery (C9) (LRR A)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatic Water M Sedimer Algal Ma Iron Dep Surface Inundatic Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concavery eter Present? Present? Present? Present?	Imagery /e Surfac Yes Yes Yes Yes Yes Yes X	No 🗵 No 🗆	Water-Sta 1, 2, 4. Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp	ined Lear A, and 4I (B11) vertebrat Sulfide C Rhizospho of Reduct of Reduct Stressed blain in R Surfs Surfs Surfs	es (B13) Dodor (C1) eres along ed Iron (C4 tion in Tille d Plants (D emarks) e ace ace	Living Roo d Soils (C6 1) (LRR A	ots (C3) s) land Hy	W Di Si Si Si Si F / P Fr	ater-Stained Leaves (E 4A, and 4B) ainage Patterns (B10) y-Season Water Table aturation Visible on Aer ecomorphic Position (D2 hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6)	(C2) rial Imagery (C9) (LRR A) (D7)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatic Water M Sedimer Algal Ma Iron Dep Surface Inundatic Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concave reactions: ter Present? Present?	Imagery /e Surfac Yes Yes Yes Yes Yes Yes X	No 🗵 No 🗆	Water-Sta 1, 2, 4. Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp	ined Lear A, and 4I (B11) vertebrat Sulfide C Rhizospho of Reduct of Reduct Stressed blain in R Surfs Surfs Surfs	es (B13) Dodor (C1) eres along ed Iron (C4 tion in Tille d Plants (D emarks) e ace ace	Living Roo d Soils (C6 1) (LRR A	ots (C3) s) land Hy	W Di Si Si Si Si F / P Fr	ater-Stained Leaves (E 4A, and 4B) ainage Patterns (B10) y-Season Water Table atturation Visible on Aer comorphic Position (D2 nallow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) ost-Heave Hummocks	(C2) rial Imagery (C9) (LRR A) (D7)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatic Water M Sedimer Algal Ma Iron Dep Surface Inundatic Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6) on Visible on Aerial vegetated Concaverations: ater Present? Present? Present? pillary fringe)	Imagery /e Surfac Yes Yes Yes Yes Yes Yes X	No 🗵 No 🗆	Water-Sta 1, 2, 4. Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp	ined Lear A, and 4I (B11) vertebrat Sulfide C Rhizospho of Reduct of Reduct Stressed blain in R Surfs Surfs Surfs	es (B13) Dodor (C1) eres along ed Iron (C4 tion in Tille d Plants (D emarks) e ace ace	Living Roo d Soils (C6 1) (LRR A	ots (C3) s) land Hy	W Di Si Si Si Si Si F / E Fr	ater-Stained Leaves (E 4A, and 4B) ainage Patterns (B10) y-Season Water Table atturation Visible on Aer comorphic Position (D2 nallow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) ost-Heave Hummocks	(C2) rial Imagery (C9) (LRR A) (D7)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Water Table Saturation P (includes ca Describe Re	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concaverations: ater Present? Present? Present? pillary fringe) poorded Data (stream	Imagery ve Surface Yes Yes Yes Yes Magage	No 🔀 No 🖂 No 🖂 No 🖂	Water-Sta 1, 2, 4. Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp Depth (inche) Depth (inche) Depth (inche) ing well, aerial	ined Lear A, and 4I (B11) vertebrat Sulfide C Rhizospho of Reduct n Reduct Stressed blain in R Surf s): Surf photos, p	es (B13) Dodor (C1) eres along ed Iron (C4 tion in Tille d Plants (D emarks) e ace ace orevious ins	Living Roo I) d Soils (C6 1) (LRR A) Wetl	ots (C3) s) land Hy if availa	DI DI SI	ater-Stained Leaves (E 4A, and 4B) ainage Patterns (B10) y-Season Water Table atturation Visible on Aer comorphic Position (D2 nallow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) ost-Heave Hummocks	39) (MLRA 1, 2, 2 (C2) 2) (LRR A) (D7)

Project/Site: 1908.0007 Prospector 6	(City/County	_{y:} Marysv	rille/Snohomish	Sampling Date: <u>2/22/21</u>
Applicant/Owner: Groundhog Land Development C	ompany,	LLC		State: WA	Sampling Point: DP-8U
Investigator(s): Dustin Pringle, Harry Richardson, F	Rachael H	lyland	Section, To	ownship, Range: <u>35, 30 l</u>	North, 5 East
Landform (hillslope, terrace, etc.): Hillslope		Local relie	ef (concave,	, convex, none): Concav	e Slope (%): 2
Subregion (LRR): A2	_ Lat: 48.0	042883		Long: -122.1202623	1 Datum: WGS 84
Soil Map Unit Name: Tokul gravelly medial loam, 0 t	o 8 perce	nt slope	S	NWI classificat	tion: N/A
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 sign	ificantly dist	turbed?	Are "No	ormal Circumstances" pres	ent? Yes ☒ No ☐
Are Vegetation, Soil, or Hydrology natu	rally problen	natic?	(If need	ed, explain any answers in	Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	samplin	g point le	ocations, transects,	important features, 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) X
Remarks:					
Not all three wetland criteria met	; lacking	hydric	soils. D	ata collected west	of Wetland C.
VEGETATION – Use scientific names of plant	ts.				
	Absolute	Dominant		Dominance Test works	heet:
Tree Stratum (Plot size: 30 ft)	% Cover			Number of Dominant Spo	
1. Pseudotsuga menziesii	40	Yes Yes	FACU	That Are OBL, FACW, or	r FAC: <u>4</u> (A)
2				Total Number of Domina	
3				Species Across All Strata	a: <u>4</u> (B)
4.	40	= Total C	over	Percent of Dominant Spe That Are OBL, FACW, or	
Sapling/Shrub Stratum (Plot size: 30 ft)				That Are OBL, I ACW, or	(A/B)
1. Rubus armeniacus	3	Yes	FAC	Prevalence Index work	
2					Multiply by:
3					x 1 =
4				*	x 2 =
5	3				x 3 =
Herb Stratum (Plot size: 10 ft)	<u> </u>	= Total C	over		x 4 = x 5 =
1. Phalaris arundinaceae	100	Yes	FACW	· ·	
2. Ranuculus repens	2	No	FAC	Column rotals.	(A) (D)
3				Prevalence Index	= B/A =
4				Hydrophytic Vegetation	n Indicators:
5				☐ Rapid Test for Hydro	• •
6				Dominance Test is >	
7				Prevalence Index is:	
8					ations ¹ (Provide supporting or on a separate sheet)
9				☐ Wetland Non-Vascul	•
10					nytic Vegetation¹ (Explain)
11	102				and wetland hydrology must
Woody Vine Stratum (Plot size: 30 ft)	102	= Total C	over	be present, unless distur	bed or problematic.
1				Hydrophytic	
2				Vegetation	
% Bare Ground in Herb Stratum 0	0	= Total C	over	Present? Yes	× No □
Domarke:					
Hydrophytic vegetation criteria met thro	ough Dom	ninance ⁻	Test.		

Sampling Point: DP-8U

Depth	cription: (Describ Matrix			Redo	ox Featur		01 0011111	iii tiic at	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	or maioatoro.	
(inches)	Color (moist)	<u>%</u>	Colo	r (moist)	%	Type ¹	Loc ²	<u>Textu</u>		Remarks	
0 - 14	2.5YR 3/2	100	<u> </u>					GrLo		Gravelly loam	
14 - 16+	2.5Y 3/2	95	7.5	YR 4/6	5	С	M	GrLo		Gravelly loam	
	-				_						
								-			
1= 0.0				184 4 1 0					21		
	oncentration, D=De Indicators: (Appl						ed Sand G			cation: PL=Pore Lining, M=Matri ors for Problematic Hydric Soil	
-		icable to				iteu.)				•	
☐ Histosol	ipedon (A2)			Sandy Redox (Stripped Matrix						n Muck (A10) Parent Material (TF2)	
☐ Black Hi				_oamy Mucky I	. ,	1) (excep	t MLRA 1	, [Shallow Dark Surface (TF12)	
_	n Sulfide (A4)			_oamy Gleyed			,	_		er (Explain in Remarks)	
	Below Dark Surfa	ce (A11)		Depleted Matrix		,		_			
☐ Thick Da	ark Surface (A12)		☐ F	Redox Dark Su	ırface (F6)		3	ndicato	ors of hydrophytic vegetation and	t
	lucky Mineral (S1)			Depleted Dark	Surface (F7)			wetla	nd hydrology must be present,	
	leyed Matrix (S4)		F	Redox Depress	sions (F8)				unles	s disturbed or problematic.	
	Layer (if present):										
Type: No				-							
Depth (in	ches):							Hydr	ric Soil	Present? Yes ☐ No ⊠	
Remarks:											
HYDROLO	GY										
Wetland Hy	drology Indicator	s:									
Primary Indi	cators (minimum of	fone requ	ired; che	eck all that app	oly)				Secor	ndary Indicators (2 or more requi	ired)
☐ Surface	Water (A1)			☐ Water-Sta	ined Leav	ves (B9) (є	except ML	.RA	\square W	ater-Stained Leaves (B9) (MLR	A 1, 2,
★ High Wa	ter Table (A2)			1, 2, 4	A, and 4I	3)				4A, and 4B)	
■ Saturation	on (A3)			☐ Salt Crust	(B11)					rainage Patterns (B10)	
☐ Water M	arks (B1)			☐ Aquatic In	vertebrate	es (B13)				ry-Season Water Table (C2)	
	nt Deposits (B2)			☐ Hydrogen	Sulfide C	dor (C1)			☐ Sa	aturation Visible on Aerial Image	ry (C9)
	oosits (B3)			Oxidized F		_	_	ots (C3)		eomorphic Position (D2)	
	it or Crust (B4)			Presence		•	,		_	hallow Aquitard (D3)	
-	osits (B5)			☐ Recent Iro			,	,		AC-Neutral Test (D5)	
	Soil Cracks (B6)		·= -\	Stunted or		•	01) (LRR <i>A</i>	A)	_	aised Ant Mounds (D6) (LRR A)	
	on Visible on Aeria		. ,	☐ Other (Exp	piain in R	emarks)			∐ Fr	rost-Heave Hummocks (D7)	
	Vegetated Conca	ve Surface	e (B8)								
Field Obser		v =		5 4 6 1	None	۵					
Surface Wat			No 🗵	Depth (inche							
Water Table			No 🗆	Depth (inche							
Saturation P (includes ca		Yes 🗵	No 🗌	Depth (inche	s): <u>3</u>		Wet	tland Hy	drolog	y Present? Yes ⊠ No 🗌	
	corded Data (strea	m gauge.	monitor	ing well, aerial	photos, r	revious in	spections)), if availa	able:		
	(2.1.00	J		J : ,	, [-		,		-		
Remarks:											
	ydrology criteria	a met th	rough	primary indi	cators A	A2 and A	١3				
	, 3. 5.59, 511611	ot u1	. o agii	rary iriai	50.0107	3.10 /					

