# Dawson's Ridge

# WETLAND DELINEATION AND ASSESSMENT



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October 28, 2016



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# **WETLAND DELINEATION & ASSESSMENT**

Project: Dawson's Ridge Project
Applicant: McIntosh Ridge PRD, LLC,

Location: 4510 NW McIntosh Road, Camas, Washington

Legal Description: NE ¼ & SE ¼ of Section 08, T01N, R03E &

SW ¼ of Section 09, T01N, R03E, W.M.; Clark County

Serial Number(s): 127144-000, 127162-000, 127162-003, 127162-007,

127162-009, 127167-000, 127168-000, 127169-000, 127170-000, 127171-000, 127174-000, & 127175-000

**Local Jurisdiction: City of Camas** 

Study Area Size: 39 acres
Project Type: Subdivision

Zoning: R-15 ComPlan: SFL

Assessment by: Kevin Grosz, PWS & Eli Schmitz
Site Visit(s): September 23 and October 25, 2016

Report Date: October 28, 2016

# 1.0 INTRODUCTION

This report details the results of a wetland delineation and assessment conducted for the Dawson's Ridge project, by The Resource Company (TRC), Inc. The project is located on the south side of NW McIntosh Road, east of Brady Road near Camas, Washington (Fig. 1). This report identifies the extent of any wetlands and associated buffers found within the study area as defined and regulated by the City of Camas Critical Areas Ordinance – Wetlands (16.53), U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act and Washington Department of Ecology (Ecology) under the Water Pollution Control Act.

The study area encompasses all or portions of the tax lots listed above, totaling 39-acres. Several single-family residences and outbuildings are located within the site. The single-family residences sit in the southern portion of the study site, which overlooks the Columbia River. Most of the property exists as grassland, pastureland, or manicured lawns, except for the southwest corner and western edge, which contains mature forestland. The topography of this site is very diverse, with slopes ranging from 5 percent to 60 percent (Fig. 2).

Through the course of the routine wetland delineation, two emergent wetlands, four forested wetlands, two scrub-shrub wetlands, one perennial stream (Deer Creek), and three intermittent streams were identified within the project area.

# 2.0 DELINEATION METHODS

The wetland delineation was conducted according to the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (USACE, 2010) hereafter, referred to as the manual. According to the manual, jurisdictional wetlands are defined as:

Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

The manual uses three parameters in making wetland determinations: hydrophytic vegetation, hydric soils and wetland hydrology. Except in certain situations defined in the manual, evidence of a minimum of one positive indicator from each parameter (hydrology, soil, and vegetation) must be found in order to make a positive wetland determination.

<u>Hydrophytic vegetation</u> are plants that due to morphological, physiological, and/or reproductive adaptations, have the ability to grow, effectively compete, reproduce, and/or persist in anaerobic soil conditions. <u>Hydric soils</u> are soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation. <u>Wetland hydrology</u> is present when an area is inundated or saturated to the surface for at least 5 percent of the growing season. The growing season is defined as the portion of the year when soil temperature at 19.7 inches below the soil surface is greater than biological zero (5 degrees C).

Except in certain situations defined in the manual, evidence of a minimum of one positive wetland indicator from each of the three parameters (hydrology, soil, and vegetation) must be found in order to make a positive wetland determination.

Prior to the on-site investigations, a review of existing information related to determination of wetland boundaries was conducted. This review included the Natural Resource Conservation Service (NRCS) Web Soil Survey, National Wetland Inventory maps, Clark County Local Wetland Inventory (LWI) maps, Clark County, and aerial photographs.

Following the background information review, on-site investigations were conducted on September 23 and October 25, 2016. To delineate wetlands within the study area, observation points were selected to correspond with terrain features, vegetation, hydrology and mapped hydric soils identified on the site. At each observation point, the vegetation, soils and hydrology were characterized and this information was then used as the basis for making the wetland determinations.

Wetland indicator status ratings and their ordinal rating categories, based on ecological descriptions. Indicator Status (abbreviation) Ecological Description\*

Obligate (OBL) Almost always is a hydrophyte, rarely in uplands
Facultative Wetland (FACW) Usually is a hydrophyte but occasionally found in uplands
Facultative (FAC) Commonly occurs as either a hydrophyte or nonhydrophyte
Facultative Upland (FACU) Occasionally is a hydrophyte, but usually occurs in uplands
Upland (UPL) Rarely is a hydrophyte, almost always in uplands.
\*Source: Lichvar (2013)

Hydrophytic vegetation is present when more than 50 percent of the dominant species have an indicator status of OBL, FACW, and/or FAC.

The presence or absence of hydric soils was determined by digging soil pits to a depth of 18 inches and examining the soil for hydric soil indicators. Organic soils such as peats and mucks are considered hydric soils. Mineral hydric soils are generally either gleyed or have bright concentrations and/or low matrix chroma immediately below the Ahorizon or 10 inches (whichever is shallower). Soil colors are determined using the Munsell Soil Color Chart (Munsell Color System 2009).

The site was examined for standing water and/or saturated soils, which serve as primary indicators of wetland hydrology. The area was also checked for other wetland hydrologic characteristics such as watermarks, drift lines, wetland drainage patterns, and morphological plant adaptations.

# 3.0 SITE SPECIFIC METHODS

TRC conducted a wetland delineation of the study area using the methodology found in the Regional Supplement to the Manual (USACE 2010). In addition, applicable guidance and any supporting technical guidance documents issued by the USACE, Ecology, and City of Camas were also utilized.

The entire site was first traversed by foot to observe any visible wetland conditions. Once the general location of the wetland boundaries were identified, paired data plots were taken in areas that represented the conditions of the uplands and wetlands, respectively. Five (5) foot radius plots were chosen in a uniform topographic position that was representative of a single plant community. The paired plots were located approximately 5 - 10 feet apart to minimize the margin of error. Soils at each sample plot were typically inspected to a depth of 16 inches (or more) to determine the presence or absence of hydric soil characteristics and/or wetland hydrology. Data sheets for the sample plots are attached in Appendix A.

The wetland boundary was associated with a change in plant communities, hydric soil and wetland hydrology indicators. The wetland boundary was determined based on the presence of hydric soils, the presence of wetland hydrology (i.e. oxidized rhizospheres along living roots, soil saturation), and a dominance of hydrophytic vegetation. It should be noted that only paired plots were recorded in the field, however, numerous unrecorded

plots were dug to confirm wetland boundaries. The on-site wetlands were classified according the USFWS classification system (Cowardin et al. 1979) and the Hydrogeomorphic (HGM) Classification system (Adamus et al. 2001).

### 4.0 RESULTS AND DISCUSSION

The NWI map does not identify wetlands within the study area (Fig. 3). The LWI data maps wetlands along the stream in the northern portion of the study area (Fig. 3). It should be noted that NWI and LWI maps are created through aerial photograph and topographic map interpretation and are not intended to represent the extent of jurisdictional wetlands. There may be unmapped wetland and waters subject to regulation and all wetlands and waters boundary mapping is approximate. In all cases, actual field conditions determine the presence, absence and boundaries of wetlands and waters.

The NRCS (USDA 2012) Web Soil Survey (Fig. 4) identifies the following soil mapping units on this site:

Olympic clay loam, 20 to 30 percent slopes (OlE). This soil is on long valley slopes and short slopes along drainageways. It is similar to Olympic clay loam, 8 to 20 percent slopes, except that it is steeper and the surface layer is generally 1 to 2 inches thinner. This soil is classified as a **non-hydric** soil according to the Clark County hydric soils list.

Olympic clay loam, 30 to 60 percent slopes (OIF). This soil is on long steep side slopes in the mountains and short slopes that lead into drainage ways in the foothills. It is similar to Olympic clay loam, 8 to 20 percent slopes, except that it is very steep and the surface layer is generally 2 to 4 inches thinner. This soil is classified as a **non-hydric** soil with possible hydric inclusions according to the Clark County hydric soils list.

**Powell silt loam, 0 to 8 percent slopes (PoB).** This soil is on ridgetops, benches, and gently sloping side slopes that lead into valleys in the Prune Hill area. In most places, the surface layer is smooth and convex, and the slope is less than 6 percent. In a typical profile, the surface layer is dark-brown silt loam about 17 inches thick. Below the surface layer is a friable, mottled, grayish-brown, and brown silt loam about 6 inches thick. The next layer is brittle and about 22 inches thick. The soil is moderately well drained. The subsoil is slowly permeable. It is classified as a **non-hydric soil** according to the Clark County hydric soils list.

**Powell silt loam, 8 to 20 percent slopes (PoD).** This soil is on long, smooth side slopes below ridges and at the foot slopes of steep areas. It is similar to Powell silt loam, 0 to 8 percent slopes, except that it is steeper and the surrounding surface layer is 1 to 3 inches thinner. It is classified as a **non-hydric soil** according to the Clark County hydric soils list.

**Powell silt loam, 20 to 30 percent slopes (PoE).** This soil is on long, smooth side slopes. It is similar to Powell silt loam, 0 to 8 percent slopes, except that it is steeper and the surface layer is 1 to 3 inches thinner. In about 10 percent of the acreage, the slope is more than 30 percent. Surface runoff is medium to rapid, and the erosion hazard is moderate to severe if the surface is left bare. It is classified as a **non-hydric soil** according to the Clark County hydric soils list.

**Rock Land (Rk).** Rock land consists of steep and very steep areas made up largely of rock outcroppings and very shallow soil. Most of this land is in the mountainous eastern and northeastern parts of the county. The areas are valuable for recreational purposes, wildlife habitat, and water yield. This soil mapping unit is classified as a **non-hydric** soil according to the Clark County hydric soils list.

Based on the review of existing information and the routine on-site delineation method described by the USACE, six (6) HGM slope wetlands and two (2) HGM riverine wetlands were identified and classified within the study site. The area within the flagged boundaries, which meets all three wetland criteria, was marked in the field with orange flagging with 'WETLAND BOUNDARY" written in black lettering. The located boundaries of the wetlands are shown in Figures 5 and 6. A description of the wetlands and surrounding uplands is found below.

#### 4.1 WETLANDS

Wetland A (Cat. IV, Table 1) is a HGM slope, palustrine emergent/forested wetland located east of the property boundary, at the base of a hillside (Fig. 5). Dominant vegetation in the wetland consists of soft rush (*Juncus effusus*, *FACW*), red fescue (*Festuca rubra*, *FAC*), colonial bentgrass (*Agrostis capillaris* – *FAC*), and a few red alder (*Alnus rubra* – *FAC*) trees. Hydric soil indicators included low chroma color matrices (10YR 3/2) and bright concentrations. Oxidized root channels, saturated soils, and standing water were the primary hydrological indicators.

Wetland B (Cat. IV, Table 1) is a slope, palustrine emergent wetland located south of Wetland A, adjacent to a small man-made pond. Dominant vegetation in the wetland consisted of colonial bentgrass, red fescue, velvet grass ( $Holcus\ lanatus\ - FAC$ ), creeping buttercup ( $Ranunculus\ repens\ - FAC$ ), and soft rush. Hydric soil indicators included low chroma color matrices (10YR 3/2) with concentrations. Oxidized root channels, saturated soils, and standing water were the primary hydrological indicators.

Wetlands C-F (Cat. IV, Table 1) are slope, palustrine forested wetlands and are adjacent to Deer Creek, and are all very similar in nature. These wetlands are located on the southside of Deer Creek and are hydrologically influenced by hillside seeps. Dominant vegetation includes salmonberry (*Rubus spectabilis - FAC*), large-leaved avens (*Geum macrophyllum - FAC*), creeping buttercup, and reed canarygrass (*Phalaris arundinacea - FACW*). These wetlands also contained a few western red cedar (*Thuja plicata - FAC*), black cottonwood (*Populus balsamifera - FAC*), and red alder trees. Hydric soil indicators included low chroma color matrices (10YR 4/1) and concentrations. Oxidized

root channels, saturated soils, and standing water were the primary hydrological indicators.

Wetlands G and H (Cat. III, Table 1) are HGM riparian, palustrine shrub/scrub wetlands adjacent to Deer Creek. These wetlands are located on the either side of Deer Creek and are hydrologically influenced by Deer Creek and small hillside slopes. Dominant vegetation includes salmonberry and large-leaved avens. Hydric soil indicators included low chroma color matrices (10YR 4/1) with bright concentrations. Oxidized root channels, saturated soils, and standing water were the primary hydrological indicators.

# 4.2 WETLAND FUNCTIONAL ASSESSMENT

The on-site wetlands have been assessed using the Washington State Wetland Rating System for Western Washington (Hruby 2014). This rating system categorizes wetlands based on specific attributes such as rarity, sensitivity to disturbance, and functions. The system was designed to differentiate between wetlands based on their sensitivity to disturbance, their significance, their rarity, our ability to replace them, and the functions they provide. Through a series of questions, the wetland rating system will yield a number for water quality functions, hydrologic functions, and habitat function, which yield a total score for functions. Based on the total score, the wetland is categorized as a Category I, II, III, or IV wetland. Table 1 below summarizes the wetland type, total score for functions, and category.

**Table 1. Wetland Function Rating** 

(F.											
Wetland	Wetland Type	Water Quality Functions	Hydrologic Functions	Habitat Functions	Total Score	Wetland Category	Buffer Width High Intensity Land-Use				
А	Slope	4	4	4	12	IV	50'				
В	Slope	4	4	4	12	IV	50'				
С	Slope	4	5	4	13	IV	50'				
D	Slope	4	5	4	13	IV	50'				
E	Slope	4	4	4	12	IV	50'				
F	Slope	4	5	4	13	IV	50'				
G	Riparian	7	5	4	16	III	80'				
Н	Riparian	7	5	5	17	III	120'				

#### 4.3 NON-WETLANDS

# **Streams and Watercourses**

Deer Creek, a perennial Type F stream, was identified along the northern property boundary, which flows to the west and south. The stream is located in a shallow, forested ravine dominated by red alder, western red cedar and black cottonwood. The stream flows west for a short distance, near the northeast corner of the study site, before crossing under NW McIntosh Road. The stream then flows west on the north side of NW McIntosh Road for approximately 1500 feet before crossing back to the south side of road. From this point, the stream flows in a westerly direction adjacent to NW McIntosh Road until the intersection with Brady Road. At the intersection with Brady Road, the stream flows south on the east side of Brady Road, crosses under SR- 14, and discharges into the Columbia River. The stream averaged a channel width of 3-4 feet with an estimated flow rate of 1.67 cubic feet per second (cfs).

In addition to Deer Creek, three intermittent tributaries to Deer Creek were identified in the study area. All three intermittent streams are located on the southern side of Deer Creek. All three intermittent streams flow to the north for a short distance until their confluence with Deer Creek.

### **Uplands**

Soils within the non-wetland areas match the description of the non-hydric soil loam type identified by the NRCS. Upland soil samples contained a low chroma soil matrix (10YR 3/2) but were generally not mottled in the upper 12 inches. Due to the excessive amount of rain received prior to the wetland delineation, some upland soil plots exhibited signs of wetland hydrology, mostly saturated soils. However, upon further examination of the soils no secondary indicators of wetland hydrology were identified. Additionally, the plant communities in the non-wetland areas did not meet the Corps criteria for hydrophytic vegetation. The upland vegetation is dominated by tall false rye grass (*Schedonorus arundinacea- FAC*), colonial bentgrass, dove's foot geranium (*Geranium molle – UPL*), and great plantain (*Plantago major – FAC*).

#### 5.0 REGULATORY ISSUES

The City of Camas Critical Areas Ordinance (16.53) provides for the protection of wetlands within the City's jurisdiction. The ordinance establishes protective buffers associated with wetlands and specifies that certain permits or approvals be obtained for projects containing wetlands or their respective buffers.

As mentioned above, the wetlands were rated using the updated wetland rating system developed by Ecology for western Washington (Hruby 2014). Wetlands A-F rated as Category IV wetlands. Wetland buffers are based on water quality and habitat scores. (Table 1). According to Table 16.53.040-1 of the critical areas ordinance, Category IV

wetlands with a habitat score of 4 adjacent to high intensity land-use areas be protected by a 50 foot wetland buffer as given in Table 1 and shown on Figure 6.

Wetlands G rated as Category III wetland. Wetland buffers are based on water quality and habitat scores. (Table 1). According to Table 16.53.040-1 of the critical areas ordinance, Category III wetlands with a habitat score of 4 adjacent to high intensity landuse areas be protected by a 80 foot wetland buffer as given in Table 1 and shown on Figure 6.

Wetlands H rated as Category III wetland. Wetland buffers are based on water quality and habitat scores. (Table 1). According to Table 16.53.040-1 of the critical areas ordinance, Category III wetlands with a habitat score of 5 adjacent to high intensity landuse areas be protected by a 120 foot wetland buffer as given in Table 1 and shown on Figure 6.

In addition to the City's critical areas ordinance, jurisdictional wetlands are also regulated at the federal and state levels by the USACE and Ecology under Sections 404 and 401 of the Clean Water Act, respectively. Any impacts to the wetlands may require notification and approval from the USACE and Ecology. It is recommended that the USACE and Ecology be contacted regarding current permit requirements before proceeding with any development activities that would impact wetlands on this site.

The wetland boundaries and classifications shown in this report have been determined using the most appropriate field techniques and best professional judgment of the environmental scientist. It should be noted that USACE and City of Camas have the final authority in determining the wetland boundaries and categories under their respective jurisdictions. It is recommended that this delineation report be submitted to these agencies for concurrence prior to starting any development or planning activities that would affect wetlands or buffers on this site.

# 6.0 LITERATURE CITED

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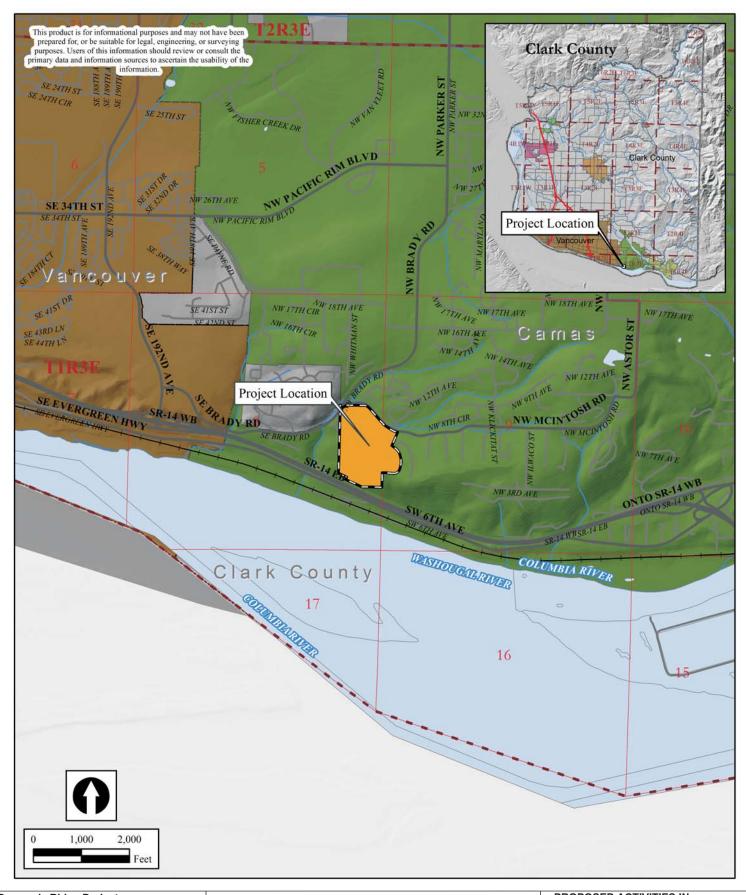
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#### APPLICANT:

McIntosh Ridge PRD, LLC 16420 SE McGillivray Blvd., Ste. 103-197 Vancouver, WA 98683

PURPOSE: Wetland Delineation and

Assessment

Project Location Map Dawson's Ridge Camas, Washington

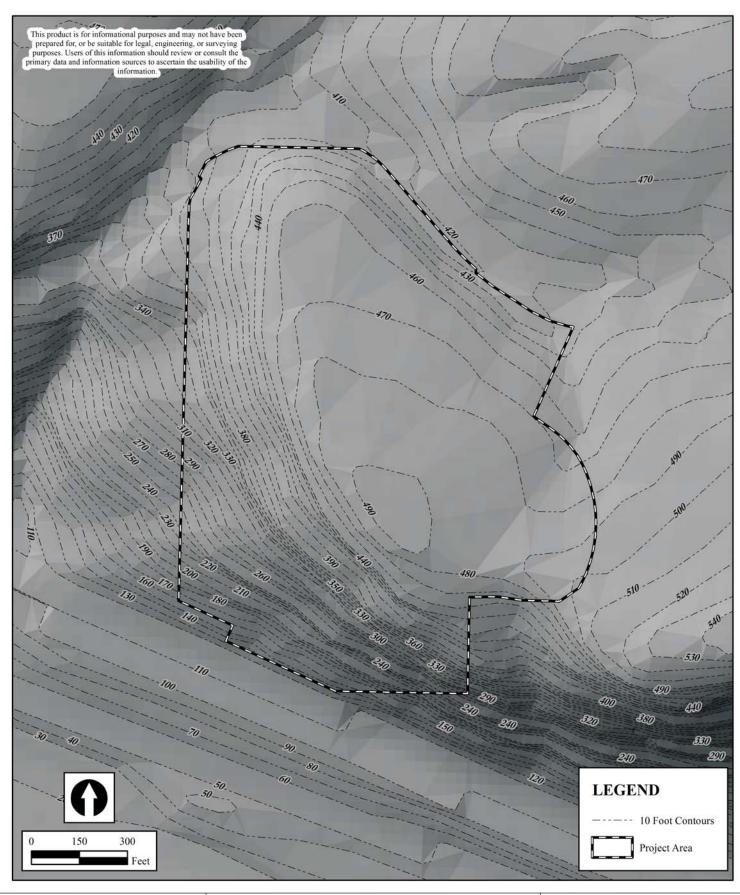


#### PROPOSED ACTIVITIES IN:

Columbia Slope Watershed

LEGAL: SE & NE 1/4 of Sect 08 & SW1/4

Sect. 9, T1N, R3E, W.M., NEAR: Camas, Washington COUNTY: Clark County DATE: October 28, 2016



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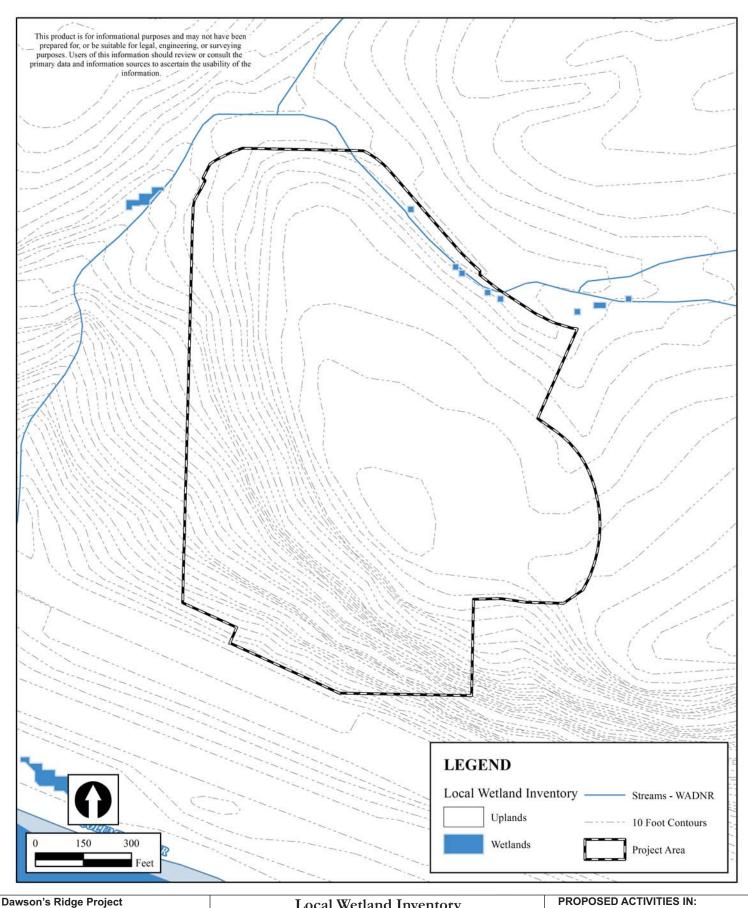
Clark County LiDAR Topography Dawson's Ridge Camas, Washington



#### PROPOSED ACTIVITIES IN:

Columbia Slope Watershed

LEGAL: SE & NE ¼ of Sect. 08 & SW¼ Sect. 9, T1N, R3E, W.M., NEAR: Camas, Washington COUNTY: Clark County DATE: October 28, 2016



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PURPOSE: Wetland Delineation and

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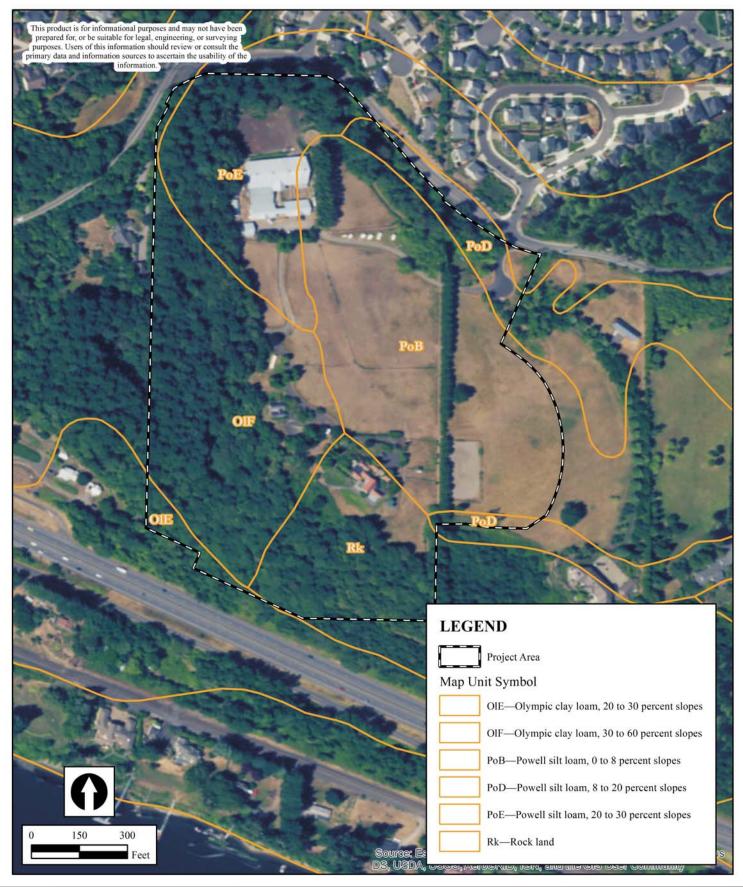
**Local Wetland Inventory** Dawson's Ridge Camas, Washington



Columbia Slope Watershed

LEGAL: SE & NE 1/4 of Sect. 08 & SW1/4

Sect. 9, T1N, R3E, W.M.,
NEAR: Camas, Washington
COUNTY: Clark County
DATE: October 28, 2016



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PURPOSE: Wetland Delineation and

Assessment

Clark County NRCS Soil Survey Map Dawson's Ridge Camas, Washington

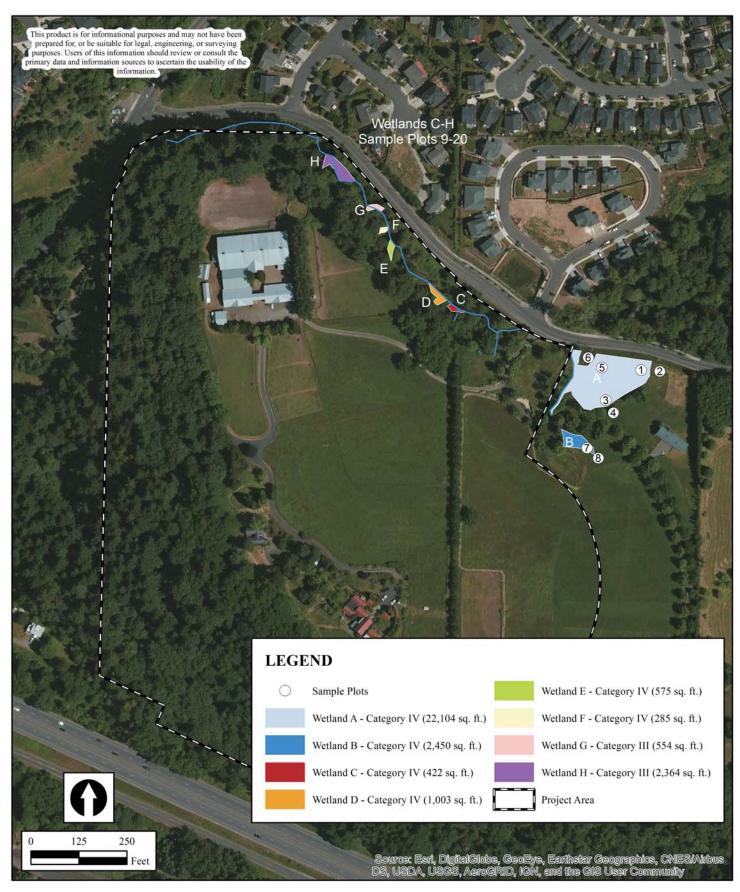


#### PROPOSED ACTIVITIES IN:

Columbia Slope Watershed

LEGAL: SE & NE 1/4 of Sect 08 & SW1/4

Sect. 9, T1N, R3E, W.M., NEAR: Camas, Washington COUNTY: Clark County DATE: October 28, 2016



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Assessment

Wetland Delineation Dawson's Ridge Camas, Washington



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Columbia Slope Watershed

LEGAL: SE & NE 1/4 of Sect 08 & SW1/4

Sect. 9, T1N, R3E, W.M., NEAR: Camas, Washington COUNTY: Clark County DATE: October 28, 2016



#### APPLICANT:

McIntosh Ridge PRD, LLC 16420 SE McGillivray Blvd., Ste. 103-197 Vancouver, WA 98683

PURPOSE: Wetland Delineation and

Assessment

Approximate Wetland Boundaries and Buffers
Dawson's Ridge
Camas, Washington



#### PROPOSED ACTIVITIES IN:

Columbia Slope Watershed

LEGAL: SE & NE 1/4 of Sect 08 & SW1/4

Sect. 9, T1N, R3E, W.M.,
NEAR: Camas, Washington
COUNTY: Clark County
DATE: October 28, 2016





Wetland A



Wetland B



Wetland C



Wetland D



Wetland E

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Project Photographs Dawson's Ridge Camas, Washington



#### PROPOSED ACTIVITIES IN:

Columbia Slope Watershed

LEGAL: SE & NE ¼ of Sect. 08 & SW¼
Sect. 9, T1N, R3E, W.M.,
NEAR: Camas, Washington
COUNTY: Clark County
DATE: October 28, 2016 Photo Sheet 1



Wetland G





Type F Stream



Type F Stream



Type Ns Stream



Riparian Area

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Project Photographs Dawson's Ridge Camas, Washington



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Columbia Slope Watershed
LEGAL: SE & NE 1/4 of Sect. 08 & SW1/4
Sect. 9, T1N, R3E, W.M.,
NEAR: Camas, Washington
COUNTY: Clark County
DATE: October 28, 2016 Photo Sheet 2

# APPENDIX A – WETLAND DATA SHEETS

=	this time of year?	nvex, none): <u>cc</u> <u>45.58463006</u> ? <u>Yes</u> (if no, exp	ncave Slo Long: <u>-122.4</u> Dlain in Remal Are "Normal (if needed, e	rks.) Circumstances" present? <u>Yes</u> xplain any answers in Remarks.)				
Hydric Soil Present? Yes  Wetland Hydrology Present? Yes  Is the Sampled Area within a Wetland? Yes								
Remarks:  VEGETATION – Use scientific names of plants.								
Tree Stratum (Plot size: <u>30</u> ) 1. 2. 3. 4.  Total Cover = <u>0</u>	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)  Total Number of Dominant Species Across All Strata: 3 (B)				
Sapling/Shrub Stratum (Plot size: 30 )   1.   2.   3.   4.   5.   Total Cover = 0				Percent of Dominant Species   That Are OBL, FACW, or FAC:   100 (A/B)				
Herb Stratum (Plot size: _30 )  1. Agrostis capillaris  2. Festuca rubra  3. Ranuculus repens  4. Holcus lanatus  5. Juncus effusus  6.  7.  8.  9.  10.  11.  Total Cover = 95	40 20 20 10 5	Yes Yes Yes No No	FAC FAC FAC FAC FACW	FACU species $0$ $x 4 = 0$ UPL species $0$ $x 5 = 0$ Column Totals: $0$ $0$ $0$ $0$ $0$ Prevalence Index = $0$ Hydrophytic Vegetation Indicators:  1 -Rapid Test for Hydrophytic Vegetation  X 2 - Dominance Test >50%  3 - Prevalence Index is $0$ $0$ $0$ $0$ $0$ $0$ $0$ $0$ $0$ $0$				
1. 2. Total Cover = 0				must be present, unless disturbed or problematic.				
% Bare Ground in Herb Stratum: <u>0</u>				Hydrophytic Vegetation Present? Yes				
Remarks:								

SOIL Sampling Point: 1

	Mat	<u>rix</u>		Redox I	-eatures				
Depth	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks
(inches)									
0-9	10YR 4/1	<u>80</u>	10YR 3/6	20	<u>C</u>	<u>M</u>	Silt Loam		
9-16	10YR 3/2	80	10YR 3/4	20	<u>c</u>	<u>M</u>	Silty Clay Loam		
	· · · · · · · · · · · · · · · · · · ·		<del></del>			_			
1	C	Danlatian	DNA Daduard NA	- tuit - CC -	<u> </u>	. C t l C	1 C 2 <sub>1</sub> -	DI	Daniel Linding M. Machalia
Type: C=	Concentration, L	=Depletior	, RM=Reduced M	atrix, CS=0	covered of	r Coated S	and Grains. Lo	cation: Pi	L=Pore Lining, M=Matrix
Hydric So	il Indicators: (Ap	olicable to	all LRRs, unless ot	herwise ı	noted.)			Indicato	rs for Problematic Hydric Soils <sup>3</sup> :
Histor	sol (A1)		Sa	ndy Redo	x (S5)			2 cr	m Muck (A10)
	Epipedon (A2)			ripped Ma					l Parent Material (TF2)
	Histic (A3)			• •		(F1) (evc	ept MLRA 1)	1	ry Shallow Dark Surface (TF12)
	ogen Sulfide (A4)		· · · · · · · · · · · · · · · · · · ·	-	ed Matrix		ept with 1)		er (Explain in Remarks)
	ted Below Dark S	urface (A1:				(Г2)			lei (Explaili III Kelliaiks)
		•	· —	pleted Ma		<b>C</b> \		31	and of harden haden and the control
	Dark Surface (A1	•			Surface (F	•			ors of hydrophytic vegetation and dhydrology must be present, unless
	Mucky Mineral (		·	•	ark Surface				ed or problematic.
Sandy	Gleyed Matrix (S	4)	Re	dox Depr	essions (F8	3)		distarb	ed of problematic.
Restrictiv	e Layer (if preser	ıt):							
Type:									
Depth (in	ches): <u>0</u>							Hydric	Soil Present? Yes
Remarks:									
HYDROLO									
	Hydrology Indicat				,				
Primary Ir	idicators (minimu	m of one r	equired; check all	that apply	/)		5	secondary	Indicators (two or more required)
Surfac	e Water (A1)		Wa	ter-Staine	ed Leaves	(B9)	_	Water	-Stained Leaves (B9)( <b>MLRA 1,2,4A,4B</b> )
High \	Water Table (A2)		(е	xcept ML	RA 1,2,4A,	and 4B)	_	Draina	ge Patterns (B10)
Satura	ation (A3)		Salt	t Crust (B:	11)		_	Dry-Se	eason Water Table (C2)
Water	Marks (B1)		Aqı	uatic Inve	rtebrates (	B13)	_	Satura	tion Visible on Aerial Imagery (C9)
Sedim	ent Deposits (B2)		Hyd	drogen Su	lfide Odor	(C1)		Geom	orphic Position (D2)
	Deposits (B3)		· · · · · · · · · · · · · · · · · · ·	_			ng Roots (C3)		w Aquitard (D3)
	Mat or Crust (B4)				Reduced Ir	_	, ,		eutral Test (D5)
	eposits (B5)				Reduction		nils (C6)		Ant Mounds (D6)(LRR A)
	ce Soil Cracks (B6)				tressed Pla				Heave Hummocks (D7)
	ation Visible on A				in in Rema		- INN A)	11031-1	reave Hummocks (D7)
		_		iei (Expia	III III NEIIIa	i K5)			
-	ely Vegetated Cor	icave Surra	ce (B8)						
Field Obse			Danath /in.	-h\.					
	ater Present? No	=	Depth (ind Depth (ind	-					
	ole Present? <u>No</u> n Present? <u>Ye</u>			nches): 10					
	apillary fringe)	<u>3</u>	Deptii (ii	ichesj. 10			Wetland Hydro	logy Pres	ent? Yes
		ream gaug	e, monitoring well	, aerial pł	notos, prev	ious inspe	ections), if available	e:	
	•	5 0	<u> </u>	•	• •	•			
Remarks:									

	n, Township, Rang elief (concave, con Lat: this time of year? disturbed? oblematic? ng sampling poi	nvex, none): <u>co</u> 45.58463006  ? <u>Yes</u> (if no, exp	long: -122.4 Long: -122.4 Dlain in Rema Are "Normal (if needed, e	rks.) Circumstances" present? <u>No</u> xplain any answers in Remarks.)
VEGETATION – Use scientific names of plants.	Absolute %	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30</u> ) 1. 2. 3. 4.	Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)  Total Number of Dominant Species Across All Strata: 3 (B)
Total Cover = 0  Sapling/Shrub Stratum (Plot size: 30 )				Percent of Dominant Species
1. 2. 3. 4. 5.  Total Cover =0  Herb Stratum (Plot size: 30 )  1. Agrostis capillaris  2. Festuca rubra  3. Hypochaeris radicata  4. Holcus lanatus  5  6.  7.  8.  9.  10.  11.  Total Cover =90	40 20 20 10	Yes Yes Yes No	FAC FAC FACU FAC	That Are OBL, FACW, or FAC: 67 (A/B)  Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species $0$ $x 1 = 0$ FACW species $0$ $x 2 = 00$ FAC species $0$ $x 3 = 0$ FAC species $0$ $x 4 = 0$ UPL species $0$ $x 5 = 0$ Column Totals: $0$ (A) $0$ (B)  Prevalence Index = B/A = $0$ Hydrophytic Vegetation Indicators:  1 -Rapid Test for Hydrophytic Vegetation  X 2 - Dominance Test >50%  3 - Prevalence Index is $\le 3.0^1$ 4 - Morphological Adaptions (Provide supporting data in Remarks or on a separate sheet)  5 - Wetland Non-Vascular Plants Problematic Hydrophytic Vegetation (Explain)
Woody Vine Stratum (Plot size: 30 )  1. 2.  Total Cover = 0				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
% Bare Ground in Herb Stratum: <u>0</u> Remarks:				Hydrophytic Vegetation Present? Yes