Project/Site: 1908.0007 Prospector 6		City/Cour	_{nty:} Marysv	rille/Snohomish	Sampling Date: 2/22/21
Applicant/Owner: Groundhog Land Developmer	nt Company,	LLC		State: WA	_ Sampling Point: DP-9W
Investigator(s): Dustin Pringle, Harry Richardso	n, Rachael H	lyland	_ Section, To	ownship, Range: 35, 30) North, 5 East
Landform (hillslope, terrace, etc.): Depressional		Local re	elief (concave,	, convex, none): Conca	3 Slope (%): 3
Subregion (LRR): A2	Lat: 48.0	042733	3	Long: -122.120218	B28 Datum: WGS 84
Soil Map Unit Name: Tokul gravelly medial loam	, 0 to 8 perce	nt slop	es	NWI classific	cation: N/A
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	significantly dis	turbed?	Are "No	ormal Circumstances" pre	esent? Yes ☒ No ☐
Are Vegetation, Soil, or Hydrology	naturally probler	natic?	(If need	ed, explain any answers	in Remarks.)
SUMMARY OF FINDINGS - Attach site ma	ap showing	sampli	ing point le	ocations, transects	s, important features, etc.
Hydrophytic Vegetation Present? Yes ☒ No	П				
Hydric Soil Present? Yes ☒ No	=		the Sampled		—
Wetland Hydrology Present? Yes ☒ No		Wi	thin a Wetlar	nd? Yes 🗷	No 📙
Remarks:				_	
All three wetland criteria met.	Data collec	ted in	Wetland	C.	
VEGETATION – Use scientific names of p	lante				
VEGETATION – Use scientific fiames of p		Domina	nt Indicator	Dominance Test wor	kehoot
Tree Stratum (Plot size: 30 ft)			s? Status	Number of Dominant S	
1					or FAC: (A)
2				Total Number of Domi	nant
3				Species Across All Str	ata: (B)
4				Percent of Dominant S	Species
Sapling/Shrub Stratum (Plot size: 30 ft)	0	= Total	Cover	That Are OBL, FACW,	or FAC: (A/B)
1.				Prevalence Index wo	rksheet:
2.				Total % Cover of:	Multiply by:
3.				OBL species	x 1 =
4.				FACW species	x 2 =
5				FAC species	x 3 =
	0	= Total	Cover		x 4 =
Herb Stratum (Plot size: 10 ft) 1. Phalaris arundinacea	40	Vas	FACW		x 5 =
2 Ranunculus repens	10	No	FAC	Column Totals:	(A) (B)
3. Taraxacum officinale	10	No	FACU	Prevalence Index	x = B/A =
4. Glechoma hederacea	8	No	FACU	Hydrophytic Vegetati	
5. Juncus effusus	5	No	FACW	Rapid Test for Hyd	
6	<u> </u>	-		☐ Dominance Test is	s >50%
7.				☐ Prevalence Index i	s ≤3.0¹
8.					aptations ¹ (Provide supporting
9	<u> </u>			data in Remark	ks or on a separate sheet)
10				_	
11				-	phytic Vegetation ¹ (Explain) bil and wetland hydrology must
Woody Vine Stratum (Diet size, 20 ft)	73	= Total	Cover	be present, unless dist	
Woody Vine Stratum (Plot size: 30 ft)					
1				Hydrophytic	
2	•	= Total	Cover	Vegetation Present? Yes	es 🗵 No 🗌
% Bare Ground in Herb Stratum 27		_ i olai			
Remarks: Hydrophytic vegetation criteria met	through the i	rapid te	est		
, s. sp.,, as vogotation officina mot	oagii iilo i	3p.0 10			
					·

Depth (inches)	Color (moist)	%	Colo	or (moist)	dox Featu %	Type ¹	Loc ²	Texture	Remarks
0 - 4	10YR 3/2	100	<u>-</u>	ii (iiioist)		<u> </u>	-	SaLo	Sandy loam
4 - 10	10YR 3/2	95	10	YR 4/6	5	С	М	SaLo	Sandy loam
10 - 14+	2.5Y 4/2	95	10	YR 4/6	5	С	М	SaLo	Sandy Loam
			_						
	oncentration, D=D Indicators: (App						ted Sand G		² Location: PL=Pore Lining, M=Matrix. icators for Problematic Hydric Soils ³ :
Histosol				Sandy Redox		,			2 cm Muck (A10)
	pipedon (A2)			Stripped Matri					Red Parent Material (TF2)
Black His				Loamy Mucky		F1) (excep	t MLRA 1)		Very Shallow Dark Surface (TF12)
	n Sulfide (A4)			Loamy Gleyed	,		,		Other (Explain in Remarks)
	d Below Dark Surfa	ace (A11)		Depleted Matr		-/			(2) prain in 1 terraine)
	ark Surface (A12)			Redox Dark S	, ,	3)		³ Inc	licators of hydrophytic vegetation and
	lucky Mineral (S1)			Depleted Dark	•	•			wetland hydrology must be present,
-	leyed Matrix (S4)			Redox Depres					unless disturbed or problematic.
	Layer (if present)	:			()	,			
Туре: No				_					
Depth (in	ches):							Hydric	Soil Present? Yes ⊠ No □
Remarks:									
	criteria met th	rough in	dicator	s A11 and	F6.				
lydric soil	GY		dicator	rs A11 and	F6.				
ydric soil YDROLO Vetland Hy	GY drology Indicator	rs:							Secondary Indicators (2 or more required)
YDROLO Vetland Hydrimary Indic	GY drology Indicator cators (minimum o	rs:		eck all that ap	ply)	ayoo (PO) (nyoont MI		Secondary Indicators (2 or more required)
YDROLO Vetland Hydrimary India Surface V	GY drology Indicator	rs:		eck all that ap	ply)		except ML		Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
YDROLO Vetland Hydrimary Indid Surface Verligh Wa	drology Indicator cators (minimum o Water (A1) ater Table (A2)	rs:		eck all that ap Water-St 1, 2,	ply) ained Lea 4A, and 4		except ML		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
YDROLO Vetland Hydrimary India Surface Verligh Wa	drology Indicator cators (minimum o Water (A1) tter Table (A2) on (A3)	rs:		eck all that ap Water-St 1, 2,	ply) ained Lea 4A, and 4 st (B11)	lB)	except ML	RA [Water-Stained Leaves (B9) (MLRA 1, 2,
YDROLO Vetland Hydrimary India Surface V High Wa Saturatic Water M	drology Indicator cators (minimum o Water (A1) tter Table (A2) on (A3)	rs:		eck all that ap Water-St 1, 2,	ply) ained Lea 4A, and 4 at (B11) nvertebra	tes (B13)	except ML	RA [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
YDROLO Vetland Hyd Primary India Surface V High Wa Saturatio Water M Sedimen	drology Indicator cators (minimum o Water (A1) tter Table (A2) on (A3) arks (B1) at Deposits (B2)	rs:		eck all that ap Water-St 1, 2, Salt Crus Aquatic I Hydroger	ply) ained Lea 4A, and 4 st (B11) nvertebra n Sulfide (tes (B13) Odor (C1)		RA [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9
YDROLO Vetland Hyd Surface V High Wa Saturatic Water M Sedimen Drift Dep	drology Indicator cators (minimum o Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2)	rs:		eck all that ap Water-St 1, 2, Salt Crus Aquatic I Hydroger Oxidized	ply) ained Lea 4A, and 4 at (B11) nvertebra n Sulfide (tes (B13) Odor (C1) neres along	J Living Roo	RA [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2)
YDROLO Vetland Hydrimary India Surface V High Wa Saturatic Water M Sedimen Drift Dep	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4)	rs:		eck all that ap Water-St 1, 2, 4 Salt Crus Aquatic I Hydrogei Oxidized Presence	ply) ained Lea 4A, and 4 at (B11) nvertebra n Sulfide (Rhizosph	tes (B13) Odor (C1) heres along ced Iron (C	J Living Roo	RA [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3)
YDROLO Vetland Hyd Surface V High Wa Saturatic Water M Sedimen Drift Dep Algal Ma	drology Indicator cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	rs:		eck all that ap Water-St 1, 2, 4 Salt Crus Aquatic I Hydroger Oxidized Presence	ply) ained Lea 4A, and 4 st (B11) nvertebrain Sulfide (Rhizospherof Reduction Reduction	tes (B13) Odor (C1) neres along ced Iron (C	J Living Roo 4) ed Soils (C6	RA [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
YDROLO Vetland Hyd Primary India Surface V High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep	drology Indicator cators (minimum of Water (A1) tter Table (A2) on (A3) arks (B1) at Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6)	s: f one requ	uired; che	eck all that ap Water-St 1, 2, 4 Salt Crus Aquatic I Hydroger Oxidized Presence	ply) ained Lea 4A, and 4 at (B11) nvertebra n Sulfide (Rhizosph e of Reduc	tes (B13) Odor (C1) heres along ced Iron (C ction in Tille d Plants (E	J Living Roo	RA [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
YDROLO Vetland Hyd Surface V Saturation Water M Sediment Drift Dep Algal Ma Iron Dep Surface S Inundation	drology Indicator cators (minimum of Water (A1) tter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria	s: f one requ	uired; che	eck all that ap Water-St 1, 2, 4 Salt Crus Aquatic I Hydroger Oxidized Presence	ply) ained Lea 4A, and 4 at (B11) nvertebra n Sulfide (Rhizosph e of Reduc	tes (B13) Odor (C1) heres along ced Iron (C ction in Tille d Plants (E	J Living Roo 4) ed Soils (C6	RA [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
YDROLO Vetland Hyde Primary India Surface V High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio	drology Indicator cators (minimum of Water (A1) after Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria	s: f one requ	uired; che	eck all that ap Water-St 1, 2, 4 Salt Crus Aquatic I Hydroger Oxidized Presence	ply) ained Lea 4A, and 4 at (B11) nvertebra n Sulfide (Rhizosph e of Reduc	tes (B13) Odor (C1) heres along ced Iron (C ction in Tille d Plants (E	J Living Roo 4) ed Soils (C6	RA [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
YDROLO Vetland Hydrimary India Surface Male Saturatio Water Male Sedimen Drift Dep Algal Male Iron Dep Surface	drology Indicator cators (minimum of Water (A1) ther Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Concar	rs: If one requ Il Imagery Ive Surfac	uired; che	eck all that ap Water-St 1, 2, 4 Salt Crus Aquatic I Hydrogei Oxidized Presence Recent Ir Stunted o	ply) ained Lea 4A, and 4 at (B11) nvertebra n Sulfide (Rhizosph e of Reduction Reduct	tes (B13) Odor (C1) heres along ced Iron (C ction in Tille d Plants (E Remarks)	J Living Roo 4) ed Soils (C6	RA [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
YDROLO Vetland Hyderimary India Surface Very High Ware March Mar	drology Indicator cators (minimum of water (A1) atter Table (A2) on (A3) arks (B1) at Deposits (B2) cosits (B3) attor Crust (B4) cosits (B5) Soil Cracks (B6) on Visible on Aeria vegetated Concarvations:	f one required in the state of	uired; che (B7) e (B8)	eck all that ap Water-St 1, 2, 4 Salt Crus Aquatic I Hydroger Oxidized Presence Recent Ir Stunted (Other (Ex	ply) ained Lea 4A, and 4 at (B11) nvertebra n Sulfide (Rhizosph e of Reduc on Reduc or Stresse xplain in F	tes (B13) Odor (C1) heres along ced Iron (C ction in Tille d Plants (E Remarks)	J Living Roo 4) ed Soils (C6	RA [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
YDROLO Vetland Hyde Primary India Surface V High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatio Sparsely Field Obser Surface Water Table	drology Indicator cators (minimum of water (A1) and (A2) on (A3) arks (B1) arks (B2) cosits (B3) art or Crust (B4) cosits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Concarvations: The resent?	f one required in the second	(B7) e (B8) No ⊠ No □	eck all that ap Water-St 1, 2, 4 Salt Crus Aquatic I Hydroger Oxidized Presence Recent Ir Stunted of Other (Ex	ply) ained Lea 4A, and 4 at (B11) nvertebrat n Sulfide (Rhizosph e of Reduct on Reduct or Stresse kplain in F es): Nor es): 3	tes (B13) Odor (C1) heres along ced Iron (C ction in Tille d Plants (E Remarks)	J Living Roo (4) ed Soils (Co (1) (LRR A	RA [Cots (C3) [Cots (C3	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
YDROLO Wetland Hyderimary India Surface Water May Sedimen Drift Dep Algal Ma Iron Dep Surface Surface Surface Water Mater May Sparsely Field Obser Surface Water Mater Table Saturation P	drology Indicator cators (minimum of water (A1) and (A2) on (A3) arks (B1) arks (B2) cosits (B3) art or Crust (B4) cosits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Concarvations: The resent?	f one required in the state of	uired; che (B7) e (B8)	eck all that ap Water-St 1, 2, 4 Salt Crus Aquatic I Hydroger Oxidized Presence Recent Ir Stunted (Other (Ex	ply) ained Lea 4A, and 4 at (B11) nvertebrat n Sulfide (Rhizosph e of Reduct on Reduct or Stresse kplain in F es): Nor es): 3	tes (B13) Odor (C1) heres along ced Iron (C ction in Tille d Plants (E Remarks)	J Living Roo (4) ed Soils (Co (1) (LRR A	RA [Cots (C3) [Cots (C3	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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Appendix F — Wetland Rating Forms

RATING SUMMARY – Western Washington

Name of wetland (or ID #): A	Date of site visit: $\frac{2/2/21}{2}$
Rated by Lauren Templeton	Trained by Ecology? <u> YesNo Date of training 11/20</u>
HGM Class used for rating Depressional	Wetland has multiple HGM classes?Y _ ✓ _N
NOTE: Form is not complete witho Source of base aerial photo/map	ut the figures requested (figures can be combined). ESRI ArcGIS
OVERALL WETLAND CATEGORY	II (based on functions <u>✓</u> or special characteristics)

1. Category of wetland based on FUNCTIONS

Category I – Total score = 23 - 27

Category II – Total score = 20 - 22

X Category III – Total score = 16 - 19

Category IV – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
		Circle the ap	propriate ratings	
Site Potential	М	L	L	
Landscape Potential	М	М	L	
Value	Н	M	М	TOTAL
Score Based on Ratings	7	5	4	16

Score for each function based on three ratings (order of ratings is not *important)* 9 = H,H,H8 = H,H,M7 = H,H,L 7 = H,M,M6 = H,M,L6 = M,M,M5 = H,L,L 5 = M,M,L4 = M, L, L3 = 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	N/A	

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
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 undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

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 undisturbed 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

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 polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense , rigid trees, shrubs, and herbaceous plants	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 undisturbed 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 ur	nit usually controlled by tides except during floods?
Σ	⊠NO – go to 2	☐ YES – the wetland class is Tidal Fringe – go to 1.1
1	1.1 Is the salinity of the water during	periods of annual low flow below 0.5 ppt (parts per thousand)?
		s a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it stuarine wetland and is not scored. This method cannot be used to
2.	The entire wetland unit is flat and pand surface water runoff are NOT se	precipitation is the only source (>90%) of water to it. Groundwater ources of water to the unit.
×	☑NO – go to 3 If your wetland can be classified as a	TYES – The wetland class is Flats <i>Flats wetland, use the form for</i> Depressional wetlands.
3.	<u> </u>	d is on the shores of a body of permanent open water (without any of the year) at least 20 ac (8 ha) in size;
X	☑NO – go to 4 ☐YES	- The wetland class is Lake Fringe (Lacustrine Fringe)
4.		can be very gradual), tland in one direction (unidirectional) and usually comes from s sheetflow, or in a swale without distinct banks,
X	☑NO – go to 5	☐ YES – The wetland class is Slope
	-	d in these type of wetlands except occasionally in very small and amocks (depressions are usually <3 ft diameter and less than 1 ft
5.	Does the entire wetland unit meet a The unit is in a valley, or stream stream or river, The overbank flooding occurs at	channel, where it gets inundated by overbank flooding from that

We	tland name or number <u>A</u>	
	NO – go to 6 NOTE : The Riverine unit can contain depressiflooding	☐ YES – The wetland class is Riverine ions that are filled with water when the river is not
		pression in which water ponds, or is saturated to the neans that any outlet, if present, is higher than the interior
	NO – go to 7	▼YES – The wetland class is Depressional
	flooding? The unit does not pond surface wat	t area with no obvious depression and no overbank er more than a few inches. The unit seems to be The wetland may be ditched, but has no obvious natural
	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	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	2	
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 > $^{1}/_{10}$ of area Wetland has persistent, ungrazed plants > $^{1}/_{10}$ of area Wetland has persistent, ungrazed plants < $^{1}/_{10}$ of area points = 0	1	
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 > ½ total area of wetland Area seasonally ponded is < ½ total area of wetland points = 2 Area seasonally ponded is < ½ total area of wetland points = 0	4	
Total for D 1 Add the points in the boxes above	7	
Rating of Site Potential If score is:12-16 = HX_6-11 = M0-5 = L Record the rating on the first p	age	
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. ls > 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	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	2	
Rating of Landscape Potential If score is:3 or 4 = HX_1 or 2 = M0 = L Record the rating on the f	irst 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 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: X 2-4 = H1 = M0 = L		

<u>DEPRESSIONAL AND FLATS WETLANDS</u>		
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 or ditch, OR highly constricted permanently flowing outletpoints = 2	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		
D 4.2. <u>Depth of storage during wet periods:</u> <i>Estimate the height of ponding above the bottom of the outlet. For wetlands</i>		
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	0	
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		
D 4.3. <u>Contribution of the wetland to storage in the watershed</u> : <i>Estimate the ratio of the area of upstream basin</i>		
contributing surface water to the wetland 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	0	
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		
·		
Pro to	•	
Total for D 4 Add the points in the boxes above	2	
Rating of Site Potential If score is: 12-16 = H 6-11 = M × 0-5 = L Record the rating on the	first page	
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?		
D 5.1. Does the wetland receive stormwater discharges? Yes = 1 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	0	
>1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0	ŭ	
Total for D 5 Add the points in the boxes above	1	
Rating of Landscape Potential If score is: 3 = H X 1 or 2 = M 0 = L Record the rating on the	first page	
D 6.0. Are the hydrologic functions provided by the site valuable to society?		
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around		
the wetland unit being rated. Do not add points. <u>Choose the highest score if more than one condition is met.</u>		
The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has		
damaged human or natural resources (e.g., houses or salmon redds):		
• Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2		
• Surface flooding problems are in a sub-basin farther down-gradient. points = 1	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. points = 0		
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0	
	1	

Rating of Value If score is: ____2-4 = H ___X_1 = M ____0 = L

Record the rating on the first page

These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. Aquatic bed 4 structures or more: points = 4 3 structures: points = 2 Emergent 1 ★ Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 Forested (areas where trees have > 30% cover) 1 structure: points = 0 If the unit has a Forested class, check if: The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). Permanently flooded or inundated 4 or more types present: points = 3 × Seasonally flooded or inundated 3 types present: points = 2 Occasionally flooded or inundated 2 types present: points = 1 0 Saturated only 1 type present: points = 0 ___Permanently flowing stream or river in, or adjacent to, the wetland Seasonally flowing stream in, or adjacent to, the wetland Lake Fringe wetland 2 points Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 1 If you counted: > 19 species points = 2 5 - 19 species points = 1 points = 0 < 5 species 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. 1 None = 0 points Moderate = 2 points Low = 1 point All three diagrams in this row are **HIGH** = 3points

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 extends at least 3.3 ft (1 m)		
over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)	1	
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 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 for list of 		
strata)		
Total for H 1 Add the points in the boxes above	4	
Rating of Site Potential If score is:15-18 = H7-14 = MX_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 <i>only habitat that directly abuts wetland unit</i>). Calculate: 0 % undisturbed habitat + [(% moderate and low intensity land uses) $\boxed{4.13}$ /2] = 2.065 %		
If 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. Undisturbed habitat in 1 km Polygon around the wetland.		
Calculate: 9.00 % undisturbed habitat + [(% moderate and low intensity land uses) $\frac{43.17}{2}$ = $\frac{30.585}{6}$ %		
Undisturbed habitat > 50% of Polygon points = 3		
Undisturbed habitat 10-50% and in 1-3 patches points = 2	0	
Undisturbed habitat 10-50% and > 3 patches points = 1		
Undisturbed habitat < 10% of 1 km Polygon points = 0		
H 2.3. Land use intensity in 1 km Polygon: If		
> 50% of 1 km Polygon is high intensity land use points = (-2)	-2	
\leq 50% of 1 km Polygon is high intensity points = 0	_	
Total for H 2 Add the points in the boxes above	-2	
Rating of Landscape Potential If score is:4-6 = H1-3 = M \times < 1 = L Record the rating on t		
Tracing of Editoscope Potential in Score is4 0 = 1113 = 101 1 = 1 1 = 1 1 = 1 1 = 1	ne jiist 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		
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: $2 = H \times 1 = M = 0 = L$ Record the rating on	the first page	

WDFW Priority Habitats

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

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

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

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
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	
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 Spartina, see page 25)	
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.	
☐ 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. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High	
Conservation Value?	
SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
☐Yes = Category I ☑No = Not a WHCV	
SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf □ Yes - Contact WNHP/WDNR and go to SC 2.4 ⋈ No = Not a WHCV	
SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on	
their website?	
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 = Is not a bog	
SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30%	
cover of plant species listed in Table 4?	
NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the	
plant species in Table 4 are present, the wetland is a bog.	
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar,	
western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the	
species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	
☐Yes = Is a Category I bog ☐No = Is not a bog	

Wetland name or number \underline{A}

COAO Escalada Maderala	
SC 4.0. Forested Wetlands	
Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i>	
 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	
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) □Yes - Go to SC 5.1 ⋈No = Not a wetland in a coastal lagoon 	
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 on p. 100). At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. The wetland is larger than ¹/10 ac (4350 ft²) 	
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 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 — Yes – Go to SC 6.1 No = not an interdunal wetland for rating	
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)? $\square \text{Yes} = \text{Category I} \square \text{No} - \text{Go to SC 6.2}$	
SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?	
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? \[\textstyle Yes = \textbf{Category III} \] \[\textstyle No = \textbf{Category IV} \]	
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	

Wetland name or number A

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RATING SUMMARY – Western Washington

Name of wetland (or ID #): B	Date of site visit: $\frac{2/2/21}{2}$	
Rated by Lauren Templeton	Trained by Ecology? <u> YesNo Date of training 11/20</u>	
HGM Class used for rating Depressional	Wetland has multiple HGM classes?Y <u><</u> N	
NOTE: Form is not complete without the figures requested (figures can be combined). Source of base aerial photo/map ESRI ArcGIS		
OVERALL WETLAND CATEGORY	II (based on functions <u></u> or special characteristics)	

1. Category of wetland based on FUNCTIONS

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

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
		Circle the ap	propriate ratings	
Site Potential	М	M	L	
Landscape Potential	М	M	L	
Value	Н	M	М	TOTAL
Score Based on Ratings	7	6	4	17

Score for each function based on three ratings (order of ratings is not *important)* 9 = H,H,H8 = H,H,M7 = H,H,L 7 = H,M,M6 = H,M,L6 = M,M,M5 = H,L,L 5 = M,M,L4 = M, L, L3 = 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	N/A	

Maps and figures required to answer questions correctly for Western Washington

<u>Depressional Wetlands</u>

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
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 undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

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 undisturbed 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

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 polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants	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 undisturbed 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 con	trolled by tides except during floods?	
Σ	☑NO – go to 2	YES – the	e wetland class is Tidal Fringe – go to 1.1	
1	1.1 Is the salinity of the wat	er during periods of anr	nual low flow below 0.5 ppt (parts per thousand)?	
	3.2	assified as a Freshwater it is an Estuarine wetla	☐ YES - Freshwater Tidal Fringe Tidal Fringe use the forms for Riverine wetlands. If it ind and is not scored. This method cannot be used to	it
2.	The entire wetland unit is and surface water runoff a	• •	the only source (>90%) of water to it. Groundwate or to the unit.	r
X	INO – go to 3 <i>If your wetland can be clas</i>	ssified as a Flats wetland	☐ YES – The wetland class is Flats , use the form for Depressional wetlands.	
3.		he wetland is on the sho t any time of the year) at	res of a body of permanent open water (without any tleast 20 ac (8 ha) in size;	7
X	NO – go to 4	YES – The wetland	d class is Lake Fringe (Lacustrine Fringe)	
4.		ope (<i>slope can be very gr</i> gh the wetland in one d surface, as sheetflow, or	radual), irection (unidirectional) and usually comes from in a swale without distinct banks,	
X	NO – go to 5		☐ YES – The wetland class is Slope	
			of wetlands except occasionally in very small and ssions are usually <3 ft diameter and less than 1 ft	
5.	Does the entire wetland u The unit is in a valley, stream or river, The overbank flooding	or stream channel, whe	re it gets inundated by overbank flooding from that	