SOIL Sampling Point: 2

	Mat	<u>rix</u>		Redox I	<u>eatures</u>				
Depth	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks
(inches)									
0-10	10YR 3/2	<u>100</u>					Silt Loam		
<u>10-16</u>	10YR 3/2	<u>90</u>	10YR 3/4	<u>10</u>	<u>c</u>	<u>M</u>	Silt Loam		
 			·						
1	Comment of the D	Danlatia	DM Dada al M	- tuit - CC -			2	1 t' DI	David Living M. Materia
Type: C	=Concentration, D	=Depletior	, RM=Reduced M	atrix, CS=0	Lovered o	r Coated S	and Grains.	Location: Pi	_=Pore Lining, M=Matrix
Hydric So	oil Indicators: (Ap	olicable to	all LRRs, unless of	herwise ı	noted.)			Indicato	rs for Problematic Hydric Soils <sup>3</sup> :
Histo	sol (A1)		Sa	ndy Redo	x (S5)			2 cr	m Muck (A10)
Histic	Epipedon (A2)			ripped Ma					Parent Material (TF2)
	Histic (A3)					l (F1) ( <b>exc</b>	ept MLRA 1)		ry Shallow Dark Surface (TF12)
	ogen Sulfide (A4)		·	-	ed Matrix		,		er (Explain in Remarks)
	eted Below Dark S	urface (A1		pleted Ma		(/			er (Explain in Nemarke)
	Dark Surface (A12	-			Surface (F	:6)		3Indicat	ors of hydrophytic vegetation and
	Mucky Mineral (	•			ark Surface	•			d hydrology must be present, unless
	y Gleyed Matrix (S	-			essions (F				ed or problematic.
				dox pepi	ESSIONS (F	0)			<u>'</u>
	e Layer (if preser	it):							
Type:	-h\. O							Hydric	Soil Present? <u>No</u>
Depth (in	cnes): <u>U</u>							nyunc .	on Fresent: NO
Remarks:									
HYDROLO	NCV								
	Hydrology Indicat		equired; check all	that annly	<i>(</i> )			Secondary	Indicators (two or more required)
						(00)			, , ,
	ce Water (A1)				ed Leaves	` '			-Stained Leaves (B9)( <b>MLRA 1,2,4A,4B</b> )
	Water Table (A2)		•	•	RA 1,2,4A,	, and 4B)			ge Patterns (B10)
	ation (A3)		·	t Crust (B:					ason Water Table (C2)
Wate	r Marks (B1)		Aqı	uatic Inve	rtebrates (	(B13)		Satura	tion Visible on Aerial Imagery (C9)
Sedim	nent Deposits (B2)		Ну	drogen Su	lfide Odor	(C1)		Geom	orphic Position (D2)
Drift [	Deposits (B3)		Oxi	dized Rhi	zospheres	along Livi	ng Roots (C3)	Shallo	w Aquitard (D3)
Algal	Mat or Crust (B4)		Pre	sence of	Reduced Ir	ron (C4)		FAC-N	eutral Test (D5)
Iron D	eposits (B5)		Red	ent Iron I	Reduction	in Tilled S	oils (C6)	Raised	Ant Mounds (D6)(LRR A)
Surfac	ce Soil Cracks (B6)		Stu	nted or St	ressed Pla	ants (D1)( <b>I</b>	LRR A)	Frost-l	Heave Hummocks (D7)
Inund	ation Visible on A	erial Image	ry (B7)Oth	ner (Expla	in in Rema	ırks)			
Spars	ely Vegetated Cor	cave Surfa	ce (B8)						
Field Obs	-								
Surface W				ches):					
	/ater Present? <u>No</u>	<u>)</u>	Depth (in				1		
Water Tal			Depth (in Depth (in	•					
	/ater Present? No	<u>)</u>	• •	ches):					
Saturation (includes ca	Vater Present? Notes that Present? Notes Present? Notes Present? Notes Present? Notes Present?	<u>)</u>	Depth (in Depth (in	ches): ches):			Wetland Hyd		ent? <u>No</u>
Saturation (includes ca	Vater Present? Notes that Present? Notes Present? Notes Present? Notes Present? Notes Present?	<u>)</u>	Depth (in	ches): ches):	notos, prev	vious inspe			ent? <u>No</u>
Saturation (includes ca	Vater Present? Notes that Present? Notes Present? Notes Present? Notes Present? Notes Present?	<u>)</u>	Depth (in Depth (in	ches): ches):	notos, prev	vious inspe			ent? <u>No</u>
Saturation (includes or Describe I	Vater Present? Notes that Present? Notes Present? Notes Present? Notes Present? Notes Present?	<u>)</u>	Depth (in Depth (in	ches): ches):	notos, prev	vious inspe			ent? <u>No</u>
Saturation (includes ca	Vater Present? Notes that Present? Notes Present? Notes Present? Notes Present? Notes Present?	<u>)</u>	Depth (in Depth (in	ches): ches):	notos, prev	vious inspe			ent? <u>No</u>
Saturation (includes or Describe I	Vater Present? Notes that Present? Notes Present? Notes Present? Notes Present? Notes Present?	<u>)</u>	Depth (in Depth (in	ches): ches):	notos, prev	vious inspe			ent? <u>No</u>

Applicant/Owner: McIntosh Ridge PRD, LLC St. Investigator(s): Kevin Grosz/Eli Schmitz Landform (hillslope, terrace, etc.): Terrace Subregion (LRR): Northwest Forests & Coast (LR Soil Map Unit Name: PoD NWI classification Are climatic/hydrologic conditions on the site ty Are Vegetation, Soil, or Hydrology sig Are Vegetation, Soil, or Hydrology nat  SUMMARY OF FINDINGS – Attach site may Hydrophytic Vegetation Present? Yes	Section, Township, Range Local relief (concave, con RA) Lat: 4  : None  /pical for this time of year?  nificantly disturbed?  turally problematic?	vex, none): <u>co</u> 45.58463006 <u>Yes</u> (if no, exp	ncave Slo Long: <u>-122.4</u> plain in Remai Are "Normal (if needed, e	cks.) Circumstances" present? <u>Yes</u> kplain any answers in Remarks.)				
Hydric Soil Present? <u>Yes</u> Wetland Hydrology Present? <u>Yes</u>	Hydric Soil Present? Yes  Wetland Hydrology Present? Yes  Is the Sampled Area within a Wetland? Yes							
Remarks:								
VEGETATION – Use scientific names of pla	nts.							
Tree Stratum (Plot size: 30 ) 1. Alnus rubra 2. 3.	Absolute % Cover <u>20</u>	Dominant Species? <u>Yes</u>	Indicator Status <u>FAC</u>	Dominance Test worksheet:  Number of Dominant Species  That Are OBL, FACW, or FAC: 4 (A)  Total Number of Dominant				
4. Total Cover = <u>20</u>				Species Across All Strata: 4 (B)				
Sapling/Shrub Stratum (Plot size: 30 ) 1.				Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)				
2. 3. 4. 5.  Total Cover = 0  Herb Stratum (Plot size: 30)  1. Agrostis capillaris 2. Festuca rubra 3. Ranuculus repens 4. Holcus lanatus 5. Juncus effusus 6. 7. 8. 9. 10. 11.  Total Cover = 95  Woody Vine Stratum (Plot size: 30) 1. 2.  Total Cover = 0	40 20 20 10 5	Yes Yes Yes No No	FAC FAC FAC FACW	Prevalence Index worksheet:				
% Bare Ground in Herb Stratum: <u>0</u>				Hydrophytic Vegetation Present? Yes				
Remarks:	1			, , , <u>, , , , , , , , , , , , , , , , </u>				

SOIL Sampling Point: 3

	<u>Mati</u>	<u> </u>		INCUOX I	<u>eatures</u>												
Depth	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks								
(inches)																	
<u>0-9</u>	<u>10YR 4/1</u>	<u>80</u>	10YR 3/6	<u>20</u>	<u>C</u>	<u>M</u>	Silt Loam										
9-16	<u>10YR 3/2</u>	<u>80</u>	<u>10YR 3/4</u>	<u>20</u>	<u>C</u>	<u>M</u>	Silty Clay Loam										
4																	
¹Type: C=	Concentration, D	=Depletion	RM=Reduced M	atrix, CS=0	Covered o	r Coated S	and Grains. <sup>2</sup> Lo	ocation: Pl	=Pore Lining, M=Matrix								
Hydric So	il Indicators: (App	plicable to a	ill LRRs, unless of	therwise r	noted.)			Indicato	rs for Problematic Hydric Soils <sup>3</sup> :								
Histos	sol (A1)		Sa	ndy Redo	x (S5)			2 cr	n Muck (A10)								
Histic	Epipedon (A2)		St	ripped Ma	itrix (S6)			Red	Parent Material (TF2)								
Black	Histic (A3)		Lo	amy Muc	ky Minera	l (F1) (exc	ept MLRA 1)	Ver	ry Shallow Dark Surface (TF12)								
Hydro	ogen Sulfide (A4)		Lo	amy Gley	ed Matrix	(F2)		Oth	er (Explain in Remarks)								
Deple	eted Below Dark S	urface (A11	) <u>X</u> De	pleted Ma	atrix (F3)												
Thick	Dark Surface (A12	2)	Re	dox Dark	Surface (F	6)		<sup>3</sup> Indicat	ors of hydrophytic vegetation and								
Sandy	/ Mucky Mineral (	S1)	De	epleted Da	ark Surface	e (F7)			hydrology must be present, unless								
Sandy	, Gleyed Matrix (S	54)	Re	dox Depr	essions (F	3)		disturbe	ed or problematic.								
Restrictiv	e Layer (if presen	nt):															
Type:	,	•															
Depth (in	ches): <u>0</u>							Hydric S	Soil Present? Yes								
Remarks:								1									
	.6.4																
HYDROLO		orci															
	ndicators (minimu		quired; check all	that apply	<b>/</b> )		Wetland Hydrology Indicators:										
							:	Secondary	ilidicators (two or ilione required)								
	Water Table (A2)	Surface Water (A1)Water-Stained Leaves (B9)					:		Indicators (two or more required)  -Stained Leaves (B9)(MLRA 1.2.4A 4B)								
_					ed Leaves		-	Water	-Stained Leaves (B9)(MLRA 1,2,4A,4B)								
	ration (A3)Salt Crust (B11)						- - -	Water Draina	-Stained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10)								
Water			( <b>e</b> Sal	xcept ML t Crust (B:	ed Leaves RA 1,2,4A,	, and 4B)	: - - -	Water Draina Dry-Se	-Stained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2)								
· <del></del>	r Marks (B1)		( <b>e</b> Sal Aq	xcept ML t Crust (B2 uatic Inve	ed Leaves RA 1,2,4A, 11) rtebrates (	(B13)	: - - -	WaterDrainaDry-SeSatura	-Stained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9)								
Sedim	r Marks (B1) nent Deposits (B2)		( <b>e</b> Sal Aq Hy	xcept ML t Crust (B2 uatic Inve drogen Su	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor	(B13) (C1)	- - - -	WaterDrainaDry-SeSaturaGeome	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2)								
Sedim Drift D	r Marks (B1) nent Deposits (B2) Deposits (B3)		( <b>e</b> Sal Aq Hyo XOx	xcept ML t Crust (B2 uatic Inve drogen Su idized Rhi	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres	(B13) (C1) along Livi	- - - - - ng Roots (C3)	Water Draina Dry-Se Satura Geome	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) preprice Position (D2) w Aquitard (D3)								
Sedim Drift D Algal I	r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4)		(e Sal Aq Hyi X.Ox Pre	xcept ML t Crust (B2 uatic Inve drogen Su idized Rhi esence of I	ed Leaves  RA 1,2,4A,  L1)  rtebrates (  Ifide Odor  zospheres  Reduced Ir	(B13) (C1) along Livi	ng Roots (C3)	Water Draina Dry-Se Satura Geome Shallov FAC-Ne	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) preprice Position (D2) w Aquitard (D3) eutral Test (D5)								
Sedim Drift D Algal I Iron D	r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)		(e Sal Aq Hyı XOx Pre Rec	xcept ML t Crust (B2 uatic Invederogen Sudicized Rhice esence of I cent Iron I	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In	(B13) (C1) along Livi ron (C4) in Tilled S	ng Roots (C3)	Water Draina Dry-Se Satura Geome Shallov FAC-Ne	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A)								
SedimDrift DAlgal IIron DSurfac	r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ce Soil Cracks (B6)		(e Sal Aq Hyi Pre Rei Stu	xcept ML t Crust (B: uatic Inver drogen Su idized Rhi esence of I cent Iron I	ed Leaves ( RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction tressed Pla	(B13) (C1) along Livi ron (C4) in Tilled Searts (D1)(L	ng Roots (C3)	Water Draina Dry-Se Satura Geome Shallov FAC-Ne	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) preprice Position (D2) w Aquitard (D3) eutral Test (D5)								
SedimDrift EAlgal IIron DSurfac	r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Ce Soil Cracks (B6) ation Visible on A	erial Image	(e Sal Aq Hyv XOx Pre Stu Stu ry (B7)Otl	xcept ML t Crust (B: uatic Inver drogen Su idized Rhi esence of I cent Iron I	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In	(B13) (C1) along Livi ron (C4) in Tilled Searts (D1)(L	ng Roots (C3)	Water Draina Dry-Se Satura Geome Shallov FAC-Ne	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A)								
SedimDrift [Algal IIron DSurfacInund:Sparse	r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) De Soil Cracks (B6) ation Visible on A ely Vegetated Con	erial Image	(e Sal Aq Hyv XOx Pre Stu Stu ry (B7)Otl	xcept ML t Crust (B: uatic Inver drogen Su idized Rhi esence of I cent Iron I	ed Leaves ( RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction tressed Pla	(B13) (C1) along Livi ron (C4) in Tilled Searts (D1)(L	ng Roots (C3)	Water Draina Dry-Se Satura Geome Shallov FAC-Ne	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A)								
SedimDrift DAlgal IIron DSurfacInundaSparse Field Obse	r Marks (B1) pent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) De Soil Cracks (B6) ation Visible on A Dely Vegetated Concervations:	erial Image ncave Surfac	(e	xcept ML t Crust (B: uatic Invel drogen Su idized Rhi esence of I cent Iron I inted or St ner (Expla	ed Leaves ( RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction tressed Pla	(B13) (C1) along Livi ron (C4) in Tilled Searts (D1)(L	ng Roots (C3)	Water Draina Dry-Se Satura Geome Shallov FAC-Ne	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A)								
SedimDrift EAlgal IIron DSurfacInund:Sparse Field Obse Surface W	r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) De Soil Cracks (B6) ation Visible on A Dely Vegetated Contervations: Vater Present? No	erial Imagei ncave Surfac	(e	xcept ML t Crust (B: uatic Invel drogen Su idized Rhi esence of I cent Iron I ented or Si ner (Explai	ed Leaves ( RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction tressed Pla	(B13) (C1) along Livi ron (C4) in Tilled Searts (D1)(L	ng Roots (C3)	Water Draina Dry-Se Satura Geome Shallov FAC-Ne	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A)								
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Applicant/Owner: McIntosh Ridge PRD, I Investigator(s): Kevin Grosz/Eli Schmitz Landform (hillslope, terrace, etc.): Terrac Subregion (LRR): Northwest Forests & Co	Section, Township, Ra  Local relief (concave,  Locat (LRR A)  La  Concave  La  Conc	convex, none): convex, none): convex, none): convex, none): convex description (see the convex description): convex description (see th	ncave Slo Long: <u>-122.4</u> Dlain in Rema Are "Normal (if needed, e <b>transects, i</b>	rks.) Circumstances" present? <u>Yes</u> xplain any answers in Remarks.)
VEGETATION – Use scientific names  Tree Stratum (Plot size: _30_)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species
1. Alnus rubra	2 <u>0</u>	Yes	FAC	That Are OBL, FACW, or FAC: 1 (A)
2.				T. 110 1 150 1 1
3. 4.				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
Total Cove	er = <u>20</u>			<u>s</u> (s)
Sapling/Shrub Stratum (Plot size: 30	_)			Percent of Dominant Species
1.				That Are OBL, FACW, or FAC: 33 (A/B)  Prevalence Index worksheet:
2. 3.				Total % Cover of: Multiply by:
4.				OBL species $\underline{0}$ x 1 = $\underline{0}$
5.				FACW species $\underline{0}$ x 2 = $\underline{0}$
Total Cov	er = <u>0</u>			FAC species $\underline{0}$ $\times 3 = \underline{0}$
Herb Stratum (Plot size: 30 )				FACU species $\underline{0}$ x 4 = $\underline{0}$ UPL species $\underline{0}$ x 5 = $\underline{0}$
Agrostis capillaris     Schedonorus pratensis	10 40	No Vos	FAC	Column Totals: $\underline{0}$ (A) $\underline{0}$ (B)
3. Hypochaeris radicata	40 30	<u>Yes</u> Yes	<u>FACU</u> <u>FAC</u>	
4. Holcus lanatus		No.	FAC	Prevalence Index = $B/A = 0$
5. Geranium molle	<u>10</u> <u>5</u>	<u>No</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators:
6.				1 –Rapid Test for Hydrophytic Vegetation
7. 8.				2 – Dominance Test >50%
9.				$3$ - Prevalence Index is $\leq 3.0^1$
10.				4 - Morphological Adaptions (Provide supporting
11.				data in Remarks or on a separate sheet) 5 – Wetland Non-Vascular Plants <sup>1</sup>
Total Cov	er = <u>95</u>			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 30 )				<sup>1</sup> Indicators of hydric soil and wetland hydrology
1. 2.				must be present, unless disturbed or problematic.
Total Cov	er = <u>0</u>			
% Bare Ground in Herb Stratum: <u>0</u>				
Remarks:				Hydrophytic Vegetation Present? No
inclinates.				

SOIL Sampling Point: 4

	<u>Mati</u>	<u>IX</u>		Redox i	<u>eatures</u>				
Depth	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks
(inches)									
0-10	10YR 2/3	<u>100</u>					Silt Loam		
10-16	10YR 3/2	<u>95</u>	10YR 3/4	<u>5</u>	<u>c</u>	M	Silt Loam		
		_	·	_					
1 <sub></sub>	2	Danlatian	DNA Daduard NA	- tuit - CC - 4			and Contract	2,	L. Dana Lining M. Mahair
Type: C=C	Loncentration, D	=Depletior	, RM=Reduced M	atrix, CS=0	Lovered o	r Coated S	and Grains.	Location: P	L=Pore Lining, M=Matrix
Hydric Soil	Indicators: (App	olicable to	all LRRs, unless ot	herwise r	noted.)			Indicato	rs for Problematic Hydric Soils <sup>3</sup> :
Histoso	ol (A1)		Sa	ndy Redo	x (S5)			2 cı	m Muck (A10)
Histic E	Epipedon (A2)			ripped Ma					l Parent Material (TF2)
	Histic (A3)					l (F1) ( <b>exc</b>	ept MLRA 1)	·	ry Shallow Dark Surface (TF12)
	gen Sulfide (A4)		· · · · · · · · · · · · · · · · · · ·	-	ed Matrix		,		ner (Explain in Remarks)
	ed Below Dark S	urface (A1		epleted M		(-)			(Exprair in Nemano)
	Dark Surface (A12	•			Surface (F	6)		3Indicat	tors of hydrophytic vegetation and
	Mucky Mineral (	-			ark Surface	•			d hydrology must be present, unless
-	Gleyed Matrix (S				essions (F				ed or problematic.
				dox Depi	ESSIONS (F	0)			<u> </u>
	Layer (if presen	it):							
Type:	l\. O							Hudric	Soil Present? <u>No</u>
Depth (inch	nes): <u>u</u>							пуштс	3011 Fresent: NO
Remarks:									
LIVEROLOG	-v								
-	ydrology Indicat		equired: check all	that annly	<i>'</i>			Secondary	/ Indicators (two or more required)
Wetland Hy Primary Ind	ydrology Indicat dicators (minimu		equired; check all			(00)			/ Indicators (two or more required)
Wetland Hy Primary IndSurface	ydrology Indicat dicators (minimu e Water (A1)		Wa	ter-Staine	ed Leaves	` '		Water	r-Stained Leaves (B9)(MLRA 1,2,4A,4B)
Wetland Hy Primary IndSurfaceHigh Wa	ydrology Indicat dicators (minimu e Water (A1) dater Table (A2)		Wa	ter-Staine	ed Leaves	` '		Water	-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10)
Wetland Hy Primary Ind Surface High Wa Saturati	ydrology Indicat dicators (minimu water (A1) dater Table (A2) cion (A3)		Wa ( <b>e</b> Sali	ter-Staine xcept ML t Crust (B2	ed Leaves RA 1,2,4A,	, and 4B)		Water	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) eason Water Table (C2)
Wetland Hy Primary Ind Surface High Wa Saturati	ydrology Indicat dicators (minimu e Water (A1) dater Table (A2)		Wa ( <b>e</b> Sali	ter-Staine xcept ML t Crust (B2	ed Leaves	, and 4B)		Water	-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10)
Wetland Hy Primary Ind SurfaceHigh Water N	ydrology Indicat dicators (minimu water (A1) dater Table (A2) cion (A3)	m of one r	Wa ( <b>e</b> Sali Aqu	ter-Staine xcept ML t Crust (B2 uatic Inve	ed Leaves RA 1,2,4A,	(B13)		Water Draina Dry-Se Satura	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) eason Water Table (C2)
Wetland Hy Primary Ind  Surface High Water Mater	ydrology Indicat dicators (minimu water (A1) rater Table (A2) cion (A3) Marks (B1)	m of one r	Wa ( <b>e</b> Sal: Aqu Hyd	ter-Staine xcept ML t Crust (B2 uatic Invel drogen Su	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor	(B13) (C1)	ng Roots (C3)	WaterDrainaDry-SeSaturaGeom	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Imagery (C9)
Wetland Hy Primary Ind SurfaceHigh Water Notes Indicate In	ydrology Indicat dicators (minimu e Water (A1) dater Table (A2) cion (A3) Marks (B1) ent Deposits (B2)	m of one r	Wa ( <b>e</b> Sali Aqu Hyo Oxi	ter-Staine xcept ML t Crust (B2 uatic Invel drogen Su dized Rhiz	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor	(B13) (C1) along Livi	ng Roots (C3)	Water Draina Dry-Se Satura Geom Shallo	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Imagery (C9) orphic Position (D2)
Wetland Hy Primary Ind  Surface High Water Notes Sedime Drift Dee Algal M	ydrology Indicat dicators (minimu e Water (A1) dater Table (A2) dicion (A3) Marks (B1) ent Deposits (B2) eposits (B3)	m of one r	Wa 	xcept ML t Crust (B2 uatic Invedrogen Sudized Rhiz drsence of I	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres	(B13) (C1) along Livi		Water Draina Dry-Se Satura Geom Shallo	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3)
Wetland Hy Primary Ind  Surface High Water Notes Sedime Drift De Algal Motors	ydrology Indicat dicators (minimu e Water (A1) dater Table (A2) cion (A3) Marks (B1) ent Deposits (B2) eposits (B3) dat or Crust (B4)	m of one r	Wa (e Salt Aqu Hyo Oxi Pre	xcept ML t Crust (B2 uatic Inverdrogen Su dized Rhizesence of I	ed Leaves  RA 1,2,4A,  L1)  rtebrates (  Ifide Odor  zospheres  Reduced Ir	(B13) (C1) along Livi on (C4) in Tilled S	oils (C6)	Water Draina Dry-Se Satura Geom Shallo FAC-N Raiseo	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5)
Wetland Hy Primary Ind  Surface High W: Saturati Water N Sedime Drift De Algal M Iron De Surface	ydrology Indicated dicators (minimula Water (A1) Vater Table (A2) Licion (A3) Marks (B1) Lent Deposits (B2) Leposits (B3) Mat or Crust (B4) Leposits (B5)	m of one r	Wa	xcept ML t Crust (B: uatic Inverdrogen Su dized Rhizesence of I	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced II	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	oils (C6)	Water Draina Dry-Se Satura Geom Shallo FAC-N Raiseo	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) asson Water Table (C2) ation Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) d Ant Mounds (D6)(LRR A)
Wetland Hy Primary Ind  Surface High Water Notes Sedime Drift De Algal Molron De Surface Inundat	ydrology Indicated dicators (minimula Water (A1) Vater Table (A2) Vicion (A3) Marks (B1) Vicion (B3) Vicion (B3) Vicion (B3) Vicion (B4) Vicion (B4) Vicion (B4) Vicion (B5) Vicion (B6) Vicion Visible on A	m of one r	Wa	xcept ML t Crust (B: uatic Inverdrogen Su dized Rhizesence of I	ed Leaves ( RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction tressed Pla	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	oils (C6)	Water Draina Dry-Se Satura Geom Shallo FAC-N Raiseo	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) asson Water Table (C2) ation Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) d Ant Mounds (D6)(LRR A)
Wetland Hy Primary Ind  Surface High Water Notes Sedime Drift De Algal Molron De Surface Inundat	ydrology Indicated dicators (minimulated Water (A1) Vater Table (A2) Scion (A3) Marks (B1) Ent Deposits (B2) Eposits (B3) Mat or Crust (B4) Eposits (B5) Ele Soil Cracks (B6) Ition Visible on Ally Vegetated Con	m of one r	Wa	xcept ML t Crust (B: uatic Inverdrogen Su dized Rhizesence of I	ed Leaves ( RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction tressed Pla	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	oils (C6)	Water Draina Dry-Se Satura Geom Shallo FAC-N Raiseo	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) asson Water Table (C2) ation Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) d Ant Mounds (D6)(LRR A)
Wetland Hy Primary Ind  Surface High Water Now Sedime Drift Dee Algal Modern Iron Dee Surface Inundate Sparsely Field Observing	ydrology Indicated dicators (minimulated Water (A1) Vater Table (A2) Scion (A3) Marks (B1) Ent Deposits (B2) Eposits (B3) Mat or Crust (B4) Eposits (B5) Ele Soil Cracks (B6) Ition Visible on Ally Vegetated Con	m of one r erial Image cave Surfa	Wa	iter-Staine xcept ML t Crust (B2 uatic Inver- drogen Su dized Rhizes esence of I cent Iron I nted or Staner (Explain	ed Leaves ( RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction tressed Pla	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	oils (C6)	Water Draina Dry-Se Satura Geom Shallo FAC-N Raiseo	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) asson Water Table (C2) ation Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) d Ant Mounds (D6)(LRR A)
Wetland Hy Primary Ind  Surface High Water Now Sedime Drift Dee Algal Modern Iron Dee Surface Inundate Sparsely Field Observing	ydrology Indicated dicators (minimulated Water (A1)  Vater Table (A2)  Licion (A3)  Marks (B1)  Lent Deposits (B2)  Leposits (B3)  Lat or Crust (B4)  Leposits (B5)  Leposits (B6)	m of one r erial Image icave Surfa	Wa	iter-Staine xcept ML t Crust (B3 uatic Inver- drogen Su dized Rhizes esence of I cent Iron Inted or Stainer (Explainance)	ed Leaves ( RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction tressed Pla	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	oils (C6)	Water Draina Dry-Se Satura Geom Shallo FAC-N Raiseo	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) asson Water Table (C2) ation Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) d Ant Mounds (D6)(LRR A)
Wetland Hy Primary Ind  Surface High Water Notes Sedime Drift De Algal Modern Iron De Surface Inundat Sparsely Field Obser Surface Wa	ydrology Indicated dicators (minimula Water (A1)  Yater Table (A2)  Licion (A3)  Marks (B1)  Lent Deposits (B2)  Leposits (B3)  Lat or Crust (B4)  Leposits (B5)  Le Soil Cracks (B6)  Licion Visible on Ally Vegetated Contractions:  Later Present? Note the Present?	m of one r	Wa	iter-Staine xcept ML t Crust (B3 uatic Invertion of the control	ed Leaves ( RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction tressed Pla	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	oils (C6) .RR A)	Water Draina Dry-Se Satura Geom Shallo FAC-N Raisec Frost-	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) asson Water Table (C2) ation Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) d Ant Mounds (D6)(LRR A) Heave Hummocks (D7)
Wetland Hy Primary Ind  Surface High Water Notes and Sedime Drift De Algal Modern Iron De Surface Inundat Sparsely Field Obser Surface Water Table Saturation I (includes cap	ydrology Indicated dicators (minimula Water (A1)  Yater Table (A2)  Licion (A3)  Marks (B1)  Lent Deposits (B2)  Leposits (B3)  Lat or Crust (B4)  Leposits (B5)  Le Soil Cracks (B6)  Licion Visible on Ally Vegetated Contractions:  Later Present? Note  Present? Note  Dillary fringe)	m of one r	Wa	iter-Staine xcept ML t Crust (B: uatic Invention of Iteration of Itera	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction cressed Platin in Rema	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	oils (C6) .RR A) Wetland Hyd	Water Draina Dry-Se Satura Geom Shallo FAC-N Raisec Frost-	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) asson Water Table (C2) ation Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) d Ant Mounds (D6)(LRR A) Heave Hummocks (D7)
Wetland Hy Primary Ind  Surface High Water Notes and Sedime Drift De Algal Modern Iron De Surface Inundat Sparsely Field Obser Surface Water Table Saturation I (includes cap	ydrology Indicated dicators (minimula Water (A1)  Yater Table (A2)  Licion (A3)  Marks (B1)  Lent Deposits (B2)  Leposits (B3)  Lat or Crust (B4)  Leposits (B5)  Le Soil Cracks (B6)  Licion Visible on Ally Vegetated Contractions:  Later Present? Note  Present? Note  Dillary fringe)	m of one r	Wa	iter-Staine xcept ML t Crust (B: uatic Invention drogen Su dized Rhizesence of I cent Iron I nted or St ner (Explain ches): ches): ches):	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction cressed Platin in Rema	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	oils (C6) .RR A) Wetland Hyd	Water Draina Dry-Se Satura Geom Shallo FAC-N Raisec Frost-	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) asson Water Table (C2) ation Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) d Ant Mounds (D6)(LRR A) Heave Hummocks (D7)
Wetland Hy Primary Ind  Surface High Water Notes and Sedime Drift De Algal Modern Iron De Surface Inundat Sparsely Field Obser Surface Water Table Saturation I (includes cap	ydrology Indicated dicators (minimula Water (A1)  Yater Table (A2)  Licion (A3)  Marks (B1)  Lent Deposits (B2)  Leposits (B3)  Lat or Crust (B4)  Leposits (B5)  Le Soil Cracks (B6)  Licion Visible on Ally Vegetated Contractions:  Later Present? Note  Present? Note  Dillary fringe)	m of one r	Wa	iter-Staine xcept ML t Crust (B: uatic Invention drogen Su dized Rhizesence of I cent Iron I nted or St ner (Explain ches): ches): ches):	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction cressed Platin in Rema	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	oils (C6) .RR A) Wetland Hyd	Water Draina Dry-Se Satura Geom Shallo FAC-N Raisec Frost-	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) asson Water Table (C2) ation Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) d Ant Mounds (D6)(LRR A) Heave Hummocks (D7)
Wetland Hy Primary Ind  Surface High W: Saturati Water N Sedime Drift De Algal M Iron De Surface Inundat Sparsely Field Obser Surface Wa Water Table Saturation I (includes cap Describe Re	ydrology Indicated dicators (minimula Water (A1)  Yater Table (A2)  Licion (A3)  Marks (B1)  Lent Deposits (B2)  Leposits (B3)  Lat or Crust (B4)  Leposits (B5)  Le Soil Cracks (B6)  Licion Visible on Ally Vegetated Contractions:  Later Present? Note  Present? Note  Dillary fringe)	m of one r	Wa	iter-Staine xcept ML t Crust (B: uatic Invention drogen Su dized Rhizesence of I cent Iron I nted or St ner (Explain ches): ches): ches):	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction cressed Platin in Rema	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	oils (C6) .RR A) Wetland Hyd	Water Draina Dry-Se Satura Geom Shallo FAC-N Raisec Frost-	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) asson Water Table (C2) ation Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) d Ant Mounds (D6)(LRR A) Heave Hummocks (D7)
Wetland Hy Primary Ind  Surface High Water Notes and Sedime Drift De Algal Modern Iron De Surface Inundat Sparsely Field Obser Surface Water Table Saturation I (includes cap	ydrology Indicated dicators (minimula Water (A1)  Yater Table (A2)  Licion (A3)  Marks (B1)  Lent Deposits (B2)  Leposits (B3)  Lat or Crust (B4)  Leposits (B5)  Le Soil Cracks (B6)  Licion Visible on Ally Vegetated Contractions:  Later Present? Note  Present? Note  Dillary fringe)	m of one r	Wa	iter-Staine xcept ML t Crust (B: uatic Invention drogen Su dized Rhizesence of I cent Iron I nted or St ner (Explain ches): ches): ches):	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction cressed Platin in Rema	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	oils (C6) .RR A) Wetland Hyd	Water Draina Dry-Se Satura Geom Shallo FAC-N Raisec Frost-	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) asson Water Table (C2) ation Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) d Ant Mounds (D6)(LRR A) Heave Hummocks (D7)
Wetland Hy Primary Ind SurfaceHigh W:SaturatiWater NSedimeDrift DeAlgal MIron DeSurfaceInundatSparselv Field Obser Surface Wa Water Table Saturation I (includes cap Describe Re	ydrology Indicated dicators (minimula Water (A1)  Yater Table (A2)  Licion (A3)  Marks (B1)  Lent Deposits (B2)  Leposits (B3)  Lat or Crust (B4)  Leposits (B5)  Le Soil Cracks (B6)  Licion Visible on Ally Vegetated Contractions:  Later Present? Note  Present? Note  Dillary fringe)	m of one r	Wa	iter-Staine xcept ML t Crust (B: uatic Invention drogen Su dized Rhizesence of I cent Iron I nted or St ner (Explain ches): ches): ches):	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction cressed Platin in Rema	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	oils (C6) .RR A) Wetland Hyd	Water Draina Dry-Se Satura Geom Shallo FAC-N Raisec Frost-	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) asson Water Table (C2) ation Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) d Ant Mounds (D6)(LRR A) Heave Hummocks (D7)

	relief (concave, con Lat: r this time of year? y disturbed? roblematic?	nvex, none): <u>cc</u> 45.58460941  P Yes (if no, exp	Long: -122.4 Dlain in Remal Are "Normal (if needed, e	rks.) Circumstances" present? <u>Yes</u> xplain any answers in Remarks.)
Remarks:  VEGETATION – Use scientific names of plants.				
Tree Stratum (Plot size: 30 ) 1. 2. 3. 4.  Total Cover = 0	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)  Total Number of Dominant Species Across All Strata: 3 (B)
Sapling/Shrub Stratum (Plot size: 30 ) 1. 2. 3. 4. 5. Total Cover = 0				Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)  Prevalence Index worksheet:
Herb Stratum (Plot size: _30_)  1. Agrostis capillaris  2. Festuca rubra  3. Ranuculus repens  4. Holcus lanatus  5. Juncus effusus  6. 7. 8. 9.  10. 11. Total Cover =95	40 20 20 10 5	Yes Yes Yes No No	FAC FAC FAC FAC FACW	FACU species $0$ x 4 = $0$ UPL species $0$ x 5 = $0$ Column Totals: $0$ (A) $0$ (B)  Prevalence Index = B/A = $0$ Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation  X 2 - Dominance Test > 50%  3 - Prevalence Index is $\leq 3.0^1$ 4 - Morphological Adaptions (Provide supporting data in Remarks or on a separate sheet)  5 - Wetland Non-Vascular Plants Problematic Hydrophytic Vegetation (Explain)
Woody Vine Stratum (Plot size: 30 )  1. 2. Total Cover = 0  % Bare Ground in Herb Stratum: 0				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  Hydrophytic Vegetation Present? Yes
Remarks:				

SOIL Sampling Point: 5

	<u>Mat</u>	<u>rix</u>		Redox I	-eatures				
Depth	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks
(inches)									
<u>0-10</u>	10YR 4/1	<u>80</u>	10YR 3/6	<u>20</u>	<u>C</u>	<u>M</u>	Silt Loam		
<u>10-16</u>	<u>10YR 3/2</u>	<u>80</u>	<u>10YR 3/4</u>	<u>20</u>	<u>C</u>	<u>M</u>	Silty Clay Loam		
1							,		
¹Type: C=	Concentration, D	=Depletior	, RM=Reduced M	atrix, CS=0	Covered o	r Coated S	and Grains. Lo	ocation: Pl	L=Pore Lining, M=Matrix
Hydric So	il Indicators: (Ap	plicable to	all LRRs, unless ot	herwise ı	noted.)			Indicato	rs for Problematic Hydric Soils <sup>3</sup> :
Histos	sol (A1)		Sa	ndy Redo	x (S5)			2 cr	m Muck (A10)
Histic	Epipedon (A2)		St	ripped Ma	atrix (S6)			Rec	l Parent Material (TF2)
Black	Histic (A3)		Lo	amy Muc	ky Minera	l (F1) (exc	ept MLRA 1)	Ve	ry Shallow Dark Surface (TF12)
Hydro	gen Sulfide (A4)		Lo	amy Gley	ed Matrix	(F2)		Oth	ner (Explain in Remarks)
Deple	ted Below Dark S	urface (A1	l) <u>X</u> De	pleted Ma	atrix (F3)				
Thick	Dark Surface (A1	2)	Re	dox Dark	Surface (F	6)		<sup>3</sup> Indicat	cors of hydrophytic vegetation and
Sandy	Mucky Mineral (	S1)	De	pleted Da	ark Surface	e (F7)			d hydrology must be present, unless
Sandy	Gleyed Matrix (S	54)	Re	dox Depr	essions (F8	3)		disturb	ed or problematic.
Restrictiv	e Layer (if preser	nt):							
Type:									
Depth (in	ches): <u>0</u>							Hydric	Soil Present? Yes
Remarks:									
HYDROLO	GV								
	Hydrology Indicat	ors:							
			equired; check all	that apply	/)		:	Secondary	Indicators (two or more required)
Surfac	e Water (A1)		Wa	ter-Staine	ed Leaves (	(B9)		Water	Stained Leaves (B9)( <b>MLRA 1,2,4A,4B</b> )
· <del></del>	Vater Table (A2)				RA 1,2,4A,		-		age Patterns (B10)
_	ntion (A3)			t Crust (B:		,	-		eason Water Table (C2)
	Marks (B1)				, rtebrates (	B13)	-		ition Visible on Aerial Imagery (C9)
· <del></del>	ent Deposits (B2)				lfide Odor	,	<del>-</del>		orphic Position (D2)
	Deposits (B3)		· · · · · · · · · · · · · · · · · · ·	_			ng Roots (C3)		w Aquitard (D3)
	Mat or Crust (B4)				Reduced Ir	_	5		eutral Test (D5)
	eposits (B5)		<del></del>		Reduction		oils (C6)		Ant Mounds (D6)(LRR A)
	e Soil Cracks (B6)				tressed Pla				Heave Hummocks (D7)
	ation Visible on A				in in Rema				reave Hammooks (57)
	ely Vegetated Cor	_		.c. (2,1p.a					
Field Obse	-								
	ater Present? No	)	Depth (inc	ches):					
	ole Present? No	_	Depth (in	•					
Saturation	Present? Ye	<u>:S</u>	Depth (ir	nches): 10					
	apillary fringe)						Wetland Hydro		ent? <u>Yes</u>
Describe F	kecoraea Data (st	ream gaug	e, monitoring well	, aeriai pr	iotos, prev	rious inspe	ections), if available	e.	
Remarks:									

Project/Site: <u>Dawson's Ridge</u> City/Counter Applicant/Owner: <u>McIntosh Ridge PRD, LLC</u> Sta Investigator(s): <u>Kevin Grosz/Eli Schmitz</u> Landform (hillslope, terrace, etc.): <u>Terrace</u> Subregion (LRR): <u>Northwest Forests &amp; Coast (LRR</u> Soil Map Unit Name: <u>PoD</u> NWI classification: Are climatic/hydrologic conditions on the site type Are Vegetation, Soil, or Hydrology sign Are Vegetation, Soil, or Hydrology nature Summary Of Findings — Attach site map	Section, Township, Rang Local relief (concave, contact)  None Dical for this time of years ificantly disturbed? urally problematic?	nvex, none): <u>co</u> <u>45.58460941</u> ? <u>Yes</u> (if no, exp	ncave Slo Long: <u>-122.4</u> Dlain in Rema Are "Normal (if needed, e	rks.) Circumstances" present? <u>Yes</u> xplain any answers in Remarks.)
Hydrophytic Vegetation Present? Yes Hydric Soil Present? No				
Wetland Hydrology Present? No		Is the S	Sampled Area	within a Wetland? <u>No</u>
Remarks:  VEGETATION – Use scientific names of plan	nts.			
	Absolute %	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ) 1.	Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2.				
3.				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
Total Cover = 0				<u>5</u> (b)
Sapling/Shrub Stratum (Plot size: 30 )				Percent of Dominant Species
1.				That Are OBL, FACW, or FAC: 67 (A/B)  Prevalence Index worksheet:
2. 3.				Total % Cover of: Multiply by:
4.				OBL species $\underline{0}$ x 1 = $\underline{0}$
5.				FACW species $\underline{0}$ x 2 = $\underline{00}$ FAC species $\underline{0}$ x 3 = $\underline{0}$
Total Cover = 0  Herb Stratum (Plot size: 30 )				FACU species $\underline{0}$ $\times$ $4 = \underline{0}$
1. Agrostis capillaris	<u>40</u>	Yes	FAC	UPL species $\underline{0}$ x 5 = $\underline{0}$
2. <u>Festuca rubra</u>	<u>20</u>	Yes	FAC	Column Totals: $\underline{0}$ (A) $\underline{0}$ (B)
Hypochaeris radicata     Holcus lanatus	<u>20</u>	Yes No	<u>FAC</u> <u>FAC</u>	Prevalence Index = $B/A = 0$
5. Geranium molle	<u>10</u> <u>5</u>	<u>No</u> <u>No</u>	FACU	
6. 7. 8. 9. 10. 11. Total Cover = 95				Hydrophytic Vegetation Indicators: 1 — Rapid Test for Hydrophytic Vegetation  X2 — Dominance Test > 50% 3 - Prevalence Index is ≤ 3.0¹ 4 - Morphological Adaptions¹ (Provide supporting data in Remarks or on a separate sheet) 5 — Wetland Non-Vascular Plants¹  Problematic Hydrophytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size: 30 )				<sup>1</sup> Indicators of hydric soil and wetland hydrology
1. 2.				must be present, unless disturbed or problematic.
Total Cover = 0				
% Bare Ground in Herb Stratum: <u>0</u>				Hydrophytic Vegetation Present? Yes
Remarks:	•			

SOIL Sampling Point: 6

	<u>Mat</u>	<u>rix</u>		Redox F	<u>eatures</u>				
Depth	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks
(inches)									
0-4	10YR 4/2	<u>100</u>		<u>20</u>			Silt Loam		
4-16	10YR 5/3	<u>95</u>	10YR 3/6	<u>5</u>	<u>C</u>	<u>M</u>	Silt Loam		
 	·			_	_				
1								·	
Type: C=	Concentration, D	=Depletior	, RM=Reduced Ma	atrix, CS=0	Lovered of	r Coated S	and Grains.	Location: Pi	L=Pore Lining, M=Matrix
Hydric So	il Indicators: (Ap	plicable to	all LRRs, unless ot	herwise r	noted.)			Indicato	rs for Problematic Hydric Soils <sup>3</sup> :
Histos	sol (A1)		Sa	ndy Redo	x (S5)			2 cr	m Muck (A10)
	Epipedon (A2)			ripped Ma					Parent Material (TF2)
	Histic (A3)					l (F1) (exc	ept MLRA 1)	· · · · · · · · · · · · · · · · · · ·	ry Shallow Dark Surface (TF12)
	ogen Sulfide (A4)		· · · · · · · · · · · · · · · · · · ·	-	ed Matrix		cpt william 1)	·	ner (Explain in Remarks)
	ted Below Dark S	urfaco (A1		epleted M		(12)			ici (Explait ili Nemarks)
	Dark Surface (A1)	•			Surface (F	·c)		3 <sub>Indicat</sub>	cors of hydrophytic vegetation and
	•	•			•	•			d hydrology must be present, unless
	Mucky Mineral (				ark Surface				ed or problematic.
	Gleyed Matrix (S		ке	dox Depr	essions (F8	3)		distans	ed of problematic.
	e Layer (if preser	nt):							
Type:								11. alata	Call Bus and 2 Ma
Depth (in	ches): <u>0</u>							Hyaric	Soil Present? No
Remarks:									
HYDROLO									
	Hydrology Indicat		المادة ماد ماد ماد	+hat analı	٨			Cocondon	/ Indicators (two or more required)
		iii oi one i	equired; check all					,	` ' '
	e Water (A1)				ed Leaves	. ,			-Stained Leaves (B9)( <b>MLRA 1,2,4A,4B</b> )
High \	Vater Table (A2)		(e	xcept ML	RA 1,2,4A,	, and 4B)		Draina	age Patterns (B10)
Satura	ation (A3)		Salt	t Crust (B:	l1)			Dry-Se	eason Water Table (C2)
Water	· Marks (B1)		Aqı	uatic Inve	rtebrates (	(B13)		Satura	tion Visible on Aerial Imagery (C9)
Sedim	ent Deposits (B2)	)	Нус	drogen Su	lfide Odor	(C1)		Geom	orphic Position (D2)
Drift [	Deposits (B3)		Oxi	dized Rhi	zospheres	along Livi	ng Roots (C3)	Shallo	w Aquitard (D3)
Algal I	Mat or Crust (B4)		Pre	sence of I	Reduced Ir	on (C4)		FAC-N	eutral Test (D5)
Iron D	eposits (B5)		Rec	ent Iron F	Reduction	in Tilled S	oils (C6)	Raised	Ant Mounds (D6)(LRR A)
	ce Soil Cracks (B6)		 Stu	nted or St	ressed Pla	ants (D1)(I	LRR A)		Heave Hummocks (D7)
	ation Visible on A				in in Rema		,		,
	ely Vegetated Cor	_		(=:-		,			
Field Obse		10010 30110	cc (50)						
	rater Present? <u>No</u>	1	Depth (inc	hes).					
	ole Present? No	_	Depth (inc	•					
	Present? No	_	Depth (in	•					
(includes ca	apillary fringe)			,			Wetland Hyd	rology Pres	ent? <u>No</u>
Describe F	Recorded Data (st	ream gaug	e, monitoring well	, aerial ph	notos, prev	ious inspe	ections), if availa	ble:	
Remarks:									

Applicant/Owner: McIntosh Ridge PRD, LLC State Investigator(s): Kevin Grosz/Eli Schmitz	Section, Township, Rang Local relief (concave, cor A) Lat: None ical for this time of year? ficantly disturbed?	nvex, none): <u>co</u> 45.583920491 ' <u>Yes</u> (if no, exp	ncave Slo Long: <u>-122.</u> Dlain in Rema Are "Normal	<del></del>
SUMMARY OF FINDINGS – Attach site map	showing sampling poi	nt locations,	transects, i	nportant features, etc.
Hydrophytic Vegetation Present? <u>Yes</u> Hydric Soil Present? <u>Yes</u>				
Wetland Hydrology Present? Yes		Is the S	Sampled Area	within a Wetland? Yes
Remarks:				
VEGETATION – Use scientific names of plant	ts.			
Tree Stratum (Plot size: 30 ) 1. 2. 3.	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)  Total Number of Dominant
4.				Species Across All Strata: <u>3</u> (B)
Total Cover = 0  Sapling/Shrub Stratum (Plot size: 30 ) 1.				Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
2. 3. 4. 5.  Total Cover = 0  Herb Stratum (Plot size: 30)  1. Agrostis capillaris 2. Festuca rubra 3. Ranuculus repens 4. Holcus lanatus 5. Juncus effusus 6. Hyphochaeris radicata 7. 8. 9. 10. 11.  Total Cover = 95  Woody Vine Stratum (Plot size: 30) 1. 2.  Total Cover = 0	30 20 20 10 10 5	Yes Yes Yes No No	FAC FAC FAC FACW FACU	Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species $0$ x 1 = $0$ FACW species $0$ x 2 = $00$ FAC species $0$ x 3 = $0$ FACU species $0$ x 4 = $0$ UPL species $0$ x 5 = $0$ Column Totals: $0$ (A) $0$ (B)  Prevalence Index = B/A = $0$ Hydrophytic Vegetation Indicators:  1 −Rapid Test for Hydrophytic Vegetation  X 2 − Dominance Test >50%  3 − Prevalence Index is ≤ $3.0^1$ 4 − Morphological Adaptions (Provide supporting data in Remarks or on a separate sheet)  5 − Wetland Non-Vascular Plants Problematic Hydrophytic Vegetation (Explain)
% Bare Ground in Herb Stratum: <u>0</u>				Hydrophytic Vegetation Present? Yes
Remarks:				

	<u>Mat</u>	<u>rix</u>		Redox F	<u>eatures</u>				
Depth	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks
(inches)									
0-10	10YR 3/1	<u>80</u>	10YR 3/6	<u>20</u>	<u>C</u>	<u>M</u>	Silt Loam		
<u>10-16</u>	10YR 3/2	80	10YR 3/4	20	<u>c</u>	<u>M</u>	Silty Clay Loam		
			<del></del>						
1	Communication D	Danlatian	DNA Daduard NA	- tuit - CC - 4	<u> </u>		1 C 2 <sub>1</sub> -	DI	David Living M. Materia
Type: C=	Concentration, D	=Depletior	, RM=Reduced M	atrix, CS=0	covered of	r Coated S	and Grains. Lo	cation: Pi	_=Pore Lining, M=Matrix
Hydric So	il Indicators: (Ap	olicable to	all LRRs, unless ot	herwise r	noted.)			Indicato	rs for Problematic Hydric Soils <sup>3</sup> :
Histos	sol (A1)		Sa	ndy Redo	x (S5)			2 cr	n Muck (A10)
Histic	Epipedon (A2)		St	ripped Ma	atrix (S6)			Rec	Parent Material (TF2)
Black	Histic (A3)		Lo	amy Muc	ky Minera	l (F1) (exc	ept MLRA 1)	Ve	ry Shallow Dark Surface (TF12)
Hydro	gen Sulfide (A4)		· · · · · · · · · · · · · · · · · · ·	-	ed Matrix			Oth	er (Explain in Remarks)
	ted Below Dark S	urface (A1:		pleted Ma		. ,			, ,
	Dark Surface (A1)	•	· —		Surface (F	6)		3Indicat	ors of hydrophytic vegetation and
	Mucky Mineral (	•			ark Surface	•			hydrology must be present, unless
	Gleyed Matrix (S	-			essions (F8				ed or problematic.
•				.dox Bepi					
Type:	e Layer (if preser	it):							
Depth (in	rhes): O							Hydric	Soil Present? Yes
								,	
Remarks:									
HYDROLO	GY								
	Hydrology Indicat	ors:							
			equired; check all	that apply	<b>/</b> )		9	Secondary	Indicators (two or more required)
	e Water (A1)				ed Leaves (	(R9)		Water	-Stained Leaves (B9)( <b>MLRA 1,2,4A,4B</b> )
	Vater Table (A2)				RA 1,2,4A,	` '	-		ge Patterns (B10)
			•	•		, aliu 4D)	-		
	ition (A3)		<del></del>	t Crust (Bí	•	(D42)	-		eason Water Table (C2)
	· Marks (B1)				rtebrates (	,	-		tion Visible on Aerial Imagery (C9)
	ent Deposits (B2)		· · · · · · · · · · · · · · · · · · ·	_	Ifide Odor				orphic Position (D2)
	Deposits (B3)					_	ng Roots (C3)		w Aquitard (D3)
	Mat or Crust (B4)				Reduced Ir		-		eutral Test (D5)
	eposits (B5)		Red	ent Iron F	Reduction	in Tilled S	oils (C6)	Raised	Ant Mounds (D6)( <b>LRR A</b> )
Surfac	e Soil Cracks (B6)		Stu	nted or St	tressed Pla	ants (D1)( <b>L</b>	.RR A)	Frost-l	Heave Hummocks (D7)
Inund	ation Visible on A	erial Image	ry (B7)Oth	ner (Explai	in in Rema	ırks)			
Sparse	ely Vegetated Cor	icave Surfa	ce (B8)						
Field Obse	ervations:								
Surface W	ater Present? No	<u>)</u>	Depth (inc	•					
	ole Present? No		Depth (in	•					
	n Present? <u>Ye</u>	<u>S</u>	Depth (ir	nches): 10			Wetland Hydro	logy Pres	ent? Yes
	apillary fringe) Recorded Data (st	ream gaile	e monitoring well	aerial nh	notos nrev	inus insna	ections), if available		<u></u>
PC3CI IDE I	iccorded Data (St	i cuili gaug	c, monitoring well	, acriai pi	iotos, piel	rious irispt	.ccions <sub>j</sub> , ii avaliable	-•	
Remarks:									

Applicant/Owner: McIntosh Ridge PRD, LLC St Investigator(s): Kevin Grosz/Eli Schmitz Landform (hillslope, terrace, etc.): Terrace Subregion (LRR): Northwest Forests & Coast (LR Soil Map Unit Name: PoD NWI classification Are climatic/hydrologic conditions on the site ty Are Vegetation, Soil, or Hydrology sig Are Vegetation, Soil, or Hydrology nat SUMMARY OF FINDINGS — Attach site may	Section, Township, Rang Local relief (concave, conormal RA) Lat:  None  Poical for this time of year inficantly disturbed?  Lat:  La	nvex, none): <u>co</u> <u>45.583920491</u> P <u>Yes</u> (if no, exp	ncave Slo Long: <u>-122.</u> blain in Rema Are "Normal (if needed, e	rks.) Circumstances" present? <u>Yes</u> xplain any answers in Remarks.)
Hydrophytic Vegetation Present? Yes Hydric Soil Present? No				
Wetland Hydrology Present? <u>No</u>		Is the S	ampled Area	within a Wetland? <u>No</u>
VEGETATION – Use scientific names of pla	•			
Troo Stratum (Blot cizo: 20 )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species
Tree Stratum (Plot size: 30 ) 1.	Cover	Species?	Status	That Are OBL, FACW, or FAC: $\underline{2}$ (A)
2.				
3.				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
Total Cover = <u>0</u>				<u>species / tal 055 / tal 041 data.</u>
Sapling/Shrub Stratum (Plot size: 30 )				Percent of Dominant Species
1.				That Are OBL, FACW, or FAC: 67 (A/B)  Prevalence Index worksheet:
2. 3.				Total % Cover of:Multiply by:
3. 4.				OBL species $\underline{0}$ x 1 = $\underline{0}$
5.				FACW species $0 \times 2 = 00$
Total Cover = <u>0</u>				FAC species $\underline{0}$ x 3 = $\underline{0}$ FACU species $\underline{0}$ x 4 = $\underline{0}$
Herb Stratum (Plot size: 30 )	20	Vos	EAC	FACU species $\underline{0}$ $\times$ 4 = $\underline{0}$ UPL species $\underline{0}$ $\times$ 5 = $\underline{0}$
Agrostis capillaris     Schedonorus pratensis	30 20	<u>Yes</u> <u>Yes</u>	<u>FAC</u> <u>FAC</u>	Column Totals: $\underline{0}$ (A) $\underline{0}$ (B)
3. <u>Hypochaeris radicata</u>	<u>20</u>	Yes	FACU	
4. Holcus lanatus	<u>10</u>	<u>No</u>	FAC	Prevalence Index = B/A = <u>0</u>
5. <u>Geranium molle</u> 6. 7. 8. 9. 10. 11. Total Cover = 90	<u>10</u>	<u>No</u>	FACU	Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation  X 2 - Dominance Test >50%  3 - Prevalence Index is ≤ 3.0¹  4 - Morphological Adaptions¹ (Provide supporting data in Remarks or on a separate sheet)  5 - Wetland Non-Vascular Plants¹  Problematic Hydrophytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size: 30)				<sup>1</sup> Indicators of hydric soil and wetland hydrology
1. 2.				must be present, unless disturbed or problematic.
Total Cover = 0				
% Bare Ground in Herb Stratum: <u>0</u>				Hydrophytic Vegetation Present? Yes
Remarks:				

SOIL Sampling Point: 8

	<u>Mat</u>	1 173		INCOOK I	-eatures				
Depth	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks
(inches)									
<u>0-10</u>	10YR 3/2	<u>100</u>					Silt Loam		
<u>10-16</u>	<u>10YR 3/3</u>	<u>100</u>					<u>Silt Loam</u>		
¹Type: C=	Concentration, D	=Depletion	, RM=Reduced Ma	atrix, CS=	Covered o	r Coated S	and Grains.	<sup>2</sup> Location: P	L=Pore Lining, M=Matrix
Hydric So	il Indicators: (Ap	plicable to	all LRRs, unless ot	herwise ı	noted.)			Indicato	ors for Problematic Hydric Soils <sup>3</sup> :
Histo:	sol (A1)		Sa	ndy Redo	x (S5)			2 c	m Muck (A10)
Histic	Epipedon (A2)		Sti	ipped Ma	atrix (S6)			Re	d Parent Material (TF2)
Black	Histic (A3)		Lo	amy Muc	ky Minera	l (F1) (exc	ept MLRA 1)	Ve	ery Shallow Dark Surface (TF12)
Hydro	ogen Sulfide (A4)		Lo	amy Gley	ed Matrix	(F2)		Otl	her (Explain in Remarks)
Deple	ted Below Dark S	urface (A11	L)De	pleted M	atrix (F3)				
Thick	Dark Surface (A1	2)	Re	dox Dark	Surface (F	6)		<sup>3</sup> Indica	tors of hydrophytic vegetation and
Sandy	/ Mucky Mineral (	S1)	De	pleted Da	ark Surface	e (F7)			d hydrology must be present, unless
Sandy	Gleyed Matrix (S	54)	Re	dox Depr	essions (F8	3)		disturb	oed or problematic.
Restrictiv	e Layer (if preser	nt):							
Type:									
Depth (in	ches): <u>0</u>							Hydric	Soil Present? No
Remarks:									
UVDBOLO	NCV								
		tors:							
Wetland I	Hydrology Indicat		equired; check all	that apply	<i>(</i> )			Secondar	y Indicators (two or more required)
<b>Wetland</b> I Primary Ir	Hydrology Indicat ndicators (minimu		equired; check all			(BQ)		1	y Indicators (two or more required)
Wetland I Primary Ir Surfac	Hydrology Indicated indicators (minimulated Water (A1)		Wa	ter-Staine	ed Leaves (			Wate	r-Stained Leaves (B9)(MLRA 1,2,4A,4B)
Wetland In Primary In Surface High N	Hydrology Indicat ndicators (minimu ce Water (A1) Water Table (A2)		Wa (e	ter-Staine	ed Leaves ( RA 1,2,4A,			Wate	r-Stained Leaves (B9)( <b>MLRA 1,2,4A,4B</b> ) age Patterns (B10)
Wetland I Primary IrSurfacHigh \Satura	Hydrology Indicat ndicators (minimu se Water (A1) Water Table (A2) nation (A3)		Wa ( <b>e</b> Salt	ter-Staine xcept ML : Crust (B:	ed Leaves ( <b>RA 1,2,4A</b> , 11)	, and 4B)		Wate	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) eason Water Table (C2)
Wetland I Primary Ir Surfac High \SaturaWater	Hydrology Indicated indicators (minimuse Water (A1) Water Table (A2) ation (A3) r Marks (B1)	m of one re	Wa ( <b>e</b> Salt Aqu	ter-Staine xcept ML Crust (B:	ed Leaves ( RA 1,2,4A, 11) rtebrates (	(B13)		WateDrainDry-So	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Imagery (C9)
Wetland I Primary Ir Surfac High \ Satura Water Sedim	Hydrology Indicated indicators (minimuse Water (A1) Water Table (A2) action (A3) Marks (B1) Marks (B2)	m of one re	Wa (e Salt Aqu Hyd	ter-Staine xcept ML : Crust (B: uatic Inve	ed Leaves ( RA 1,2,4A, 11) rtebrates ( Ifide Odor	(B13) (C1)	ng Poots (C2)	Wate Drain. Dry-Si Satura Geom	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2)
Wetland I Primary Ir Surface High \ Satura Water Sedim Drift I	Hydrology Indicated indicators (minimuste Water (A1) Water Table (A2) ation (A3) r Marks (B1) Juent Deposits (B2) Deposits (B3)	m of one re	Wa (e Salt Aqu Hyo Oxi	ter-Staine xcept ML : Crust (B: uatic Inve drogen Su dized Rhi	ed Leaves ( RA 1,2,4A, 11) rtebrates ( Ifide Odor zospheres	, <b>and 4B</b> ) (B13) (C1) along Livi	ng Roots (C3)	Wate Drain. Dry-Si Satura Geom Shallo	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3)
Wetland I Primary Ir Surfac High V Satura Water Sedim Drift I	Hydrology Indicated addicators (minimuste Water (A1) Water Table (A2) Action (A3) F Marks (B1) Hent Deposits (B2) Deposits (B3) Mat or Crust (B4)	m of one re	Wa (e Sali Aqu Hyo Oxi Pre	ter-Staine xcept ML : Crust (B: uatic Inve drogen Su dized Rhi: sence of	ed Leaves ( RA 1,2,4A, 11) rtebrates ( Ifide Odor zospheres Reduced Ir	(B13) (C1) along Livi		WateDrainDry-SolutionSaturoGeomShalloFAC-N	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5)
Wetland I Primary Ir Surface High \ Satura Water Sedim Drift [ Algal I	Hydrology Indicated adicators (minimuste Water (A1) Water Table (A2) Action (A3) Marks (B1) Ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	m of one re	Wa (e Salt Aqu Hyo Oxi Pre Rec	ter-Staine cept ML Crust (B: uatic Inve drogen Su dized Rhi: sence of I	ed Leaves ( RA 1,2,4A, 11) rtebrates ( Ifide Odor zospheres Reduced Ir	(B13) (C1) along Livi ron (C4) in Tilled S	oils (C6)	WateDrain:Dry-SiSaturaGeomShalloFAC-NRaisee	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5) d Ant Mounds (D6)(LRR A)
Wetland I Primary Ir Surfac High V Satura Water Sedim Drift I Algal I Iron D Surfac	Hydrology Indicated adicators (minimuster Water (A1) Water Table (A2) ation (A3) or Marks (B1) Juent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Des Soil Cracks (B6)	m of one re	Wa	ter-Staine xcept ML : Crust (B: uatic Inve drogen Su dized Rhi sence of I cent Iron I	ed Leaves ( RA 1,2,4A, 11)  rtebrates ( Ifide Odor zospheres Reduced Ir Reduction tressed Pla	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	oils (C6)	WateDrain:Dry-SiSaturaGeomShalloFAC-NRaisee	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5)
Wetland I Primary Ir Surfac High V Satura Water Sedim Drift I Algal I Iron D Surfac	Hydrology Indicated indicators (minimulate Water (A1) Water Table (A2) ation (A3) If Marks (B1) Ident Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) The Soil Cracks (B6) Action Visible on A	erial Image	Wa	ter-Staine xcept ML : Crust (B: uatic Inve drogen Su dized Rhi sence of I cent Iron I	ed Leaves ( RA 1,2,4A, 11) rtebrates ( Ifide Odor zospheres Reduced Ir	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	oils (C6)	WateDrain:Dry-SiSaturaGeomShalloFAC-NRaisee	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5) d Ant Mounds (D6)(LRR A)
Wetland I Primary Ir  Surfac  High V  Satura  Water  Sedim  Drift I  Algal I  Iron D  Surfac  Inund  Sparse	Hydrology Indicated indicators (minimuste Water (A1) Water Table (A2) Action (A3) F Marks (B1) Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Dece Soil Cracks (B6) Action Visible on Action Section Communication	erial Image	Wa	ter-Staine xcept ML : Crust (B: uatic Inve drogen Su dized Rhi sence of I cent Iron I	ed Leaves ( RA 1,2,4A, 11)  rtebrates ( Ifide Odor zospheres Reduced Ir Reduction tressed Pla	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	oils (C6)	WateDrain:Dry-SiSaturaGeomShalloFAC-NRaisee	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5) d Ant Mounds (D6)(LRR A)
Wetland I Primary Ir  Surface High \ Satura Water Sedim Drift I Algal I Iron D Surface Inund Sparse Field Obse	Hydrology Indicated indicators (minimulated Water (A1) Water Table (A2) Action (A3) Marks (B1) Ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Mat or Cracks (B6) Action Visible on Action Visibl	erial Image	Wa	ter-Staine xcept ML Crust (B: uatic Inve drogen Su dized Rhi sence of I sent Iron I nted or Si aer (Expla	ed Leaves ( RA 1,2,4A, 11)  rtebrates ( Ifide Odor zospheres Reduced Ir Reduction tressed Pla	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	oils (C6)	WateDrain:Dry-SiSaturaGeomShalloFAC-NRaisee	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5) d Ant Mounds (D6)(LRR A)
Wetland I Primary Ir  Surface High V Satura Water Sedim Drift I Algal I Iron D Surface Inund Sparse Field Obse Surface W	Hydrology Indicated adicators (minimulated Water (A1) Water Table (A2) Action (A3) Marks (B1) Ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Mat or Crust (B6) Mat or Crust (B	erial Image	Wa	ter-Staine xcept ML : Crust (B: uatic Inve drogen Su dized Rhi: sence of I sent Iron I nted or Si er (Expla	ed Leaves ( RA 1,2,4A, 11)  rtebrates ( Ifide Odor zospheres Reduced Ir Reduction tressed Pla	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	oils (C6)	WateDrain:Dry-SiSaturaGeomShalloFAC-NRaisee	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5) d Ant Mounds (D6)(LRR A)
Surface Water Tal	Hydrology Indicated adicators (minimulated Water (A1)  Water Table (A2) Detion (A3) For Marks (B1) Detent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Des Soil Cracks (B6) Detent Deposits (B6) Detent Crust (B6) Deten	erial Image ncave Surface	Wa	ter-Staine xcept ML : Crust (B: uatic Inve drogen Su dized Rhi: sence of I sent Iron I nted or Si er (Expla	ed Leaves ( RA 1,2,4A, 11)  rtebrates ( Ifide Odor zospheres Reduced Ir Reduction tressed Pla	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	oils (C6)	WateDrain:Dry-SiSaturaGeomShalloFAC-NRaisee	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5) d Ant Mounds (D6)(LRR A)
Wetland I Primary Ir  Surface High V Satura Water Sedim Drift I Algal I Iron D Surface Inund Sparse Field Obse Surface W Water Tal Saturation (includes ca	Hydrology Indicated adicators (minimulated Water (A1)  Water Table (A2) Pation (A3)  Marks (B1) Pent Deposits (B2) Peposits (B3)  Mat or Crust (B4) Peposits (B5) Peposits (B5) Peposits (B6) Peposits	erial Image ncave Surface	Wa	ter-Staine xcept ML : Crust (B: uatic Inve drogen Su dized Rhi: sence of I sent Iron I nted or Si er (Expla	ed Leaves ( RA 1,2,4A, 11)  rtebrates ( Ifide Odor zospheres Reduced Ir Reduction tressed Pla in in Rema	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(L	oils (C6) .RR A) Wetland Hyd	WateDrainSaturaGeomShalloFAC-NRaiseeFrost-	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5) d Ant Mounds (D6)(LRR A) Heave Hummocks (D7)
Wetland I Primary Ir  Surface High V Satura Water Sedim Drift I Algal I Iron D Surface Inund Sparse Field Obse Surface W Water Tal Saturation (includes ca	Hydrology Indicated adicators (minimulated Water (A1)  Water Table (A2) Pation (A3)  Marks (B1) Pent Deposits (B2) Peposits (B3)  Mat or Crust (B4) Peposits (B5) Peposits (B5) Peposits (B6) Peposits	erial Image ncave Surface	Wa	ter-Staine xcept ML : Crust (B: uatic Inve drogen Su dized Rhi: sence of I sent Iron I nted or Si er (Expla	ed Leaves ( RA 1,2,4A, 11)  rtebrates ( Ifide Odor zospheres Reduced Ir Reduction tressed Pla in in Rema	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(L	oils (C6) .RR A) Wetland Hyd	WateDrainSaturaGeomShalloFAC-NRaiseeFrost-	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5) d Ant Mounds (D6)(LRR A) Heave Hummocks (D7)
Wetland I Primary Ir  Surface High V Satura Water Sedim Drift I Algal I Iron D Surface Inund Sparse Field Obse Surface W Water Tal Saturation (includes ca	Hydrology Indicated adicators (minimulated Water (A1)  Water Table (A2) Pation (A3)  Marks (B1) Pent Deposits (B2) Peposits (B3)  Mat or Crust (B4) Peposits (B5) Peposits (B5) Peposits (B6) Peposits	erial Image ncave Surface	Wa	ter-Staine xcept ML : Crust (B: uatic Inve drogen Su dized Rhi: sence of I sent Iron I nted or Si er (Expla	ed Leaves ( RA 1,2,4A, 11)  rtebrates ( Ifide Odor zospheres Reduced Ir Reduction tressed Pla in in Rema	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(L	oils (C6) .RR A) Wetland Hyd	WateDrainSaturaGeomShalloFAC-NRaiseeFrost-	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5) d Ant Mounds (D6)(LRR A) Heave Hummocks (D7)
Wetland I Primary Ir  Surfac High V Satura Water Sedim Drift I Algal I Iron D Surfac Inund Sparse Field Obse Surface W Water Tal Saturation (includes ca	Hydrology Indicated adicators (minimulated Water (A1)  Water Table (A2) Pation (A3)  Marks (B1) Pent Deposits (B2) Peposits (B3)  Mat or Crust (B4) Peposits (B5) Peposits (B5) Peposits (B6) Peposits	erial Image ncave Surface	Wa	ter-Staine xcept ML : Crust (B: uatic Inve drogen Su dized Rhi: sence of I sent Iron I nted or Si er (Expla	ed Leaves ( RA 1,2,4A, 11)  rtebrates ( Ifide Odor zospheres Reduced Ir Reduction tressed Pla in in Rema	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(L	oils (C6) .RR A) Wetland Hyd	WateDrainSaturaGeomShalloFAC-NRaiseeFrost-	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5) d Ant Mounds (D6)(LRR A) Heave Hummocks (D7)
Wetland I Primary Ir  Surface High V Satura Water Sedim Drift I Algal I Iron D Surface Inund Sparse Field Obse Surface W Water Tal Saturation (includes ca	Hydrology Indicated adicators (minimulated Water (A1)  Water Table (A2) Pation (A3)  Marks (B1) Pent Deposits (B2) Peposits (B3)  Mat or Crust (B4) Peposits (B5) Peposits (B5) Peposits (B6) Peposits	erial Image ncave Surface	Wa	ter-Staine xcept ML : Crust (B: uatic Inve drogen Su dized Rhi: sence of I sent Iron I nted or Si er (Expla	ed Leaves ( RA 1,2,4A, 11)  rtebrates ( Ifide Odor zospheres Reduced Ir Reduction tressed Pla in in Rema	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(L	oils (C6) .RR A) Wetland Hyd	WateDrainSaturaGeomShalloFAC-NRaiseeFrost-	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5) d Ant Mounds (D6)(LRR A) Heave Hummocks (D7)
Wetland I Primary Ir  Surfac High V Satura Water Sedim Drift I Algal I Iron D Surfac Inund Sparse Field Obse Surface W Water Tal Saturation (includes ca	Hydrology Indicated adicators (minimulated Water (A1)  Water Table (A2) Pation (A3)  Marks (B1) Pent Deposits (B2) Peposits (B3)  Mat or Crust (B4) Peposits (B5) Peposits (B5) Peposits (B6) Peposits	erial Image ncave Surface	Wa	ter-Staine xcept ML : Crust (B: uatic Inve drogen Su dized Rhi: sence of I sent Iron I nted or Si er (Expla	ed Leaves ( RA 1,2,4A, 11)  rtebrates ( Ifide Odor zospheres Reduced Ir Reduction tressed Pla in in Rema	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(L	oils (C6) .RR A) Wetland Hyd	WateDrainSaturaGeomShalloFAC-NRaiseeFrost-	r-Stained Leaves (B9)(MLRA 1,2,4A,4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3) Neutral Test (D5) d Ant Mounds (D6)(LRR A) Heave Hummocks (D7)

Project/Site: <u>Dawson's Ridge</u> City/County: <u>Car</u> Applicant/Owner: <u>McIntosh Ridge PRD, LLC</u> State: <u>W</u>				Sampling Date: <u>10/25/2016</u> Sampling Point: 9						
Investigator(s): Kevin Grosz/Eli Schmitz Section, Township, Range: Sec. 9 T1N R3E										
	l relief (concave, cor			nno (9/): E						
Landform (hillslope, terrace, etc.): <u>Terrace</u> Local Subregion (LRR): <u>Northwest Forests &amp; Coast (LRR A)</u>		45.584909761		ppe (%): <u>5</u> .45515287						
Soil Map Unit Name: PoD NWI classification: None		+3.50+505701	LONG. <u>122.</u>	43313207 Dutain. <u>Wd304</u>						
Are climatic/hydrologic conditions on the site typical for		Yes (if no. ext	olain in Rema	rks.)						
Are Vegetation, Soil, or Hydrology significant		. <u>103</u> (11 110) exp		Circumstances" present? <u>Yes</u>						
Are Vegetation, Soil, or Hydrology naturally				explain any answers in Remarks.)						
The vegetation, son or rivarology naturally	, or object that it is		(II riccaca, c	Apidin driy driswers in Kerildriks.						
SUMMARY OF FINDINGS – Attach site map show	ving sampling poi	nt locations,	transects, i	mportant features, etc.						
Hydrophytic Vegetation Present? Yes										
Hydric Soil Present? <u>Yes</u>		la Aba (	Samuelad Ausa	a mithin a Watland 2 Vaa						
Wetland Hydrology Present? <u>Yes</u>		is the s	Sampled Area	a within a Wetland? Yes						
Remarks:										
VEGETATION – Use scientific names of plants.										
	Absolute %	Dominant	Indicator	Dominance Test worksheet:						
<u>Tree Stratum</u> (Plot size: <u>30</u> )	Cover	Species?	Status	Number of Dominant Species						
1. 2.				That Are OBL, FACW, or FAC: $\underline{4}$ (A)						
3.				Total Number of Dominant						
4.				Species Across All Strata: 4 (B)						
Total Cover = <u>0</u>										
Sapling/Shrub Stratum (Plot size: _30_)				Percent of Dominant Species						
1. Rubus spectabilis	<u>40</u>	<u>Yes</u>	<u>FAC</u>	That Are OBL, FACW, or FAC: 100 (A/B)						
2. <u>Salix scouleriana</u>	<u>20</u>	Yes	<u>FAc</u>	Prevalence Index worksheet:Total % Cover of:Multiply by:						
3.										
4. 5.				FACW species $0 \times 2 = 00$						
Total Cover =60				FAC species $\underline{0}$ x 3 = $\underline{0}$						
Herb Stratum (Plot size: 30 )	_			FACU species $\underline{0}$ x 4 = $\underline{0}$						
Geum macrophyllum	<u>30</u>	Yes	FAC	UPL species $\underline{0}$ x 5 = $\underline{0}$						
2. Ranuculus repens	<u>20</u>	Yes	FAC	Column Totals: $\underline{0}$ (A) $\underline{0}$ (B)						
3.				Prevalence Index = $B/A = 0$						
4.				= Index = B/A = 0						
5. 6.				Hydrophytic Vegetation Indicators:						
7.				1 –Rapid Test for Hydrophytic Vegetation						
8.				X 2 – Dominance Test >50%						
9.										
10.				data in Remarks or on a separate sheet)						
11.				5 – Wetland Non-Vascular Plants <sup>1</sup>						
Total Cover = <u>50</u>				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)						
Woody Vine Stratum (Plot size, 20.)				1 Indicators of hydric soil and watland hydrology						
Woody Vine Stratum (Plot size: _30_) 1.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.						
2.				must be present, unless disturbed of problematic.						
Total Cover = <u>0</u>										
% Bare Ground in Herb Stratum: <u>0</u>				Hydrophytic Vegetation Present? Yes						
Remarks:										

SOIL Sampling Point: 9

	<u>Mat</u>	<u>rix</u>		<u>Redox I</u>	-eatures						
Depth	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks		
(inches)											
<u>0-10</u>	10YR 4/1	<u>80</u>	10YR 3/6	<u>20</u>	<u>C</u>	<u>M</u>	Silt Loam				
<u>10-16</u>	<u>10YR 4/2</u>	<u>80</u>	<u>10YR 3/4</u>	<u>20</u>	<u>C</u>	<u>M</u>	Silty Clay Loam				
4											
¹Type: C=	Concentration, D	=Depletior	, RM=Reduced M	atrix, CS=0	Covered o	r Coated S	and Grains. <sup>2</sup> Lo	ocation: Pl	L=Pore Lining, M=Matrix		
Hydric So	il Indicators: (Ap	olicable to	all LRRs, unless ot	herwise ı	noted.)			Indicato	rs for Problematic Hydric Soils <sup>3</sup> :		
Histos	sol (A1)		Sa	ndy Redo	x (S5)			2 cr	m Muck (A10)		
Histic	Epipedon (A2)		St	ripped Ma	atrix (S6)			Rec	d Parent Material (TF2)		
Black	Histic (A3)		Lo	amy Muc	ky Minera	(F1) ( <b>exc</b>	ept MLRA 1)	Ve	ry Shallow Dark Surface (TF12)		
Hydro	gen Sulfide (A4)		Lo	amy Gley	ed Matrix	(F2)		Oth	ner (Explain in Remarks)		
Deple	ted Below Dark S	urface (A1:	1) <u>X</u> De	pleted Ma	atrix (F3)						
Thick	Dark Surface (A12	2)	Re	dox Dark	Surface (F	6)		<sup>3</sup> Indicat	tors of hydrophytic vegetation and		
Sandy	Mucky Mineral (	S1)	De	pleted Da	ark Surface	e (F7)			d hydrology must be present, unless		
Sandy	Gleyed Matrix (S	4)	Re	dox Depr	essions (F8	3)		disturb	ed or problematic.		
Restrictiv	e Layer (if preser	it):									
Type:											
Depth (in	ches): <u>0</u>							Hydric	Soil Present? Yes		
Remarks:								1			
HYDROLO	icv										
	Hydrology Indicat	ors:									
			equired; check all	that apply	/)		9	Secondary	/ Indicators (two or more required)		
Surfac	ce Water (A1)		Wa	ter-Staine	ed Leaves (	(B9)		Water	Stained Leaves (B9)(MLRA 1,2,4A,4B)		
· ·	Water Table (A2)				RA 1,2,4A,		-		age Patterns (B10)		
_	ation (A3)			t Crust (B:		,,	-		eason Water Table (C2)		
	· Marks (B1)			•	, rtebrates (	B13)	-		ation Visible on Aerial Imagery (C9)		
·	ent Deposits (B2)				lfide Odor		<del>-</del>		orphic Position (D2)		
	Deposits (B3)		· · · · · · · · · · · · · · · · · · ·	_			ng Roots (C3)		w Aquitard (D3)		
	Mat or Crust (B4)				Reduced Ir	_			eutral Test (D5)		
	eposits (B5)				Reduction		oils (C6)				
	ce Soil Cracks (B6)				tressed Pla						
	ation Visible on A				in in Rema			11030	ricave manimocks (57)		
	ely Vegetated Cor	_		ici (Expia	iii iii iteiila	i KJ					
Field Obse		icave barra	cc (20)								
	ater Present? No	)	Depth (inc	ches):							
	ole Present? No	_	Depth (in	•							
Saturation	n Present? <u>Ye</u>	<u>s</u>		nches): 10	ı						
	apillary fringe)						Wetland Hydro		ent? Yes		
Describe F	Recorded Data (st	ream gaug	e, monitoring well	, aerial pr	notos, prev	ious inspe	ections), if available	e:			
Remarks:											

Landform (hillslope, terrace, etc.): Terrace  Subregion (LRR): Northwest Forests & Coast (LRR A)  Soil Map Unit Name: PoD NWI classification: None  Are climatic/hydrologic conditions on the site typical for the Vegetation, Soil, or Hydrology significantly of the Vegetation, Soil, or Hydrology naturally property.	Township, Rang lief (concave, con Lat: this time of year? disturbed? blematic?	nvex, none): <u>co</u> <u>45.584909761</u> ? <u>Yes</u> (if no, exp	ncave Slo Long: <u>-122.</u> Dlain in Remal Are "Normal (if needed, e	rks.) Circumstances" present? <u>Yes</u> xplain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showin Hydrophytic Vegetation Present? Yes	g samping poi	iit iocations,	transects, ii	inportant leatures, etc.
Hydric Soil Present? No				
Wetland Hydrology Present? No		Is the S	Sampled Area	within a Wetland? <u>No</u>
Remarks:  VEGETATION – Use scientific names of plants.				
Coc scientific names of plants.	Absolute %	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30</u> )	Cover	Species?	Status	Number of Dominant Species
1. Alnus rubra	<u>20</u>	Yes	<u>FAC</u>	That Are OBL, FACW, or FAC: <u>3</u> (A)
2. 3.				Total Number of Dominant
4.				Species Across All Strata: <u>5</u> (B)
Total Cover =2 <u>0</u>				<u>species / in oss / in otraca.</u>
Sapling/Shrub Stratum (Plot size: 30 )				Percent of Dominant Species
1. Acer circinatum	<u>20</u>	<u>Yes</u>	FAC	That Are OBL, FACW, or FAC: <u>60</u> (A/B)
2. <u>Ilex aquifolium</u>	20	Yes	FACU	Prevalence Index worksheet:
3.				Total % Cover of: Multiply by:
4.				OBL species $\underline{0}$ $\times$ 1 = $\underline{0}$ FACW species $\underline{0}$ $\times$ 2 = $\underline{00}$
5.				FAC species $0 \times 3 = 0$
Total Cover = <u>50</u> Herb Stratum (Plot size: <u>30</u> )				FACU species $\underline{0}$ x 4 = $\underline{0}$
1. Polystichum munitum	<u>30</u>	Yes	FACU	UPL species $\underline{0}$ x 5 = $\underline{0}$
2.	<u> </u>			Column Totals: $\underline{0}$ (A) $\underline{0}$ (B)
3.				Prevalence Index = B/A = 0
4.				Prevalence index – B/A – <u>0</u>
5. 6.				Hydrophytic Vegetation Indicators:
7.				1 –Rapid Test for Hydrophytic Vegetation
8.				X 2 – Dominance Test >50%
9.				<ul> <li>3 - Prevalence Index is ≤ 3.0<sup>1</sup></li> <li>4 - Morphological Adaptions<sup>1</sup> (Provide supporting</li> </ul>
10.				data in Remarks or on a separate sheet)
11.				5 – Wetland Non-Vascular Plants <sup>1</sup>
Total Cover = <u>30</u>				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 30 )  1. Rubus armeniacus  2.	40	Yes	FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Total Cover = <u>40</u>				
% Bare Ground in Herb Stratum: <u>0</u>				Hydrophytic Vegetation Present? Yes
Remarks:				