We	Wetland name or number <u>D</u>	
X	NO − go to 6 NOTE: The Riverine unit can contain depressions that are filled with wa flooding	
6.	6. Is the entire wetland unit in a topographic depression in which water posurface, at some time during the year? <i>This means that any outlet, if presof the wetland.</i>	
	□ NO – go to 7	ss is Depressional
7.	7. Is the entire wetland unit located in a very flat area with no obvious dep flooding? The unit does not pond surface water more than a few inches. maintained by high groundwater in the area. The wetland may be ditched outlet.	The unit seems to be
	□NO – go to 8 □YES – The wetland cla	ss 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	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	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. <u>Characteristics and distribution of persistent plants</u> (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	1
Wetland has persistent, ungrazed plants $> \frac{1}{10}$ 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.	2
Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2	
Area seasonally ponded is < 1/4 total area of wetland points = 0	
Total for D 1 Add the points in the boxes above	6
·	
Rating of Site Potential If score is: 12-16 = H X 6-11 = M 0-5 = L Record the rating on the first po	ige
D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source 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 = HX_1 or 2 = M0 = L Record the rating on the file	rst 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 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: X 2-4 = H 1 = M 0 = L NOTES and FIELD OBSERVATIONS: 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?	1011
5	T
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 or ditch, OR highly constricted permanently flowing outletpoints = 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	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 wetland 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 D 4.3. Contribution of the area of upstream basin contributions of the area of upstream basin to the area of the unit area of the unit points = 5 The area of the basin is more than 100 times the area of the unit points = 0 Entire wetland is in the Flats class	0
Total for D 4 Add the points in the boxes above	7
Rating of Site Potential If score is: 12-16 = H × 6-11 = M 0-5 = L Record the rating on the	first page
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?	-
D 5.1. Does the wetland receive stormwater discharges? 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	0
Total for D 5 Add the points in the boxes above	1
Rating of Landscape Potential If score is: 3 = H X 1 or 2 = M 0 = L Record the rating on the	first page
D 6.0. Are the hydrologic functions provided by the site valuable to society?	•
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met. The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): • Flooding occurs in a sub-basin that is immediately down-gradient of unit. • Surface flooding problems are in a sub-basin farther down-gradient. 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.	1
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for D 6 Add the points in the boxes above	1

Rating of Value If score is: ____2-4 = H ___X_1 = M ____0 = L

Record the rating on the first page

These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. Aquatic bed 4 structures or more: points = 4 3 structures: points = 2 ___Emergent 1 ★ Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 × Forested (areas where trees have > 30% cover) 1 structure: points = 0 If the unit has a Forested class, check if: The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). Permanently flooded or inundated 4 or more types present: points = 3 × Seasonally flooded or inundated 3 types present: points = 2 Occasionally flooded or inundated 2 types present: points = 1 0 Saturated only 1 type present: points = 0 ___Permanently flowing stream or river in, or adjacent to, the wetland Seasonally flowing stream in, or adjacent to, the wetland Lake Fringe wetland 2 points Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 1 If you counted: > 19 species points = 2 5 - 19 species points = 1 points = 0 < 5 species 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. 1 None = 0 points Moderate = 2 points Low = 1 point All three diagrams in this row are **HIGH** = 3points

H 1.5. Special habitat features:		
Check the habitat features that are present in the wetland. The number of checks is the r	าumber of points.	
_x_Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).		
_x_Standing snags (dbh > 4 in) within the wetland		
Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants exter	nds at least 3.3 ft (1 m)	
over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)	, ,	3
Stable steep banks of fine material that might be used by beaver or muskrat for den	ning (> 30 degree	
slope) OR signs of recent beaver activity are present (cut shrubs or trees that have r		
where wood is exposed)	•	
At least ¼ ac of thin-stemmed persistent plants or woody branches are present in ar	eas that are	
permanently or seasonally inundated (structures for egg-laying by amphibians)		
_x Invasive plants cover less than 25% of the wetland area in every stratum of plants (s	ee H 1.1 for list of	
strata)		
Total for H 1 Add the point	ts in the boxes above	6
Rating of Site Potential If score is:15-18 = H7-14 = MX_0-6 = L	Record the rating on	the first page
H 2.0. Does the landscape have the potential to support the habitat functions of the sit	te?	
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).		
Calculate: 0 % undisturbed habitat + [(% moderate and low intensity land uses) 4.	.13 /2] = 2.065 %	
If total accessible habitat is:		
> ¹ / ₃ (33.3%) of 1 km Polygon	points = 3	
20-33% of 1 km Polygon	points = 2	0
10-19% of 1 km Polygon	points = 1	
< 10% of 1 km Polygon	points = 0	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	μοιπτς – σ	
	9.77 / 2] = 28.885 %	
Undisturbed habitat > 50% of Polygon	points = 3	0
Undisturbed habitat 10-50% and in 1-3 patches	points = 2	
Undisturbed habitat 10-50% and > 3 patches	points = 1	
Undisturbed habitat < 10% of 1 km Polygon	points = 0	
H 2.3. Land use intensity in 1 km Polygon: If		
> 50% of 1 km Polygon is high intensity land use	points = (- 2)	-2
≤ 50% of 1 km Polygon is high intensity	points = 0	
	ts in the boxes above	-2
Rating of Landscape Potential If score is:4-6 = H1-3 = MX < 1 = L	Record the rating on t	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? <i>Choose</i> of	only the highest score	Ι
that applies to the wetland being rated.	my the mynest store	
Site meets ANY of the following criteria:	points = 2	
-	ροπτι – 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 	a state or fodoral lists)	
It provides habitat for Threatened or Endangered species (any plant or animal on the It is manned as a location for an individual WDEW priority species.)	: state of federal lists)	1
— It is mapped as a location for an individual WDFW priority species It is a Wotland of High Conservation Value as determined by the Department of Natural Conservation (Natural Conservation Conservation Value as determined by the Department of Natural Conservation (Natural Conservation Co	ural Pacaureas	[
It is a Wetland of High Conservation Value as determined by the Department of Natural than hear sategorized as an important habitat site in a local or regional comprehension.		
It has been categorized as an important habitat site in a local or regional comprehen Shoreline Master Plan, or in a watershed plan.	sive pian, 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: $2 = H \times 1 = M = 0 = L$	Record the rating on	the first page

Wetland Rating System for Western WA: 2014 Update Rating Form – Effective January 1, 2015

WDFW Priority Habitats

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

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

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

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
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?	
\square Yes = Category I \square 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	
than 10% cover of non-native plant species. (If non-native species are Spartina, see page 25)	
\square At least $rac{1}{2}$ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland.	
The wetland has at least two of the following features: tidal channels, depressions with open water, or	
contiguous freshwater wetlands. Section Property of the following features: tidal chambers, depressions with open water, of the following features: tidal chambers, depressions with open water, of the following features: tidal chambers, depressions with open water, of the following features: tidal chambers, depressions with open water, of the following features: tidal chambers, depressions with open water, of the following features: tidal chambers, depressions with open water, of the following features: tidal chambers, depressions with open water, of the following features: tidal chambers, depressions with open water, of the following features: tidal chambers, depressions with open water, of the following features: tidal chambers, depressions with open water, of the following features: tidal chambers, depressions with open water, of the features: tidal chambers and the features: tidal chambers are tidal chambers.	
Contiguous irestiwater wettands.	
SC 2.0. Wetlands of High Conservation Value (WHCV)	
SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High	
Conservation Value?	
SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
☐Yes = Category I ☑No = Not a WHCV	
SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf ☐ Yes - Contact WNHP/WDNR and go to SC 2.4 ☒ No = Not a WHCV	
SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on	
their website?	
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? \square Yes – Go to SC 3.3 \square No = Is not a bog	
SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30%	
cover of plant species listed in Table 4?	
NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by	
measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the	
plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar,	
western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the	
species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	
Yes = Is a Category I bog \Box No = Is not a bog	
☐Yes = Is a Category I bog ☐No = Is not a bog	

Wetland name or number $\underline{\mathsf{B}}$

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	
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) □ Yes − Go to SC 5.1 □ No = Not a wetland in a coastal lagoon 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 on p. 100). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland is larger than ¹/₁₀ ac (4350 ft²) □ 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 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 ☐ Yes − Go to SC 6.1 ☒ No = not an interdunal wetland for rating 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 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	
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	

Wetland name or number B

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RATING SUMMARY – Western Washington

Name of wetland (or ID #): $^{ extstyle{C}}$	Date of site visit: 2/2/21
Rated by Lauren Templeton	_ Trained by Ecology? <u>✓</u> YesNo Date of training 11/20
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 figures requested (figures can be combined). S ESRI ArcGIS
OVERALL WETLAND CATEGORY	\underline{V} (based on functions \underline{v} or special characteristics)

1. Category of wetland based on FUNCTIONS

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

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
		Circle the ap	propriate ratings	
Site Potential	L	L	L	
Landscape Potential	М	M	L	
Value	Н	М	L	TOTAL
Score Based on Ratings	6	5	3	14

Score for each function based on three ratings (order of ratings is not *important)* 9 = H,H,H8 = H,H,M7 = H,H,L 7 = H,M,M6 = H,M,L6 = M,M,M5 = H,L,L 5 = M,M,L4 = M, L, L3 = 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	N/A	

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
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 undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

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 undisturbed 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

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 undisturbed 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 undisturbed 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	nit 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 durin	periods of annual low flow below 0.5 ppt (parts per thousand)?
	, ,	s a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it stuarine wetland and is not scored. This method cannot be used to
2.	The entire wetland unit is flat and and surface water runoff are NOT	precipitation is the only source (>90%) of water to it. Groundwater ources of water to the unit.
×	☑NO – go to 3 If your wetland can be classified as	☐ YES – The wetland class is Flats a Flats wetland, use the form for Depressional wetlands.
3.	•	d is on the shores of a body of permanent open water (without any of the year) at least 20 ac (8 ha) in size;
×	NO – go to 4	- The wetland class is Lake Fringe (Lacustrine Fringe)
4.	_	can be very gradual), etland in one direction (unidirectional) and usually comes from s sheetflow, or in a swale without distinct banks,
×	⊠NO – go to 5	☐ YES – The wetland class is Slope
	•	d in these type of wetlands except occasionally in very small and nmocks (depressions are usually <3 ft diameter and less than 1 ft
5.	Does the entire wetland unit mee The unit is in a valley, or streat stream or river, The overbank flooding occurs	channel, where it gets inundated by overbank flooding from that

We	land name or number <u>C</u>
×	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 natura butlet.
	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.

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	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. <u>Characteristics of surface water outflows from the wetland</u> : Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	2
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 points = 0	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 Area seasonally ponded is > ½ total area of wetland Area seasonally ponded is < ½ total area of wetland points = 2 points = 0	0
Total for D 1 Add the points in the boxes above	2
Rating of Site Potential If score is:12-16 = H6-11 = M \times _0-5 = L Record the rating on the first potential	age
D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0
D 2.2. Is $> 10\%$ of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?	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	1
Rating of Landscape Potential If score is:3 or 4 = HX_1 or 2 = M0 = L Record the rating on the fi	rst 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 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: X 2-4 = H 1 = M 0 = L Record the rating on the first page NOTES and FIELD OBSERVATIONS:	

DEPRESSIONAL AND FLATS WETLANDS Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradati	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 or ditch, OR highly constricted permanently flowing outletpoints = 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	2
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 wetland 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	0
Total for D 4 Add the points in the boxes above	2
Rating of Site Potential If score is: 12-16 = H 6-11 = M × 0-5 = L Record the rating on the	first page
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?	
D 5.1. Does the wetland receive stormwater discharges? Yes = 1 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	0
Total for D 5 Add the points in the boxes above	1
Rating of Landscape Potential If score is: 3 = H X 1 or 2 = M 0 = L Record the rating on the	first page
D 6.0. Are the hydrologic functions provided by the site valuable to society?	
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met. The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): • Flooding occurs in a sub-basin that is immediately down-gradient of unit. • Surface flooding problems are in a sub-basin farther down-gradient. 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.	1
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for D 6 Add the points in the boxes above	1