SOIL Sampling Point: <u>10</u>

	<u>Mat</u>	<u>rix</u>		Redox I	-eatures				
Depth	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks
(inches)									
<u>0-10</u>	10YR 4/2	<u>100</u>					Silt Loam		
<u>10-16</u>	10YR 4/3	<u>100</u>					Silt Loam		
<sup>1</sup> Type: C=	Concentration, D	=Depletion	, RM=Reduced Ma	atrix, CS=	Covered o	r Coated S	and Grains. 2	Location: Pl	L=Pore Lining, M=Matrix
Hydric So	il Indicators: (Ap	plicable to	all LRRs, unless ot	herwise ı	noted.)			Indicato	rs for Problematic Hydric Soils <sup>3</sup> :
	sol (A1)	'		ndy Redo				1	m Muck (A10)
	Epipedon (A2)			ipped Ma					l Parent Material (TF2)
	Histic (A3)					l (F1) (exc	ept MLRA 1)		ry Shallow Dark Surface (TF12)
	gen Sulfide (A4)		· · · · · · · · · · · · · · · · · · ·		ed Matrix		<b></b>		er (Explain in Remarks)
	ted Below Dark S	urface (A11		oleted Ma		(12)			er (Explain in Nemarks)
	Dark Surface (A1:	•			Surface (F	6)		3Indicat	ors of hydrophytic vegetation and
	Mucky Mineral (	•			ark Surface	,			d hydrology must be present, unless
	Gleyed Matrix (S				essions (F				ed or problematic.
				иох Бері	essions (Fo	9)			
Restrictiv Type:	e Layer (if preser	it):							
Depth (in	rhes): O							Hvdric	Soil Present? No
								,	
Remarks:									
HYDROLO	GY								
	Hydrology Indicat	ors:							
Primary In	dicators (minimu	m of one re	equired; check all	hat apply	<sub>/</sub> )			Secondary	Indicators (two or more required)
Surfac	e Water (A1)		Wa	ter-Staine	ed Leaves	(R9)		Water	-Stained Leaves (B9)(MLRA 1,2,4A,4B)
	Vater Table (A2)				RA 1,2,4A,				age Patterns (B10)
_	ition (A3)			Crust (B		aliu 4D)			eason Water Table (C2)
	· Marks (B1)		· <del></del>		rtebrates (	D12\			tion Visible on Aerial Imagery (C9)
	ent Deposits (B2)								
	•		•	_	Ifide Odor		ng Doots (C3)		orphic Position (D2)
	Deposits (B3)					_	ng Roots (C3)		w Aquitard (D3)
	Mat or Crust (B4)		· <del></del>		Reduced Ir		:1 (06)	·	eutral Test (D5)
	eposits (B5)				Reduction				Ant Mounds (D6)(LRR A)
	e Soil Cracks (B6)				tressed Pla		.RR A)	Frost-l	Heave Hummocks (D7)
	ation Visible on A	_	- · · · · · · · · · · · · · · · · · · ·	er (Expla	in in Rema	rks)			
	ely Vegetated Cor	icave Surfa	ce (B8)						
Field Obse			5 /:						
	ater Present? No	_	Depth (inc	•					
Saturation	ole Present? <u>No</u> n Present?           No	_	Depth (in Depth (in						
	pillary fringe)	2	Deptii (iii	ciies).			Wetland Hyd	rology Pres	ent? No
		ream gaug	e, monitoring well	aerial ph	notos, prev	ious inspe	ections), if availab	ole:	
	·		-	-		·			
Remarks:									

	n, Township, Rang relief (concave, con Lat: or this time of year ly disturbed?	nvex, none): <u>cc</u> 45.585104981	oncave Slo Long: <u>-122.</u> plain in Rema Are "Normal	<del></del>
SUMMARY OF FINDINGS – Attach site map show	ving sampling poi	nt locations,	transects, i	mportant features, etc.
Hydrophytic Vegetation Present? Yes				
Hydric Soil Present? <u>Yes</u>		la Aba (		
Wetland Hydrology Present? Yes		is the s	Sampled Area	within a Wetland? Yes
VEGETATION – Use scientific names of plants.				
	Absolute %	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30</u> )	Cover	Species?	Status	Number of Dominant Species
1. Alnus rubra	<u>20</u>	Yes	<u>FAC</u>	That Are OBL, FACW, or FAC: $\underline{4}$ (A)
2.				Total Number of Deminant
3. 4.				Total Number of Dominant Species Across All Strata: 4 (B)
Total Cover =20				Species Across Air Strata.
				Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: _30_)  1. Rubus spectabilis	40	Vec	EAC	That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2.	<u>40</u>	<u>Yes</u>	FAC	Prevalence Index worksheet:
3.				Total % Cover of: Multiply by:
4.				OBL species $\underline{0}$ x 1 = $\underline{0}$
5.				FACW species $\underline{0}$ x 2 = $\underline{00}$
Total Cover = <u>40</u>				FAC species $\underline{0}$ x 3 = $\underline{0}$ FACU species $\underline{0}$ x 4 = $\underline{0}$
Herb Stratum (Plot size: 30 )	20	.,	540	UPL species $\underline{0}$ $\times$ $5 = \underline{0}$
1. Geum macrophyllum	<u>30</u>	<u>Yes</u>	FAC	Column Totals: $\underline{0}$ (A) $\underline{0}$ (B)
2. Ranuculus repens 3.	<u>20</u>	<u>Yes</u>	<u>FAC</u>	
4.				Prevalence Index = $B/A = 0$
5.				
6.				Hydrophytic Vegetation Indicators:  1 –Rapid Test for Hydrophytic Vegetation
7.				X 2 – Dominance Test >50%
8.				$\frac{x}{2}$ 3 - Prevalence Index is $\leq 3.0^{1}$
9.				4 - Morphological Adaptions (Provide supporting
11.				data in Remarks or on a separate sheet)
Total Cover = <u>50</u>				5 – Wetland Non-Vascular Plants <sup>1</sup>
_				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: _30_)				<sup>1</sup> Indicators of hydric soil and wetland hydrology
1.				must be present, unless disturbed or problematic.
2.				
Total Cover = <u>0</u>				
% Bare Ground in Herb Stratum: <u>0</u>				Hydrophytic Vegetation Present? Yes
Remarks:	,		•	<del></del>

SOIL Sampling Point: 11

	<u>Mat</u>	<u>rix</u>		Redox F	-eatures				
Depth	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks
(inches)									
0-10	10YR 4/1	<u>80</u>	10YR 3/6	<u>20</u>	<u>C</u>	<u>M</u>	Silt Loam		
<u>10-16</u>	10YR 4/2	80	10YR 3/4	20	<u>c</u>	<u>M</u>	Silty Clay Loam		
			<del></del>			_			
1	Communication D	Danlatian	DNA Daduard NA	- tuit - CC - 4	<u> </u>	. C t l C	l C : 2 <sub>1</sub> -	DI	Daniel Linding M. Machalia
Type: C=	Concentration, D	=Depletior	, RM=Reduced M	atrix, CS=0	covered of	r Coated S	and Grains. Lo	cation: Pi	L=Pore Lining, M=Matrix
Hydric So	il Indicators: (Ap	olicable to	all LRRs, unless ot	herwise r	noted.)			Indicato	rs for Problematic Hydric Soils <sup>3</sup> :
Histor	sol (A1)		Sa	ndy Redo	x (S5)			2 cr	m Muck (A10)
	Epipedon (A2)			ripped Ma					l Parent Material (TF2)
	Histic (A3)			• •		(F1) (evc	ept MLRA 1)		ry Shallow Dark Surface (TF12)
	ogen Sulfide (A4)		· · · · · · · · · · · · · · · · · · ·	-	ed Matrix		ept with 1)		er (Explain in Remarks)
	ted Below Dark S	urface (A1:		-		(Г2)			lei (Explaili III Kelliaiks)
		•	· —	pleted Ma		<b>C</b> \		31	and of harden haden and the control
	Dark Surface (A12	•			Surface (F	•			ors of hydrophytic vegetation and dhydrology must be present, unless
	Mucky Mineral (				ark Surface				ed or problematic.
Sandy	Gleyed Matrix (S	4)	Re	dox Depr	essions (F8	3)		distarb	ed of problematic.
Restrictiv	e Layer (if preser	ıt):							
Type:									
Depth (in	ches): <u>0</u>							Hydric	Soil Present? Yes
Remarks:									
HYDROLO									
	Hydrology Indicat				,				
Primary Ir	idicators (minimu	m of one r	equired; check all	that apply	/)		3	secondary	Indicators (two or more required)
Surfac	e Water (A1)		Wa	ter-Staine	ed Leaves (	(B9)	_	Water	-Stained Leaves (B9)( <b>MLRA 1,2,4A,4B</b> )
High \	Vater Table (A2)		(е	xcept ML	RA 1,2,4A,	and 4B)	_	Draina	ge Patterns (B10)
Satura	ition (A3)		Salt	t Crust (B	11)		_	Dry-Se	eason Water Table (C2)
Water	· Marks (B1)		Aqı	uatic Inve	rtebrates (	B13)	_	Satura	tion Visible on Aerial Imagery (C9)
Sedim	ent Deposits (B2)		Нус	drogen Su	lfide Odor	(C1)		Geom	orphic Position (D2)
	Deposits (B3)		· · · · · · · · · · · · · · · · · · ·	_			ng Roots (C3)		w Aquitard (D3)
	Mat or Crust (B4)				Reduced Ir	_	• • •		eutral Test (D5)
	eposits (B5)				Reduction		nils (C6)		Ant Mounds (D6)(LRR A)
	e Soil Cracks (B6)				tressed Pla				Heave Hummocks (D7)
	ation Visible on A				in in Rema			11031-1	reave Hummocks (D7)
		_	- · · · · · · · · · · · · · · · · · · ·	iei (Expiai	III III NEIIIa	i K5)			
-	ely Vegetated Cor	icave Surra	ce (B8)						
Field Obse			Donth /in	shoc).					
	ater Present? <u>No</u> ble Present? No	=	Depth (ind Depth (ind	•					
	ole Present? <u>No</u> n Present? <u>Ye</u>			nches): 10					
	pillary fringe)	<u> </u>	Верин (п	iciic3j. 10			Wetland Hydro	logy Pres	ent? Yes
		ream gaug	e, monitoring well	, aerial ph	notos, prev	ious inspe	ections), if available	2:	
Remarks:									

Applicant/Owner: <u>McIntosh Ridge PRD, LLC</u> State Investigator(s): <u>Kevin Grosz/Eli Schmitz</u>	Section, Township, Rang Local relief (concave, cor A) Lat:  None vical for this time of year? ficantly disturbed? virally problematic?	nvex, none): <u>co</u> 45.585104981  Yes (if no, exp	ncave Slo Long: <u>-122.</u> Dlain in Rema Are "Normal (if needed, e	rks.) Circumstances" present? <u>Yes</u> xplain any answers in Remarks.)
VEGETATION – Use scientific names of plan  Tree Stratum (Plot size: 30 )  1. Alnus rubra  2.  3.  4.	Absolute % Cover 20	Dominant Species? Yes	Indicator Status FAC	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)  Total Number of Dominant Species Across All Strata: 5 (B)
Total Cover =2 <u>0</u>				
Sapling/Shrub Stratum (Plot size: 30 )				Percent of Dominant Species
1. Acer circinatum 2. Ilex aquifolium 3. 4. 5. Total Cover = 20  Herb Stratum (Plot size: 30) 1. Polystichum munitum 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. Total Cover = 50  Woody Vine Stratum (Plot size: 30) 1. Rubus armeniacus	<u>10</u> <u>10</u>	Yes Yes  Yes	FACU FACU	That Are OBL, FACW, or FAC: 60 (A/B)  Prevalence Index worksheet:
2. Total Cover = 2 <u>0</u> % Bare Ground in Herb Stratum: <u>0</u> Remarks:				Hydrophytic Vegetation Present? Yes
neniario.				

SOIL Sampling Point: 12

	<u>Mat</u>	rix		Redox I	<u>eatures</u>				
Depth	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks
(inches)	, ,		, ,		, ,				
0-10	10YR 4/2	100					Silt Loam		
<u>10-16</u>	10YR 4/3	100					Silt Loam		
10-10	<u>1011(4/3</u>	100					Silt Loain		
<sup>1</sup> Type: C-	-Concentration D	)=Denletion	, RM=Reduced M	atriv (S=1	overed o	r Coated S	and Grains 2	Location: Pl	_=Pore Lining, M=Matrix
Type. C	-concentration, E	-Вергеног	i, mvi–neddeed ivi	utilix, C5-	covered o	Couteus	ana Grams.	Location. 1	z-i ore ziming, ivi–ividerix
Hydric So	il Indicators: (Ap	plicable to	all LRRs, unless of	herwise ı	noted.)			Indicato	rs for Problematic Hydric Soils <sup>3</sup> :
Histo	sol (A1)		Sa	ndy Redo	x (S5)			2 cr	m Muck (A10)
· ·	Epipedon (A2)			ripped Ma					Parent Material (TF2)
	Histic (A3)					I /E1) /ove	on+ MIDA 1\		ry Shallow Dark Surface (TF12)
	, ,		· · · · · · · · · · · · · · · · · · ·	-			ept MLRA 1)		
	ogen Sulfide (A4)				ed Matrix	(F2)		Oth	er (Explain in Remarks)
Deple	eted Below Dark S	urface (A1	1)De	pleted M	atrix (F3)				
Thick	Dark Surface (A1	2)	Re	dox Dark	Surface (F	6)			ors of hydrophytic vegetation and
Sandy	/ Mucky Mineral (	(S1)	De	pleted Da	ark Surface	e (F7)			d hydrology must be present, unless
Sandy	Gleyed Matrix (S	64)	Re	dox Depr	essions (F	3)		disturb	ed or problematic.
	e Layer (if preser				•	<u>,                                      </u>			
Type:	e Layer (II preser	itj.							
	ah a a\. O							Hydric	Soil Present? No
Depth (in	cries): <u>u</u>							Tiyane.	our resent: No
Remarks:									
HYDROLO	GY								
Wetland I	Hydrology Indicat	tors:							
			equired; check all	that apply	<b>/</b> )			Secondary	Indicators (two or more required)
Curto	ce Water (A1)		\\/s	tor Ctains	ed Leaves	(DO)		Matan	-Stained Leaves (B9)( <b>MLRA 1,2,4A,4B</b> )
						` '			(
	Water Table (A2)				RA 1,2,4A	, and 4B)			ge Patterns (B10)
Satura	ation (A3)		Sal	t Crust (B:	L1)			Dry-Se	ason Water Table (C2)
Wate	r Marks (B1)		Aq	uatic Inve	rtebrates (	(B13)		Satura	tion Visible on Aerial Imagery (C9)
Sedim	ent Deposits (B2)	)	Hy	drogen Su	lfide Odor	(C1)		Geom	orphic Position (D2)
Drift [	Deposits (B3)		Ox	dized Rhi	zospheres	along Livi	ng Roots (C3)	Shallo	w Aquitard (D3)
	Mat or Crust (B4)		·		Reduced Ir	-	· ,		eutral Test (D5)
	Peposits (B5)				Reduction		oils (C6)		Ant Mounds (D6)(LRR A)
			<u></u>						
	ce Soil Cracks (B6)				tressed Pla		.RR A)	Frost-l	Heave Hummocks (D7)
Inund	ation Visible on A	erial Image	ery (B7)Oth	ner (Expla	in in Rema	ırks)			
Sparse	ely Vegetated Cor	ncave Surfa	ce (B8)						
Field Obs	ervations:								
Surface W	c. vac.os.		Donth (in	ches):					
Water Tal	/ater Present? <u>No</u>	<u> </u>	Deptii (iii				i i		
		_	Depth (in	ches):					
Saturation	/ater Present? <u>No</u>	<u>0</u>		•					
(includes ca	Vater Present? Note Present? Note Present? Note Present? Note Present? Note Present?	<u>0</u> <u>0</u>	Depth (in Depth (ir	ches):			Wetland Hyd		ent? <u>No</u>
(includes ca	Vater Present? Note Present? Note Present? Note Present? Note Present? Note Present?	<u>0</u> <u>0</u>	Depth (in	ches):	notos, prev	vious inspe			ent? <u>No</u>
(includes ca	Vater Present? Note Present? Note Present? Note Present? Note Present? Note Present?	<u>0</u> <u>0</u>	Depth (in Depth (ir	ches):	notos, prev	vious inspe			ent? <u>No</u>
(includes ca	Vater Present? Note Present? Note Present? Note Present? Note Present? Note Present?	<u>0</u> <u>0</u>	Depth (in Depth (ir	ches):	notos, prev	vious inspe			ent? <u>No</u>
(includes ca	Vater Present? Note Present? Note Present? Note Present? Note Present? Note Present?	<u>0</u> <u>0</u>	Depth (in Depth (ir	ches):	notos, prev	vious inspe			ent? <u>No</u>
(includes ca Describe I	Vater Present? Note Present? Note Present? Note Present? Note Present? Note Present?	<u>0</u> <u>0</u>	Depth (in Depth (ir	ches):	notos, prev	vious inspe			ent? <u>No</u>
(includes ca Describe I	Vater Present? Note Present? Note Present? Note Present? Note Present? Note Present?	<u>0</u> <u>0</u>	Depth (in Depth (ir	ches):	notos, prev	vious inspe			ent? <u>No</u>

Project/Site: <u>Dawson's Ridge</u> City/County: <u>Can</u>				Sampling Date: 10/25/2016
Applicant/Owner: McIntosh Ridge PRD, LLC State: W.		C O T4 N F	25	Sampling Point: <u>13</u>
	on, Township, Rang			(a) =
· · · · · · · · · · · · · · · · · · ·	relief (concave, con			ppe (%): <u>5</u>
Subregion (LRR): Northwest Forests & Coast (LRR A)		<u>45.58552921</u>	Long: <u>-122.4</u>	15613456 Datum: <u>WGS84</u>
Soil Map Unit Name: <u>PoD</u> NWI classification: <u>None</u>	-	2 V/:6	alata ta Bassa	ol - A
Are climatic/hydrologic conditions on the site typical fo		? <u>Yes</u> (If no, exp		
Are Vegetation, Soil, or Hydrology significant				Circumstances" present? Yes
Are Vegetation, Soil, or Hydrology naturally I	oroblematic?		(if needed, e	explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ving sampling noi	int locations	transects i	mnortant features, etc
Hydrophytic Vegetation Present? Yes	8 sab8 po.		transcetto, n	inportant routures, etc.
Hydric Soil Present? Yes				
Wetland Hydrology Present? Yes		Is the	Sampled Area	a within a Wetland? <u>Yes</u>
Remarks:				
VEGETATION – Use scientific names of plants.		T	T	T
Tree Christian (Blat size, 20.)	Absolute %	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ) 1.Alnus rubra	Cover <u>20</u>	Species? Yes	Status <u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
2.	20	163	IAC	That Are Obl., FACW, OF FAC.
3.				Total Number of Dominant
4.				Species Across All Strata: <u>4</u> (B)
Total Cover =2 <u>0</u>				
Sapling/Shrub Stratum (Plot size: _30_)				Percent of Dominant Species
1. Rubus spectabilis	<u>40</u>	<u>Yes</u>	<u>FAC</u>	That Are OBL, FACW, or FAC: 100 (A/B)
2.				Prevalence Index worksheet:
3.				Total % Cover of: Multiply by:  OBL species 0 x 1 = 0
4.				OBL species $\underline{0}$ $\times$ 1 = $\underline{0}$ FACW species $\underline{0}$ $\times$ 2 = $\underline{00}$
5. Total Cover =40				FAC species $\underline{0}$ $\times$ 3 = $\underline{0}$
Herb Stratum (Plot size: 30 )				FACU species $\underline{0}$ x 4 = $\underline{0}$
1. Geum macrophyllum	<u>30</u>	Yes	FAC	UPL species $\underline{0}$ x 5 = $\underline{0}$
2. Ranuculus repens	<u>20</u>	<u>Yes</u>	FAC	Column Totals: $\underline{0}$ (A) $\underline{0}$ (B)
3.	_			
4.				Prevalence Index = $B/A = 0$
5.				Hydrophytic Vegetation Indicators:
6. 7.				1 –Rapid Test for Hydrophytic Vegetation
8.				X 2 – Dominance Test >50%
9.				$3$ - Prevalence Index is $\leq 3.0^1$
10.				4 - Morphological Adaptions (Provide supporting
11.				data in Remarks or on a separate sheet) 5 – Wetland Non-Vascular Plants <sup>1</sup>
Total Cover = <u>50</u>				5 - Wetland Non-Vascular Plants Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
				Troblematic Tryarophytic regulation (Explain)
Woody Vine Stratum (Plot size: 30 )				<sup>1</sup> Indicators of hydric soil and wetland hydrology
1.				must be present, unless disturbed or problematic.
2.				
Total Cover = <u>0</u>				
% Bare Ground in Herb Stratum: <u>0</u>				Hydrophytic Vegetation Present? Yes
Remarks:	L	1	L	1 1 1 - 1

SOIL Sampling Point: 13

	<u>Mat</u>	<u>rix</u>		Redox F	-eatures				
Depth	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks
(inches)									
0-10	10YR 4/1	<u>80</u>	10YR 3/6	<u>20</u>	<u>C</u>	<u>M</u>	Silt Loam		
<u>10-16</u>	10YR 4/2	80	10YR 3/4	20	<u>c</u>	<u>M</u>	Silty Clay Loam		
			<del></del>			_			
1	Communication D	Danlatian	DNA Daduard NA	- tuit - CC - 4	<u> </u>	. C t l C	l C : 2 <sub>1</sub> -	DI	Daniel Linding M. Machalia
Type: C=	Concentration, D	=Depletior	, RM=Reduced M	atrix, CS=0	covered of	r Coated S	and Grains. Lo	cation: Pi	L=Pore Lining, M=Matrix
Hydric So	il Indicators: (Ap	olicable to	all LRRs, unless ot	herwise r	noted.)			Indicato	rs for Problematic Hydric Soils <sup>3</sup> :
Histor	sol (A1)		Sa	ndy Redo	x (S5)			2 cr	m Muck (A10)
	Epipedon (A2)			ripped Ma					l Parent Material (TF2)
	Histic (A3)			• •		(F1) (evc	ept MLRA 1)		ry Shallow Dark Surface (TF12)
	ogen Sulfide (A4)		· · · · · · · · · · · · · · · · · · ·	-	ed Matrix		ept with 1)		er (Explain in Remarks)
	ted Below Dark S	urface (A1:		-		(Г2)			lei (Explaili III Kelliaiks)
		•	· —	pleted Ma		<b>C</b> \		31	and of harden haden and the control
	Dark Surface (A12	•			Surface (F	•			ors of hydrophytic vegetation and dhydrology must be present, unless
	Mucky Mineral (				ark Surface				ed or problematic.
Sandy	Gleyed Matrix (S	4)	Re	dox Depr	essions (F8	3)		distarb	ed of problematic.
Restrictiv	e Layer (if preser	ıt):							
Type:									
Depth (in	ches): <u>0</u>							Hydric	Soil Present? Yes
Remarks:									
HYDROLO									
	Hydrology Indicat				,				
Primary Ir	idicators (minimu	m of one r	equired; check all	that apply	/)		3	secondary	Indicators (two or more required)
Surfac	e Water (A1)		Wa	ter-Staine	ed Leaves (	(B9)	_	Water	-Stained Leaves (B9)( <b>MLRA 1,2,4A,4B</b> )
High \	Vater Table (A2)		(е	xcept ML	RA 1,2,4A,	and 4B)	_	Draina	ge Patterns (B10)
Satura	ition (A3)		Salt	t Crust (B	11)		_	Dry-Se	eason Water Table (C2)
Water	· Marks (B1)		Aqı	uatic Inve	rtebrates (	B13)	_	Satura	tion Visible on Aerial Imagery (C9)
Sedim	ent Deposits (B2)		Нус	drogen Su	lfide Odor	(C1)		Geom	orphic Position (D2)
	Deposits (B3)		· · · · · · · · · · · · · · · · · · ·	_			ng Roots (C3)		w Aquitard (D3)
	Mat or Crust (B4)				Reduced Ir	_	• • •		eutral Test (D5)
	eposits (B5)				Reduction		nils (C6)		Ant Mounds (D6)(LRR A)
	e Soil Cracks (B6)				tressed Pla				Heave Hummocks (D7)
	ation Visible on A				in in Rema			11031-1	reave Hummocks (D7)
		_	- · · · · · · · · · · · · · · · · · · ·	iei (Expiai	III III NEIIIa	i K5)			
-	ely Vegetated Cor	icave Surra	ce (B8)						
Field Obse			Donth /in	shoc).					
	ater Present? <u>No</u> ble Present? No	=	Depth (ind Depth (ind	•					
	ole Present? <u>No</u> n Present? <u>Ye</u>			nches): 10					
	pillary fringe)	<u> </u>	Верин (п	iciic3j. 10			Wetland Hydro	logy Pres	ent? Yes
		ream gaug	e, monitoring well	, aerial ph	notos, prev	ious inspe	ections), if available	2:	
Remarks:									

	this time of year? oblematic?	nvex, none): <u>co</u> 45.58552921  Yes (if no, exp	ncave Slo Long: <u>-122.4</u> Dlain in Rema Are "Normal (if needed, e	rks.) Circumstances" present? <u>Yes</u> xplain any answers in Remarks.)
Tree Stratum (Plot size: _30_)  1. Alnus rubra 2. Acer macrophyllum 3. 4. Total Cover = 25	Absolute % Cover 10 15	Dominant Species? Yes Yes	Indicator Status <u>FAC</u> <u>FACU</u>	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  Total Number of Dominant Species Across All Strata: 6 (B)
Sapling/Shrub Stratum (Plot size: _30_)  1. Acer circinatum 2. Ilex aquifolium 3. Corylus cornuta 4. 5. Total Cover =40	5 10 15	<u>No</u> <u>Yes</u> <u>Yes</u>	FAC FACU FACU	Percent of Dominant Species That Are OBL, FACW, or FAC: 17 (A/B)  Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species 0 x 1 = 0  FACW species 0 x 2 = 00  FAC species 0 x 3 = 0
Herb Stratum (Plot size: _30_ )  1. Polystichum munitum  2.  3.  4.  5.  6.  7.  8.  9.  10.  11.  Total Cover = 25	<u>25</u>	Yes	FACU	FACU species $0$ x 4 = $0$ UPL species $0$ x 5 = $0$ Column Totals: $0$ (A) $0$ (B)  Prevalence Index = B/A = $0$ Hydrophytic Vegetation Indicators:  1 -Rapid Test for Hydrophytic Vegetation  2 - Dominance Test >50%  3 - Prevalence Index is $\leq 3.0^1$ 4 - Morphological Adaptions <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1.Rubus armeniacus 2. Total Cover = 50  % Bare Ground in Herb Stratum: 0  Remarks:	<u>50</u>	<u>Yes</u>	FACU	must be present, unless disturbed or problematic.  Hydrophytic Vegetation Present? No

SOIL Sampling Point: <u>14</u>

Depth   Color (moist)   SK   Color (moist)   SK   Type <sup>1</sup>   Loc <sup>2</sup>   Texture   Remarks		<u>Mat</u>	<u>rix</u>		Redox I	-eatures				
10-16 10/78 4/3 100 Silt Loam  Type: C-Concentration, D-Depletion, RM-Reduced Matrix, Cs-Covered or Coated Sand Grains.  Type: C-Concentration, D-Depletion, RM-Reduced Matrix, Cs-Covered or Coated Sand Grains.  Type: C-Concentration, D-Depletion, RM-Reduced Matrix, Cs-Covered or Coated Sand Grains.  Type: Cs-Concentration, D-Depletion, RM-Reduced Matrix, Cs-Covered or Coated Sand Grains.  Type: Cs-Concentration, D-Depletion, RM-Reduced Matrix, Cs-Covered or Coated Sand Grains.  Type: Cs-Concentration, D-Depletion, RM-Reduced Matrix, Cs-Covered or Coated Sand Grains.  Type: Cs-Concentration, D-Depletion, RM-Reduced Matrix, Cs-Covered or Coated Sand Grains.  Type: Cs-Concentration, D-Depletion, RM-Reduced Matrix, Cs-Covered or Coated Sand Grains.  Type: Cs-Concentration, D-Depletion, RM-Reduced Matrix, Cs-Covered or Coated Sand Grains.  Type: Cs-Concentration, D-Depletion, RM-Reduced Matrix, Cs-Covered or Coated Sand Grains.  Type: Cs-Concentration, D-Depletion, RM-Reduced Matrix, Cs-Covered or Coated Sand Grains.  Type: Cs-Concentration, D-Depletion, RM-Reduced Matrix, Cs-Covered or Coated Sand Grains.  Type: Cs-Concentration, D-Depletion, RM-Reduced Matrix, Cs-Covered Matr	Depth	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks
10-16 10YR 4/3 100 Silt Loam  Trype: L-Concentration, D-Expletion, RM-Reduced Matrix, CS-Covered or Coated Sand Grains. *Location** PL-Pore Lining, M-Matrix  Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*:  Histosco (IA1) Sandy Redox (SS) Siripped Matrix (SS) Ratc Histic (A3) Siripped Matrix (SS) Ratc Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1)  Loamy Mucky Mineral (F2) Query Shallow Dark Surface (F12)  Sandy Mucky Mineral (S1) Redox Dark Surface (F6)  Sandy Mucky Mineral (S1) Redox Dark Surface (F7)  Sandy Mucky Mineral (S1) Redox Dark Surface (F7)  Sandy Gleyed Matrix (S4) Redox Dark Surface (F7)  Sectricitive Layer (if present):  Type:  Wetand Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (two or more required)  Hydric Soil Present? No  Primary Indicators (minimum of one required):  Hydric Soil Present? No  Primary Indicators (minimum of one required):  Hydric Soil Present? No  Primary Indicators (minimum of one required):  Hydric Soil Present? No  Primary Indicators (minimum of one required):  Hydric Soil Present? No  Primary Indicators (minimum of one required):  Hydrogen Sulfide Odor (C1)  Diril Deposits (B2)  Ophthe Deposits (B3)  Ophthe Deposits (B3)  Ophthe Deposits (B3)  Presence of Reduced fron (C4)  Frost-Heave Hummocks (D7)  Depth (inches):  Sutrace Water Present? No  Depth (inches):  Depth (inches)	(inches)									
10-16 10YR 4/3 100 Silt Loam  Trype: L-Concentration, D-Expletion, RM-Reduced Matrix, CS-Covered or Coated Sand Grains. *Location** PL-Pore Lining, M-Matrix  Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*:  Histosco (IA1) Sandy Redox (SS) Siripped Matrix (SS) Ratc Histic (A3) Siripped Matrix (SS) Ratc Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1)  Loamy Mucky Mineral (F2) Query Shallow Dark Surface (F12)  Sandy Mucky Mineral (S1) Redox Dark Surface (F6)  Sandy Mucky Mineral (S1) Redox Dark Surface (F7)  Sandy Mucky Mineral (S1) Redox Dark Surface (F7)  Sandy Gleyed Matrix (S4) Redox Dark Surface (F7)  Sectricitive Layer (if present):  Type:  Wetand Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (two or more required)  Hydric Soil Present? No  Primary Indicators (minimum of one required):  Hydric Soil Present? No  Primary Indicators (minimum of one required):  Hydric Soil Present? No  Primary Indicators (minimum of one required):  Hydric Soil Present? No  Primary Indicators (minimum of one required):  Hydric Soil Present? No  Primary Indicators (minimum of one required):  Hydrogen Sulfide Odor (C1)  Diril Deposits (B2)  Ophthe Deposits (B3)  Ophthe Deposits (B3)  Ophthe Deposits (B3)  Presence of Reduced fron (C4)  Frost-Heave Hummocks (D7)  Depth (inches):  Sutrace Water Present? No  Depth (inches):  Depth (inches)	0-8	10YR 4/2	100					Silt Loam		
"Type: Ciconcentration, Dispetation, RMs-Reduced Matrix, CS-Covered or Coated Sand Grains." *Location: PLs-Pore Lining, MeMatrix  Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histors (A1)	10-16	10YR 4/3	100					Silt Loam		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)	<u> </u>	· · · · · · · · · · · · · · · · · · ·								
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)										
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)										
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)										
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)										
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)										
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)	1	C	Danlatian	DNA Dadesad NA			. C t l C			Daniel Linding M. Machalia
Histosol (A1) Histic Epipedon (A2) Stripped Matrix (56) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Popleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Sandy Mucky Mineral (IS1) Sandy Mucky Mineral (IS1) Sandy Mucky Mineral (IS1) Sandy Mucky Mineral (IS1) Depleted Dark Surface (F6) Sandy Mucky Mineral (IS1) Sandy Gleyed Matrix (54) Redox Depressions (F8)  Restrictive Layer (if present): Type: Type: Remarks:  WYDROLOGY  Wetland Hydrology Indicators: Primary indicators (minimum of one required; check all that apply)  Frimary indicators (minimum of one required; check all that apply)  Water Afa (IS1) Sextrace (MA12) Saturation (A3) Salt Crust (B11) Water Marks (B1) Sextrace (MA13) Aquatic Invertebrates (B13) Apdigit Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) Surface Soil Cracks (B6) Iron Depth (inches): Surface Water Mark (B2) Surface Water Marks (B3) Surface Water (B3) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) Surface Soil Cracks (B6) Iron Deposits (B5) Surface Water Marks (B3) Depth (inches): Surface Water Marks (B3) Depth (inches): Surface Water Marks (B3) Depth (inches): Surface Water Present? No Depth (inches): Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Type: C=	Concentration, L	=Depletior	i, Kivi=Reduced ivi	atrix, CS=0	Lovered of	r Coated S	and Grains.	Location: Pi	L=Pore Lining, M=Matrix
Histic Epipedon (A2)  Black Histic (A3)  Black Histic (A3)  Black Histic (A3)  Loamy Mucky Mineral (F1) (except MLRA 1)  Depleted Below Dark Surface (A11)  Depleted Matrix (F2)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S13)  Sandy Mucky Mineral (S13)  Depleted Dark Surface (F7)  Sandy Mucky Mineral (S13)  Depleted Dark Surface (F7)  Sandy Gleyed Matrix (S4)  Redox Depressions (F8)  Restrictive Layer (if present):  Type:  Depth (inches): 0  Remarks:    Water-Stained Leaves (B9)  High Water Table (A2)  Saturation (A3)  Salt Crust (B14)  Water Marks (B1)  Aquatic Invertebrates (B13)  Algal Mat or Crust (B4)  Iron Deposits (B3)  Algal Mat or Crust (B4)  Presence of Reduced Iron (C4)  Iron Deposits (B3)  Algal Mat or Crust (B4)  Presence of Reduced Iron (C4)  Iron Deposits (B3)  Algal Mat or Crust (B4)  Presence of Reduced Iron (C4)  Iron Deposits (B5)  Surface (B6)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface Water Present? No  Depth (inches):  Depth (inches):  Sustured or Ordinations (Treat MIRA 1,2 Apple (A)  Present Parent Material (TF2)  Very Shallow Dark Surface (F12)  Other (Explain in Remarks)  Physical Redox Surface (B12)  Wetland Hydrology must be present, unless disturbed or problematic.  Ret (F12)  Other (Explain in Remarks)  Physical Redox Surface (B1)  Water Table (F2)  Wetland Hydrology Present? No  Wetland Hydrology Present? No  Depth (Inches):  Wetland Hydrology Present? No  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Hydric So	il Indicators: (Ap	plicable to	all LRRs, unless ot	herwise ı	noted.)			Indicato	rs for Problematic Hydric Soils <sup>3</sup> :
Histic Epipedon (A2)  Black Histic (A3)  Black Histic (A3)  Black Histic (A3)  Loamy Mucky Mineral (F1) (except MLRA 1)  Depleted Below Dark Surface (A11)  Depleted Matrix (F2)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S13)  Sandy Mucky Mineral (S13)  Depleted Dark Surface (F7)  Sandy Mucky Mineral (S13)  Depleted Dark Surface (F7)  Sandy Gleyed Matrix (S4)  Redox Depressions (F8)  Restrictive Layer (if present):  Type:  Depth (inches): 0  Remarks:    Water-Stained Leaves (B9)  High Water Table (A2)  Saturation (A3)  Salt Crust (B14)  Water Marks (B1)  Aquatic Invertebrates (B13)  Algal Mat or Crust (B4)  Iron Deposits (B3)  Algal Mat or Crust (B4)  Presence of Reduced Iron (C4)  Iron Deposits (B3)  Algal Mat or Crust (B4)  Presence of Reduced Iron (C4)  Iron Deposits (B3)  Algal Mat or Crust (B4)  Presence of Reduced Iron (C4)  Iron Deposits (B5)  Surface (B6)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface Water Present? No  Depth (inches):  Depth (inches):  Sustured or Ordinations (Treat MIRA 1,2 Apple (A)  Present Parent Material (TF2)  Very Shallow Dark Surface (F12)  Other (Explain in Remarks)  Physical Redox Surface (B12)  Wetland Hydrology must be present, unless disturbed or problematic.  Ret (F12)  Other (Explain in Remarks)  Physical Redox Surface (B1)  Water Table (F2)  Wetland Hydrology Present? No  Wetland Hydrology Present? No  Depth (Inches):  Wetland Hydrology Present? No  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Histos	sol (A1)		Sa	ndv Redo	x (S5)			2 cr	m Muck (A10)
							l (F1) (exc	ent MIRA 1)	l ——	
Depleted Below Dark Surface (A12)		,		· · · · · · · · · · · · · · · · · · ·	-			ept MEIOT 1	ı ——	
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Secondary Gleyed Matrix (S4) Redox Depressions (F8)  Redox Depressions (F8)  Restrictive Layer (if present): Type: Depth (inches): 0 Remarks:    WDROLOGY   Hydric Soil Present? No   Matrix (S4)   Secondary Indicators:			urfaco (A1				(12)			ici (Explain ili Nemarks)
Sandy Mucky Mineral (S1)Depleted Dark Surface (F7)Sandy Gleyed Matrix (S4)Redox Depressions (F8) disturbed or problematic.  Restrictive Layer (if present): Type: Depth (inches): 0  Remarks:    Hydric Soil Present? No			•	•			۵)		3 <sub>Indicat</sub>	cars of hydrophytic vogotation and
Sandy Gleyed Matrix (S4) Redox Depressions (F8) disturbed or problematic.  Restrictive Layer (if present): Type: Depth (inches): 0  Remarks:    Hydric Soil Present? No    Wetland Hydrology Indicators:   Primary Indicators (minimum of one required; check all that apply)   Secondary Indicators (two or more required)   Surface Water (A1)		•	-			•	•			
Restrictive Layer (if present): Type: Depth (inches): 0  Remarks:    Hydric Soil Present? No   Depth (inches):   Hydric Soil Present? No   Depth (inches):   Hydric Soil Present? No   Hydric Soil Prese					•					
Type: Depth (inches): 0  Remarks:    Hydric Soil Present? No				ке	dox Depr	essions (F	3)		diota. 5	
National Present? No   Hydric Soil Present? No		e Layer (if preser	nt):							
IVDROLOGY   Wetland Hydrology Indicators:   Primary Indicators (minimum of one required; check all that apply)   Secondary Indicators (two or more required)   Sufface Water (A1)	· ·								I Israhiin (	Cail Dunnant I No
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (two or more required)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Salt Crust (B11)  Water-Stained Leaves (B9)  Water-Stained Leaves (B9)  Drainage Patterns (B10)  Saturation Visible on Aerial Imagery (C9)  Saturation Visible on Aerial Imagery (C9)  Saturation Presente One Aerial Imagery (C9)  Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface Water Present? No Depth (inches):  Water Table Present? No Depth (inches):  Water Table Present? No Depth (inches):  Wetland Hydrology Present? No Depth (inches):  Wetland Hydrology Present? No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Depth (in	ches): <u>0</u>							nyarics	Soil Present? <u>NO</u>
Wetland Hydrology Indicators:         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (two or more required)         Surface Water (A1)	Remarks:									
Wetland Hydrology Indicators:         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (two or more required)         Surface Water (A1)										
Wetland Hydrology Indicators:         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (two or more required)         Surface Water (A1)										
Wetland Hydrology Indicators:         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (two or more required)         Surface Water (A1)										
Wetland Hydrology Indicators:         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (two or more required)         Surface Water (A1)										
Wetland Hydrology Indicators:         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (two or more required)         Surface Water (A1)		.0.4								
Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (two or more required)  Surface Water (A1)										
Surface Water (A1)				aguirod: chock all	that annly	۸			Socondan	Indicators (two or more required)
High Water Table (A2)  Saturation (A3)  Salt Crust (B11)  Dry-Season Water Table (C2)  Saturation (Visible on Aerial Imagery (C9)  Drift Deposits (B2)  Magal Mat or Crust (B4)  Presence of Reduced Iron (C4)  Iron Deposits (B5)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface Water Table (A2)  Depth (inches):  Water Marks (B1)  Aquatic Invertebrates (B13)  Aquatic Invertebrates (B13)  Aquatic Invertebrates (B13)  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)  Frost-Heave Hummocks (D7)  Wetland Hydrology Present? No  Depth (inches):  Wetland Hydrology Present? No  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	•	·	iiii oi one i	· · · · · · · · · · · · · · · · · · ·		•			-	
						,	. ,			(
Water Marks (B1)Aquatic Invertebrates (B13)Saturation Visible on Aerial Imagery (C9)Sediment Deposits (B2)Hydrogen Sulfide Odor (C1)Geomorphic Position (D2)Shallow Aquitard (D3)Shallow Aquitard	High \	Vater Table (A2)		(e.	xcept ML	RA 1,2,4A,	and 4B)		Draina	ge Patterns (B10)
	Satura	ation (A3)		Salt	Crust (B	L1)			Dry-Se	eason Water Table (C2)
Drift Deposits (B3)	Water	· Marks (B1)		Aqı	uatic Inve	rtebrates (	B13)		Satura	tion Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)Presence of Reduced Iron (C4)FAC-Neutral Test (D5)Iron Deposits (B5)Recent Iron Reduction in Tilled Soils (C6)Raised Ant Mounds (D6)(LRR A)Surface Soil Cracks (B6)Stunted or Stressed Plants (D1)(LRR A)Frost-Heave Hummocks (D7)Noterial Imagery (B7)Other (Explain in Remarks)Sparsely Vegetated Concave Surface (B8)  Field Observations: Surface Water Present? Noterial Imagery (Noterial Im	Sedim	ent Deposits (B2)	)	Нус	drogen Su	lfide Odor	(C1)		Geom	orphic Position (D2)
Iron Deposits (B5)Recent Iron Reduction in Tilled Soils (C6)Raised Ant Mounds (D6)(LRR A)Surface Soil Cracks (B6)Stunted or Stressed Plants (D1)(LRR A)Frost-Heave Hummocks (D7)	Drift [	Deposits (B3)		Oxi	dized Rhi	zospheres	along Livi	ng Roots (C3)	Shallo	w Aquitard (D3)
Surface Soil Cracks (B6)Stunted or Stressed Plants (D1)(LRR A)Frost-Heave Hummocks (D7)Inundation Visible on Aerial Imagery (B7)Other (Explain in Remarks)Sparsely Vegetated Concave Surface (B8)Sparsely Vegetated Concave Surface (B8)	Algal I	Mat or Crust (B4)		Pre	sence of	Reduced Ir	on (C4)		FAC-N	eutral Test (D5)
Surface Soil Cracks (B6)Stunted or Stressed Plants (D1)(LRR A)Frost-Heave Hummocks (D7)Inundation Visible on Aerial Imagery (B7)Other (Explain in Remarks)Sparsely Vegetated Concave Surface (B8)Sparsely Vegetated Concave Surface (B8)	Iron D	eposits (B5)		Rec	ent Iron I	Reduction	in Tilled S	oils (C6)	Raised	Ant Mounds (D6)(LRR A)
Inundation Visible on Aerial Imagery (B7)Other (Explain in Remarks)Sparsely Vegetated Concave Surface (B8)  Field Observations: Surface Water Present? No Depth (inches): Water Table Present? No Depth (inches): Saturation Present? No Depth (inches): (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:										
Sparsely Vegetated Concave Surface (B8)  Field Observations: Surface Water Present? No Depth (inches): Water Table Present? No Depth (inches): Saturation Present? No Depth (inches): (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								,		,
Field Observations:  Surface Water Present? No Depth (inches):  Water Table Present? No Depth (inches):  Saturation Present? No Depth (inches):  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			_		(=:-		,			
Surface Water Present? No Depth (inches):  Water Table Present? No Depth (inches):  Saturation Present? No Depth (inches):  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	-		10010 30110	cc (50)						
Water Table Present? No Depth (inches):  Saturation Present? No Depth (inches):  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			)	Denth (inc	hes).					
Saturation Present? No Depth (inches):  (includes capillary fringe)  Wetland Hydrology Present? No  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			_	•	-					
(includes capillary fringe) Wetland Hydrology Present? No  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			_		•					
	(includes ca				<u> </u>			Wetland Hyd	rology Pres	ent? <u>No</u>
Remarks:	Describe F	Recorded Data (st	ream gaug	e, monitoring well	, aerial pł	notos, prev	ious inspe	ections), if availal	ble:	
Remarks:										
Remarks:										
	кетаrкs:									

Project/Site: <u>Dawson's Ridge</u> City/County: <u>Car</u>				Sampling Date: <u>10/25/2016</u>
Applicant/Owner: McIntosh Ridge PRD, LLC State: W				Sampling Point: <u>15</u>
	ion, Township, Rang			
· · · · · · · · · · · · · · · · · · ·	l relief (concave, co	nvex, none): <u>cc</u>	oncave Slo	ppe (%): <u>5</u>
Subregion (LRR): Northwest Forests & Coast (LRR A)		45.58568314	Long: <u>-122.4</u>	<u>15615602</u> Datum: <u>WGS84</u>
Soil Map Unit Name: <u>PoD</u> NWI classification: <u>None</u>				
Are climatic/hydrologic conditions on the site typical f		? Yes(if no, exp		
Are Vegetation, Soil, or Hydrology significan				Circumstances" present? <u>Yes</u>
Are Vegetation, Soil, or Hydrology naturally	problematic?		(if needed, e	xplain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	wing sampling poi	int locations,	transects, ii	nportant features, etc.
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes				
		Is the	Sampled Area	a within a Wetland? <u>Yes</u>
			•	
Remarks:				
<b>VEGETATION</b> – Use scientific names of plants.				
	Absolute %	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 )	Cover	Species?	Status	Number of Dominant Species
1. <u>Populus balsamifera</u> 2.	<u>20</u>	Yes	FAC	That Are OBL, FACW, or FAC: $\underline{4}$ (A)
3.				Total Number of Dominant
4.				Species Across All Strata: 4 (B)
Total Cover =2 <u>0</u>				_ ( ,
Sapling/Shrub Stratum (Plot size: _30_)				Percent of Dominant Species
1. Rubus spectabilis	<u>30</u>	Yes	FAC	That Are OBL, FACW, or FAC: 100 (A/B)
2.				Prevalence Index worksheet:
3.				Total % Cover of: Multiply by:
4.				OBL species $\underline{0}$ x 1 = $\underline{0}$ FACW species $\underline{0}$ x 2 = $\underline{00}$
5. Total Cover =30				FAC species $\underline{0}$ $\times$ $3 = \underline{0}$
Herb Stratum (Plot size: 30 )				FACU species $\underline{0}$ x 4 = $\underline{0}$
Geum macrophyllum	<u>30</u>	Yes	FAC	UPL species $\underline{0}$ x 5 = $\underline{0}$
2. Ranuculus repens	<u>20</u>	Yes	FAC	Column Totals: $\underline{0}$ (A) $\underline{0}$ (B)
3.				Prevalence Index = $B/A = 0$
4.				Frevalence index – b/A – <u>0</u>
5.				Hydrophytic Vegetation Indicators:
6. 7.				1 –Rapid Test for Hydrophytic Vegetation
8.				X 2 – Dominance Test >50%
9.				$\underline{}$ 3 - Prevalence Index is $\leq 3.0^1$
10.				4 - Morphological Adaptions <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
11.				5 – Wetland Non-Vascular Plants <sup>1</sup>
Total Cover = <u>50</u>				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 30 )				<sup>1</sup> Indicators of hydric soil and wetland hydrology
1.				must be present, unless disturbed or problematic.
2. Total Cover =0				
Total cover - <u>o</u>				
% Bare Ground in Herb Stratum: <u>0</u>				Hydrophytic Vegetation Present? Yes
Remarks:				

SOIL Sampling Point: <u>15</u>

	<u>Mat</u>	<u>rix</u>		<u>neuox r</u>	<u>eatures</u>				
Depth	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks
(inches)	, ,				, ,				
0-10	10YR 4/1	<u>80</u>	10YR 3/6	20	<u>c</u>	M	Silt Loam		
<u>10-16</u>	10YR 4/2	80	10YR 3/4	20	<u>c</u>	M	Silty Clay Loam		
10-10	101K 4/2	<u>80</u>	<u>1011 3/4</u>	20	<u> </u>	101	Sifty Clay Loain		
<sup>1</sup> Type: C=	-Concentration D	-Denletion	, RM=Reduced M	atriv (S=1	overed o	r Coated S	and Grains 21 c	ncation: Pl	=Pore Lining, M=Matrix
Type. C	-concentration, b	-Беріссіої	i, itivi–iteaacea ivi	utilix, C5–	covered o	Couteus	ana orams.	ocation. 1 i	-1 ore Emmy, wi-watrix
Hydric So	il Indicators: (App	plicable to	all LRRs, unless of	herwise r	noted.)			Indicato	rs for Problematic Hydric Soils <sup>3</sup> :
Histos	sol (A1)		Sa	ndy Redo	x (S5)			2 cr	n Muck (A10)
· · · · · · · · · · · · · · · · · · ·	Epipedon (A2)			ripped Ma					Parent Material (TF2)
	Histic (A3)		<del></del>	• •	` '	I /E1\ /ove	on+ MI DA 1\		ry Shallow Dark Surface (TF12)
	` ,		·	-			ept MLRA 1)		
	ogen Sulfide (A4)			-	ed Matrix	(F2)		Oth	er (Explain in Remarks)
	eted Below Dark S	•	l) <u>X</u> De	pleted Ma	atrix (F3)				
Thick	Dark Surface (A12	2)	Re	dox Dark	Surface (F	6)			ors of hydrophytic vegetation and
Sandy	/ Mucky Mineral (	S1)	De	epleted Da	ark Surface	e (F7)			hydrology must be present, unless
Sandy	, Gleyed Matrix (S	54)	Re	dox Depr	essions (F	8)		disturb	ed or problematic.
	re Layer (if presen			•	•	<u> </u>			
Type:	e Layer (ii presei	ıtj.							
	ah a a\. O							Hydric	Soil Present? Yes
Depth (in	ches): <u>u</u>							Tryunc.	on resent: res
Remarks:									
HYDKOLO	GY								
		tors:							
Wetland I	Hydrology Indicat		equired; check all	that apply	<i>(</i> )			Secondary	Indicators (two or more required)
<b>Wetland I</b> Primary In	Hydrology Indicat ndicators (minimu					(PO)			. , ,
Wetland In Primary InSurfac	Hydrology Indicat ndicators (minimu ce Water (A1)		Wa	iter-Staine	ed Leaves	` '		Water	-Stained Leaves (B9)(MLRA 1,2,4A,4B)
Wetland In Primary InSurfacHigh V	Hydrology Indicat ndicators (minimu ce Water (A1) Water Table (A2)		Wa	ter-Staine	ed Leaves	` '	-	Water Draina	-Stained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10)
Wetland In Primary InSurfacHigh V	Hydrology Indicat ndicators (minimu ce Water (A1)		Wa	iter-Staine	ed Leaves	` '	- - -	Water Draina	-Stained Leaves (B9)(MLRA 1,2,4A,4B)
Wetland I Primary In Surfac High V Satura	Hydrology Indicat ndicators (minimu ce Water (A1) Water Table (A2)		Wa ( <b>e</b> Sal	ter-Staine xcept ML t Crust (B2	ed Leaves	, and 4B)		Water Draina Dry-Se	-Stained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10)
Primary InSurfacHigh VSaturaWater	Hydrology Indicated indicators (minimulated Water (A1) Water Table (A2) ation (A3)	m of one re	Wa ( <b>e</b> Sal Aqı	xcept ML t Crust (B2 uatic Inve	ed Leaves RA 1,2,4A,	(B13)	- - - -	WaterDrainaDry-SeSatura	-Stained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2)
Wetland I Primary In Surfac High V Satura Water Sedim	Hydrology Indicated indicators (minimuse Water (A1) Water Table (A2) ation (A3) or Marks (B1) ment Deposits (B2)	m of one re	Wa ( <b>e</b> Sal: Aqı Hyo	xcept ML t Crust (B2 uatic Inve	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor	(B13) (C1)	- - - -	Water Draina Dry-Se Satura	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2)
Wetland I Primary In Surfac High V Satura Water Sedim Drift D	Hydrology Indicated indicators (minimuse Water (A1) Water Table (A2) action (A3) or Marks (B1) ment Deposits (B2) Deposits (B3)	m of one re	Wa (e Sal Aqı Hyo X_Ox	xcept ML t Crust (B2 uatic Invel drogen Su	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres	(B13) (C1) along Livi	- - - - - - - - - -	Water Draina Dry-Se Satura Geom Shallo	-Stained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3)
Wetland I Primary In Surfac High V Satura Water Sedim Drift D	Hydrology Indicated andicators (minimulated Water (A1) Water Table (A2) ation (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)	m of one re	Wa 	xcept ML t Crust (B2 uatic Invederagen Su drogen Su didized Rhi	ed Leaves  RA 1,2,4A,  L1)  rtebrates (  Ifide Odor  zospheres  Reduced Ir	(B13) (C1) along Livi	- - - - ng Roots (C3)	Water Draina Dry-Se Satura Geom Shallo	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) preprice Position (D2) w Aquitard (D3) eutral Test (D5)
Wetland I Primary In Surfac High V Satura Water Sedim Drift C Algal I	Hydrology Indicated andicators (minimulated Water (A1) Water Table (A2) Action (A3) In Marks (B1) In Marks (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	m of one re	Wa (e Sali Aqi Hyo YOx Pre	xcept ML t Crust (B2 uatic Inver drogen Su idized Rhi	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In	(B13) (C1) along Livi ron (C4) in Tilled S		Water Draina Dry-Se Satura Geom Shallo FAC-N Raised	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) preprice Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A)
Wetland I Primary In Surfac High V Satura Water Sedim Drift E Algal I Iron D Surfac	Hydrology Indicated andicators (minimulated Water (A1)) Water Table (A2) Action (A3) or Marks (B1) Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Ce Soil Cracks (B6)	m of one re	Wa	iter-Staine xcept ML t Crust (B: uatic Invertigation drogen Su idized Rhi esence of I cent Iron I	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction tressed Pla	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I		Water Draina Dry-Se Satura Geom Shallo FAC-N Raised	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) preprice Position (D2) w Aquitard (D3) eutral Test (D5)
Wetland I Primary In Surfac High V Satura Water Sedim Drift D Algal I Iron D Surfac Inunda	Hydrology Indicated andicators (minimulated Water (A1) Water Table (A2) Action (A3) In Marks (B1) In Marks (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) The Soil Cracks (B6) Action Visible on A	m of one ro	Wa	iter-Staine xcept ML t Crust (B: uatic Invertigation drogen Su idized Rhi esence of I cent Iron I	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I		Water Draina Dry-Se Satura Geom Shallo FAC-N Raised	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) preprice Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A)
Wetland I Primary In Surfac High V Satura Water Sedim Drift D Algal I Iron D Surfac Inunda	Hydrology Indicated andicators (minimulated Water (A1)) Water Table (A2) Action (A3) or Marks (B1) Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Ce Soil Cracks (B6)	m of one ro	Wa	iter-Staine xcept ML t Crust (B: uatic Invertigation drogen Su idized Rhi esence of I cent Iron I	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction tressed Pla	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I		Water Draina Dry-Se Satura Geom Shallo FAC-N Raised	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) preprice Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A)
Wetland I Primary In Surfac High V Satura Water Sedim Drift D Algal I Iron D Surfac Inunda	Hydrology Indicated andicators (minimulated Water (A1) Water Table (A2) Action (A3) In Marks (B1) In Marks (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) The Soil Cracks (B6) Action Visible on A	m of one ro	Wa	iter-Staine xcept ML t Crust (B: uatic Invertigation drogen Su idized Rhi esence of I cent Iron I	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction tressed Pla	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I		Water Draina Dry-Se Satura Geom Shallo FAC-N Raised	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) preprice Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A)
Wetland I Primary In Surfac High V Satura Water Sedim Drift E Algal I Iron D Surfac Inund: Sparse Field Obse	Hydrology Indicated indicators (minimulated Water (A1)) Water Table (A2) action (A3) In Marks (B1) In Marks (B3) Mat or Crust (B4) Deposits (B5) In Soil Cracks (B6) Action Visible on Action Visible Core	m of one re erial Image ncave Surfa	Wa	iter-Staine xcept ML t Crust (B2 uatic Inver- drogen Su idized Rhia esence of I cent Iron I inted or Si ner (Explain	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction tressed Pla	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I		Water Draina Dry-Se Satura Geom Shallo FAC-N Raised	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) preprice Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A)
Wetland I Primary In Surfac High V Satura Water Sedim Drift D Algal I Iron D Surfac Inunda Sparse Surface W	Hydrology Indicated indicators (minimulated Water (A1)) Water Table (A2) action (A3) In Marks (B1) In Marks (B3) Mat or Crust (B4) Deposits (B5) De Soil Cracks (B6) action Visible on Action Visible on Action Servations:	m of one re erial Image ncave Surfa	Wa	iter-Staine xcept ML t Crust (B3 uatic Inveited Rhi issence of I cent Iron I inted or St ner (Explain	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction tressed Pla	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I		Water Draina Dry-Se Satura Geom Shallo FAC-N Raised	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) preprice Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A)
Wetland I Primary In Surfac High V Satura Water Sedim Drift D Algal I Iron D Surfac Inunda Sparse Surface W Water Tab	Hydrology Indicated andicators (minimulated Water (A1) Water Table (A2) Action (A3) Fr Marks (B1) Deposits (B3) Mat or Crust (B4) Deposits (B5) Deposits (B5) Deposits (B6) Action Visible on Ac	erial Image ncave Surfa	Wa	iter-Staine xcept ML t Crust (B3 uatic Inveited Rhi issence of I cent Iron I inted or St ner (Explain	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction tressed Platin in Rema	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	ng Roots (C3) oils (C6) .RR A)	Water Draina Dry-Se Satura Geom Shallo FAC-N Raised Frost-I	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) preprice Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A) Heave Hummocks (D7)
Wetland I Primary In Surfac High V Satura Water Sedim Drift D Algal I Iron D Surfac Inunda Sparse Surface W Water Tak Saturation (includes ca	Hydrology Indicated andicators (minimulated Water (A1) Water Table (A2) Action (A3) In Marks (B1) In Marks (B1) In Marks (B3) Mat or Crust (B4) Deposits (B5) In See Soil Cracks (B6) In Action Visible on Action	erial Image ncave Surfa	Wa	iter-Staine xcept ML t Crust (B3 uatic Inveited Rhi issence of I cent Iron I inted or St ner (Explain ches): ches):	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction cressed Platin in Rema	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	ng Roots (C3) oils (C6) RR A)  Wetland Hydro	Water Draina Dry-Se Satura Geom Shallo FAC-N Raised Frost-l	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) preprice Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A) Heave Hummocks (D7)
Wetland I Primary In Surfac High V Satura Water Sedim Drift D Algal I Iron D Surfac Inunda Sparse Surface W Water Tak Saturation (includes ca	Hydrology Indicated andicators (minimulated Water (A1) Water Table (A2) Action (A3) In Marks (B1) In Marks (B1) In Marks (B3) Mat or Crust (B4) Deposits (B5) In See Soil Cracks (B6) In Action Visible on Action	erial Image ncave Surfa	Wa	iter-Staine xcept ML t Crust (B3 uatic Inveited Rhi issence of I cent Iron I inted or St ner (Explain ches): ches):	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction cressed Platin in Rema	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	ng Roots (C3) oils (C6) .RR A)	Water Draina Dry-Se Satura Geom Shallo FAC-N Raised Frost-l	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) preprice Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A) Heave Hummocks (D7)
Wetland I Primary In Surfac High V Satura Water Sedim Drift C Algal I Iron D Surfac Inunda Sparse Surface W Water Tak Saturation (includes ca	Hydrology Indicated andicators (minimulated Water (A1) Water Table (A2) Action (A3) In Marks (B1) In Marks (B1) In Marks (B3) Mat or Crust (B4) Deposits (B5) In See Soil Cracks (B6) In Action Visible on Action	erial Image ncave Surfa	Wa	iter-Staine xcept ML t Crust (B3 uatic Inveited Rhi issence of I cent Iron I inted or St ner (Explain ches): ches):	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction cressed Platin in Rema	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	ng Roots (C3) oils (C6) RR A)  Wetland Hydro	Water Draina Dry-Se Satura Geom Shallo FAC-N Raised Frost-l	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) preprice Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A) Heave Hummocks (D7)
Wetland I Primary In Surfac High V Satura Water Sedim Drift D Algal I Iron D Surfac Inunda Sparse Field Obse Surface W Water Tak Saturation (includes ca Describe F	Hydrology Indicated andicators (minimulated Water (A1) Water Table (A2) Action (A3) In Marks (B1) In Marks (B1) In Marks (B3) Mat or Crust (B4) Deposits (B5) In See Soil Cracks (B6) In Action Visible on Action	erial Image ncave Surfa	Wa	iter-Staine xcept ML t Crust (B3 uatic Inveited Rhi issence of I cent Iron I inted or St ner (Explain ches): ches):	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction cressed Platin in Rema	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	ng Roots (C3) oils (C6) RR A)  Wetland Hydro	Water Draina Dry-Se Satura Geom Shallo FAC-N Raised Frost-l	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) preprice Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A) Heave Hummocks (D7)
Wetland I Primary In Surfac High V Satura Water Sedim Drift C Algal I Iron D Surfac Inunda Sparse Surface W Water Tak Saturation (includes ca	Hydrology Indicated andicators (minimulated Water (A1) Water Table (A2) Action (A3) In Marks (B1) In Marks (B1) In Marks (B3) Mat or Crust (B4) Deposits (B5) In See Soil Cracks (B6) In Action Visible on Action	erial Image ncave Surfa	Wa	iter-Staine xcept ML t Crust (B3 uatic Inveited Rhi issence of I cent Iron I inted or St ner (Explain ches): ches):	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction cressed Platin in Rema	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	ng Roots (C3) oils (C6) RR A)  Wetland Hydro	Water Draina Dry-Se Satura Geom Shallo FAC-N Raised Frost-l	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) preprice Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A) Heave Hummocks (D7)
Wetland I Primary In Surfac High V Satura Water Sedim Drift D Algal I Iron D Surfac Inunda Sparse Field Obse Surface W Water Tak Saturation (includes ca Describe F	Hydrology Indicated andicators (minimulated Water (A1) Water Table (A2) Action (A3) In Marks (B1) In Marks (B1) In Marks (B3) Mat or Crust (B4) Deposits (B5) In See Soil Cracks (B6) In Action Visible on Action	erial Image ncave Surfa	Wa	iter-Staine xcept ML t Crust (B3 uatic Inveited Rhi issence of I cent Iron I inted or St ner (Explain ches): ches):	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction cressed Platin in Rema	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	ng Roots (C3) oils (C6) RR A)  Wetland Hydro	Water Draina Dry-Se Satura Geom Shallo FAC-N Raised Frost-l	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) preprice Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A) Heave Hummocks (D7)
Wetland I Primary In Surfac High V Satura Water Sedim Drift D Algal I Iron D Surfac Inunda Sparse Field Obse Surface W Water Tak Saturation (includes ca Describe F	Hydrology Indicated andicators (minimulated Water (A1) Water Table (A2) Action (A3) In Marks (B1) In Marks (B1) In Marks (B3) Mat or Crust (B4) Deposits (B5) In See Soil Cracks (B6) In Action Visible on Action	erial Image ncave Surfa	Wa	iter-Staine xcept ML t Crust (B3 uatic Inveited Rhi issence of I cent Iron I inted or St ner (Explain ches): ches):	ed Leaves RA 1,2,4A, L1) rtebrates ( Ifide Odor zospheres Reduced In Reduction cressed Platin in Rema	(B13) (C1) along Livi ron (C4) in Tilled S ants (D1)(I	ng Roots (C3) oils (C6) RR A)  Wetland Hydro	Water Draina Dry-Se Satura Geom Shallo FAC-N Raised Frost-l	restained Leaves (B9)(MLRA 1,2,4A,4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) preprice Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A) Heave Hummocks (D7)

	this time of year? oblematic?	nvex, none): <u>co</u> 45.58568314  P Yes (if no, exp	ncave Slo Long: <u>-122.4</u> Dlain in Rema Are "Normal (if needed, e transects, in	rks.) Circumstances" present? <u>Yes</u> xplain any answers in Remarks.)
VEGETATION – Use scientific names of plants.  Tree Stratum (Plot size: _30_) 1.Alnus rubra 2. Acer macrophyllum 3. 4.  Total Cover =30	Absolute % Cover  15 15	Dominant Species? Yes <u>Yes</u>	Indicator Status <u>FAC</u> FACU	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)  Total Number of Dominant Species Across All Strata: 7 (B)
Sapling/Shrub Stratum (Plot size: 30 )  1. Acer circinatum 2. Corylus cornuta 3. Ilex aqualifolium 4. 5. Total Cover =60	20 25 15	Yes Yes Yes	FAC FACU FACU	Percent of Dominant Species   That Are OBL, FACW, or FAC:
Herb Stratum (Plot size: <u>30</u> )  1. <u>Polystichum munitum</u> 2.  3.  4.  5.  6.  7.  8.  9.  10.  11.  Total Cover = <u>30</u> Woody Vine Stratum (Plot size: <u>30</u> )	<u>30</u>	Yes	FACU	FACU species $0$ x 4 = $0$ UPL species $0$ x 5 = $0$ Column Totals: $0$ (A) $0$ (B)  Prevalence Index = B/A = $0$ Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test >50% 3 - Prevalence Index is $\leq 3.0^1$ 4 - Morphological Adaptions (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants Problematic Hydrophytic Vegetation (Explain)
1.Rubus armeniacus 2. Total Cover =30  % Bare Ground in Herb Stratum: 0  Remarks:	<u>30</u>	<u>Yes</u>	FAC	must be present, unless disturbed or problematic.  Hydrophytic Vegetation Present? No

SOIL Sampling Point: <u>16</u>

	<u>Mat</u>	<u>rix</u>		Redox I	eatures				
Depth	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks
(inches)	,		, ,		, ,				
0-8	10YR 4/2						Silt Loam		
<u>10-16</u>	10YR 4/3						Silt Loam		
10-10	101K 4/3						Silt Loain		
<sup>1</sup> Typo: C-	-Concontration F	)=Doplotion	, RM=Reduced Ma	triv CS-	Covered o	r Coatod S	and Grains 2	Location: DI	L=Pore Lining, M=Matrix
Type. C-	-Concentration, L	-Depletioi	i, Kivi–Reduced ivid	itiix, C3–1	covered of	Coateu 3	and Granis.	LUCALIUII. FI	L-FOIE LITTING, IVI-IVIALITY
Hydric So	il Indicators: (Ap	plicable to	all LRRs, unless ot	herwise ı	noted.)			Indicato	rs for Problematic Hydric Soils <sup>3</sup> :
Histos	sol (A1)		Sa	ndy Redo	x (S5)			2 cr	n Muck (A10)
Histic	Epipedon (A2)		Sti	ipped Ma	trix (S6)			Rec	l Parent Material (TF2)
	Histic (A3)					l (F1) (exc	ept MLRA 1)	I	ry Shallow Dark Surface (TF12)
	, ,		· · · · · · · · · · · · · · · · · · ·				perment 1	I	
	ogen Sulfide (A4)				ed Matrix	(FZ)		0	er (Explain in Remarks)
	ted Below Dark S	•			atrix (F3)			2	
Thick	Dark Surface (A1	2)	Re	dox Dark	Surface (F	6)			ors of hydrophytic vegetation and
Sandy	/ Mucky Mineral (	(S1)	De	pleted Da	ark Surface	e (F7)			d hydrology must be present, unless
Sandy	Gleyed Matrix (S	54)	Re	dox Depr	essions (F8	3)		disturb	ed or problematic.
	e Layer (if prese			•					
Type:	e Layer (II presei	itj.							
	ah a a\. O							Hydric	Soil Present? No
Depth (in	cnes): <u>u</u>							Tiyuric .	Son Fresent: No
Remarks:									
HYDROLO	ιGΥ								
	Hydrology Indica	tors:							
			equired; check all	hat apply	/)			Secondary	Indicators (two or more required)
			· · · · · · · · · · · · · · · · · · ·		•	(DO)			
	ce Water (A1)				ed Leaves (	. ,			-Stained Leaves (B9)( <b>MLRA 1,2,4A,4B</b> )
High \	Water Table (A2)		(e	cept ML	RA 1,2,4A,	and 4B)		Draina	ge Patterns (B10)
Satura	ation (A3)		Salt	Crust (B:	L1)			Dry-Se	eason Water Table (C2)
Water	r Marks (B1)		Aqı	atic Inve	rtebrates (	B13)		Satura	tion Visible on Aerial Imagery (C9)
Sedim	ent Deposits (B2)	)	Hyd	rogen Su	lfide Odor	(C1)		Geom	orphic Position (D2)
· ·	Deposits (B3)	'	•	-			ng Roots (C3)		w Aquitard (D3)
	Mat or Crust (B4)		·		Reduced Ir	-	ig 1100t3 (C3)		
							(06)	· · · · · · · · · · · · · · · · · · ·	eutral Test (D5)
	eposits (B5)				Reduction		•		Ant Mounds (D6)( <b>LRR A</b> )
Surfac	ce Soil Cracks (B6)	)	Stu	nted or St	tressed Pla	nts (D1)( <b>I</b>	RR A)	Frost-l	Heave Hummocks (D7)
Inund	ation Visible on A	erial Image	ery (B7)Oth	er (Expla	in in Rema	rks)			
Sparse	ely Vegetated Cor	ncave Surfa	ce (B8)						
Field Obse	ervations:								
	/ater Present? No	)	Depth (inc	hes):					
	ole Present? N	_	Depth (inc	-					
	n Present? No		Depth (in	•					
	apillary fringe)	<u> </u>	2 op (				Wetland Hyd	rology Pres	ent? No
		ream gaug	e, monitoring well	aerial ph	notos, prev	ious inspe	ections), if availab	ole:	
	(0.	00	,		-,		,,		
Remarks:									
c.marks.									

	on, Township, Rang relief (concave, con Lat: or this time of year? ly disturbed? oroblematic?	nvex, none): <u>co</u> 45.58575071  P Yes (if no, exp	ncave Slo Long: <u>-122.4</u> Dlain in Rema Are "Normal (if needed, e <b>transects, i</b>	rks.) Circumstances" present? <u>Yes</u> xplain any answers in Remarks.)
VEGETATION – Use scientific names of plants.		1	1	
T (1) (2) (2)	Absolute %	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 )	Cover	Species?	Status	Number of Dominant Species That Are ORL FACIAL or FAC:
1. <u>Populus balsamifera</u> 2. <u>Thuja plicata</u>	<u>20</u> <u>10</u>	Yes Yes	<u>FAC</u> FAC	That Are OBL, FACW, or FAC: <u>5</u> (A)
3.	10	103	IAC	Total Number of Dominant
4.				Species Across All Strata: <u>6</u> (B)
Total Cover =3 <u>0</u>				_ ` _ ` `
Sapling/Shrub Stratum (Plot size: _30_)				Percent of Dominant Species
1. Rubus spectabilis	<u>40</u>	Yes	FAC	That Are OBL, FACW, or FAC: 83 (A/B)
2.				Prevalence Index worksheet:
3.				Total % Cover of: Multiply by:
4.				OBL species $\underline{0}$ x 1 = $\underline{0}$ FACW species $\underline{0}$ x 2 = $\underline{00}$
5. Total Cover =40				FAC species $\underline{0}$ $\times$ 3 = $\underline{0}$
Herb Stratum (Plot size: 30 )				FACU species $\underline{0}$ x 4 = $\underline{0}$
1. Geum macrophyllum	<u>30</u>	<u>Yes</u>	FAC	UPL species $\underline{0}$ x 5 = $\underline{0}$
2. Ranuculus repens	<u>20</u>	<u>Yes</u>	FAC	Column Totals: $\underline{0}$ (A) $\underline{0}$ (B)
3. Hedera helix	<u>20</u>	Yes	FACU	
4.				Prevalence Index = B/A = <u>0</u>
5.				Hydrophytic Vegetation Indicators:
6.				1 –Rapid Test for Hydrophytic Vegetation
7. 8.				X 2 – Dominance Test >50%
9.				$3$ - Prevalence Index is $\leq 3.0^1$
10.				4 - Morphological Adaptions (Provide supporting
11.				data in Remarks or on a separate sheet) 5 – Wetland Non-Vascular Plants <sup>1</sup>
Total Cover = 70				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 30 )				<sup>1</sup> Indicators of hydric soil and wetland hydrology
1.				must be present, unless disturbed or problematic.
2.				
Total Cover = <u>0</u>				
% Bare Ground in Herb Stratum: <u>0</u>				Hydrophytic Vegetation Present? Yes
Remarks:	I	1	<u> </u>	

SOIL Sampling Point: <u>17</u>

	<u>Mat</u>	<u>rix</u>		Redox I	<u>eatures</u>				
Depth	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks
(inches)									
0-10	10YR 4/1	<u>80</u>	10YR 3/6	20	<u>C</u>	<u>M</u>	Silt Loam		
<u>10-16</u>	10YR 4/2	<u>80</u>	10YR 3/4	20	<u>C</u>	<u>M</u>	Silty Clay Loam		
			<del></del>		_	_			
1	Communication D	Davidation	DNA Dadesad NA	- tuit - CC -			21.		Daniel Linding M. Machalia
Type: C=	-concentration, L	=Depletior	, RM=Reduced M	atrix, CS=0	Lovered of	Coated S	and Grains. Lo	ication: Pi	L=Pore Lining, M=Matrix
Hydric So	il Indicators: (Ap	plicable to	all LRRs, unless ot	herwise ı	noted.)			Indicato	rs for Problematic Hydric Soils <sup>3</sup> :
Histos	sol (A1)		Sa	ndy Redo	x (S5)			2 cr	m Muck (A10)
Histic	Epipedon (A2)		St	ripped Ma	itrix (S6)			Rec	l Parent Material (TF2)
Black	Histic (A3)		Lo	amy Muc	ky Minera	(F1) (exc	ept MLRA 1)	Ve	ry Shallow Dark Surface (TF12)
Hydro	ogen Sulfide (A4)		· · · · · · · · · · · · · · · · · · ·	-	ed Matrix			Oth	er (Explain in Remarks)
	ted Below Dark S	urface (A1		pleted Ma					, ,
	Dark Surface (A1	•	· —		Surface (F	6)		3Indicat	ors of hydrophytic vegetation and
	/ Mucky Mineral (	•			ark Surface	•			d hydrology must be present, unless
	Gleyed Matrix (S				essions (F8				ed or problematic.
•				.dox Bepi		-1			
Type:	e Layer (if preser	it):							
Depth (in	ches): ()							Hvdric	Soil Present? Yes
								, ,	
Remarks:									
HYDROLO	iGY								
	Hydrology Indicat	tors:							
			equired; check all	that apply	<b>(</b> )		9	Secondary	Indicators (two or more required)
	ce Water (A1)				ed Leaves (	'R9)		Water	-Stained Leaves (B9)(MLRA 1,2,4A,4B)
	Water Table (A2)				RA 1,2,4A,	,	-		age Patterns (B10)
			•	•		allu 4D)	-		
	ation (A3)		<del></del>	t Crust (B:	-	D4 2\	-		eason Water Table (C2)
	r Marks (B1)				rtebrates (	•	-		tion Visible on Aerial Imagery (C9)
	ent Deposits (B2)	1	· · · · · · · · · · · · · · · · · · ·	_	lfide Odor				orphic Position (D2)
	Deposits (B3)					_	ng Roots (C3)		w Aquitard (D3)
	Mat or Crust (B4)		<del></del>		Reduced Ir		-		eutral Test (D5)
Iron D	eposits (B5)		Red	ent Iron I	Reduction	in Tilled S	oils (C6)	Raised	Ant Mounds (D6)( <b>LRR A</b> )
Surfac	ce Soil Cracks (B6)		Stu	nted or St	tressed Pla	ınts (D1)( <b>L</b>	LRR A)	Frost-l	Heave Hummocks (D7)
Inund	ation Visible on A	erial Image	ry (B7)Oth	ner (Expla	in in Rema	rks)			
Sparse	ely Vegetated Cor	ncave Surfa	ce (B8)						
Field Obse	ervations:								
Surface W	/ater Present? No	<u>)</u>	Depth (in	ches):					
	ole Present? <u>No</u>	<u>0</u>	Depth (in	•					
	n Present? <u>Ye</u>	<u>!S</u>	Depth (ir	nches): 10			Wetland Hydro	logy Pres	ent? Ves
uncludes ca	apillary fringe)		a monitoring wall	aprial ak	otos pro	ious insn			<u> 103</u>
	Recorded Data (ct			, aciidi pi	iotos, piel	ious ilispe	ccions), ii avallable		
	Recorded Data (st	ream gaug	e, monitoring wen						
	Recorded Data (st	ream gaug	e, monitoring wen	•					
	Recorded Data (st	ream gaug	e, monitoring wen						
Describe F	Recorded Data (st	ream gaug	e, monitoring wen						
Describe F	Recorded Data (st	ream gaug	e, monitoring wen						