Rating of Value If score is: ____2-4 = H ___X_1 = M ____0 = L

Record the rating on the first page

These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. Aquatic bed 4 structures or more: points = 4 3 structures: points = 2 _x_Emergent 0 Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 Forested (areas where trees have > 30% cover) 1 structure: points = 0 If the unit has a Forested class, check if: The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). Permanently flooded or inundated 4 or more types present: points = 3 Seasonally flooded or inundated 3 types present: points = 2 × Occasionally flooded or inundated 2 types present: points = 1 0 Saturated only 1 type present: points = 0 ___Permanently flowing stream or river in, or adjacent to, the wetland Seasonally flowing stream in, or adjacent to, the wetland Lake Fringe wetland 2 points Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 1 If you counted: > 19 species points = 2 5 - 19 species points = 1 points = 0 < 5 species 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. 0 None = 0 points Moderate = 2 points Low = 1 point All three diagrams in this row are **HIGH** = 3points

	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.			
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 extends at least 3.3 ft (1 m)			
over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)	0		
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 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 for list of			
strata)			
Total for H 1 Add the points in the boxes above	1		
Rating of Site Potential If score is: 15-18 = H 7-14 = M X 0-6 = L Record the rating on	the first page		
H 2.0. Does the landscape have the potential to support the habitat functions of the site?			
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).			
Calculate: 0 % undisturbed habitat + [(% moderate and low intensity land uses) 4.13 /2] = 2.065 %			
If 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. Undisturbed habitat in 1 km Polygon around the wetland.			
Calculate: 9 % undisturbed habitat + $[(\% \text{ moderate and low intensity land uses})]_{39.77}/2] = 28.885 %$			
Undisturbed habitat > 50% of Polygon points = 3			
Undisturbed habitat 10-50% and in 1-3 patches points = 2	0		
Undisturbed habitat 10-50% and > 3 patches points = 1			
Undisturbed habitat < 10% of 1 km Polygon points = 0			
H 2.3. Land use intensity in 1 km Polygon: If			
> 50% of 1 km Polygon is high intensity land use points = (- 2)	-2		
\leq 50% of 1 km Polygon is high intensity points = 0	_		
Total for H 2 Add the points in the boxes above	-2		
Rating of Landscape Potential If score is:4-6 = H1-3 = MX < 1 = L	ne jirst 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	0		
— It is a Wetland of High Conservation Value as determined by the Department of Natural Resources	-		
— It has been categorized as an important habitat site in a local or regional comprehensive plan, in a			
Shoreline Master Plan, or in a watershed plan			
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 = M $\times 0 = L$

Record the rating on the first page

WDFW Priority Habitats

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

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

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

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
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?	
\square Yes = Category I \square 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	
than 10% cover of non-native plant species. (If non-native species are Spartina, see page 25)	
\square At least $rac{1}{2}$ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland.	
The wetland has at least two of the following features: tidal channels, depressions with open water, or	
contiguous freshwater wetlands. Section Property of the following features: tidal chambers, depressions with open water, of the following features: tidal chambers, depressions with open water, of the following features: tidal chambers, depressions with open water, of the following features: tidal chambers, depressions with open water, of the following features: tidal chambers, depressions with open water, of the following features: tidal chambers, depressions with open water, of the following features: tidal chambers, depressions with open water, of the following features: tidal chambers, depressions with open water, of the following features: tidal chambers, depressions with open water, of the following features: tidal chambers, depressions with open water, of the following features: tidal chambers, depressions with open water, of the features: tidal chambers and the features: tidal chambers are tidal chambers.	
Contiguous irestiwater wettands.	
SC 2.0. Wetlands of High Conservation Value (WHCV)	
SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High	
Conservation Value?	
SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
☐Yes = Category I ☑No = Not a WHCV	
SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf ☐ Yes - Contact WNHP/WDNR and go to SC 2.4 ☒ No = Not a WHCV	
SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on	
their website?	
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? \square Yes – Go to SC 3.3 \square No = Is not a bog	
SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30%	
cover of plant species listed in Table 4?	
NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by	
measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the	
plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar,	
western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the	
species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	
Yes = Is a Category I bog \Box No = Is not a bog	
☐Yes = Is a Category I bog ☐No = Is not a bog	

Wetland name or number \underline{C}

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	
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) □ Yes − Go to SC 5.1 図No = Not a wetland in a coastal lagoon 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 on p. 100). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland is larger than ¹/₁₀ ac (4350 ft²) □ 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 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 — □Yes − Go to SC 6.1 ☑No = not an interdunal wetland for rating 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 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	
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	

Wetland name or number <u>C</u>

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RATING SUMMARY – Western Washington

Name of wetland (or ID #): D	Date of site visit: 2/2/21
Rated by Dustin Pringle	Trained by Ecology? <u> YesNo Date of training 11/20</u>
HGM Class used for rating Depressional	Wetland has multiple HGM classes?Y <u>✓</u> N
NOTE: Form is not complete without Source of base aerial photo/map	ut the figures requested (figures can be combined). ESRI ArcGIS
OVERALL WETLAND CATEGORY	II (based on functions 🗸 or special characteristics)

1. Category of wetland based on FUNCTIONS

Category I – Total score = 23 - 27

Category II – Total score = 20 - 22

X Category III – Total score = 16 - 19

Category IV – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
		Circle the ap	propriate ratings	
Site Potential	L	M	L	
Landscape Potential	М	M	L	
Value	Н	M	М	TOTAL
Score Based on Ratings	6	6	4	16

Score for each function based on three ratings (order of ratings is not *important)* 9 = H,H,H8 = H,H,M7 = H,H,L 7 = H,M,M6 = H,M,L6 = M,M,M5 = H,L,L 5 = M,M,L4 = M, L, L3 = 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	N/A	

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
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 undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

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 undisturbed 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

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 polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants	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 undisturbed 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 entir	unit usually controlled by tides	s except during floods?	
Σ	▼NO – go to 2			
1	1.1 Is the salinity of the water dur	ng periods of annual low flow b	elow 0.5 ppt (parts per thousand)?	
		l as a Freshwater Tidal Fringe us a Estuarine wetland and is not s	- Freshwater Tidal Fringe se the forms for Riverine wetlands. If it cored. This method cannot be used to	
2.	The entire wetland unit is flat and surface water runoff are NC		ce (>90%) of water to it. Groundwater	
×	NO – go to 3 If your wetland can be classified	<u>—</u>	- The wetland class is Flats for Depressional wetlands.	
3.	•	and is on the shores of a body one of the year) at least 20 ac		
X	NO – go to 4	ES - The wetland class is Lake	Fringe (Lacustrine Fringe)	
4.	_	ope can be very gradual), wetland in one direction (unidi e, as sheetflow, or in a swale wit	rectional) and usually comes from hout distinct banks,	
X	NO – go to 5	☐ YES -	The wetland class is Slope	
			scept occasionally in very small and ally <3 ft diameter and less than 1 ft	
5.	Does the entire wetland unit me The unit is in a valley, or stre stream or river, The overbank flooding occur	am channel, where it gets inunc	lated by overbank flooding from that	

We	cland name or number <u>U</u>
X	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

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	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. <u>Characteristics of surface water outflows from the wetland</u> :		
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	2	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1		
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 $> \frac{1}{2}$ of area points = 3	1	
Wetland has persistent, ungrazed plants $> \frac{1}{100}$ 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	0	
Area seasonally ponded is > 1/4 total area of wetland points = 2		
Area seasonally ponded is < 1/4 total area of wetland points = 0		
Total for D 1 Add the points in the boxes above	3	
Rating of Site Potential If score is:12-16 = H6-11 = MX_0-5 = L	page	
D 2.0. Does the landscape have the potential to support the water quality function of the site?		
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0	
D 2.2. Is $> 10\%$ of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1	
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	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	2	
Rating of Landscape Potential If score is:3 or 4 = HX_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 No = 0	1	
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in which the unit is found)? Yes = 2 No = 0	2	
Total for D 3 Add the points in the boxes above	3	
Rating of Value If score is: X 2-4 = H1 = M0 = L Record the rating on the first page	1	

NOTES and FIELD OBSERVATIONS:

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) Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outletpoints = 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	2		
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 wetland 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	0		
Total for D 4 Add the points in the boxes above Rating of Site Potential If score is: 12-16 = H × 6-11 = M 0-5 = L Record the rating on the	7		
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	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	0		
Total for D 5 Add the points in the boxes above	1		
Rating of Landscape Potential If score is: 3 = H X 1 or 2 = M 0 = L Record the rating on the fine			
D 6.0. Are the hydrologic functions provided by the site valuable to society?			
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met. The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): • Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 • Surface flooding problems are in a sub-basin farther down-gradient. 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.	1		
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0			
Total for D 6 Add the points in the boxes above	1		

Rating of Value If score is: ____2-4 = H ___X_1 = M ____0 = L

Record the rating on the first page

These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. Aquatic bed 4 structures or more: points = 4 3 structures: points = 2 _x_Emergent 1 Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 × Forested (areas where trees have > 30% cover) 1 structure: points = 0 If the unit has a Forested class, check if: The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). × Permanently flooded or inundated 4 or more types present: points = 3 Seasonally flooded or inundated 3 types present: points = 2 × Occasionally flooded or inundated 2 types present: points = 1 1 Saturated only 1 type present: points = 0 ___Permanently flowing stream or river in, or adjacent to, the wetland Seasonally flowing stream in, or adjacent to, the wetland Lake Fringe wetland 2 points Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 1 If you counted: > 19 species points = 2 5 - 19 species points = 1 points = 0 < 5 species 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. 1 None = 0 points Moderate = 2 points Low = 1 point All three diagrams in this row are **HIGH** = 3points

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).			
_ x Standing snags (dbh > 4 in) within the wetland			
Undercut banks are present for at least 6.6 ft (2 m) and/or overhang	ging plants extends at least 3.3 ft (1 m)		
over a stream (or ditch) in, or contiguous with the wetland, for at le		2	
Stable steep banks of fine material that might be used by beaver or			
slope) OR signs of recent beaver activity are present (cut shrubs or t	_ :		
where wood is exposed)			
At least ¼ ac of thin-stemmed persistent plants or woody branches a	are present in areas that are		
permanently or seasonally inundated (structures for egg-laying by	amphibians)		
_x Invasive plants cover less than 25% of the wetland area in every stra	tum of plants (see H 1.1 for list of		
strata)			
Total for H 1	Add the points in the boxes above	6	
Rating of Site Potential If score is:15-18 = H7-14 = MX 0-6 = L	Record the rating on	the first page	
H 2.0. Does the landscape have the potential to support the habitat fund	ctions of the site?		
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).		Ī	
Calculate: 0 % undisturbed habitat + [(% moderate and low intens	sity land uses) 4.13 /21 = 2.065 %		
If total accessible habitat is:	nty lulid uses/ [4.10]/2] = <u>2.000</u> /0		
$> \frac{1}{3}$ (33.3%) of 1 km Polygon	noints - 2		
	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. Undisturbed habitat in 1 km Polygon around the wetland.	sity land uses 20 77 /21 29 995 ov		
Calculate: 9 % undisturbed habitat + [(% moderate and low intens			
Undisturbed habitat > 50% of Polygon	points = 3	1	
Undisturbed habitat 10-50% and in 1-3 patches	points = 2		
Undisturbed habitat 10-50% and > 3 patches	points = 1		
Undisturbed habitat < 10% of 1 km Polygon	points = 0		
H 2.3. Land use intensity in 1 km Polygon: If			
> 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 = MX < 1 = L	Record the rating on t	he first page	
H 3.0. Is the habitat provided by the site valuable to society?		-	
	olicios? Chance only the high set assure	<u> </u>	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or put that applies to the wetland being rated.	uncles: Choose only the highest score		
Site meets ANY of the following criteria:	points = 2		
	μοιπις – 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) 			
	or animal on the state of federal lists)	1	
— 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			
 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	th a first :	
Rating of Value If score is: 2 = H X 1 = M 0 = L	Record the rating on	trie Jirst page	

Wetland Rating System for Western WA: 2014 Update Rating Form – Effective January 1, 2015

WDFW Priority Habitats

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

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

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

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
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	
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 page 25)	
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.	
The wetland has at least two of the following features: tidal channels, depressions with open water, or	
contiguous freshwater wetlands.	
SC 2.0. Wetlands of High Conservation Value (WHCV)	
SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High	
Conservation Value?	
SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
☐Yes = Category I ☑No = Not a WHCV	
SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
Yes − Contact WNHP/WDNR and go to SC 2.4 ⊠No = Not a WHCV SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on	
their website?	
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?	
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?	
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?	
NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by	
measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the	
plant species in Table 4 are present, the wetland is a bog.	
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar,	
western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the	
species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	
☐Yes = Is a Category I bog ☐No = Is not a bog	