	, Township, Rang elief (concave, con Lat: this time of year? disturbed? oblematic?	nvex, none): <u>co</u> 45.58575071 ? <u>Yes</u> (if no, exp	ncave Slo Long: <u>-122.4</u> Dlain in Rema Are "Normal (if needed, e	rks.) Circumstances" present? <u>Yes</u> xplain any answers in Remarks.)
Hydrophytic Vegetation Present? No	.8 cap8 p.c.			
Hydric Soil Present? <u>No</u>				
Wetland Hydrology Present? <u>No</u>		Is the S	Sampled Area	within a Wetland? <u>No</u>
Remarks:  VEGETATION – Use scientific names of plants.				
VEGETATION OSC SCIENCING HARRES OF PIGNES.	Absolute %	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30</u> )	Cover	Species?	Status	Number of Dominant Species
1. Alnus rubra	<u>20</u>	Yes	FAC	That Are OBL, FACW, or FAC: $\underline{3}$ (A)
Acer macrophyllum     3.	<u>10</u>	<u>Yes</u>	<u>FACU</u>	Total Number of Dominant
4.				Species Across All Strata: <u>6</u> (B)
Total Cover =30				_ (2,
Sapling/Shrub Stratum (Plot size: _30_)				Percent of Dominant Species
1. Acer circinatum	<u>15</u>	<u>Yes</u>	FAC	That Are OBL, FACW, or FAC: 38 (A/B)
2. Corylus cornuta	<u>25</u>	Yes	FACU	Prevalence Index worksheet:
3. <u>Ilex aquilifolium</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>	Total % Cover of: Multiply by:
4.				OBL species $\underline{0}$ x 1 = $\underline{0}$ FACW species $\underline{0}$ x 2 = $\underline{00}$
5. Total Cover -55				FAC species $\underline{0}$ $\times 3 = \underline{0}$
Total Cover = <u>55</u> Herb Stratum (Plot size: <u>30</u> )				FACU species $\underline{0}$ x 4 = $\underline{0}$
1. Polystichum munitum	40	Yes	FACU	UPL species $\underline{0}$ x 5 = $\underline{0}$
2. Hedera helix	<u>20</u>	Yes	FACU	Column Totals: $\underline{0}$ (A) $\underline{0}$ (B)
				Prevalence Index = $B/A = 0$
3.				Trevalence mack = B/N = <u>o</u>
4. 5.				Hydrophytic Vegetation Indicators:
6.				1 –Rapid Test for Hydrophytic Vegetation
7.				2 – Dominance Test >50%
8.				3 - Prevalence Index is $\leq 3.0^1$ 4 - Morphological Adaptions <sup>1</sup> (Provide supporting
9.				data in Remarks or on a separate sheet)
10. 11.				5 – Wetland Non-Vascular Plants <sup>1</sup>
Total Cover =60				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
				1
Woody Vine Stratum (Plot size: <u>30</u> )  1. Rubus armeniacus	<u>30</u>	Voc	<u>FAC</u>	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2.	30	<u>Yes</u>	IAC	must be present, unless disturbed of problematic.
Total Cover =3 <u>0</u>				
Of Board Comment in Hook Streets and O				
% Bare Ground in Herb Stratum: <u>0</u>			]	Hydrophytic Vegetation Present? No
Remarks:				

SOIL Sampling Point: <u>18</u>

	<u>Mat</u>	<u>rix</u>		Redox I	-eatures				
Depth	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks
(inches)									
0-8	10YR 4/2						Silt Loam		
8-16	10YR 4/3						Silt Loam		
0 10	101K 4/5						Site Eddini		
<sup>1</sup> Type: C-	Concentration D	-Denletion	, RM=Reduced M	atriv (S=1	Covered o	r Coated S	and Grains 2	Location: P	L=Pore Lining, M=Matrix
Type: C	-concentration, b	-Depiction	i, mvi–neddeed ivi	atrix, C5-	covered o	Coated 3	ana Grams.	Location. 1	e-i ore eming, ivi–iviatrix
Hydric So	oil Indicators: (Ap	plicable to	all LRRs, unless of	herwise ı	noted.)			Indicato	rs for Problematic Hydric Soils <sup>3</sup> :
Histo	sol (A1)		Sa	ndy Redo	x (S5)			2 cı	n Muck (A10)
Histic	Epipedon (A2)			ripped Ma					Parent Material (TF2)
	Histic (A3)					(F1) (evc	ept MLRA 1)	I	ry Shallow Dark Surface (TF12)
	` ,			-			ept MENA 1)	I	
	ogen Sulfide (A4)				ed Matrix	(FZ)		Otr	er (Explain in Remarks)
	eted Below Dark S	•	1)De	pleted M	atrix (F3)			2	
Thick	Dark Surface (A1	2)	Re	dox Dark	Surface (F	6)			ors of hydrophytic vegetation and
Sandy	y Mucky Mineral (	S1)	De	pleted Da	ark Surface	e (F7)			d hydrology must be present, unless
Sand	Gleyed Matrix (S	54)	Re	dox Depr	essions (F	3)		disturb	ed or problematic.
					•				
	e Layer (if preser	11):							
Type:								Usalain	Cail Duacant 2 No
Depth (in	cnes): <u>U</u>							Hyuric	Soil Present? No
Remarks:									
HYDROLO	ncv								
	Hydrology Indicat	tors:							
			equired; check all	that annly	<i>(</i> )			Secondary	Indicators (two or more required)
		iiii oi one i					,		
Surfac	ce Water (A1)		Wa	ter-Staine	ed Leaves	(B9)		Water	-Stained Leaves (B9)( <b>MLRA 1,2,4A,4B</b> )
High \	Water Table (A2)		(e	xcept ML	RA 1,2,4A	and 4B)		Draina	ge Patterns (B10)
Satura	ation (A3)		Sal	t Crust (B	11)			Dry-Se	eason Water Table (C2)
	r Marks (B1)		·		rtebrates (	B13)			tion Visible on Aerial Imagery (C9)
	` '		<del></del> ·						<del>-</del> • • •
	nent Deposits (B2)		· ·	_	Ifide Odor		4		orphic Position (D2)
	Deposits (B3)		· · · · · · · · · · · · · · · · · · ·		•	-	ng Roots (C3)	Shallo	w Aquitard (D3)
Algal	Mat or Crust (B4)		Pre	sence of	Reduced Ir	on (C4)		FAC-N	eutral Test (D5)
Iron D	Deposits (B5)		Rec	ent Iron I	Reduction	in Tilled S	oils (C6)	Raised	Ant Mounds (D6)(LRR A)
Surfac	ce Soil Cracks (B6)				tressed Pla			Frost-	Heave Hummocks (D7)
	ation Visible on A				in in Rema		,		(27)
		_		ici (Expia	III III IXCIIIO	i K3j			
-	ely Vegetated Cor	icave Suria	ce (B8)						
	ervations:								
	/ater Present? No	<u>)</u>	Depth (in	-					
	ble Present? No	<u> </u>	Depth (in	•					
Saturation				ahaa\.					
	n Present? <u>No</u>	<u> </u>	Depth (in	tries):			Metland Use	rology Dree	ant? No
	n Present? <u>No</u> apillary fringe)						Wetland Hyd		ent? <u>No</u>
	n Present? <u>No</u> apillary fringe)		Depth (indepth)		notos, prev	vious inspe			ent? <u>No</u>
	n Present? <u>No</u> apillary fringe)				notos, prev	vious inspe			ent? <u>No</u>
Describe I	n Present? <u>No</u> apillary fringe)				notos, prev	vious inspe			ent? <u>No</u>
	n Present? <u>No</u> apillary fringe)				notos, prev	vious inspe			ent? <u>No</u>
Describe I	n Present? <u>No</u> apillary fringe)				notos, prev	vious inspe			ent? <u>No</u>
Describe I	n Present? <u>No</u> apillary fringe)				notos, prev	vious inspe			ent? <u>No</u>

	on, Township, Rang relief (concave, con Lat: or this time of year! ly disturbed? problematic?	nvex, none): <u>co</u> 45.58595201 ? <u>Yes</u> (if no, exp	Long: <u>-122.4</u> Dolain in Rema Are "Normal (if needed, e	rks.) Circumstances" present? <u>Yes</u> xplain any answers in Remarks.)
VEGETATION – Use scientific names of plants.				
	Absolute %	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 )	Cover	Species?	Status	Number of Dominant Species
1. <u>Populus balsamifera</u> 2. <u>Thuja plicata</u>	<u>20</u> <u>10</u>	Yes	<u>FAC</u> FAC	That Are OBL, FACW, or FAC: <u>5</u> (A)
3.	10	<u>Yes</u>	FAC	Total Number of Dominant
4.				Species Across All Strata: <u>5</u> (B)
Total Cover = 30				_ ` '
Sapling/Shrub Stratum (Plot size: _30_)				Percent of Dominant Species
1. Rubus spectabilis	<u>40</u>	Yes	FAC	That Are OBL, FACW, or FAC: 100 (A/B)
2.	_			Prevalence Index worksheet:
3.				Total % Cover of: Multiply by:
4.				OBL species $\underline{0}$ x 1 = $\underline{0}$ FACW species $\underline{0}$ x 2 = $\underline{00}$
5.				FAC species $0 \times 3 = 0$
Total Cover = 40  Herb Stratum (Plot size: 30 )				FACU species $\underline{0}$ x 4 = $\underline{0}$
1. Geum macrophyllum	<u>30</u>	Yes	FAC	UPL species $\underline{0}$ x 5 = $\underline{0}$
2. Ranuculus repens	<u>30</u> 20	Yes	FAC	Column Totals: $\underline{0}$ (A) $\underline{0}$ (B)
3.	_			
4.				Prevalence Index = B/A = <u>0</u>
5.				Hydrophytic Vegetation Indicators:
6.				1 –Rapid Test for Hydrophytic Vegetation
7. 8.				X 2 – Dominance Test >50%
9.				$3$ - Prevalence Index is $\leq 3.0^1$
10.				4 - Morphological Adaptions (Provide supporting
11.				data in Remarks or on a separate sheet) 5 – Wetland Non-Vascular Plants <sup>1</sup>
Total Cover = <u>50</u>				5 - Wetland Non-Vascular Flants Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
				Troblematic Hydrophytic Vegetation (Explain)
Woody Vine Stratum (Plot size: 30 )				<sup>1</sup> Indicators of hydric soil and wetland hydrology
1.				must be present, unless disturbed or problematic.
2.				
Total Cover = <u>0</u>				
% Bare Ground in Herb Stratum: <u>0</u>				Hydrophytic Vegetation Present? Yes
Remarks:	1	1		,

SOIL Sampling Point: 19

	Mat	<u>rix</u>		Redox I	<u>-eatures</u>				
Depth	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks
(inches)									
0-10	10YR 4/1	<u>80</u>	10YR 3/6	20	<u>C</u>	<u>M</u>	Silt Loam		
<u>10-16</u>	10YR 4/2	<u>80</u>	10YR 3/4	<u>20</u>	<u>c</u>	<u>M</u>	Silty Clay Loam		
			<del></del>						
1	Communication D	Davidation	DNA Daduard NA	- tuit - CC -	<u> </u>		21.		Dave Linius A4 Mahrin
Type: C=	-concentration, D	=Depletior	, RM=Reduced M	atrix, CS=0	covered of	r Coated S	and Grains. Lo	cation: Pi	L=Pore Lining, M=Matrix
Hydric So	il Indicators: (Ap	plicable to	all LRRs, unless ot	herwise ı	noted.)			Indicato	rs for Problematic Hydric Soils <sup>3</sup> :
Histos	sol (A1)		Sa	ndy Redo	x (S5)			2 cr	n Muck (A10)
Histic	Epipedon (A2)		St	ripped Ma	atrix (S6)			Rec	l Parent Material (TF2)
Black	Histic (A3)		Lo	amy Muc	ky Minera	l (F1) (exc	ept MLRA 1)	Ve	ry Shallow Dark Surface (TF12)
Hydro	ogen Sulfide (A4)		· · · · · · · · · · · · · · · · · · ·	-	ed Matrix			Oth	ner (Explain in Remarks)
	ted Below Dark S	urface (A1		pleted Ma					, ,
	Dark Surface (A12	•	· —		Surface (F	:6)		3Indicat	ors of hydrophytic vegetation and
	/ Mucky Mineral (	•			ark Surface	•			d hydrology must be present, unless
	Gleyed Matrix (S				essions (F8				ed or problematic.
•				.dox Bepi					
Type:	e Layer (if preser	it):							
Depth (in	ches). U							Hvdric	Soil Present? Yes
								,	
Remarks:									
HYDROLO	iGY								
	Hydrology Indicat	tors:							
			equired; check all	that apply	<b>/</b> )		9	Secondary	/ Indicators (two or more required)
	ce Water (A1)				ed Leaves (	(R9)			-Stained Leaves (B9)(MLRA 1,2,4A,4B)
	Water Table (A2)				RA 1,2,4A,	` '	-		age Patterns (B10)
			•	•		, and 40)	-		
	ation (A3)		<del></del>	t Crust (B:	•	(D42)	-		eason Water Table (C2)
	r Marks (B1)				rtebrates (	. ,	-		ntion Visible on Aerial Imagery (C9)
	ent Deposits (B2)	1	· · · · · · · · · · · · · · · · · · ·	_	Ifide Odor				orphic Position (D2)
	Deposits (B3)					_	ng Roots (C3)		w Aquitard (D3)
	Mat or Crust (B4)				Reduced Ir		-		eutral Test (D5)
	eposits (B5)		Red	ent Iron I	Reduction	in Tilled S	oils (C6)	Raisec	Ant Mounds (D6)( <b>LRR A</b> )
Surfac	ce Soil Cracks (B6)		Stu	nted or St	tressed Pla	ants (D1)( <b>I</b>	LRR A)	Frost-	Heave Hummocks (D7)
Inund	ation Visible on A	erial Image	ry (B7)Oth	ner (Expla	in in Rema	ırks)			
Sparse	ely Vegetated Cor	ncave Surfa	ce (B8)						
Field Obse	ervations:								
Surface W	/ater Present? No	<u>)</u>	Depth (in	ches):					
	ole Present? <u>No</u>	<u>0</u>	Depth (in	•					
	n Present? <u>Ye</u>	<u>!S</u>	Depth (ir	nches): 10			Wetland Hydro	logy Proc	ent? Ves
	apillary fringe)	roam cauc	a monitoring wall	aprial ak	notos pro	ious inse	ections), if available		<u> </u>
Describe t			c, monitoring well	, acııaı pi	iotos, prev	vious 1115P6	cononsy, ii avallable		
	Recorded Data (St	ream Baab							
	Recorded Data (St	rearri gaag							
Remarks:	Recorded Data (st								
Remarks:	Recorded Data (St								
Remarks:	Recorded Data (St								

	A on, Township, Rang relief (concave, con Lat: or this time of years tly disturbed? problematic?	nvex, none): <u>co</u> 45.58595201  P Yes (if no, exp	ncave Slo Long: <u>-122.4</u> Dlain in Rema Are "Normal (if needed, e	rks.) Circumstances" present? <u>Yes</u> xplain any answers in Remarks.)
VEGETATION – Use scientific names of plants.				
Tree Stratum (Plot size: 30 ) 1. Alnus rubra 2. Acer macrophyllum 3. 4.	Absolute % Cover 20 10	Dominant Species? Yes Yes	Indicator Status <u>FAC</u> <u>FACU</u>	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)  Total Number of Dominant Species Across All Strata: 8 (B)
Total Cover = <u>30</u>				
Sapling/Shrub Stratum (Plot size: 30 )  1. Acer circinatum  2. Corylus cornuta  3. Ilex aquifolium  4.  5. Total Cover =40  Herb Stratum (Plot size: 30 )  1. Polystichum munitum  2. Hedera helix  3.  4.  5.  6.  7.	15 15 10 40 35	Yes Yes Yes Yes Yes	FACU FACU FACU FACU FACU	Percent of Dominant Species
8. 9. 10. 11. Total Cover = 75  Woody Vine Stratum (Plot size: 30 ) 1. Rubus armeniacus 2. Total Cover = 0 % Bare Ground in Herb Stratum: 0	30	<u>Yes</u>	FAC	2 - Dominance Test >50% 3 - Prevalence Index is ≤ 3.0¹ 4 - Morphological Adaptions¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Remarks:				Hydrophytic Vegetation Present? No

SOIL Sampling Point: <u>20</u>

	<u>Mat</u>	<u>rix</u>		Redox I	eatures				
Depth	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks
(inches)									
0-8	10YR 4/2						Silt Loam		
8-16	10YR 4/3						Silt Loam		
0 10	101K 4/5						Sitt Eddini		
<sup>1</sup> Type: C-	Concentration F	)=Denletion	n, RM=Reduced Ma	triv CS=0	Covered o	r Coated S	and Grains 2	l ocation: Pl	L=Pore Lining, M=Matrix
Type. C	-concentration, E	-Depiction	i, mvi–nedaced ivid	iti ix, C5–1	covered of	Coateas	ana Granis.	Location. 11	e-i ore eming, ivi–iviatrix
Hydric So	il Indicators: (Ap	plicable to	all LRRs, unless ot	herwise ı	noted.)			Indicato	rs for Problematic Hydric Soils <sup>3</sup> :
Histo	sol (A1)		Sa	ndy Redo	x (S5)			2 cr	n Muck (A10)
Histic	Epipedon (A2)			ipped Ma					Parent Material (TF2)
	Histic (A3)					l (F1) (exc	ept MLRA 1)		ry Shallow Dark Surface (TF12)
	, ,		· · · · · · · · · · · · · · · · · · ·				spenier 1		
	ogen Sulfide (A4)				ed Matrix	(FZ)		0	er (Explain in Remarks)
	ted Below Dark S	•	•		atrix (F3)			2	
Thick	Dark Surface (A1	2)	Re	dox Dark	Surface (F	6)			ors of hydrophytic vegetation and
Sandy	Mucky Mineral (	(S1)	De	pleted Da	ark Surface	e (F7)			d hydrology must be present, unless
Sandy	Gleyed Matrix (S	54)	Re	dox Depr	essions (F8	3)		disturb	ed or problematic.
	e Layer (if prese			•	•	•			
Type:	e Layer (II presei	itj.							
	ah a a\. O							Hydric	Soil Present? No
Depth (in	cnes): <u>u</u>							Tiyuric .	Son Fresent: No
Remarks:									
Ī									
HYDROLO	GY								
	Hydrology Indica	tors:							
			equired; check all	hat apply	<b>/</b> )			Secondary	Indicators (two or more required)
	ce Water (A1)				ed Leaves	(DO)	<u> </u>		-Stained Leaves (B9)(MLRA 1,2,4A,4B)
	` '				,	. ,			(
High \	Water Table (A2)		(e	cept ML	RA 1,2,4A,	and 4B)		Draina	ge Patterns (B10)
Satura	ation (A3)		Salt	Crust (B:	L1)			Dry-Se	eason Water Table (C2)
Wate	r Marks (B1)		Aqı	atic Inve	rtebrates (	B13)		Satura	tion Visible on Aerial Imagery (C9)
Sedim	ent Deposits (B2)	)	Hyd	lrogen Su	lfide Odor	(C1)		Geom	orphic Position (D2)
	Deposits (B3)	•	•	-			ng Roots (C3)		w Aquitard (D3)
	Mat or Crust (B4)		·		Reduced Ir	-	is noots (cs)		
			<del></del>					·	eutral Test (D5)
	eposits (B5)				Reduction				Ant Mounds (D6)( <b>LRR A</b> )
Surfac	ce Soil Cracks (B6)		Stu	nted or St	tressed Pla	nts (D1)( <b>I</b>	.RR A)	Frost-l	Heave Hummocks (D7)
Inund	ation Visible on A	erial Image	ery (B7)Oth	er (Expla	in in Rema	rks)			
Sparse	ely Vegetated Cor	ncave Surfa	ce (B8)						
-	ervations:								
	/ater Present? <u>No</u>	0	Depth (inc	hes):			1		
	ole Present? N	_	Depth (inc	-			1		
	n Present? No		Depth (inc	•					
	apillary fringe)	<u>~</u>	2 op (				Wetland Hyd	rology Pres	ent? No
		ream gaug	e, monitoring well	aerial pł	notos, prev	ious inspe	ections), if availab	ole:	
	(0.	00	,	P.	-,		,,		
Remarks:									

## APPENDIX B - UPDATED WESTERN WASHINGTON WETLAND RATING FORMS

### **RATING SUMMARY – Western Washington**

Name of wetland (or ID #): Wetland A	Date of site visit: <u>9/29/2</u> 016
Rated by Eli Schmitz	_ Trained by Ecology? $\underline{\mathrm{X}}$ YesNo Date of training $\underline{4/29\text{-}30/15}$
HGM Class used for rating Slope	Wetland has multiple HGM classes?Y X_N
<u>-</u>	p ESRI Base Map - Imagery, Clark County GIS, and TRC GIS
OVERALL WETLAND CATEGORY	[V] (based on functions $X$ 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		H	ydrolo	ogic	Habitat				
					Circle	the ap	propi	iate ra	itings	
Site Potential	Н	М	<b>(</b>	Н	М	0	Н	М	(L)	
Landscape Potential	Н	M	L	Н	M	L	Н	М	(L)	
Value	Н	М	<u>(L)</u>	Н	М	(L)	Н	M	L	TOTAL
Score Based on Ratings		4			4			4		12

#### 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,L5 = 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	]	ζ

# 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	B1
Hydroperiods	H 1.2	B2
Plant cover of <b>dense</b> trees, shrubs, and herbaceous plants	S 1.3	B1
Plant cover of <b>dense</b> , <b>rigid</b> trees, shrubs, and herbaceous plants	S 4.1	
(can be added to figure above)		B1
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	B2
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		В3
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	B4
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	B5-7

#### **HGM Classification of Wetlands in Western Washington**

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

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8. 1. Are the water levels in the entire unit usually controlled by tides except during floods? (NO)- go to 2 **YES** – the wetland class is **Tidal Fringe** – go to 1.1 1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? **YES - Freshwater Tidal Fringe NO - Saltwater Tidal Fringe (Estuarine)** If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands. 2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. NO go to 3 **YES** - The wetland class is **Flats** If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands. 3. Does the entire wetland unit **meet all** of the following criteria? \_\_The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size: \_\_At least 30% of the open water area is deeper than 6.6 ft (2 m). (NO)- go to 4 **YES** - The wetland class is **Lake Fringe** (Lacustrine Fringe) 4. Does the entire wetland unit **meet all** of the following criteria? X The wetland is on a slope (*slope can be very gradual*). X The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks, X The water leaves the wetland **without being impounded**. **(YES)**- The wetland class is **Slope** NO - go to 5 NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep). 5. Does the entire wetland unit **meet all** of the following criteria? The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river.

\_\_The overbank flooding occurs at least once every 2 years.

(NO)- go to 6

**YES** – The wetland class is **Riverine** 

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

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? *This means that any outlet, if present, is higher than the interior of the wetland.* 

NO) go to 7

**YES** – The wetland class is **Depressional** 

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

NO- go to 8

**YES** - The wetland class is **Depressional** 

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

**NOTE**: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit	HGM class to
being rated	use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream	Depressional
within boundary of depression	
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other	Treat as
class of freshwater wetland	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.

SLOPE WETLANDS  Water Quality Functions - Indicators that the site functions to improve water quality		
S 1.0. Does the site have the potential to improve water quality?		
S 1.1. Characteristics of the average slope of the wetland: (a 1% slope has a 1 ft ver 100 ft of horizontal distance)	tical drop in elevation for every	
Slope is 1% or less	points = 3	
Slope is > 1%-2%	points = 2	
Slope is > 2%-5%	points = 1	
Slope is greater than 5%	points = 0	0
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use I	NRCS definitions): Yes = 3 No = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutant	s:	
Choose the points appropriate for the description that best fits the plants in the have trouble seeing the soil surface (>75% cover), and uncut means not graze than 6 in.	•	
Dense, uncut, herbaceous plants > 90% of the wetland area	points = 6	
Dense, uncut, herbaceous plants > ½ of area	points = 3	
Dense, woody, plants > ½ of area	points = 2	
Dense, uncut, herbaceous plants > 1/4 of area	points = 1	_
Does not meet any of the criteria above for plants	points = 0	3
Total for S 1	dd the points in the boxes above	3
Rating of Site Potential If score is:12 = H6-11 = MX_0-5 = L	Record the rating on th	ne first p

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

Rating of Landscape Potential If score is:  $X_1-2 = M_0 = L$ 

Record the rating on the first page

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

Record the rating on the first page

SLOPE WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosi	
S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. Stems of plants should be thick enough (usually > $^{1}/_{8}$ in), or dense enough, to remain erect during surface flows.	
Dense, uncut, <b>rigid</b> plants cover > 90% of the area of the wetland points = 1	_
All other conditions points = 0	0
Poting of Site Potential If some is: 1 - M. Y. O - I	the first was

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

Record the rating on the first page

S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess	_
surface runoff? Yes = 1 No = 0	1

Rating of Landscape Potential If score is:  $X_1 = M_2 = 0$ 

Record the rating on the first page

S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems:  The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or	
natural resources (e.g., houses or salmon redds)  Surface flooding problems are in a sub-basin farther down-gradient  No flooding problems anywhere downstream  points = 0	0
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = $2 \text{ No} = 0$	0
Total for S 6 Add the points in the boxes above	0

Rating of Value If score is: \_\_\_2-4 = H \_\_\_1 = M  $X_0$  = L

Record the rating on the first page

**NOTES and FIELD OBSERVATIONS:** 

#### These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. Aquatic bed 4 structures or more: points = 4 X Emergent 3 structures: points = 2 Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 X 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) 1 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 X Saturated only 1 type present: points = 0 \_\_Permanently flowing stream or river in, or adjacent to, the wetland X Seasonally flowing stream in, or adjacent to, the wetland Lake Fringe wetland 2 points Freshwater tidal wetland 2 points 1 H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species points = 2 5 - 19 species points = 1 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. None = 0 points Moderate = 2 points Low = 1 point All three diagrams in this row are **HIGH** = 3points 1

	1
H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i>	
Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).	
Standing snags (dbh > 4 in) within the wetland	
$\underline{X}$ Undercut banks are present for at least 6.6 ft (2 m) <b>and/or</b> 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 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)	1
Total for H 1 Add the points in the boxes above	5
Rating of Site Potential If score is:15-18 = H7-14 = M $\times$ _0-6 = L Record the rating on	
	the just page
H 2.0. Does the landscape have the potential to support the habitat functions of the site?	T
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).	
Calculate: % undisturbed habitat $0$ + [(% moderate and low intensity land uses)/2] $4$ = $4$ %	
If total accessible habitat is:	
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3	
20-33% of 1 km Polygon points = 2	
10-19% of 1 km Polygon points = 1	
< 10% of 1 km Polygon points = 0	0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	
Calculate: % undisturbed habitat $\frac{19}{19}$ + [(% moderate and low intensity land uses)/2] $\frac{6}{100}$ = $\frac{25}{100}$ %	
Undisturbed habitat > 50% of Polygon points = 3	
Undisturbed habitat 10-50% and in 1-3 patches points = 2	
Undisturbed habitat 10-50% and > 3 patches points = 1	
Undisturbed habitat < 10% of 1 km Polygon points = 0	1
H 2.3. Land use intensity in 1 km Polygon: If	
> 50% of 1 km Polygon is high intensity land use points = (-2)	
≤ 50% of 1 km Polygon is high intensity points = 0	-2
Total for H 2 Add the points in the boxes above	-1
Rating of Landscape Potential If score is:4-6 = H1-3 = M $\times \times $	the first page
H 3.0. Is the habitat provided by the site valuable to society?	<u> </u>
	1
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the highest score</i>	
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	
	1
Site does not meet any of the criteria above points = 0	
<b>Rating of Value</b> If score is: $2 = H$ $X_1 = M$ $0 = L$ Record the rating or	tne 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. <a href="http://wdfw.wa.gov/publications/00165/wdfw00165.pdf">http://wdfw.wa.gov/publications/00165/wdfw00165.pdf</a> or access the list from here: <a href="http://wdfw.wa.gov/conservation/phs/list/">http://wdfw.wa.gov/conservation/phs/list/</a>)

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*).
- X **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*).
- X 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**

Wotland Type	Catagory
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 <sup>≠</sup> Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area	
Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat
Yes = Category I No - Go to SC 1.2	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less	
than 10% cover of non-native plant species. (If non-native species are Spartina, see page 25)	Cat. I
— At least $\frac{3}{4}$ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-	
mowed grassland.	Cat. II
— The wetland has at least two of the following features: tidal channels, depressions with open water, or	
contiguous freshwater wetlands. Yes = Category I No = Category II	
SC 2.0. Wetlands of High Conservation Value (WHCV)	
SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High	
Conservation Value? Yes – Go to SC 2.2 No – Go to SC 2.3	Cat. I
SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
Yes = Category I No = Not a WHCV	
SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
Yes – Contact WNHP/WDNR and go to SC 2.4 (No) = Not a WHCV SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on	
their website?  Yes = Category I No= Not a WHCV	
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? Yes = <b>Is a Category I bog</b> No – Go to <b>SC 3.4</b>	
<b>NOTE:</b> If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the	
plant species in Table 4 are present, the wetland is a bog.	Cat. I
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar,	
western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the	
species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	
Yes = <b>Is a Category I bog</b> No <b>= Is not a bog</b>	

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</i>	
the wetland based on its functions.	
<ul> <li>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</li> </ul>	
age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.  — Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the	
species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).	
Yes = Category I No = Not a forested wetland for this section	Cat. I
C 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)	Cat. I
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	Cat. I
CC 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).	Cat. II
— 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 is larger than $^{1}/_{10}$ ac (4350 ft <sup>2</sup> )  Yes = Category I No = Category II	
SC 6.0. Interdunal Wetlands	
Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If you answer yes you will still need to rate the wetland based on its habitat functions.	
In practical terms that means the following geographic areas:	
— Long Beach Peninsula: Lands west of SR 103	
Grayland-Westport: Lands west of SR 105	Cat I
<ul><li>Ocean Shores-Copalis: Lands west of SR 115 and SR 109</li></ul>	
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	Cat. II
for the three aspects of function)? Yes = Category I No – Go to SC 6.2	
C 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	Cat. III
	Cut. III
C 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?	
	Cat. IV
C 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?	Cat. IV

Wetland name or number A

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# **RATING SUMMARY – Western Washington**

Name of wetland (or ID #): Wetland B	Date of site visit: <u>9/29/</u> 2016			
Rated by Eli Schmitz	_ Trained by Ecology? $\underline{\mathrm{X}}$ YesNo Date of training $\underline{4/29-30/15}$			
HGM Class used for rating Slope	Wetland has multiple HGM classes? Y $X$ N			
•	p ESRI Base Map - Imagery, Clark County GIS, and TRC GIS			

**OVERALL WETLAND CATEGORY** IV (based on functions X 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		H	ydrolo	ogic		Habita	at		
		Circle the appropriate ratings								
Site Potential	Н	М	<b>(</b>	Н	М	0	Н	М	(L)	
Landscape Potential	Н	M	L	Н	M	L	Н	М	(L)	
Value	Н	М	<u>(L)</u>	Н	М	(L)	Н	M	L	TOTAL
Score Based on Ratings		4			4			4		12

## 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,L5 = 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	2	X

# 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	B1
Hydroperiods	H 1.2	B2
Plant cover of <b>dense</b> trees, shrubs, and herbaceous plants	S 1.3	B1
Plant cover of <b>dense</b> , <b>rigid</b> trees, shrubs, and herbaceous plants	S 4.1	
(can be added to figure above)		B1
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	B2
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		В3
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	B4
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	\$ 3.3	B5-7

# **HGM Classification of Wetlands in Western Washington**

For questions 1-7, the criteria described must apply to the entire unit being rated. If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8. 1. Are the water levels in the entire unit usually controlled by tides except during floods? (NO)- go to 2 **YES** – the wetland class is **Tidal Fringe** – go to 1.1 1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? **NO - Saltwater Tidal Fringe (Estuarine) YES - Freshwater Tidal Fringe** If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands. 2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. NO go to 3 **YES** - The wetland class is **Flats** If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands. 3. Does the entire wetland unit **meet all** of the following criteria? \_\_The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size: \_\_At least 30% of the open water area is deeper than 6.6 ft (2 m). (NO)- go to 4 **YES** - The wetland class is **Lake Fringe** (Lacustrine Fringe) 4. Does the entire wetland unit **meet all** of the following criteria? X The wetland is on a slope (*slope can be very gradual*). X The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks, X The water leaves the wetland **without being impounded**. **(YES)**- The wetland class is **Slope** NO - go to 5 NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep). 5. Does the entire wetland unit **meet all** of the following criteria? The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that

\_\_The overbank flooding occurs at least once every 2 years.

stream or river.

NO- go to 6

**YES** – The wetland class is **Riverine** 

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

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? *This means that any outlet, if present, is higher than the interior of the wetland.* 

NO) go to 7

**YES** – The wetland class is **Depressional** 

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

NO- go to 8

**YES** – The wetland class is **Depressional** 

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

**NOTE**: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit	HGM class to
being rated	use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream	Depressional
within boundary of depression	
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other	Treat as
class of freshwater wetland	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.

SLOPE WETLANDS  Water Quality Functions - Indicators that the site functions to improve wat	er quality	
S 1.0. Does the site have the potential to improve water quality?		
S 1.1. Characteristics of the average slope of the wetland: (a 1% slope has a 1 ft vertical drop in elevation f 100 ft of horizontal distance)	for every	
Slope is 1% or less	points = 3	
Slope is > 1%-2%	points = 2	
Slope is > 2%-5%	points = 1	
Slope is greater than 5%	points = 0	0
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions): Yes	= 3 No = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants:		
Choose the points appropriate for the description that best fits the plants in the wetland. Dense me	ans you	
have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants than 6 in.	are higher	
Dense, uncut, herbaceous plants > 90% of the wetland area	points = 6	
Dense, uncut, herbaceous plants > ½ of area	points = 3	
Dense, woody, plants > ½ of area	points = 2	
Dense, uncut, herbaceous plants > 1/4 of area	points = 1	_
Does not meet any of the criteria above for plants	points = 0	2
Total for S 1 Add the points in the bo	xes above	2

Rating of Site Potential If score is: \_\_12 = H \_\_\_6-11 = M  $\underline{X}$ \_0-5 = L

Record the rating on the first page

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

Rating of Landscape Potential If score is:  $X_1-2 = M_0 = L$ 

Record the rating on the first page

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

Record the rating on the first page

SLOPE WETLANDS		
Hydrologic Functions - Indicators that the site functions to reduce flooding	ng and stream eros	ion
S 4.0. Does the site have the potential to reduce flooding and stream erosion?		
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the for the description that best fits conditions in the wetland. Stems of plants should be thick e in), or dense enough, to remain erect during surface flows.		
Dense, uncut, rigid plants cover > 90% of the area of the wetland	points = 1	
All other conditions	points = 0	0
Rating of Site Potential If score is: 1 = M X 0 = I	Record the rating on t	he first nage

S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess	
surface runoff? Yes = 1 No = 0	1

Rating of Landscape Potential If score is:  $X_1 = M_2 = 0$ 

Record the rating on the first page

S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems:  The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or	
natural resources (e.g., houses or salmon redds)  Surface flooding problems are in a sub-basin farther down-gradient  No flooding problems anywhere downstream  points = 0	0
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = $2 \text{ No} = 0$	0
Total for S 6 Add the points in the boxes above	0

Rating of Value If score is: \_\_\_2-4 = H \_\_\_1 = M  $X_0$  = L

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

#### These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. Aquatic bed 4 structures or more: points = 4 X Emergent 3 structures: points = 2 Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 X 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) 1 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 X Saturated only 1 type present: points = 0 \_\_Permanently flowing stream or river in, or adjacent to, the wetland $\boldsymbol{X}$ Seasonally flowing stream in, or adjacent to, the wetland Lake Fringe wetland 2 points Freshwater tidal wetland 2 points 1 H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species points = 2 5 - 19 species points = 1 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. None = 0 points Moderate = 2 points Low = 1 point All three diagrams in this row are **HIGH** = 3points 1

	Г			
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)				
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	0			
strata)	0			
Total for H 1 Add the points in the boxes above	4			
Rating of Site Potential If score is:15-18 = H7-14 = M $\times$ 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: % undisturbed habitat $0 + (\% \text{ moderate and low intensity land uses)/2} = 4 %$				
If total accessible habitat is:				
> $\frac{1}{3}$ (33.3%) of 1 km Polygon points = 3				
20-33% of 1 km Polygon points = 2				
10-19% of 1 km Polygon points = 1				
< 10% of 1 km Polygon points = 0	0			
·				
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.				
Calculate: % undisturbed habitat $\underline{19}$ + [(% moderate and low intensity land uses)/2] $\underline{6}$ = $\underline{25}$ %				
Undisturbed habitat > 50% of Polygon points = 3				
Undisturbed habitat 10-50% and in 1-3 patches points = 2				
Undisturbed habitat 10-50% and > 3 patches points = 1	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	-2			
Total for H 2 Add the points in the boxes above	-1			
Rating of Landscape Potential If score is:4-6 = H1-3 = M $X < 1 = L$ Record the rating on the	he first page			
H 3.0. Is the habitat provided by the site valuable to society?	-			
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score				
that applies to the wetland being rated.				
Site meets ANY of the following criteria: points = 2				
<ul> <li>— It has 3 or more priority habitats within 100 m (see next page)</li> </ul>				
<ul> <li>It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</li> </ul>				
It is mapped as a location for an individual WDFW priority species				
<ul> <li>It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</li> </ul>				
<ul> <li>It has been categorized as an important habitat site in a local or regional comprehensive plan, in a</li> </ul>				
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	1			
Rating of Value If score is: 2 = H X 1 = M 0 = I Record the rating on	the first page			

Rating of Value If score is: 2 = H X = 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. <a href="http://wdfw.wa.gov/publications/00165/wdfw00165.pdf">http://wdfw.wa.gov/publications/00165/wdfw00165.pdf</a> or access the list from here: <a href="http://wdfw.wa.gov/conservation/phs/list/">http://wdfw.wa.gov/conservation/phs/list/</a>)

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*).
- X **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*).
- X 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	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?  — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are 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-	Cat. I
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	Cat. II
SC 2.0. Wetlands of High Conservation Value (WHCV)  SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value?  Yes – Go to SC 2.2  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	Cat. I
SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
Yes – Contact WNHP/WDNR and go to SC 2.4 (No) = Not a WHCV SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website?  Yes = Category I (No) = Not a WHCV	
SC 3.0. Bogs	
Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or	
more of the first 32 in of the soil profile?  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.	Cat. I
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?  Yes = Is a Category I bog No = Is not a bog	

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>	
<ul> <li>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.</li> <li>Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the</li> </ul>	
species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).  Yes = Category I (No)= Not a forested wetland for this section	Cat. I
SC 5.0. Wetlands in Coastal Lagoons	
<ul> <li>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</li> <li>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</li> <li>The lagoon in which the wetland is located contains ponded water that is saline or brackish (&gt; 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)</li> </ul>	Cat. I
Yes – Go to <b>SC 5.1</b> (No)= <b>Not a wetland in a coastal lagoon</b>	
<ul> <li>5C 5.1. Does the wetland meet all of the following three conditions?</li> <li>— 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).</li> <li>— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-</li> </ul>	Cat. II
mowed grassland.  — The wetland is larger than $^{1}/_{10}$ ac (4350 ft <sup>2</sup> )  Yes = Category I No = Category II	
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:	
<ul> <li>Long Beach Peninsula: Lands west of SR 103</li> <li>Grayland-Westport: Lands west of SR 105</li> <li>Ocean Shores-Copalis: Lands west of SR 115 and SR 109</li> <li>Yes – Go to SC 6.1</li> </ul> No= not an interdunal wetland for rating	Cat I
C 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?  Yes = Category I  No – Go to SC 6.2	Cat. II
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?	Cat. III
Yes = Category III No = Category IV	Cat. IV

Wetland name or number  $\underline{B}$ 

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# **RATING SUMMARY – Western Washington**

Name of wetland (or ID #): Wetland C	Date of site visit: <u>9/29/</u> 2016
Rated by Eli Schmitz	Trained by Ecology? $\underline{X}$ YesNo Date of training $\underline{4/29-30}/15$
HGM Class used for rating Slope	Wetland has multiple HGM classes?Y X_N
	ut the figures requested (figures can be combined). ESRI Base Map - Imagery, Clark County GIS, and TRC GIS
OVERALL WETLAND CATEGORY	$\frac{V_{-}}{V_{-}}$ (based on functions $\frac{X_{-}}{V_{-}}$ or special characteristics)
1. Category of wetland based on FU	INCTIONS

X Category IV – Total score = 9 - 15										
FUNCTION		Improving Hydrologic Hall Water Quality			Habita	at				
					Circle	the ap	propi	riate ra	tings	
Site Potential	Н	М	0	Н	M	L	Н	М	(L)	
Landscape Potential	Н	M	L	Н	M	L	Н	М	<b>(</b>	
Value	Н	М	<u>(L)</u>	Н	М	(L)	Н	M	L	TOTAL
Score Based on Ratings		4			5			4		13

Category I – Total score = 23 - 27

Category II – Total score = 20 - 22

**Category III** – Total score = 16 - 19

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,L5 = 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		X	

# 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	B1
Hydroperiods	H 1.2	B2
Plant cover of <b>dense</b> trees, shrubs, and herbaceous plants	S 1.3	B1
Plant cover of <b>dense</b> , <b>rigid</b> trees, shrubs, and herbaceous plants	S 4.1	
(can be added to figure above)		B1
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	B2
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		В3
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	B4
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	B5-7

# **HGM Classification of Wetlands in Western Washington**

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you

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

probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8. 1. Are the water levels in the entire unit usually controlled by tides except during floods? (NO)- go to 2 **YES** – the wetland class is **Tidal Fringe** – go to 1.1 1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? **YES - Freshwater Tidal Fringe NO - Saltwater Tidal Fringe (Estuarine)** If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands. 2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. NO go to 3 **YES** - The wetland class is **Flats** If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands. 3. Does the entire wetland unit **meet all** of the following criteria? \_\_The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size: \_\_At least 30% of the open water area is deeper than 6.6 ft (2 m). (NO)- go to 4 **YES** - The wetland class is **Lake Fringe** (Lacustrine Fringe) 4. Does the entire wetland unit **meet all** of the following criteria? X The wetland is on a slope (*slope can be very gradual*). X The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks, X The water leaves the wetland **without being impounded**. **(YES)**- The wetland class is **Slope** NO – go to 5 NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep). 5. Does the entire wetland unit **meet all** of the following criteria? The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that

\_\_The overbank flooding occurs at least once every 2 years.

stream or river.

(NO)- go to 6

**YES** – The wetland class is **Riverine** 

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

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? *This means that any outlet, if present, is higher than the interior of the wetland.* 

NO go to 7

**YES** – The wetland class is **Depressional** 

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

NO- go to 8

**YES** - The wetland class is **Depressional** 

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

**NOTE**: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit	HGM class to		
being rated	use in rating		
Slope + Riverine	Riverine		
Slope + Depressional	Depressional		
Slope + Lake Fringe	Lake Fringe		
Depressional + Riverine along stream	Depressional		
within boundary of depression			
Depressional + Lake Fringe	Depressional		
Riverine + Lake Fringe	Riverine		
Salt Water Tidal Fringe and any other	Treat as		
class of freshwater wetland	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.

SLOPE WETLANDS  Water Quality Functions - Indicators that the site functions to improve water quality					
S 1.0. Does the site have the potential to improve water quality?					
S 1.1. Characteristics of the average slope of the wetland: (a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)					
Slope is 1% or less points = 3					
Slope is > 1%-2% points = 2					
Slope is > 2%-5% points = 1					
Slope is greater than 5% points = 0	0				
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions): Yes = 3 No = 0					
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants:					
Choose the points appropriate for the description that best fits the plants in the wetland. Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.					
Dense, uncut, herbaceous plants > 90% of the wetland area points = 6					
Dense, uncut, herbaceous plants > ½ of area points = 3					
Dense, woody, plants > ½ of area points = 2					
Dense, uncut, herbaceous plants > 1/4 of area points = 1					
Does not meet any of the criteria above for plants points = 0	2				
Total for S 1 Add the points in the boxes above	2				

Rating of Site Potential If score is: \_\_12 = H \_\_\_6-11 = M  $\underline{X}$ \_0-5 = L

Record the rating on the first page

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

Rating of Landscape Potential If score is:  $X_1-2 = M_0 = L$ 

Record the rating on the first page

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

Rating of Value If score is: \_\_\_2-4 = H \_\_\_1 = M  $X_0$  = L

Record the rating on the first page

SLOPE WETLANDS		
Hydrologic Functions - Indicators that the site functions to reduce flooding	and stream eros	ion
S 4.0. Does the site have the potential to reduce flooding and stream erosion?		
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the positive for the description that best fits conditions in the wetland. Stems of plants should be thick end in), or dense enough, to remain erect during surface flows.		
Dense, uncut, <b>rigid</b> plants cover > 90% of the area of the wetland	points = 1	
All other conditions	points = 0	1
Rating of Site Potential If score is: X 1 = M 0 = I	ecord the ratina on a	he first nage

S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff?  Yes = 1 No = 0	1

Rating of Landscape Potential If score is:  $X_1 = M_2 = 0$ 

Record the rating on the first page

S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems:  The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or	
natural resources (e.g., houses or salmon redds)  Surface flooding problems are in a sub-basin farther down-gradient  No flooding problems anywhere downstream  points = 2  points = 1  points = 0	0
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?  Yes = 2 No = 0	0
Total for S 6 Add the points in the boxes above	0

Rating of Value If score is: \_\_\_2-4 = H \_\_\_\_1 = M  $\underline{X}$  0 = L

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

#### These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. Aquatic bed 4 structures or more: points = 4 \_ \_Emergent 3 structures: points = 2 Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 X 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) 0 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 X Saturated only 1 type present: points = 0 ${f X}$ 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 1 H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species points = 2 5 - 19 species points = 1 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. 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.							
X Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).							
standing snags (dbh > 4 in) within the wetland							
X 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 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)	2						
Total for H 1 Add the points in the boxes above	5						
Rating of Site Potential If score is: 15-18 = H 7-14 = M 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: % undisturbed habitat $9 + (\% \text{ moderate and low intensity land uses})/2 = 9 %$							
If total accessible habitat is:							
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3							
20-33% of 1 km Polygon points = 2							
10-19% of 1 km Polygon points = 1							
· ·	0						
• • • • • • • • • • • • • • • • • • • •							
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.							
Calculate: % undisturbed habitat $\underline{20} + [(\% \text{ moderate and low intensity land uses})/2] \underline{6} = \underline{26} \%$							
Undisturbed habitat > 50% of Polygon points = 3							
Undisturbed habitat 10-50% and in 1-3 patches points = 2							
Undisturbed habitat 10-50% and > 3 patches points = 1							
Undisturbed habitat < 10% of 1 km Polygon points = 0	1						
H 2.3. Land use intensity in 1 km Polygon: If							
> 50% of 1 km Polygon is high intensity land use points = (- 2)							
$\leq$ 50% of 1 km Polygon is high intensity points = 0	-2						
	-1						
Total for H 2 Add the points in the boxes above							
Rating of Landscape Potential If score is:4-6 = H1-3 = M $\times$ _ < 1 = L Record the rating on the	ne first page						
H 3.0. Is the habitat provided by the site valuable to society?							
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score							
that applies to the wetland being rated.							
Site meets ANY of the following criteria: points = 2							
<ul> <li>It has 3 or more priority habitats within 100 m (see next page)</li> </ul>							
— It has 3 of more priority habitats within 100 in (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 mapped as a location for an individual work priority species  — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources							
_ · · · · ·							
<ul> <li>It has been categorized as an important habitat site in a local or regional comprehensive plan, in a</li> <li>Shoreline Master Plan, or in a watershed plan</li> </ul>							
Site has 1 or 2 priority habitats (listed on next page) within 100 m							
	1						
Site does not meet any of the criteria above points = 0	_						
<b>Rating of Value</b> If score is: $2 = H \times 1 = M$ $0 = L$ Record the rating on	the tirst 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. <a href="http://wdfw.wa.gov/publications/00165/wdfw00165.pdf">http://wdfw.wa.gov/publications/00165/wdfw00165.pdf</a> or access the list from here: <a href="http://wdfw.wa.gov/conservation/phs/list/">http://wdfw.wa.gov/conservation/phs/list/</a>)

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*).
- X **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*).
- X 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**

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS	C-1
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 <b>SC 1.1</b> (No) Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	
Yes = Category I No - Go to SC 1.2	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
<ul> <li>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)</li> <li>At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-</li> </ul>	Cat. I
mowed grassland.	
— The wetland has at least two of the following features: tidal channels, depressions with open water, or	Cat. II
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? Yes – Go to SC 2.2 No) – Go to SC 2.3	Cat. I
SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?  Yes = Category I  No = Not a WHCV	
SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
Yes – Contact WNHP/WDNR and go to SC 2.4 (No) = Not a WHCV	
SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on	
their website? Yes = Category I No= Not a WHCV	
SC 3.0. Bogs	
Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key	
below. If you answer YES you will still need to rate the wetland based on its functions.	
SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or	
more of the first 32 in of the soil profile? Yes – Go to SC 3.3 No– Go to SC 3.2	
SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep	
over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?  Yes – Go to SC 3.3 No= Is not a bog	
SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30%	
cover of plant species listed in Table 4? Yes = Is a Category I bog No – Go to SC 3.4	
<b>NOTE:</b> 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	C-4 1
plant species in Table 4 are present, the wetland is a bog.	Cat. I
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar,	
western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the	
species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	
Yes = Is a Category I bog No = Is not a bog	

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.	
<ul> <li>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.</li> <li>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).</li> </ul>	
Yes = Category I No= Not a forested wetland for this section	Cat. I
SC 5.0. Wetlands in Coastal Lagoons	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?  — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks	
— The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)  Yes – Go to SC 5.1  No= Not a wetland in a coastal lagoon	Cat. I
SC 5.1. Does the wetland meet all of the following three conditions?  — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species 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 un-	
mowed grassland.  — The wetland is larger than $^{1}/_{10}$ ac (4350 ft <sup>2</sup> )	
Yes = Category I No = Category II	
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:	
<ul><li>Long Beach Peninsula: Lands west of SR 103</li><li>Grayland-Westport: Lands west of SR 105</li></ul>	Cat I
Ocean Shores-Copalis: Lands west of SR 115 and SR 109	
Yes – Go to <b>SC 6.1</b> 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	Cat. II
SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?	Cat. III
Yes = <b>Category II</b> No – Go to <b>SC 6.3</b> SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?	
Yes = Category III No = Category IV	Cat. IV
Category of wetland based on Special Characteristics	

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

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# **RATING SUMMARY – Western Washington**

Name of wetland (or ID #):	Date of site visit: <u>9/29/</u> 2016
Rated by Eli Schmitz	_ Trained by Ecology? $\underline{\mathrm{X}}$ YesNo Date of training $\underline{4/2930/15}$
HGM Class used for rating Slope	Wetland has multiple HGM classes?Y X_N
NOTE: Form is not complete without	out the figures requested (figures can be combined).
Source of base aerial photo/ma	p ESRI Base Map - Imagery, Clark County GIS, and TRC GIS

# 

## 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		Н	Hydrologic		Habitat				
					Circle	the ap	propi	riate ra	itings	
Site Potential	Н	М	<b>(</b>	Н	M	L	Н	М	(L)	
Landscape Potential	Н	M	L	Н	M	L	Н	М	(L)	
Value	Н	М	<u>(L)</u>	Н	М	(L)	Н	M	L	TOTAL
Score Based on Ratings		4			5			4		13

## 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,L5 = 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		X

# 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	B1
Hydroperiods	H 1.2	B2
Plant cover of <b>dense</b> trees, shrubs, and herbaceous plants	S 1.3	B1
Plant cover of <b>dense</b> , <b>rigid</b> trees, shrubs, and herbaceous plants	S 4.1	
(can be added to figure above)		B1
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	B2
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		В3
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	B4
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	B5-7

# **HGM Classification of Wetlands in Western Washington**

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

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8. 1. Are the water levels in the entire unit usually controlled by tides except during floods? (NO)- go to 2 **YES** – the wetland class is **Tidal Fringe** – go to 1.1 1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? **NO - Saltwater Tidal Fringe (Estuarine) YES - Freshwater Tidal Fringe** If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands. 2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. NO go to 3 **YES** - The wetland class is **Flats** If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands. 3. Does the entire wetland unit **meet all** of the following criteria? \_\_The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size: \_\_At least 30% of the open water area is deeper than 6.6 ft (2 m). (NO)- go to 4 **YES** - The wetland class is **Lake Fringe** (Lacustrine Fringe) 4. Does the entire wetland unit **meet all** of the following criteria? X The wetland is on a slope (*slope can be very gradual*). X The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks, X The water leaves the wetland **without being impounded**. **(YES)**- The wetland class is **Slope** NO – go to 5 NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep). 5. Does the entire wetland unit **meet all** of the following criteria? The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river.

\_\_The overbank flooding occurs at least once every 2 years.

(NO)- go to 6

**YES** – The wetland class is **Riverine** 

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

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? *This means that any outlet, if present, is higher than the interior of the wetland.* 

NO) go to 7

**YES** – The wetland class is **Depressional** 

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

NO- go to 8

**YES** - The wetland class is **Depressional** 

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

**NOTE**: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit	HGM class to
being rated	use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream	Depressional
within boundary of depression	
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other	Treat as
class of freshwater wetland	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.

SLOPE WETLANDS  Water Quality Functions - Indicators that the site functions to improve water quality	
S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: (a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)	
Slope is 1% or less points = 3	
Slope is > 1%-2% points = 2	
Slope is > 2%-5% points = 1	
Slope is greater than 5% points = 0	0
S 1.2. <u>The soil 2 in below the surface (or duff layer)</u> is true clay or true organic <i>(use NRCS definitions)</i> : Yes = 3 No = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants:	
Choose the points appropriate for the description that best fits the plants in the wetland. Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.	
Dense, uncut, herbaceous plants > 90% of the wetland area points = 6	
Dense, uncut, herbaceous plants > ½ of area points = 3	
Dense, woody, plants > ½ of area points = 2	
Dense, uncut, herbaceous plants > 1/4 of area points = 1	
Does not meet any of the criteria above for plants points = 0	2
Total for S 1 Add the points in the boxes above	2

Rating of Site Potential If score is: \_\_12 = H \_\_\_6-11 = M  $\underline{X}$ \_0-5 = L

Record the rating on the first page

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

Rating of Landscape Potential If score is:  $X_1-2 = M_0$ 

Record the rating on the first page

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

Rating of Value If score is: \_\_\_2-4 = H \_\_\_1 = M  $\times$ \_0 = L

Record the rating on the first page

SLOPE WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream eros	sion
S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. Stems of plants should be thick enough (usually > $^{1}/_{8}$ in), or dense enough, to remain erect during surface flows.	
Dense, uncut, <b>rigid</b> plants cover > 90% of the area of the wetland points = 1	
All other conditions points = 0	1
Deting of the Detected of the control V 4 M	41 C

**Rating of Site Potential** If score is:  $\underline{X}$  **1** = **M 0** = **L** 

Record the rating on the first page

S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess	•
surface runoff? Yes = 1 No = 0	I

Rating of Landscape Potential If score is:  $X_1 = M_2 = 0$ 

Record the rating on the first page

S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems:  The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or	
natural resources (e.g., houses or salmon redds)  Surface flooding problems are in a sub-basin farther down-gradient  No flooding problems anywhere downstream  points = 0	0
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = $2 \text{ No} = 0$	0
Total for S 6 Add the points in the boxes above	0

Rating of Value If score is: \_\_\_2-4 = H \_\_\_1 = M  $X_0$  = L

Record the rating on the first page

**NOTES and FIELD OBSERVATIONS:** 

#### These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. Aquatic bed 4 structures or more: points = 4 \_ Emergent 3 structures: points = 2 X 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) 0 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 X Saturated only 1 type present: points = 0 $\boldsymbol{X}$ 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 1 H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species points = 2 5 - 19 species points = 1 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. 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.	
X Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).	
X 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 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 $\frac{1}{4}$ 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)	3
Total for H 1 Add the points in the boxes above	6
Rating of Site Potential If score is:15-18 = H7-14 = 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: % undisturbed habitat $9 + (\% \text{ moderate and low intensity land uses})/2 =9 %$	
If total accessible habitat is:	
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3	
20-33% of 1 km Polygon points = 2	
10-19% of 1 km Polygon points = 1	
< 10% of 1 km Polygon points = 0	0
	0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	
Calculate: % undisturbed habitat $\underline{20} + [(\% \text{ moderate and low intensity land uses})/2] \underline{6} = \underline{26} \%$	
Undisturbed habitat > 50% of Polygon points = 3	
Undisturbed habitat 10-50% and in 1-3 patches points = 2	
Undisturbed habitat 10-50% and > 3 patches points = 1	
Undisturbed habitat < 10% of 1 km Polygon points = 0	1
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 = M $\underline{X}$ < 1 = L Record the rating on the	ne first page
H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score	
that applies to the wetland being rated.	
Site meets ANY of the following criteria: points = 2	
It has 3 or more priority habitats within 100 m (see next page)	
It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)	
— It is mapped as a location for an individual WDFW priority species	
— It is a Wetland of High Conservation Value as determined by the Department of Natural Resources	
It has been categorized as an important habitat site in a local or regional comprehensive plan, in a  Shoreling Master Plan, or in a watershed plan.	
Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1	
	1
Site does not meet any of the criteria above points = 0	1
Pating of Value If score is: 2 - H Y 1 - M 0 - I	41 C:4

Rating of Value If score is: 2 = H X = 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. <a href="http://wdfw.wa.gov/publications/00165/wdfw00165.pdf">http://wdfw.wa.gov/publications/00165/wdfw00165.pdf</a> or access the list from here: <a href="http://wdfw.wa.gov/conservation/phs/list/">http://wdfw.wa.gov/conservation/phs/list/</a>)

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*).
- X **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*).
- X 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**

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS	C-1
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 <b>SC 1.1</b> (No) Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
Yes = Category I No - Go to SC 1.2	cut. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?  — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less	Cat. I
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 unmowed 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	Cat. II
SC 2.0. Wetlands of High Conservation Value (WHCV)	
SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High	
Conservation Value? Yes – Go to SC 2.2 (No) – Go to SC 2.3	Cat. I
SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?  Yes = Category I  No = Not a WHCV	
SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
Yes – Contact WNHP/WDNR and go to SC 2.4 (No) = Not a WHCV	
SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on	
their website? Yes = Category I No= Not a WHCV	
SC 3.0. Bogs	
Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key	
below. If you answer YES you will still need to rate the wetland based on its functions.	
SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or	
more of the first 32 in of the soil profile? Yes – Go to SC 3.3 No- Go to SC 3.2	
SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep	
over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?  Yes – Go to SC 3.3  No= Is not a bog	
SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30%	
cover of plant species listed in Table 4? Yes = Is a Category I bog No – Go to SC 3.4	
NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by	
measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the	Cat I
plant species in Table 4 are present, the wetland is a bog.	Cat. I
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar,	
western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the	
species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	
Yes = Is a Category I bog No = Is not a bog	

SC 4.0. Forested Wetlands	
Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i>	
<ul> <li>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.</li> <li>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).</li> </ul>	
Yes = Category I No= Not a forested wetland for this section	Cat. I
SC 5.0. Wetlands in Coastal Lagoons	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?  — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks	
— The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)  Yes – Go to SC 5.1 No= Not a wetland in a coastal lagoon	Cat. I
SC 5.1. Does the wetland meet all of the following three conditions?  — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).	Cat. II
<ul> <li>— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland.</li> <li>— The wetland is larger than ¹/10 ac (4350 ft²)</li> </ul>	
Yes = Category I No = Category II	
SC 6.0. Interdunal Wetlands Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If you answer yes you will still need to rate the wetland based on its habitat functions. In practical terms that means the following geographic areas:	
— Long Beach Peninsula: Lands west of SR 103	
— Grayland-Westport: Lands west of SR 105	Cat I
<ul> <li>Ocean Shores-Copalis: Lands west of SR 115 and SR 109</li> <li>Yes – Go to SC 6.1</li> </ul> No= not an interdunal wetland for rating	
res = do to 3C 6.1 NO = not an interdunal wetland for fating	
SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?  Yes = Category I  No – Go to SC 6.2	Cat. II
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	Cat. III
SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?	
Yes = Category III No = Category IV	Cat. IV
Category of wetland based on Special Characteristics	N/A
If you answered No for all types, enter "Not Applicable" on Summary Form	IN/A

Wetland name or number  $\underline{D}$ 

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## **RATING SUMMARY – Western Washington**

Name of wetland (or ID #): Wetland E	Date of site visit: <u>9/29/2</u> 016
Rated by Eli Schmitz	_ Trained by Ecology? $\underline{X}$ YesNo Date of training $\underline{4/29-30/15}$
HGM Class used for rating Slope	Wetland has multiple HGM classes?Y _XN
NOTE: Form is not complete witho	ut the figures requested (figures can be combined).
Source of base aerial photo/map	ESRI Base Map - Imagery, Clark County GIS, and TRC GIS

**OVERALL WETLAND CATEGORY** IV (based on functions X 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		Н	ydrol	ogic		Habita	at		
					Circle	the ap	propi	riate ro	itings	
Site Potential	Н	М	<b>(</b>	Н	М	(1)	Н	М	(L)	
Landscape Potential	Н	M	L	Н	M	L	Н	М	<b>(</b>	
Value	Н	М	<u>(L)</u>	Н	М	(L)	Н	M	L	TOTAL
Score Based on Ratings		4			4			4		12

#### 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,L5 = 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	]	ζ

# 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	B1
Hydroperiods	H 1.2	B2
Plant cover of <b>dense</b> trees, shrubs, and herbaceous plants	S 1.3	B1
Plant cover of <b>dense</b> , <b>rigid</b> trees, shrubs, and herbaceous plants	S 4.1	
(can be added to figure above)		B1
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	B2
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		В3
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	B4
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	B5-7

## **HGM Classification of Wetlands in Western Washington**

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you

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

probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8. 1. Are the water levels in the entire unit usually controlled by tides except during floods? (NO)- go to 2 **YES** – the wetland class is **Tidal Fringe** – go to 1.1 1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? **NO - Saltwater Tidal Fringe (Estuarine) YES - Freshwater Tidal Fringe** If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands. 2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. NO go to 3 **YES** - The wetland class is **Flats** If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands. 3. Does the entire wetland unit **meet all** of the following criteria? \_\_The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size: \_\_At least 30% of the open water area is deeper than 6.6 ft (2 m). (NO)- go to 4 **YES** - The wetland class is **Lake Fringe** (Lacustrine Fringe) 4. Does the entire wetland unit **meet all** of the following criteria? X The wetland is on a slope (*slope can be very gradual*). X The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks, X The water leaves the wetland **without being impounded**. **(YES)**- The wetland class is **Slope** NO - go to 5 NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep). 5. Does the entire wetland unit **meet all** of the following criteria? The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that

\_\_The overbank flooding occurs at least once every 2 years.

stream or river.

(NO)- go to 6

**YES** – The wetland class is **Riverine** 

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

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? *This means that any outlet, if present, is higher than the interior of the wetland.* 

NO) go to 7

**YES** – The wetland class is **Depressional** 

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

NO- go to 8

**YES** - The wetland class is **Depressional** 

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

**NOTE**: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit	HGM class to
being rated	use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream	Depressional
within boundary of depression	
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other	Treat as
class of freshwater wetland	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.

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

Rating of Site Potential If score is: \_\_12 = H \_\_\_6-11 = M  $\underline{X}$ \_0-5 = L

Record the rating on the first page

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

Rating of Landscape Potential If score is:  $X_1-2 = M_0 = L$ 

Record the rating on the first page

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

Record the rating on the first page

SLOPE WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream ero	sion
S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. Stems of plants should be thick enough (usually > \frac{1}{8} in), or dense enough, to remain erect during surface flows.  Dense, uncut, rigid plants cover > 90% of the area of the wetland  All other conditions  points = 0	0

Rating of Site Potential If score is:  $1 = M \times X = 0 = L$ 

Record the rating on the first page

S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess	
surface runoff? Yes = 1 No = 0	1

Rating of Landscape Potential If score is:  $X_1 = M_2 = 0$ 

Record the rating on the first page

S 6.0. Are the hydrologic functions provided by the site valuable to society?		
S 6.1. Distance to the nearest areas downstream that have flooding problems:  The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or		
natural resources (e.g., houses or salmon redds)  Surface flooding problems are in a sub-basin farther down-gradient  No flooding problems anywhere downstream  points = 2  points = 1  points = 0	0	
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?  Yes = 2 No = 0		
Total for S 6 Add the points in the boxes above	0	

Rating of Value If score is: \_\_\_2-4 = H \_\_\_1 = M  $X_0$  = L

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

#### These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. Aquatic bed 4 structures or more: points = 4 \_ \_Emergent 3 structures: points = 2 \_Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 X 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) 0 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 X Saturated only 1 type present: points = 0 X 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 1 H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species points = 2 5 - 19 species points = 1 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. 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 nu	imber of points.	
X Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).		
Standing snags (dbh > 4 in) within the wetland		
X Undercut banks are present for at least 6.6 ft (2 m) <b>and/or</b> overhanging plants extend	ds 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 denn		
slope) OR signs of recent beaver activity are present (cut shrubs or trees that have no	ot yet weathered	
where wood is exposed)		
At least ¼ ac of thin-stemmed persistent plants or woody branches are present in are	as that are	
permanently or seasonally inundated (structures for egg-laying by amphibians)		
XInvasive plants cover less than 25% of the wetland area in every stratum of plants (see	e H 1.1 for list of	3
strata)		
	s in the boxes above	6
Rating of Site Potential If score is:15-18 = H7-14 = 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	2?	
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).		
Calculate: % undisturbed habitat $9 + (\% \text{ moderate and low intensity land uses})$	/2] <u>0</u> =9 %	
If total accessible habitat is:		
$> \frac{1}{3}$ (33.3%) of 1 km Polygon	points = 3	
20-33% of 1 km Polygon	points = 2	
10-19% of 1 km Polygon	points = 1	
< 10% of 1 km Polygon	points = 0	0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	pomits c	
Calculate: % undisturbed habitat $\underline{20}$ + [(% moderate and low intensity land uses)	$/21^{6} = 26 \%$	
Undisturbed habitat > 50% of Polygon	points = 3	
Undisturbed habitat 10-50% and in 1-3 patches	points = 2	
Undisturbed habitat 10-50% and > 3 patches	points = 1	
Undisturbed habitat < 10% of 1 km Polygon	points = 0	1
· ·	points – o	
H 2.3. Land use intensity in 1 km Polygon: If	mainta (2)	
> 50% of 1 km Polygon is high intensity land use	points = (- 2)	-2
≤ 50% of 1 km Polygon is high intensity	points = 0	_
·	s in the boxes above	-1
Rating of Landscape Potential If score is:4-6 = H1-3 = M $\times$ _ < 1 = L	Record the rating on th	ie 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 or	nly the highest score	
that applies to the wetland being rated.		
Site meets ANY of the following criteria:	points = 2	
<ul> <li>It has 3 or more priority habitats within 100 m (see next page)</li> </ul>		
— It provides habitat for Threatened or Endangered species (any plant or animal on the species)	state or federal lists)	
<ul> <li>It is mapped as a location for an individual WDFW priority species</li> </ul>		
<ul> <li>It is a Wetland of High Conservation Value as determined by the Department of Natur</li> </ul>	al Resources	
<ul> <li>It has been categorized as an important habitat site in a local or regional comprehensi</li> </ul>	ive 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	1
Rating of Value If score is: $2 = H$ $X_1 = M$ $0 = L$	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. <a href="http://wdfw.wa.gov/publications/00165/wdfw00165.pdf">http://wdfw.wa.gov/publications/00165/wdfw00165.pdf</a> or access the list from here: <a href="http://wdfw.wa.gov/conservation/phs/list/">http://wdfw.wa.gov/conservation/phs/list/</a>)

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*).
- X **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*).
- X 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**

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS	C-1
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 <b>SC 1.1</b> (No) Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	
Yes = Category I No - Go to SC 1.2	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
<ul> <li>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)</li> <li>At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-</li> </ul>	Cat. I
mowed grassland.	
— The wetland has at least two of the following features: tidal channels, depressions with open water, or	Cat. II
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? Yes – Go to SC 2.2 No) – Go to SC 2.3	Cat. I
SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?  Yes = Category I  No = Not a WHCV	
SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
Yes – Contact WNHP/WDNR and go to SC 2.4 (No) = Not a WHCV	
SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on	
their website? Yes = Category I No= Not a WHCV	
SC 3.0. Bogs	
Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key	
below. If you answer YES you will still need to rate the wetland based on its functions.	
SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or	
more of the first 32 in of the soil profile? Yes – Go to SC 3.3 No– Go to SC 3.2	
SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep	
over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?  Yes – Go to SC 3.3 No= Is not a bog	
SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30%	
cover of plant species listed in Table 4? Yes = Is a Category I bog No – Go to SC 3.4	
<b>NOTE:</b> 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	C-4 1
plant species in Table 4 are present, the wetland is a bog.	Cat. I
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar,	
western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the	
species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	
Yes = Is a Category I bog No = Is not a bog	

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>	
<ul> <li>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.</li> <li>Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the</li> </ul>	
species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).  Yes = Category I (No)= Not a forested wetland for this section	Cat. I
SC 5.0. Wetlands in Coastal Lagoons	
<ul> <li>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</li> <li>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</li> <li>The lagoon in which the wetland is located contains ponded water that is saline or brackish (&gt; 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)</li> </ul>	Cat. I
Yes – Go to <b>SC 5.1</b> (No)= <b>Not a wetland in a coastal lagoon</b>	
<ul> <li>5C 5.1. Does the wetland meet all of the following three conditions?</li> <li>— 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).</li> <li>— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-</li> </ul>	Cat. II
mowed grassland.  — The wetland is larger than $^{1}/_{10}$ ac (4350 ft <sup>2</sup> )  Yes = Category I No = Category II	
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:	
<ul> <li>Long Beach Peninsula: Lands west of SR 103</li> <li>Grayland-Westport: Lands west of SR 105</li> <li>Ocean Shores-Copalis: Lands west of SR 115 and SR 109</li> <li>Yes – Go to SC 6.1</li> </ul> No= not an interdunal wetland for rating	Cat I
C 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?  Yes = Category I  No – Go to SC 6.2	Cat. II
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?	Cat. III
Yes = Category III No = Category IV	Cat. IV

Wetland name or number  $\underline{E}$ 

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## **RATING SUMMARY – Western Washington**

Name of wetland (or ID #): Wetland F	Date of site visit: 9/29/2016
Rated by Eli Schmitz	Trained by Ecology? $\underline{\mathrm{X}}$ YesNo Date of training $\underline{4/29\text{-}30}/15$
HGM Class used for rating Slope	Wetland has multiple HGM classes?Y X_N
NOTE: Form is not complete with	out the figures requested (figures can be combined)

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

Source of base aerial photo/map <u>ESRI Base Map - Imagery, Clark County GIS</u>, and TRC GIS

**OVERALL WETLAND CATEGORY** IV (based on functions X 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		mprov iter Q	ing uality	Hydrologic		Habitat				
					Circle	the ap	propi	riate ro	itings	
Site Potential	Н	М	0	Н	M	L	Н	М	(L)	
Landscape Potential	Н	M	L	Н	M	L	Н	М	<b>(</b>	
Value	Н	М	<u>(L)</u>	Н	М	(L)	Н	M	L	TOTAL
Score Based on Ratings		4			5			4		13

#### 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		X

# 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	B1
Hydroperiods	H 1.2	B2
Plant cover of <b>dense</b> trees, shrubs, and herbaceous plants	S 1.3	Bl
Plant cover of <b>dense</b> , <b>rigid</b> trees, shrubs, and herbaceous plants	S 4.1	
(can be added to figure above)		B1
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	B2
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		В3
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	B4
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	B5-7

## **HGM Classification of Wetlands in Western Washington**

For questions 1-7, the criteria described must apply to the entire unit being rated. If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8. 1. Are the water levels in the entire unit usually controlled by tides except during floods? (NO)- go to 2 **YES** – the wetland class is **Tidal Fringe** – go to 1.1 1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? **NO - Saltwater Tidal Fringe (Estuarine) YES - Freshwater Tidal Fringe** If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands. 2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. NO go to 3 **YES** - The wetland class is **Flats** If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands. 3. Does the entire wetland unit **meet all** of the following criteria? \_\_The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size: \_\_At least 30% of the open water area is deeper than 6.6 ft (2 m). (NO)- go to 4 **YES** - The wetland class is **Lake Fringe** (Lacustrine Fringe) 4. Does the entire wetland unit **meet all** of the following criteria? X The wetland is on a slope (*slope can be very gradual*). X The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks, X The water leaves the wetland **without being impounded**. **(YES)**- The wetland class is **Slope** NO - go to 5 NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep). 5. Does the entire wetland unit **meet all** of the following criteria? The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that

\_\_The overbank flooding occurs at least once every 2 years.

stream or river.

(NO)- go to 6

**YES** – The wetland class is **Riverine** 

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

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? *This means that any outlet, if present, is higher than the interior of the wetland.* 

NO) go to 7

**YES** – The wetland class is **Depressional** 

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

NO- go to 8

**YES** – The wetland class is **Depressional** 

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

**NOTE**: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit	HGM class to
being rated	use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream	Depressional
within boundary of depression	
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other	Treat as
class of freshwater wetland	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.

SLOPE WETLANDS  Water Quality Functions - Indicators that the site functions to improve water quality		
S 1.0. Does the site have the potential to improve water quality?		
S 1.1. Characteristics of the average slope of the wetland: (a 1% slope has a 1 ft vert 100 ft of horizontal distance)	ical drop in elevation for every	
Slope is 1% or less	points = 3	
Slope is > 1%-2%	points = 2	
Slope is > 2%-5%	points = 1	
Slope is greater than 5%	points = 0	0
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use N	RCS definitions): Yes = 3 No = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants	:	
Choose the points appropriate for the description that best fits the plants in the have trouble seeing the soil surface (>75% cover), and uncut means not grazed than 6 in.	•	
Dense, uncut, herbaceous plants > 90% of the wetland area	points = 6	
Dense, uncut, herbaceous plants > ½ of area	points = 3	
Dense, woody, plants > ½ of area	points = 2	
Dense, uncut, herbaceous plants > ¼ of area	points = 1	_
Does not meet any of the criteria above for plants	points = 0	2
Total for S 1 Ac	ld the points in the boxes above	2
Rating of Site Potential If score is: 12 = H 6-11 = M X 0-5 = L	Record the rating on th	ne first p

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

Rating of Landscape Potential If score is:  $X_1-2 = M_0 = 0$ 

Record the rating on the first page

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

Rating of Value If score is: \_\_\_2-4 = H \_\_\_1 = M  $\underline{X}$ \_0 = L

Record the rating on the first page

SLOPE WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion	
S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows.  Dense, uncut, rigid plants cover > 90% of the area of the wetland points = 1	
All other conditions points = 0	1

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

Record the rating on the first page

S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess	
surface runoff? Yes = 1 No = 0	1

Rating of Landscape Potential If score is:  $X_1 = M_2 = 0$ 

Record the rating on the first page

S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems:  The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or	
natural resources (e.g., houses or salmon redds)  Surface flooding problems are in a sub-basin farther down-gradient  No flooding problems anywhere downstream  points = 2  points = 1  points = 0	0
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?  Yes = 2 No = 0	0
Total for S 6 Add the points in the boxes above	0

Rating of Value If score is: \_\_\_2-4 = H \_\_\_1 = M  $X_0$  = L

Record the rating on the first page

**NOTES and FIELD OBSERVATIONS:** 

#### These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. Aquatic bed 4 structures or more: points = 4 X Emergent 3 structures: points = 2 Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 Forested (areas where trees have > 30% cover) 1 structure: points = 0 If the unit has a Forested class, check if: The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) 0 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 X Saturated only 1 type present: points = 0 X 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 1 H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species points = 2 5 - 19 species points = 1 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. 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.	
X Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).	
Standing snags (dbh > 4 in) within the wetland	
X Undercut banks are present for at least 6.6 ft (2 m) <b>and/or</b> 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 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)	2
Total for H 1 Add the points in the boxes above	5
Rating of Site Potential If score is: 15-18 = H 7-14 = M X 0-6 = L Record the rating on	
	ine jirst 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: % undisturbed habitat $9 + (\% \text{ moderate and low intensity land uses})/2) 0 = 9 \%$	
If total accessible habitat is:	
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3	
20-33% of 1 km Polygon points = 2	
10-19% of 1 km Polygon points = 1	
< 10% of 1 km Polygon points = 0	0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	
Calculate: % undisturbed habitat $\frac{20}{6}$ + [(% moderate and low intensity land uses)/2] $\frac{6}{6}$ = $\frac{26}{6}$ %	
Undisturbed habitat > 50% of Polygon points = 3	
Undisturbed habitat 10-50% and in 1-3 patches points = 2	
Undisturbed habitat 10-50% and > 3 patches points = 1	1
Undisturbed habitat < 10% of 1 km Polygon points = 0	1
H 2.3. Land use intensity in 1 km Polygon: If	
> 50% of 1 km Polygon is high intensity land use points = (- 2)	•
≤ 50% of 1 km Polygon is high intensity points = 0	-2
Total for H 2 Add the points in the boxes above	-1
Rating of Landscape Potential If score is:4-6 = H1-3 = M $\times$ < 1 = L Record the rating on the	ne first page
H 3.0. Is the habitat provided by the site valuable to society?	-
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the highest score</i>	
that applies to the wetland being rated.	
Site meets ANY of the following criteria: points = 2	
<ul> <li>— It has 3 or more priority habitats within 100 m (see next page)</li> </ul>	
<ul> <li>It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</li> </ul>	
<ul> <li>It is mapped as a location for an individual WDFW priority species</li> </ul>	
<ul> <li>It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</li> </ul>	
<ul> <li>It has been categorized as an important habitat site in a local or regional comprehensive plan, in a</li> </ul>	
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	1
Rating of Value If score is: $2 = H \times 1 = M = 0 = L$ Record the rating on	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. <a href="http://wdfw.wa.gov/publications/00165/wdfw00165.pdf">http://wdfw.wa.gov/publications/00165/wdfw00165.pdf</a> or access the list from here: <a href="http://wdfw.wa.gov/conservation/phs/list/">http://wdfw.wa.gov/conservation/phs/list/</a>)

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*).
- X **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*).
- X 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**

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS	C-1
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 <b>SC 1.1</b> (No) Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	
Yes = Category I No - Go to SC 1.2	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
<ul> <li>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)</li> <li>At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-</li> </ul>	Cat. I
mowed grassland.	
— The wetland has at least two of the following features: tidal channels, depressions with open water, or	Cat. II
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? Yes – Go to SC 2.2 No) – Go to SC 2.3	Cat. I
SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?  Yes = Category I  No = Not a WHCV	
SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
Yes – Contact WNHP/WDNR and go to SC 2.4 (No) = Not a WHCV	
SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on	
their website? Yes = Category I No= Not a WHCV	
SC 3.0. Bogs	
Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key	
below. If you answer YES you will still need to rate the wetland based on its functions.	
SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or	
more of the first 32 in of the soil profile? Yes – Go to SC 3.3 No– Go to SC 3.2	
SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep	
over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?  Yes – Go to SC 3.3 No= Is not a bog	
SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30%	
cover of plant species listed in Table 4? Yes = Is a Category I bog No – Go to SC 3.4	
<b>NOTE:</b> 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	C-4 1
plant species in Table 4 are present, the wetland is a bog.	Cat. I
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar,	
western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the	
species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	
Yes = Is a Category I bog No = Is not a bog	

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>	
<ul> <li>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.</li> <li>Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the</li> </ul>	
species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).  Yes = Category I (No)= Not a forested wetland for this section	Cat. I
SC 5.0. Wetlands in Coastal Lagoons	
<ul> <li>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</li> <li>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</li> <li>The lagoon in which the wetland is located contains ponded water that is saline or brackish (&gt; 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)</li> </ul>	Cat. I
Yes – Go to <b>SC 5.1</b> (No)= <b>Not a wetland in a coastal lagoon</b>	
<ul> <li>5C 5.1. Does the wetland meet all of the following three conditions?</li> <li>— 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).</li> <li>— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-</li> </ul>	Cat. II
mowed grassland.  — The wetland is larger than $^{1}/_{10}$ ac (4350 ft <sup>2</sup> )  Yes = Category I No = Category II	
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:	
<ul> <li>Long Beach Peninsula: Lands west of SR 103</li> <li>Grayland-Westport: Lands west of SR 105</li> <li>Ocean Shores-Copalis: Lands west of SR 115 and SR 109</li> <li>Yes – Go to SC 6.1</li> </ul> No= not an interdunal wetland for rating	Cat I
C 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?  Yes = Category I  No – Go to SC 6.2	Cat. II
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?	Cat. III
Yes = Category III No = Category IV	Cat. IV

Wetland name or number <u>.</u>	F
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## **RATING SUMMARY – Western Washington**

Name of wetland (or ID #): $\_$	Wetland G		Date of site visit: $\frac{10/23}{16}$	
Rated by Eli Schmitz	_Trained by Ecology?	X Yes	No Date of training 4/29-30/15	
HGM Class used for rating_	Riverine	Wetland ha	s multiple HGM classes? $oxed{ ext{X}}$ Y $oxed{ ext{Y}}$	N

**NOTE**: **Form is not complete without the figures requested** (*figures can be combined*). Source of base aerial photo/map ESRI Base Map - Imagery, Clark County GIS, and TRC GIS

**OVERALL WETLAND CATEGORY**  $\underline{III}$  (based on functions  $\underline{X}$  or special characteristics $\underline{\hspace{0.5cm}}$ )

#### 1. Category of wetland based on FUNCTIONS

	<b>Category I</b> – Total score = 23 - 27
	Category II — Total score = 20 - 22
X	Category III - Total score = 16 - 19
	Category IV - Total score = 9 - 15

FUNCTION		nprov ter Qı	_	Н	ydrolo	gic		Habita	at	
					Circle	the ap	propi	iate ra	tings	
Site Potential	Н	M	L	Н	M	L	Н	М	(L)	
Landscape Potential	$\Theta$	М	L	Н	M	L	Н	М	(L)	
Value	Н	M	L	Н	М	<b>(</b>	Н	M	L	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,L 6 = 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	CATI	GORY	
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	1	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	B1
Hydroperiods	H 1.2	B2
Ponded depressions	R 1.1	В3
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	B1
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	В3
Width of unit vs. width of stream (can be added to another figure)	R 4.1	В3
Map of the contributing basin	R 2.2, R 2.3, R 5.2	B4
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		B5
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	В6
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	B7-8

#### 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 <b>dense</b> trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of <b>dense, rigid</b> 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)	\$ 3.3	

## **HGM Classification of Wetlands in Western Washington**

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

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

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

(NO)- go to 2

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

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

#### **NO - Saltwater Tidal Fringe (Estuarine)**

**YES - Freshwater Tidal Fringe** 

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

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

NO- go to 3

YES - The wetland class is Flats

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

- 3. Does the entire wetland unit **meet all** of the following criteria?
  - \_\_The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;
  - \_\_At least 30% of the open water area is deeper than 6.6 ft (2 m).