SC 4.0. Forested Wetlands	
Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i>	
 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	
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) □ Yes − Go to SC 5.1 ☑No = Not a wetland in a coastal lagoon 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 on p. 100). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland is larger than ¹/₁₀ ac (4350 ft²) □ 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 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 ☐ Yes − Go to SC 6.1 ☒ No = not an interdunal wetland for rating 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)? SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? \[\text{Yes} = \text{Category I} \] \[\text{No} - \text{Go to SC 6.2} \] \[\text{Yes} = \text{Category II} \] \[\text{No} - \text{Go to SC 6.3} \]	
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?	
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	

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RATING SUMMARY – Western Washington

Name of wetland (or ID #): E	Date of site visit: $\frac{2/2/21}{2}$			
Rated by Dustin Pringle	Trained by Ecology? <u><</u> YesNo Date of training 11/20			
HGM Class used for rating Depressional	Wetland has multiple HGM classes?Y _ ✓ _N			
NOTE: Form is not complete without the figures requested (figures can be combined). Source of base aerial photo/map ESRI ArcGIS				
OVERALL WETLAND CATEGORY	II (based on functions 🗸 or special characteristics)			

1. Category of wetland based on FUNCTIONS

Category I – Total score = 23 - 27

Category II – Total score = 20 - 22

X Category III – Total score = 16 - 19

Category IV – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
		Circle the ap	propriate ratings	
Site Potential	М	L	L	
Landscape Potential	М	М	L	
Value	Н	M	М	TOTAL
Score Based on Ratings	7	5	4	16

Score for each function based on three ratings (order of ratings is not *important)* 9 = H,H,H8 = H,H,M7 = H,H,L7 = H,M,M6 = H,M,L6 = M,M,M5 = H,L,L 5 = M,M,L4 = M, L, L3 = 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	N/A	

Maps and figures required to answer questions correctly for Western Washington

<u>Depressional Wetlands</u>

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
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 undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

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 undisturbed 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

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 polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants	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 undisturbed 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 e	ntire unit usually controll	ed by tides except during floods?	
	☑NO – go to 2		tland class is Tidal Fringe – go to 1.1	
1	1.1 Is the salinity of the water	during periods of annual	low flow below 0.5 ppt (parts per thousand)?	
		sified as a Freshwater Tida is an Estuarine wetland a	☐ YES - Freshwater Tidal Fringe all Fringe use the forms for Riverine wetlands. If a land is not scored. This method cannot be used to	it
2.	The entire wetland unit is fla and surface water runoff are		only source (>90%) of water to it. Groundwate the unit.	er
X	NO – go to 3 If your wetland can be classij	ĩed as a Flats wetland, use	YES – The wetland class is Flats the form for Depressional wetlands.	
3.	Does the entire wetland unit ☐The vegetated part of the plants on the surface at an ☐At least 30% of the open w	wetland is on the shores on the shores on time of the year) at least	of a body of permanent open water (without any st 20 ac (8 ha) in size;	У
X	NO – go to 4	■YES - The wetland class	ss is Lake Fringe (Lacustrine Fringe)	
4.	_	e (slope can be very gradue the wetland in one direct rface, as sheetflow, or in a	al), tion (unidirectional) and usually comes from a swale without distinct banks,	
X	NO – go to 5		☐ YES – The wetland class is Slope	
			vetlands except occasionally in very small and ns are usually <3 ft diameter and less than 1 ft	
5.	Does the entire wetland unit The unit is in a valley, or stream or river, The overbank flooding or	stream channel, where it	gets inundated by overbank flooding from that	

We	Vetland name or number <u></u>	
X	NO – go to 6 NOTE: The Riverine unit can contain depression flooding	☐ YES – The wetland class is Riverine as that are filled with water when the river is not
6.	. Is the entire wetland unit in a topographic depresurface, at some time during the year? <i>This med of the wetland.</i>	ession in which water ponds, or is saturated to the ans that any outlet, if present, is higher than the interior
	□ NO – go to 7	▼YES – The wetland class is Depressional
7.	. Is the entire wetland unit located in a very flat an flooding? The unit does not pond surface water maintained by high groundwater in the area. Th 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	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	2
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. <u>Characteristics and distribution of persistent plants</u> (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	0
Wetland has persistent, ungrazed plants $> \frac{1}{10}$ 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 Area seasonally ponded is > ½ total area of wetland Area seasonally ponded is < ½ total area of wetland Area seasonally ponded is < ½ total area of wetland points = 2 points = 0	4
Total for D 1 Add the points in the boxes above	6
Rating of Site Potential If score is: 12-16 = H X 6-11 = M 0-5 = L Record the rating on the first po	ige
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. ls > 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	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	2
Rating of Landscape Potential If score is: 3 or 4 = H × 1 or 2 = M 0 = L Record the rating on the file	rst 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 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: X 2-4 = H 1 = M 0 = L NOTES and FIELD OBSERVATIONS: 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) Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outletpoints = 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	2
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 wetland 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	0
Total for D 4 Add the points in the boxes above Rating of Site Potential If score is: 12-16 = H 6-11 = M × 0-5 = L Record the rating on the	5
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?	Jiist page
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	0
Total for D 5 Add the points in the boxes above	1
Rating of Landscape Potential If score is: 3 = H X 1 or 2 = M 0 = L Record the rating on the	first page
D 6.0. Are the hydrologic functions provided by the site valuable to society?	
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met. The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): • Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 • Surface flooding problems are in a sub-basin farther down-gradient. 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.	1
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	0
Yes = 2 No = 0 Total for D 6 Add the points in the boxes above	1

Rating of Value If score is: ____2-4 = H ___X_1 = M ____0 = L

Record the rating on the first page

These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. Aquatic bed 4 structures or more: points = 4 3 structures: points = 2 _x_Emergent 0 Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 Forested (areas where trees have > 30% cover) 1 structure: points = 0 If the unit has a Forested class, check if: The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). Permanently flooded or inundated 4 or more types present: points = 3 × Seasonally flooded or inundated 3 types present: points = 2 Occasionally flooded or inundated 2 types present: points = 1 0 Saturated only 1 type present: points = 0 ___Permanently flowing stream or river in, or adjacent to, the wetland Seasonally flowing stream in, or adjacent to, the wetland Lake Fringe wetland 2 points Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 1 If you counted: > 19 species points = 2 5 - 19 species points = 1 points = 0 < 5 species 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. 0 None = 0 points Moderate = 2 points Low = 1 point All three diagrams in this row are **HIGH** = 3points

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 (> 4 in diameter and 6 ft long). Standing snags (dbh > 4 in) within the wetland (> 4 in diameter and 6 ft long). Underrut banks are present for al teast 6. 6 it (2 in) and/or overhanging plants extends at least 3.3 it (1 in) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 it (10 m) Stable steep banks of fine material that might be used by beaver or muskers for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that hove not yet weathered where wood is exposed) At least % a cof thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg laving by amphibians) Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strato) Total for H			,
Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). Standing snags (dbh > 4 in) within the wetland (> 4 in diameter and 6 ft long). Standing snags (dbh > 4 in) within the wetland (> 1 minus over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (1 m) over 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 weothered where wood is exposed) At least % a cof 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 for list of strota) Total for H 1 Add the points in the boxes above 1 Rating of Site Potential if score is:15-18 = H7-14 = Mx0-6 = L	H 1.5. Special habitat features:		
Standing snags (dbh > 4 in) within the wetland Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) 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 than thore not yet weathered where wood is exposed) At least X ac of thin s-temmed 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 for list of strota) Total for H 1 Add the points in the boxes above Rating of Site Potential if score is:15-18 = H	Check the habitat features that are present in the wetland. The number	of checks is the number of points.	
Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) 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 X ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibions) Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strotta) Total for H 1	Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).		
over 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 muskraft 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 X as of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibitions) Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata) Total for H 1 Add the points in the boxes above 1 Rating of Site Potential if score is:15-18 = H7-14 = MX 0-6 = L	Standing snags (dbh > 4 in) within the wetland		
over 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 muskraft 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 X as of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibitans) Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata) Total for H 1 Add the points in the boxes above 1 Record the rating on the first page ### 12.0. Does the landscape have the potential to support the habitat functions of the site? ###################################	Undercut banks are present for at least 6.6 ft (2 m) and/or overhang	ging plants extends at least 3.3 ft (1 m)	
Stable steep banks of fline 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 % a cof 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 for list of strata) Total for H 1			0
slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed) At least % a co of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg laying by amphibitions) Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata) Total for H 1 Add the points in the boxes above 1 Rating of Site Potential If score is:15-18 = H7-14 = MX 0-6 = L			
At least % ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-loying by amphibians)Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata) Total for H 1			
Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of stratus)	where wood is exposed)		
Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strato) Total for H 1 Rating of Site Potential If score is:15-18 = H7-14 = MX 0.6 = L Record the rating on the first page H 2.0. Does the landscape have the potential to support the habitat functions of the site? H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit). Colculate: [0]	At least ¼ ac of thin-stemmed persistent plants or woody branches	are present in areas that are	
Total for H 1 Add the points in the boxes above 1 Rating of Site Potential If score is:15-18 = H7-14 = MX 0-6 = L	permanently or seasonally inundated (structures for egg-laying by	amphibians)	
Total for H 1	Invasive plants cover less than 25% of the wetland area in every stra	atum of plants (see H 1.1 for list of	
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 that directly abuts wetland unit). Calculate: □	strata)		
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 that directly abuts wetland unit). Calculate:	Total for H 1	Add the points in the boxes above	1
H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>). Calculate:	Rating of Site Potential If score is:15-18 = H7-14 = MX_0-6 = L	Record the rating on	the first page
Calculate: Sundisturbed habitat + (% moderate and low intensity land uses) 4.13 72 = 2.065 % ff total accessible habitat is:	H 2.0. Does the landscape have the potential to support the habitat fund	ctions of the site?	
Calculate: Sundisturbed habitat + (% moderate and low intensity land uses) 4.13 72 = 2.065 % ff total accessible habitat is:	H 2.1 Accessible habitat (include only habitat that directly abuts wetland unit)		
If total accessible habitat is: > ½, (33.3%) of 1 km Polygon points = 3 20-33% of 1 km Polygon points = 2 10-19% of 1 km Polygon points = 0 H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. Calculate: 9			
> 1/3 (33.3%) of 1 km Polygon 20-33% of 1 km Polygon 10-19% of 1 km Polygon 20-33% of 1 km Polygon 20-30% of 2 28.885 // points = 3 28.885 // points = 2 28.885		, say take accept	
20-33% of 1 km Polygon 10-19% of 1 km Polygon 20-30% of 1 km Polygon is high intensity land use 20-30% of 1 km Polygon is high intensity land use 20-30% of 1 km Polygon is high intensity land use 20-30% of 1 km Polygon is high intensity 20-30% of 1 km Polygon is high intensity 20-30% of 1 km Polygon is high intensity 30-30%		noints - 2	
10-19% of 1 km Polygon	· · · · · · · · · · · · · · · · · · ·		0
A contract Contrac	· -	· · · · · · · · · · · · · · · · · · ·	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. Calculate: 9 % undisturbed habitat + [(% moderate and low intensity land uses) 99.77]/2] = 28.885 % Undisturbed habitat > 50% of Polygon Dints = 3 Dundisturbed habitat 10-50% and in 1-3 patches Dundisturbed habitat 10-50% and > 3 patches Dundisturbed habitat 10-50% and > 3 patches Dundisturbed habitat 1 0-50% and > 3 patches Dundisturbed habitat > 10% of 1 km Polygon Dints = 0 H 2.3. Land use intensity in 1 km Polygon: If Soow of 1 km Polygon is high intensity land use Soow of 1 km Polygon is high intensity Dints = 0 Total for H 2 Add the points in the boxes above Rating of Landscape Potential If score is:4-6 = H1-3 = MX < 1 = L Record the rating on the first page H 3.0. Is the habitat provided by the site valuable to society? H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score that applies to the wetland being rated. Site meets ANY of the following criteria: Dints = 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 an apped 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 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 X Site does not meet any of the criteria above H 2.2. Lase Source points = 2 Depoints = 0 Add the points in the boxes above Points = 0 Poi	· -	· · · · · · · · · · · · · · · · · · ·	
Calculate: 9 % undisturbed habitat + [(% moderate and low intensity land uses) 39.77]/2] = 28.885 % points = 3 points = 3 Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10-50% and in 1-3 patches points = 1 Undisturbed habitat 10-50% and > 3 patches points = 1 Undisturbed habitat 10-50% and > 3 patches points = 0 H 2.3. Land use intensity in 1 km Polygon is high intensity land use some solution in 1 km Polygon is high intensity land use points = (-2) points = 0 Total for H 2 Add the points in the boxes above 2 Rating of Landscape Potential If score is:4-6 = H1-3 = MX < 1 = L Record the rating on the first page H 3.0. Is the habitat provided by the site valuable to society? H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose 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 a Wetland of High Conservation Value as determined by the Department of Natural Resources — It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shorelline Master Plan, or in a watershed plan × Site does not meet any of the criteria above points = 0		polits = 0	
Undisturbed habitat > 50% of Polygon Undisturbed habitat 10-50% and in 1-3 patches Undisturbed habitat 10-50% and > 3 patches Undisturbed habitat 10-50% and > 3 patches Undisturbed habitat 10-50% and > 3 patches Undisturbed habitat 10 moints = 0 H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use ≤ 50% of 1 km Polygon is high intensity points = 0 Total for H 2 Rating of Landscape Potential: If score is:4-6 = H1-3 = M		city land usos\\20.77\/2\\	
Undisturbed habitat 10-50% and in 1-3 patches Undisturbed habitat 10-50% and > 3 patches Undisturbed habitat 20% of 1 km Polygon H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use ≤ 50% of 1 km Polygon is high intensity Points = 0 Total for H 2 Rating of Landscape Potential If score is:4-6 = H1-3 = M			
Undisturbed habitat 10-50% and > 3 patches Undisturbed habitat < 10% of 1 km Polygon H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use ≤ 50% of 1 km Polygon is high intensity Total for H 2 Rating of Landscape Potential If score is:4-6 = H1-3 = M _ X < 1 = L	1-	· · · · · · · · · · · · · · · · · · ·	0
Undisturbed habitat < 10% of 1 km Polygon H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use ≤ 50% of 1 km Polygon is high intensity Total for H 2 Rating of Landscape Potential If score is:4-6 = H1-3 = MX < 1 = L Record the rating on the first page H 3.0. Is the habitat provided by the site valuable to society? H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose 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 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 -2 -2 -2 -2 -2 -2 -2 -2 -2 -	·	· · · · · · · · · · · · · · · · · · ·	
H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use 50% of 1 km Polygon is high intensity Total for H 2 Rating of Landscape Potential If score is:4-6 = H1-3 = M X < 1 = L Record the rating on the first page H 3.0. Is the habitat provided by the site valuable to society? H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose 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 a Wetland of High Conservation Value as determined by the Department of Natural Resources — It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan × 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	·	· · · · · · · · · · · · · · · · · · ·	
> 50% of 1 km Polygon is high intensity land use	.,	points = 0	
Total for H 2 Rating of Landscape Potential If score is:4-6 = H1-3 = MX < 1 = L	, , , , , , , , , , , , , , , , , , , ,		
Total for H 2 Rating of Landscape Potential If score is:4-6 = H1-3 = M _ X < 1 = L		•	-2
Rating of Landscape Potential If score is:4-6 = H1-3 = MX < 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 — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources — It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan × 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			
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 — 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 Landscape Potential If score is: 4-6 = H 1-3 = M X < 1 = L	Record the rating on t	he first page
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 — 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	H 3.0. Is the habitat provided by the site valuable to society?		-
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 — 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	H 3.1. Does the site provide habitat for species valued in laws, regulations, or p	olicies? Chaose only the highest scare	
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 — 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	· · · · · · · · · · · · · · · · · · ·	onoics. Choose only the highest store	
 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 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 		noints = 7	
 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 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 - 2	
 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 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 	, ,	or animal on the state or federal lists)	
 It is a Wetland of High Conservation Value as determined by the Department of Natural Resources It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) within 100 m Site does not meet any of the criteria above 		or animal off the state of federal lists)	1
 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 		partment of Natural Resources	
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			
 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 	- '	ona. comprehensive plan, in a	
× Site does not meet any of the criteria above points = 0		points = 1	
		naints - 0	
	Rating of Value If score is: 2 = H × 1 = M 0 = L	•	the first nage

Wetland Rating System for Western WA: 2014 Update Rating Form – Effective January 1, 2015

WDFW Priority Habitats

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

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

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

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
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	
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 page 25)	
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.	
The wetland has at least two of the following features: tidal channels, depressions with open water, or	
contiguous freshwater wetlands.	
SC 2.0. Wetlands of High Conservation Value (WHCV)	
SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High	
Conservation Value?	
SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
☐Yes = Category I ☑No = Not a WHCV	
SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
Yes − Contact WNHP/WDNR and go to SC 2.4 ⊠No = Not a WHCV SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on	
their website?	
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?	
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?	
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?	
NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by	
measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the	
plant species in Table 4 are present, the wetland is a bog.	
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar,	
western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the	
species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	
☐Yes = Is a Category I bog ☐No = Is not a bog	

Wetland name or number $\underline{\mathsf{E}}$

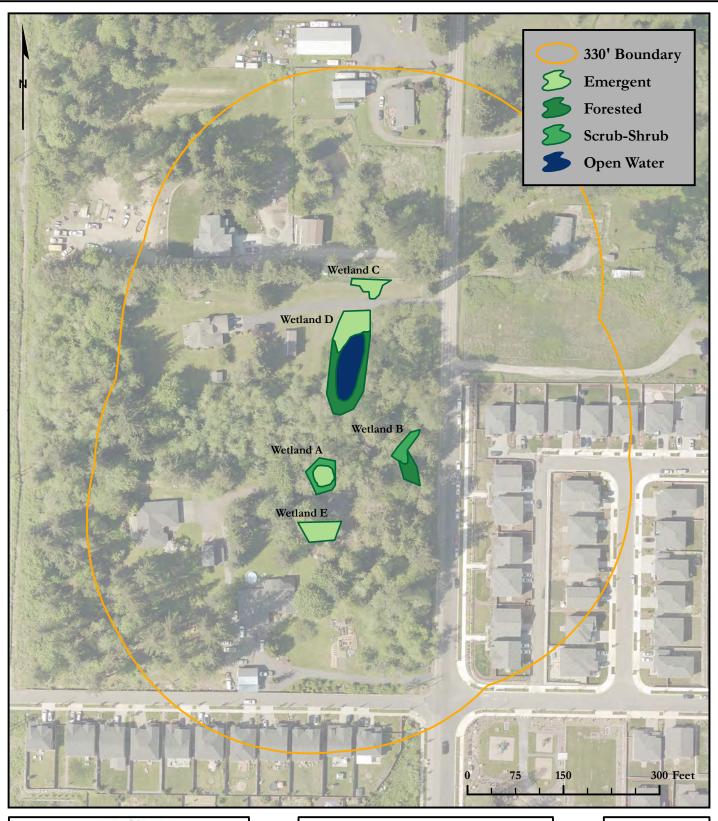
SC 4.0. Forested Wetlands	
Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? If you answer YES you will still need to rate the wetland based on its functions. — Old-growth forests (west 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	
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) □ Yes − Go to SC 5.1 □ No = Not a wetland in a coastal lagoon 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 on p. 100). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland is larger than ¹/₁₀ ac (4350 ft²) □ 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 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 ☐ Yes − Go to SC 6.1 ☑ No = not an interdunal wetland for rating 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 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	
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	

Wetland name or number $\underline{\mathsf{E}}$

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Appendix G — Wetland Rating Maps

COWARDIN MAP





2907 Harborview Dr., Suite D, Gig Harbor, WA 98335 Phone: (253) 514-8952 Fax: (253) 514-8954 www.soundviewconsultants.com

PROSPECTOR 6

5110 83RD AVE NE MARYSVILLE, WA 98270

SNOHOMISH COUNTY PARCEL NUMBER: $00590700010500\,$

DATE: 5/6/2022

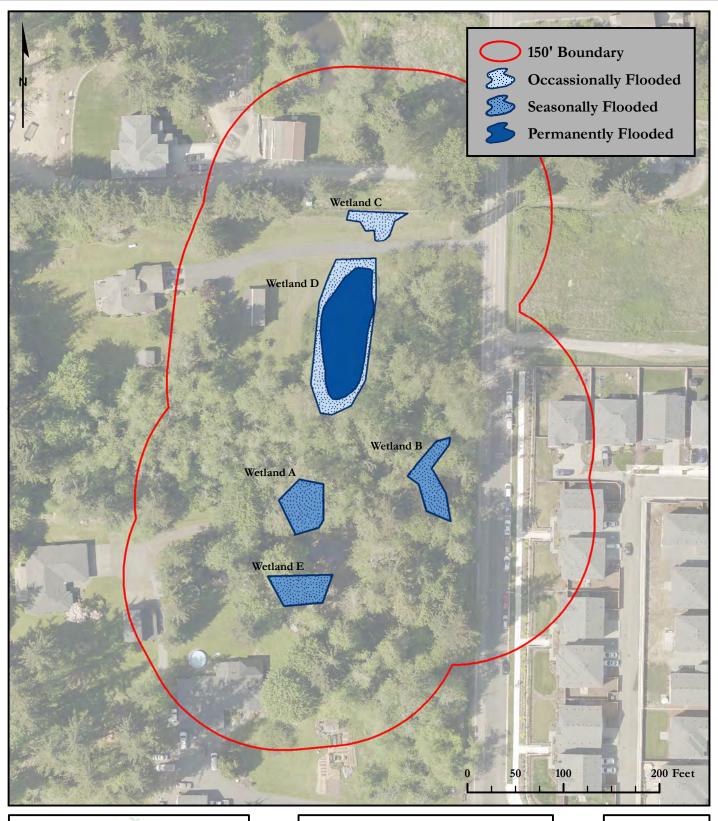
JOB: 1908.0007

BY: DDS

SCALE: 1 " = 150 '

FIGURE NO. 1 of 5

HYDROPERIOD MAP





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PROSPECTOR 6

5110 83RD AVE NE MARYSVILLE, WA 98270

SNOHOMISH COUNTY PARCEL NUMBER: $00590700010500\,$

DATE: 5/6/2022 JOB: 1908.0007

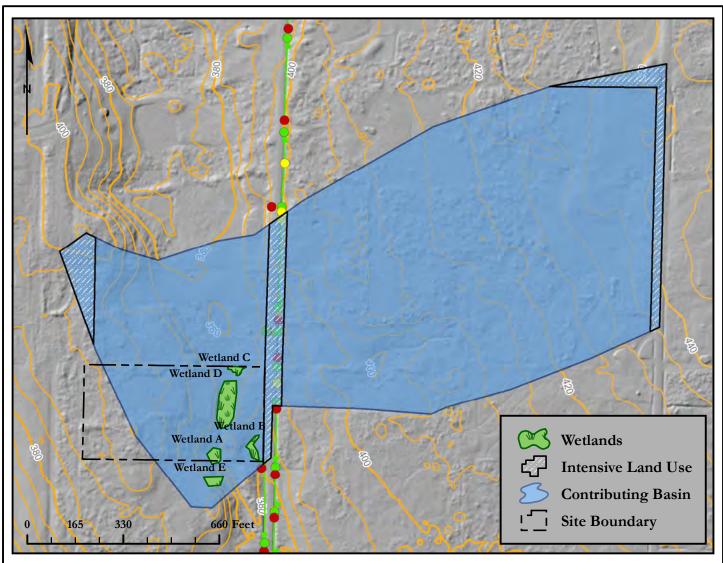
DDC

BY: DDS

SCALE: 1 " = 100 '

FIGURE NO. 2 of 5

CONTRIBUTING BASIN MAP



D.4.0		
D.4.3		
	Area of Contributing Basin (SF)	1,690,804
	Area of Wetland A (SF)	1,912
	Percent of Wetland A within Contributing Basin	0.113%
	Area of Wetland B (SF)	1755.65
	Percent of Wetland B within Contributing Basin	0.104%
	Area of Wetland C (SF)	1002.16
	Percent of Wetland C within Contributing Basin	0.059%
	Area of Wetland D (SF)	8435.79
	Percent of Wetland D within Contributing Basin	0.499%
	Area of Wetland E (SF)	1631.82
	Percent of Wetland E within Contributing Basin	0.097%
D.5.0		
D.5.3		
	Area of Contributing Basin	1,690,804
	Area of Intensive Human Land Uses	110,631
	Percent of Intensive Human Land Use	
	within Contributing Basin	7%



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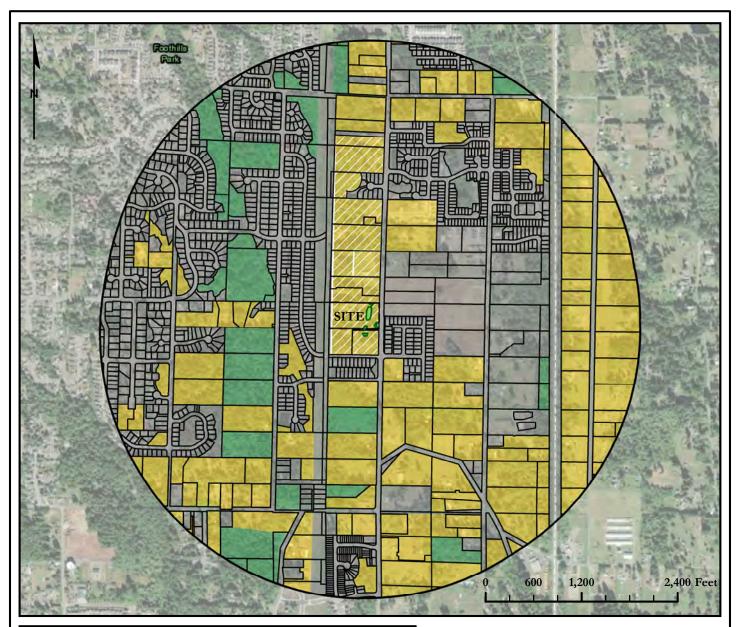
5110 83RD AVE NE MARYSVILLE, WA 98270

PROSPECTOR 6

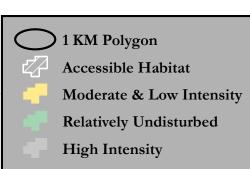
SNOHOMISH COUNTY PARCEL NUMBER: 00590700010500

DATE: 5/6/2022
JOB: 1908.0007
BY: DDS
SCALE: 1 " = 330 '

FIGURE NO. 3 of 5



H.2.0 Wetlands A, B, C, D, & E		
H.2.1		
	Abutting Undisturbed Habitat	0.00%
	Abutting Moderate & Low Intensity Land Uses	4.13%
	Accessible Habitat	2.07%
H.2.2		
	Undisturbed Habitat	9.00%
	Moderate & Low Intensity Land Uses	39.77%
	Undisturbed Habitat in 1 KM Polygon	28.88%
H.2.3		
	High Intensity Land Use in 1 KM Polygon	51.23%





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PROSPECTOR 6

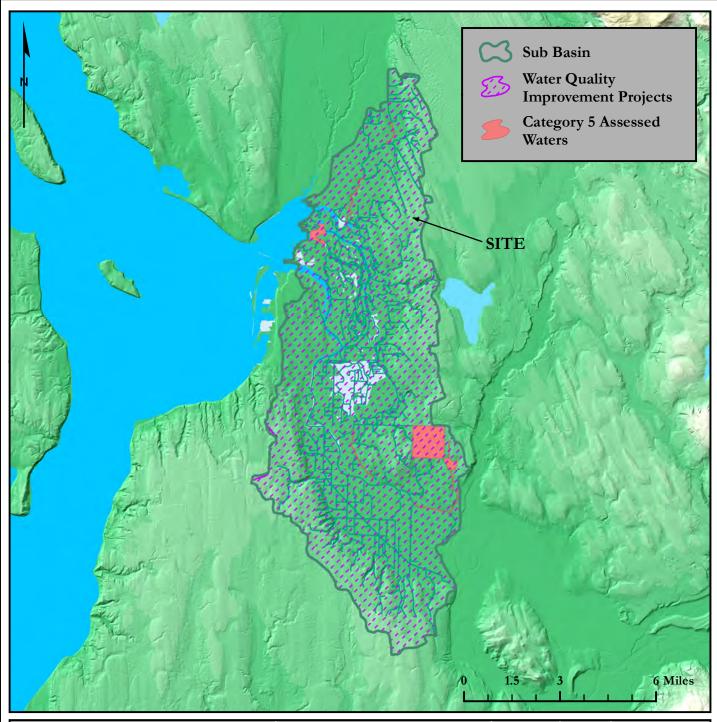
5110 83RD AVE NE MARYSVILLE, WA 98270

SNOHOMISH COUNTY PARCEL NUMBER: $00590700010500\,$

DATE: 5/6/2022
ЈОВ: 1908.0007
BY: DDS

SCALE: 1 " = 1,200 '

FIGURE NO. 4 of 5



Name	Pollutants	TMDL ID	WRIA	Year Approved
Snohomish River Tributaries Bacteria TMDL	Bacteria	34	7	2001
Little Bear Creek Bacteria TMDL	Bacteria	62	8	2005
North Creek Bacteria TMDL	Bacteria	43	8	2002
Snohomish River Estuary Multiparameter TMDL	Ammonia-N, CBOD, Dissolved Oxygen	48	7	2002



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PROSPECTOR 6

5110 83RD AVE NE MARYSVILLE, WA 98270

SNOHOMISH COUNTY PARCEL NUMBER: $00590700010500\,$

DATE: 5/6/2022
JOB: 1908.0007
BY: DDS
SCALE: 1 " = 3 mi
FIGURE NO. 5 of 5

Appendix H — Qualifications

All field inspections, wetland delineations, habitat assessments, and supporting documentation, including this <u>Wetland and Fish and Wildlife Habitat Assessment Report</u> prepared for <u>Prospector 6</u> site were prepared by, or under the direction of, Jon Picket of SVC. In addition, the site investigations were performed by Rachael Hyland, report preparation was completed by Mae Ancheta, and additional project oversight and final report review by Kyla Caddey.

Jon Pickett

Associate Principal

Professional Experience: 10+ years

Jon Pickett is an Associate Principal and Senior Scientist with a diverse background in environmental and shoreline compliance and permitting, wetland and stream ecology, fish and wildlife biology, mitigation compliance and design, and environmental planning and land use due diligence. Jon oversees a wide range of large-scale industrial, commercial, and multi-family residential projects throughout Western Washington, providing environmental permitting and regulatory compliance assistance for land use entitlement projects from feasibility through mitigation compliance. Jon performs wetland, stream, and shoreline delineations and fish & wildlife habitat assessments; conducts code and regulation analysis and review; prepares reports and permit applications and documents; provides environmental compliance recommendation; and provides restoration and mitigation design.

Jon earned a Bachelor of Science degree in Natural Resource Sciences from Washington State University and Bachelor of Science and Minor in Forestry from Washington State University. Jon has received 40-hour wetland delineation training (Western Mountains, Valleys, & Coast and Arid West Regional Supplements) and regularly performs wetland, stream, and shoreline delineations. Jon is a Whatcom County Qualified Wetland Specialist and Wildlife Biologist and is a Pierce County Qualified Wetland Specialist. He has been formally trained by WSDOE in the use of the Washington State Wetland Rating System 2014, How to Determine the Ordinary High-Water Mark (Freshwater and Marine), Using Field Indicators for Hydric Soils, and the Using the Credit-Debit Method for Estimating Mitigation Needs.

Rachael Hyland, PWS, Certified Ecologist

Senior Environmental Scientist Professional Experience: 9 years

Rachael Hyland is a Senior Environmental Scientist with extensive wetland and stream delineation and regulatory coordination experience. Rachael has a background in wetland and ecological habitat assessments in various states, most notably Washington, Connecticut, Massachusetts, Rhode Island, and Ohio. She has experience in assessing wetland, stream, riparian, and tidal systems, as well as complicated agricultural and disturbed sites. She currently performs wetland, stream, and shoreline delineations and fish and wildlife habitat assessments; conducts environmental code analysis; and prepares environmental assessment and mitigation reports, biological evaluations, and permit applications to support clients through the regulatory and planning process for various land use projects. She also has extensive knowledge of bats and their associated habitats and white nose syndrome (*Pseudogymnoascus destructans*), a fungal disease affecting bats which was recently documented in Washington.

Rachael earned a Bachelor of Science degree in Ecology and Evolutionary Biology from the University of Connecticut, with additional ecology studies at the graduate level. Rachael is a Professional Wetland Scientist (PWS #3480) through the Society of Wetland Scientists as well as a Certified Ecologist through the Ecological Society of America. She has completed 40-hour wetland delineation training for Western Mountains, Valleys, & Coast and Arid West Regional Supplement, in addition to formal training for the Northcentral and Northeast supplement, and experience with the Midwest, Eastern Mountains and Piedmont, and Atlantic and Gulf Coast supplements. She has also received formal training from the Washington State Department of Ecology in the Using the Revised 2014 Wetland Rating System for Western Washington, How to Determine the Ordinary High Water Mark, Navigating SEPA, Selecting Wetland Mitigation Sites Using a Watershed Approach, and Wetland Classification. Rachael has also received training from the Washington State Department of Transportation in Biological Assessment Preparation for Transportation Projects and is listed by WSDOT as a junior author for preparing Biological Assessments.

Kyla Caddey, PWS, Certified Ecologist

Senior Environmental Scientist Professional Experience: 7 years

Kyla Caddey is a Senior Environmental Scientist with a diverse background in stream and wetland ecology, wildlife ecology and conservation, wildlife and natural resource assessments and monitoring, and riparian habitat restoration at various public and private entities. Kyla has field experience performing in-depth studies in both the Pacific Northwest and Central American ecosystems which included various environmental science research and statistical analysis. Kyla has advanced expertise in federal- and state-listed endangered, threatened, and sensitive species surveys and assessment of aquatic and terrestrial systems throughout the Puget Sound region. She has completed hundreds of wetland delineations and has extensive knowledge and interest in hydric soil identification. As the senior writer, she provides informed project oversight and performs final quality assurance / quality control on various types of scientific reports for agency submittal, including: Biological Assessments/Evaluations; Wetland, Shoreline, and Fish and Wildlife Habitat Assessments; Mitigation Plans, and Mitigation Monitoring Reports. She currently performs wetland, stream, and shoreline delineations and fish and wildlife habitat assessments; prepares scientific reports; and provides environmental permitting and regulatory compliance assistance to support a wide range of commercial, industrial, and multi-family residential land use projects.

Kyla earned a Bachelor of Science degree in Environmental Science and Resource Management from the University of Washington, Seattle with a focus in Wildlife Conservation and a minor in Quantitative Science. She has also completed additional coursework in Comprehensive Bird Biology from Cornell University. Ms. Caddey is a Certified Professional Wetland Scientist (PWS #3479) through the Society of Wetland Scientists and Certified Ecologist through the Ecological Society of America. She has received 40-hour wetland delineation training (Western Mtns, Valleys, & Coast and Arid West Regional Supplement), is a Pierce County Qualified Wetland Specialist and Wildlife Biologist, and is a USFWS-approved Mazama pocket gopher survey biologist. Kyla has been formally trained through the Washington State Department of Ecology, Coastal Training Program, and the Washington Native Plant Society in winter twig and grass, sedge, and rush identification for Western WA; Using the Credit-Debit Method in Estimating Wetland Mitigation Needs; How to Determine the Ordinary High Water Mark; Using Field Indicators for Hydric Soils; How to Administer Development Permits in Washington Shorelines; Puget Sound Coastal Processes; and Forage Fish Survey

Additionally, she has received formal training in preparing WSDOT Biological Techniques. Assessments.