(NO)- go to 4

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

- 4. Does the entire wetland unit **meet all** of the following criteria?
  - X The wetland is on a slope (*slope can be very gradual*),
  - X The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,
  - X The water leaves the wetland **without being impounded**.

NO - go to 5

**YES**- The wetland class is **Slope** 

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

- 5. Does the entire wetland unit **meet all** of the following criteria?
  - X The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
  - X The overbank flooding occurs at least once every 2 years.

NO – go to 6

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

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? *This means that any outlet, if present, is higher than the interior of the wetland.* 

(NO) go to 7

**YES** – The wetland class is **Depressional** 

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

NO- go to 8

**YES** – The wetland class is **Depressional** 

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

**NOTE**: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit	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.

RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
R 1.0. Does the site have the potential to improve water quality?	
R 1.1. Area of surface depressions within the Riverine wetland that can trap sediments during a flooding event:	
Depressions cover $>$ $^3/_4$ area of wetland points = 8	
Depressions cover > ½ area of wetland points = 4	
Depressions present but cover < ½ area of wetland points = 2	
No depressions present points = 0	0
R 1.2. Structure of plants in the wetland (areas with >90% cover at person height, <b>not</b> Cowardin classes)	
Trees or shrubs $> \frac{2}{3}$ area of the wetland points = 8	
Trees or shrubs $> \frac{1}{3}$ area of the wetland points = 6	
Herbaceous plants (> 6 in high) > $^2/_3$ area of the wetland points = 6	
Herbaceous plants (> 6 in high) > $\frac{1}{3}$ area of the wetland points = 3	
Trees, shrubs, and ungrazed herbaceous $< \frac{1}{3}$ area of the wetland points = 0	8
Total for R 1 Add the points in the boxes above	8
Rating of Site Potential If score is: 12-16 = H $\frac{X}{6}$ -11 = M 0-5 = L Record the rating on the	he first page
<u> </u>	, , ,
R 2.0. Does the landscape have the potential to support the water quality function of the site?	
R 2.1. Is the wetland within an incorporated city or within its UGA? Yes = $2 \text{ No} = 0$	2
R 2.2. Does the contributing basin to the wetland include a UGA or incorporated area? Yes = 1 No = 0	1
R 2.3. Does at least 10% of the contributing basin contain tilled fields, pastures, or forests that have been clearcut within the last 5 years? Yes = $1 \text{ No} = 0$	1
R 2.4. ls > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
R 2.5. Are there other sources of pollutants coming into the wetland that are not listed in questions R 2.1-R 2.4	
Other sources Livestock Yes = 1 No = 0	1
Total for R 2 Add the points in the boxes above	6
Rating of Landscape Potential If score is: X 3-6 = H 1 or 2 = M 0 = L Record the rating on the	he first page
R 3.0. Is the water quality improvement provided by the site valuable to society?	
R 3.1. Is the wetland along a stream or river that is on the 303(d) list or on a tributary that drains to one within 1 mi?	
Yes = 1 No = 0	1
R 3.2. Is the wetland along a stream or river that has TMDL limits for nutrients, toxics, or pathogens?	
Yes = $1 \text{ No} = 0$	0
R 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? (answer YES if there is a TMDL for the drainage in which the unit is found)  Yes = 2 No = 0	0
Total for R 3  Add the points in the boxes above	1
Add the points in the boxes above	

Rating of Value If score is: \_\_\_2-4 = H  $\underline{X}$ \_1 = M \_\_\_0 = L

Record the rating on the first page

Wetland name or number <u>G</u>		
RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS		
Hydrologic Functions - Indicators that site functions to reduce flooding and stream	m erosion	
R 4.0. Does the site have the potential to reduce flooding and erosion?		
R 4.1. Characteristics of the overbank storage the wetland provides:  Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of wetland)/(average)		
width of stream between banks).		
·	nts = 9	
·	nts = 6	
·	nts = 4	
·	nts = 2	2
·	nts = 1	
R 4.2. Characteristics of plants that slow down water velocities during floods: Treat large woody debris as for shrub. Choose the points appropriate for the best description (polygons need to have >90% cover at per height. These are NOT Cowardin classes).	rson	
	nts = 7	
	nts = 4	7
·	nts = 0	
Total for R 4 Add the points in the boxes	above	9
Rating of Site Potential If score is:12-16 = H $\times$ 0-5 = L Record the r	ating on the	e jirst page
R 5.1. Is the stream or river adjacent to the wetland downcut?  Yes = 0	No = 1	0
R 5.2. Does the up-gradient watershed include a UGA or incorporated area? Yes = 1	No = 0	1
R 5.3. Is the up-gradient stream or river controlled by dams?  Yes = 0	No = 1	1
Total for R 5 Add the points in the boxes	above	2
Rating of Landscape Potential If score is: $3 = H$ $X_1$ or $2 = M$ $0 = L$ Record the r	ating on the	e first page
R 6.0. Are the hydrologic functions provided by the site valuable to society?		
R 6.1. Distance to the nearest areas downstream that have flooding problems?  Choose the description that best fits the site.		
· -	ints = 2	
e, e	ints = 1 nts = 0	0
R 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood contr	-	0
Yes = 2  Total for R 6  Add the points in the boxes		
Add the points in the boxes	anove	0

#### These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. Aquatic bed 4 structures or more: points = 4 \_\_Emergent 3 structures: points = 2 X 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) 0 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 X Occasionally flooded or inundated 2 types present: points = 1 Saturated only 1 type present: points = 0 X 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 1 H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species points = 2 5 - 19 species points = 1 1 < 5 species points = 0 H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. None = 0 points Moderate = 2 points Low = 1 point All three diagrams in this row are **HIGH** = 3points

Forest 1997		
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		
$\underline{X}$ 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 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)	1	
Total for H 1 Add the points in the boxes above	5	
Rating of Site Potential If score is: 15-18 = H 7-14 = M $\times$ 0-6 = L Record the rating on		
	ine jiist 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: % undisturbed habitat $9 + (\% \text{ moderate and low intensity land uses})/2] 0 = 9 \%$		
If total accessible habitat is:		
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3		
20-33% of 1 km Polygon points = 2		
10-19% of 1 km Polygon points = 1		
< 10% of 1 km Polygon points = 0	0	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.  Calculate: % undisturbed habitat $20 + [(\% \text{ moderate and low intensity land uses})/2]6 = 26 \%$		
Undisturbed habitat > 50% of Polygon points = 3		
Undisturbed habitat 10-50% and in 1-3 patches points = 2		
Undisturbed habitat 10-50% and > 3 patches points = 1		
Undisturbed habitat < 10% of 1 km Polygon points = 0	1	
H 2.3. Land use intensity in 1 km Polygon: If		
> 50% of 1 km Polygon is high intensity land use points = (-2)		
≤ 50% of 1 km Polygon is high intensity points = 0	-2	
Total for H 2 Add the points in the boxes above	-1	
Rating of Landscape Potential If score is:4-6 = H1-3 = M $\times$ _<1 = L Record the rating on t	he first page	
	.e jet 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)		
<ul> <li>It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</li> </ul>		
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 = 0	1 6 .	

Rating of Value If score is: 2 = H X 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. <a href="http://wdfw.wa.gov/publications/00165/wdfw00165.pdf">http://wdfw.wa.gov/publications/00165/wdfw00165.pdf</a> or access the list from here: <a href="http://wdfw.wa.gov/conservation/phs/list/">http://wdfw.wa.gov/conservation/phs/list/</a>)

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*).
- X **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*).
- X 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**

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS	C-1
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 <b>SC 1.1</b> (No) Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
Yes = Category I No - Go to SC 1.2	cut. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?  — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less	Cat. I
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 unmowed 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	Cat. II
SC 2.0. Wetlands of High Conservation Value (WHCV)	
SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High	
Conservation Value? Yes – Go to SC 2.2 (No) – Go to SC 2.3	Cat. I
SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?  Yes = Category I  No = Not a WHCV	
SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
Yes – Contact WNHP/WDNR and go to SC 2.4 (No) = Not a WHCV	
SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on	
their website? Yes = Category I No= Not a WHCV	
SC 3.0. Bogs	
Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key	
below. If you answer YES you will still need to rate the wetland based on its functions.	
SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or	
more of the first 32 in of the soil profile? Yes – Go to SC 3.3 No- Go to SC 3.2	
SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep	
over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?  Yes – Go to SC 3.3  No= Is not a bog	
SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30%	
cover of plant species listed in Table 4? Yes = Is a Category I bog No – Go to SC 3.4	
NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by	
measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the	Cat I
plant species in Table 4 are present, the wetland is a bog.	Cat. I
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar,	
western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the	
species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	
Yes = 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>	
<ul> <li>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.</li> <li>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).</li> </ul>	
Yes = Category I No = Not a forested wetland for this section	Cat. I
SC 5.0. Wetlands in Coastal Lagoons	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?  — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks	
— The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)  Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon	Cat. I
<ul> <li>SC 5.1. Does the wetland meet all of the following three conditions?</li> <li>— 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).</li> <li>— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-</li> </ul>	Cat. II
mowed grassland. — The wetland is larger than $^1/_{10}$ ac (4350 ft $^2$ ) Yes = <b>Category I</b> No = <b>Category II</b>	
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:	
<ul> <li>Long Beach Peninsula: Lands west of SR 103</li> <li>Grayland-Westport: Lands west of SR 105</li> <li>Ocean Shores-Copalis: Lands west of SR 115 and SR 109</li> <li>Yes – Go to SC 6.1</li> </ul> No = not an interdunal wetland for rating	Cat I
SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?  Yes = Category I  No – Go to SC 6.2	Cat. II
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?	Cat. III
Yes = Category III No = Category IV	Cat. IV
Category of wetland based on Special Characteristics	N/A

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

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# **RATING SUMMARY – Western Washington**

Name of wetland (or ID #): $_{ extstyle -}$	Wetland H	Date of site visit: $\frac{10/23}{16}$
Rated by Eli Schmitz	_ Trained by Ecology?	X YesNo Date of training 4/29-30/15
HGM Class used for rating_	Riverine	Wetland has multiple HGM classes? X YN

**NOTE**: **Form is not complete without the figures requested** (*figures can be combined*). Source of base aerial photo/map ESRI Base Map - Imagery, Clark County GIS, and TRC GIS

**OVERALL WETLAND CATEGORY**  $\underline{III}$  (based on functions  $\underline{X}$  or special characteristics $\underline{\hspace{0.5cm}}$ )

# 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		nprov ter Qı	ring uality	H	ydrolo	gic		Habita	at	
					Circle	the ap	propr	iate ra	tings	
Site Potential	Н	M	L	Н	M	L	Н	W	L	
Landscape Potential	$\Theta$	М	L	Н	M	L	Н	М	(L)	
Value	Н	M	L	Н	М	<b>(</b>	Н	M	L	TOTAL
Score Based on Ratings		7			5			5		17

# 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

# **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	B1
Hydroperiods	H 1.2	B2
Ponded depressions	R 1.1	В3
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	B1
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	В3
Width of unit vs. width of stream (can be added to another figure)	R 4.1	В3
Map of the contributing basin	R 2.2, R 2.3, R 5.2	B4
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		B5
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	В6
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	B7-8

# 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 <b>dense</b> 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 entire ui	nit usually	controlled b	y tides	except (	during f	loods?
----	---------------	---------------	-------------	-------------	--------------	---------	----------	----------	--------

(NO) – go to 2

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

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

### **NO - Saltwater Tidal Fringe (Estuarine)**

**YES - Freshwater Tidal Fringe** 

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

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

NO- go to 3

YES - The wetland class is Flats

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

- 3. Does the entire wetland unit **meet all** of the following criteria?
  - \_\_The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;
  - \_\_At least 30% of the open water area is deeper than 6.6 ft (2 m).

(NO)- go to 4

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

- 4. Does the entire wetland unit **meet all** of the following criteria?
  - X The wetland is on a slope (*slope can be very gradual*),
  - X The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,
  - X The water leaves the wetland **without being impounded**.

NO - go to 5

**YES**- The wetland class is **Slope** 

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

- 5. Does the entire wetland unit **meet all** of the following criteria?
  - X The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
  - X The overbank flooding occurs at least once every 2 years.

Wetland name or number H

NO – go to 6

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

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? *This means that any outlet, if present, is higher than the interior of the wetland.* 

(NO) go to 7

**YES** – The wetland class is **Depressional** 

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

NO- go to 8

**YES** – The wetland class is **Depressional** 

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

**NOTE**: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit	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.

RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
R 1.0. Does the site have the potential to improve water quality?	
R 1.1. Area of surface depressions within the Riverine wetland that can trap sediments during a flooding event:	
Depressions cover > 3/4 area of wetland points = 8	
Depressions cover > ½ area of wetland points = 4	
Depressions present but cover < ½ area of wetland points = 2	
No depressions present points = 0	0
R 1.2. Structure of plants in the wetland (areas with >90% cover at person height, <b>not</b> Cowardin classes)	
Trees or shrubs $> \frac{2}{3}$ area of the wetland points = 8	
Trees or shrubs $> \frac{1}{3}$ area of the wetland points = 6	
Herbaceous plants (> 6 in high) $> \frac{1}{3}$ area of the wetland points = 6	
Herbaceous plants (> 6 in high) > $\frac{1}{3}$ area of the wetland points = 3	
Trees, shrubs, and ungrazed herbaceous $< \frac{1}{3}$ area of the wetland points = 0	8
Total for R 1 Add the points in the boxes above	8
Rating of Site Potential If score is:12-16 = H $\underline{X}$ 6-11 = M0-5 = L Record the rating on the	ne first page
R 2.0. Does the landscape have the potential to support the water quality function of the site?	
R 2.1. Is the wetland within an incorporated city or within its UGA? Yes = 2 No = 0	2
R 2.2. Does the contributing basin to the wetland include a UGA or incorporated area? Yes = 1 No = 0	1
R 2.3. Does at least 10% of the contributing basin contain tilled fields, pastures, or forests that have been clearcut within the last 5 years?  Yes = 1 No = 0	1
R 2.4. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
R 2.5. Are there other sources of pollutants coming into the wetland that are not listed in questions R 2.1-R 2.4  Other sources $Livestock$ $Yes = 1$ $No = 0$	1
Total for R 2 Add the points in the boxes above	6
Rating of Landscape Potential If score is: X 3-6 = H 1 or 2 = M 0 = L Record the rating on the	ne first page
R 3.0. Is the water quality improvement provided by the site valuable to society?	
R 3.1. Is the wetland along a stream or river that is on the 303(d) list or on a tributary that drains to one within 1 mi?	
Yes = 1 No = 0	1
R 3.2. Is the wetland along a stream or river that has TMDL limits for nutrients, toxics, or pathogens?  Yes = 1 No = 0	0
R 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? (answer YES if there is a TMDL for the drainage in which the unit is found)  Yes = 2 No = 0	0

Rating of Value If score is: \_\_\_2-4 = H  $\underline{X}$ \_1 = M \_\_\_0 = L

Total for R 3

Record the rating on the first page

Add the points in the boxes above

Wetland name or number <u>H</u>		
RIVERINE AND FRESHWATER TIDAL FRI	NGE WETLANDS	
Hydrologic Functions - Indicators that site functions to red	luce flooding and stream erosion	า
R 4.0. Does the site have the potential to reduce flooding and erosion?		
R 4.1. Characteristics of the overbank storage the wetland provides:		
Estimate the average width of the wetland perpendicular to the direction of	= -	
stream or river channel (distance between banks). Calculate the ratio: (aver-	rage width of wetland)/(average	
width of stream between banks).		
If the ratio is more than 20	points = 9	
If the ratio is 10-20	points = 6	
If the ratio is 5-<10 If the ratio is 1-<5	points = 4 points = 2	
If the ratio is < 1	points = 1	4
R 4.2. Characteristics of plants that slow down water velocities during floods: <i>Trea</i>	•	
shrub. Choose the points appropriate for the best description (polygons nee	= -	
height. These are <u>NOT Cowardin</u> classes).	a to have 1 30% cover at person	
Forest or shrub for $>^1/_3$ area OR emergent plants $>^2/_3$ area	points = 7	
Forest or shrub for $> \frac{1}{10}$ area OR emergent plants $> \frac{1}{3}$ area	points = 4	
Plants do not meet above criteria	points = 0	7
Total for R 4	Add the points in the boxes above	11
R 5.0. Does the landscape have the potential to support the hydrologic fun	ctions of the site?	
R 5.1. Is the stream or river adjacent to the wetland downcut?	Yes = 0 No = 1	0
R 5.2. Does the up-gradient watershed include a UGA or incorporated area?	Yes = 1 No = 0	1
R 5.3. Is the up-gradient stream or river controlled by dams?	Yes = 0 No = 1	1
Total for R 5	Add the points in the boxes above	2
Rating of Landscape Potential If score is:3 = H $\underline{X}$ 1 or 2 = M0 = L	Record the rating on th	ne first page
R 6.0. Are the hydrologic functions provided by the site valuable to society	?	
R 6.1. Distance to the nearest areas downstream that have flooding problems?		
Choose the description that best fits the site.		
The sub-basin immediately down-gradient of the wetland has flooding prob	Laura Alauk wasi iki in alawa ana ka	
, ,	_	
human or natural resources (e.g., houses or salmon redds)	points = 2	
human or natural resources (e.g., houses or salmon redds) Surface flooding problems are in a sub-basin farther down-gradient	points = 2 points = 1	
human or natural resources (e.g., houses or salmon redds)	points = 2	0
human or natural resources (e.g., houses or salmon redds) Surface flooding problems are in a sub-basin farther down-gradient	points = 2 points = 1 points = 0	0
human or natural resources (e.g., houses or salmon redds) Surface flooding problems are in a sub-basin farther down-gradient No flooding problems anywhere downstream	points = 2 points = 1 points = 0	0

Rating of Value If score is: \_\_\_2-4 = H \_\_\_\_1 = M  $\underline{X}$ \_0 = L

Record the rating on the first page

### These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. Aquatic bed 4 structures or more: points = 4 Emergent 3 structures: points = 2 X 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) 0 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 $\boldsymbol{X}$ Occasionally flooded or inundated 2 types present: points = 1 X Saturated only 1 type present: points = 0 X 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 2 H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species points = 2 5 - 19 species points = 1 1 < 5 species points = 0 H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. None = 0 points 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. <i>The number of checks is the number of points.</i>		
X Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).		
Standing snags (dbh > 4 in) within the wetland		
X 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 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	2	
Strata)  Total for H 1 Add the points in the boxes above	7	
<u> </u>		
Rating of Site Potential If score is:15-18 = H $\underline{X}$ _7-14 = M 0-6 = L Record the rating on	the first page	
H 2.0. Does the landscape have the potential to support the habitat functions of the site?		
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).		
Calculate: % undisturbed habitat $9 + [(\% \text{ moderate and low intensity land uses})/2] 0 = 9 %$		
If total accessible habitat is:		
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3		
20-33% of 1 km Polygon points = 2		
10-19% of 1 km Polygon points = 1		
< 10% of 1 km Polygon points = 0	0	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.		
Calculate: % undisturbed habitat $20 + [(\% \text{ moderate and low intensity land uses})/2]6 = 26 \ \%$		
Undisturbed habitat > 50% of Polygon points = 3		
Undisturbed habitat 10-50% and in 1-3 patches points = 2		
Undisturbed habitat 10-50% and > 3 patches points = 1		
Undisturbed habitat < 10% of 1 km Polygon points = 0	1	
H 2.3. Land use intensity in 1 km Polygon: If	_	
> 50% of 1 km Polygon is high intensity land use points = (- 2)		
$\leq$ 50% of 1 km Polygon is high intensity points = 0	-2	
Total for H 2 Add the points in the boxes above	-1	
Rating of Landscape Potential If score is:4-6 = H1-3 = M $\times$ < 1 = L Record the rating on t		
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 only the highest score</i>		
that applies to the wetland being rated.		
Site meets ANY of the following criteria: points = 2		
<ul> <li>— It has 3 or more priority habitats within 100 m (see next page)</li> </ul>		
<ul> <li>It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</li> </ul>		
<ul> <li>It is mapped as a location for an individual WDFW priority species</li> </ul>		
<ul> <li>It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</li> </ul>		
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 habitate (listed on poyt page) within 100 m		
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	1	
<b>Rating of Value</b> If score is: $2 = H$ $X_1 = M$ $0 = L$ 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. <a href="http://wdfw.wa.gov/publications/00165/wdfw00165.pdf">http://wdfw.wa.gov/publications/00165/wdfw00165.pdf</a> or access the list from here: <a href="http://wdfw.wa.gov/conservation/phs/list/">http://wdfw.wa.gov/conservation/phs/list/</a>)

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*).
- X **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*).
- X 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**

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 ½ 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?  Yes — Go to SC 2.2  Yes — Go to SC 2.2  Yes — Go to SC 2.3  SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?  Yes = Category I  No = Not a WHCV  SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website?  Yes = Category I  No = Not a WHCV		ED ON SPECIAL CHARACTERISTICS	
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		<del>_</del>	
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	t e contrata de la c		
pond? Yes – Go to <b>SC 3.3</b> (No)= <b>Is not a bog</b> SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30%	·		
cover of plant species listed in Table 4? Yes = Is a Category I bog No – Go to SC 3.4		<del>-</del>	
<b>NOTE:</b> If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by	· ·	<u> </u>	
measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the	-		
plant species in Table 4 are present, the wetland is a bog.			Cat. I
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar,		<u> </u>	
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		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>	
<ul> <li>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.</li> <li>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).</li> </ul>	
Yes = Category I No = Not a forested wetland for this section	Cat. I
SC 5.0. Wetlands in Coastal Lagoons	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?  — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks	
— The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)  Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon	Cat. I
<ul> <li>SC 5.1. Does the wetland meet all of the following three conditions?</li> <li>— 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).</li> <li>— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-</li> </ul>	Cat. II
mowed grassland. — The wetland is larger than $^1/_{10}$ ac (4350 ft $^2$ ) Yes = <b>Category I</b> No = <b>Category II</b>	
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:	
<ul> <li>Long Beach Peninsula: Lands west of SR 103</li> <li>Grayland-Westport: Lands west of SR 105</li> <li>Ocean Shores-Copalis: Lands west of SR 115 and SR 109</li> <li>Yes – Go to SC 6.1</li> </ul> No = not an interdunal wetland for rating	Cat I
SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?  Yes = Category I  No – Go to SC 6.2	Cat. II
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?	Cat. III
Yes = Category III No = Category IV	Cat. IV
Category of wetland based on Special Characteristics	N/A

Wetland name or number H

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# APPENDIX B1. WETLAND RATING FORM FIGURES.

**B1 - COWARDIN VEGETATION MAP** 

**B2 - HYDROPERIOD MAP** 

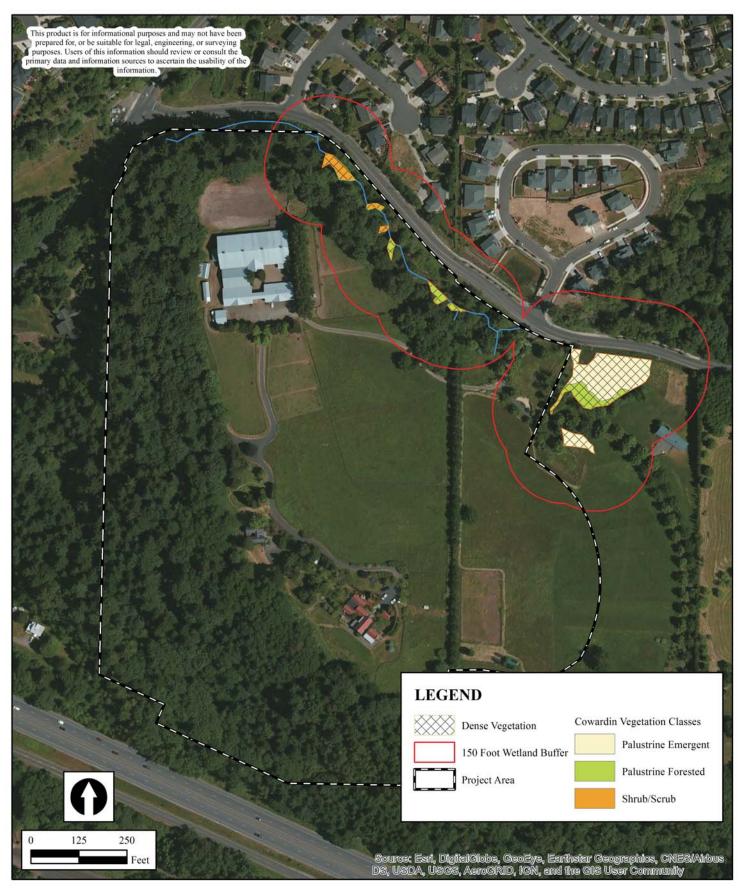
B3 - RIVERINE WETLAND ASSESSMENT

**B4 - MAP OF CONTRIBUTING BASINS** 

**B5 - LAND USE INTENSITY MAP** 

B6 - ECOLOGY 303(D) LISTED WATERS

B7/8/9 - TMDL'S FOR WRIA 28



### APPLICANT:

McIntosh Ridge PRD, LLC 16420 SE McGillivray Blvd., Ste. 103-197 Vancouver, WA 98683

PURPOSE: Wetland Delineation and

Assessment

Cowardin Vegetation Map
Dawson's Ridge
Camas, Washington

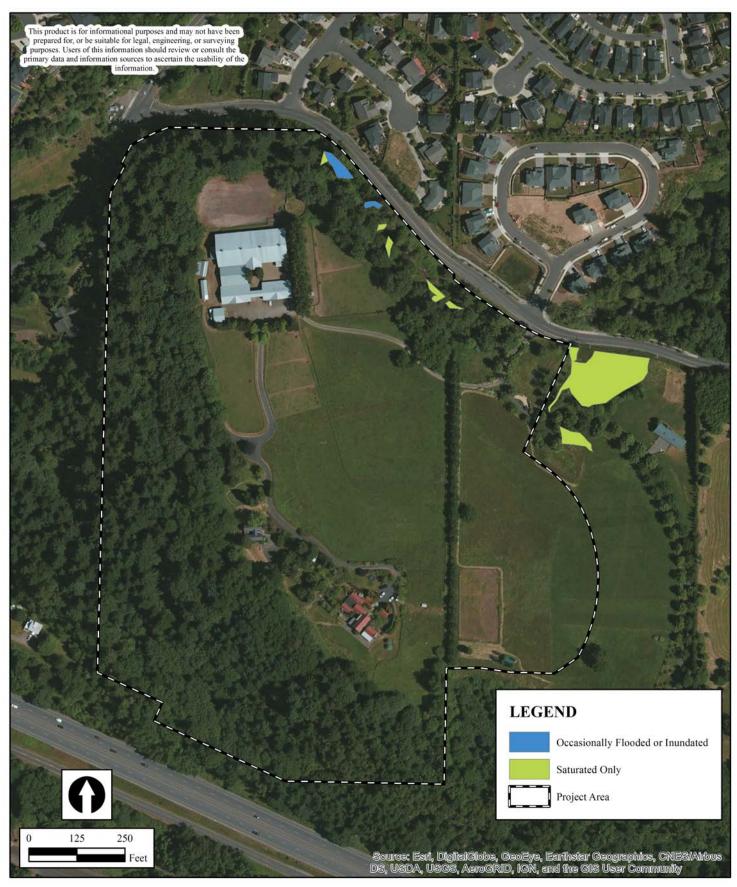


### PROPOSED ACTIVITIES IN:

Columbia Slope Watershed

**LEGAL:** SE & NE  $\frac{1}{4}$  of Sect. 08 & SW $\frac{1}{4}$ 

Sect. 9, T1N, R3E, W.M.,
NEAR: Camas, Washington
COUNTY: Clark County
DATE: October 28, 2016
Appendix B1



### APPLICANT:

McIntosh Ridge PRD, LLC 16420 SE McGillivray Blvd., Ste. 103-197 Vancouver, WA 98683

PURPOSE: Wetland Delineation and

Assessment

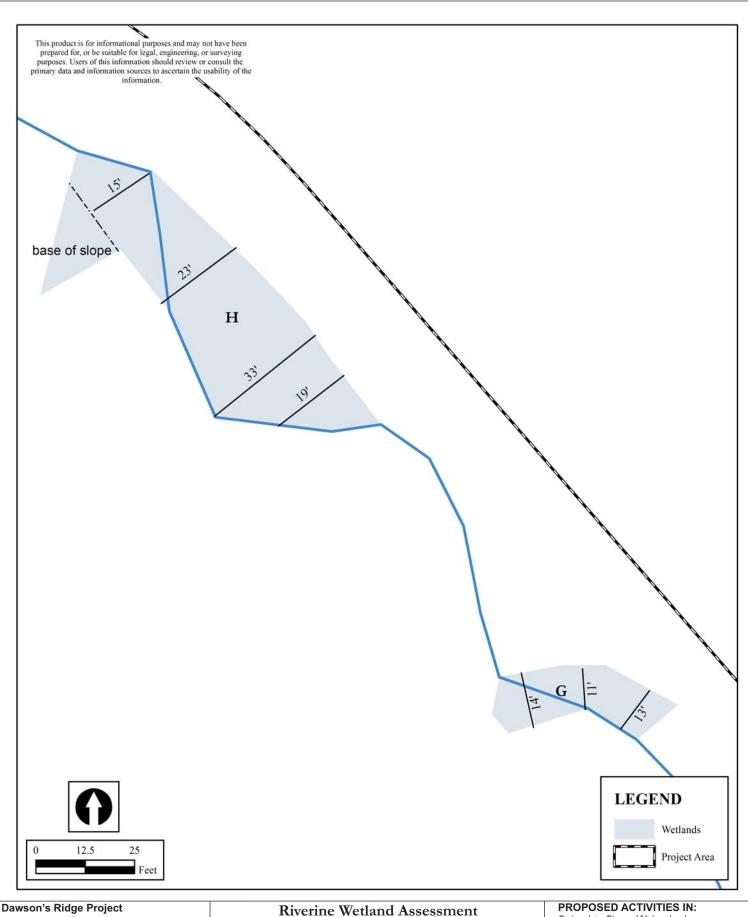
Hydroperiods Map Dawson's Ridge Camas, Washington



### PROPOSED ACTIVITIES IN:

Columbia Slope Watershed

LEGAL: SE & NE 1/4 of Sect. 08 & SW1/4
Sect. 9, T1N, R3E, W.M.,
NEAR: Camas, Washington
COUNTY: Clark County
DATE: October 28, 2016 Appendix B2



### APPLICANT:

McIntosh Ridge PRD, LLC 16420 SE McGillivray Blvd., Ste. 103-197 Vancouver WA 98683

PURPOSE: Wetland Delineation and

Assessment

Dawson's Ridge Camas, Washington



Columbia Slope Watershed

LEGAL: SE & NE 1/4 of Sect 08 & SW1/4

Sect. 9, T1N, R3E, W.M., NEAR: Camas, Washington COUNTY: Clark County DATE: October 28, 2016 Appendix B3



### APPLICANT:

McIntosh Ridge PRD, LLC 16420 SE McGillivray Blvd., Ste. 103-197 Vancouver, WA 98683

PURPOSE: Wetland Delineation and

Assessment

Map of Contributing Basins
Dawson's Ridge
Camas, Washington



### PROPOSED ACTIVITIES IN:

Columbia Slope Watershed

LEGAL: SE & NE 1/4 of Sect 08 & SW1/4

Sect. 9, T1N, R3E, W.M., NEAR: Camas, Washington COUNTY: Clark County DATE: October 28, 2016  $Appendix\ B4$ 



### APPLICANT:

McIntosh Ridge PRD, LLC 16420 SE McGillivray Blvd., Ste. 103-197 Vancouver, WA 98683

PURPOSE: Wetland Delineation and

Assessment

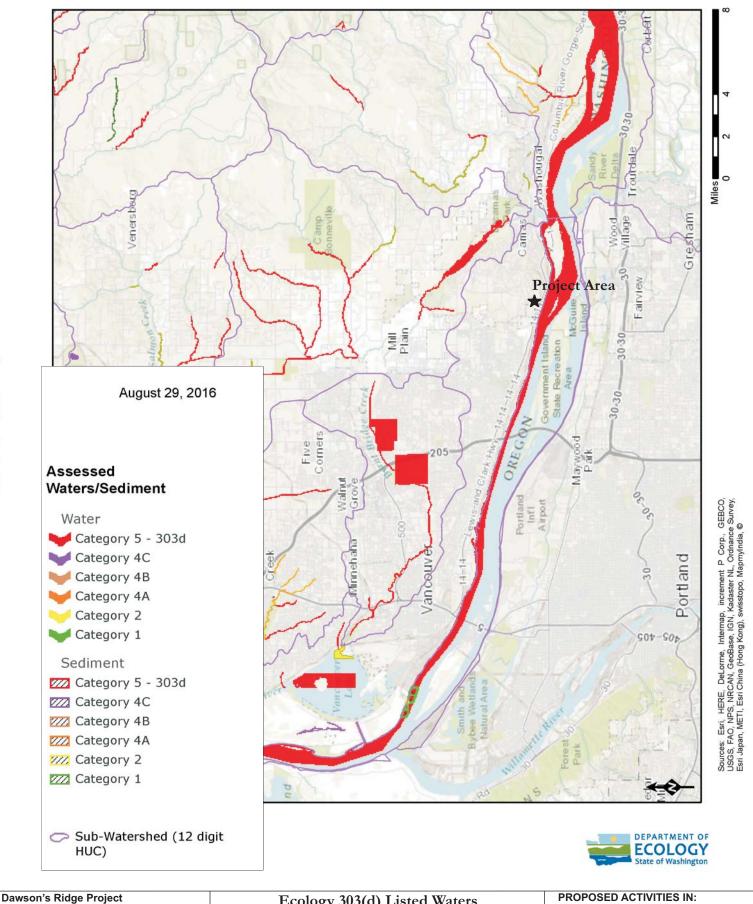
Land Use Intensity Map Dawson's Ridge Clark County, Washington



### PROPOSED ACTIVITIES IN:

Columbia Slope Watershed

LEGAL: SE & NE ¼ of Sect. 08 & SW¼
Sect. 9, T1N, R3E, W.M.,
NEAR: Camas, Washington
COUNTY: Clark County
DATE: October 28, 2016 Appendix B5



### APPLICANT:

McIntosh Ridge PRD, LLC 16420 SE McGillivray Blvd., Ste. 103-197 Vancouver, WA 98683

PURPOSE: Wetland Delineation and Assessment

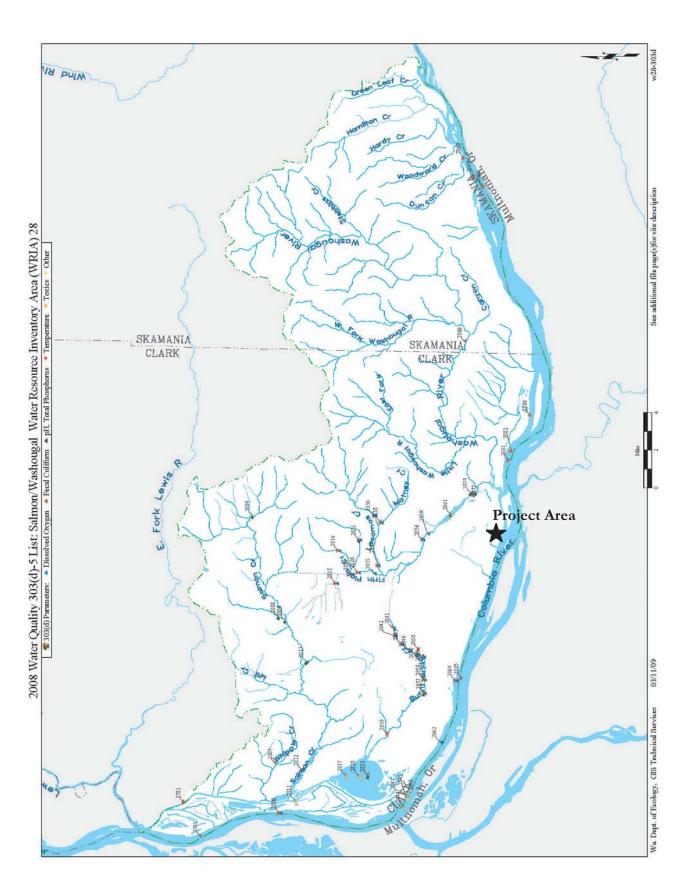
Ecology 303(d) Listed Waters Dawson's Ridge Clark County, Washington



Columbia Slope Watershed

LEGAL: SE & NE 1/4 of Sect 08 & SW1/4

Sect. 9, T1N, R3E, W.M., NEAR: Camas, Washington COUNTY: Clark County DATE: October 28, 2016 Appendix B6



### APPLICANT:

McIntosh Ridge PRD, LLC 16420 SE McGillivray Blvd., Ste. 103-197 Vancouver, WA 98683

PURPOSE: Wetland Delineation and

Assessment

TMDL's for WRIA 28 Dawson's Ridge Camas, Washington



### PROPOSED ACTIVITIES IN:

Columbia Slope Watershed

LEGAL: SE & NE 1/4 of Sect 08 & SW1/4

Sect. 9, T1N, R3E, W.M., NEAR: Camas, Washington COUNTY: Clark County DATE: October 28, 2016  $Appendix\ B7$ 

### 303(d) Catagory 5 Assessed Waters for WRIA 28

Мар#	Listing	Waterbody	Parameter	Medium
2844	509972	COLUMBIA RIVER	Sediment Bioassay	(s)
2845	509973	COLUMBIA RIVER	PCB	(s)
2846	7840	BURNT BRIDGE CREEK	Dissolved Oxygen	(W)
2846	7858	BURNT BRIDGE CREEK	Fecal Coliform	(w)
2847	509974	COLUMBIA RIVER	PCB	(s)
2848	509976	COLUMBIA RIVER	PCB	(s)
2850	46972	PETERSON DITCH	Fecal Coliform	(w)
2850	48661	PETERSON DITCH	Temperature	(w)
2851	7828	BURNT BRIDGE CREEK	Fecal Coliform	(w)
2851		BURNT BRIDGE CREEK	Dissolved Oxygen	(w)
2851	7851	BURNT BRIDGE CREEK	Temperature	(w)
2853		BURNT BRIDGE CREEK	Fecal Coliform	(w)
2853	7839	BURNT BRIDGE CREEK	Dissolved Oxygen	(w)
2853	7848	BURNT BRIDGE CREEK	Temperature	(w)
2856		LACAMAS CREEK	Dissolved Oxygen	(w)
2856		LACAMAS CREEK	Fecal Coliform	(w)
2856	7917	LACAMAS CREEK	Temperature	(w)
2857		BURNT BRIDGE CREEK	рН	(w)
2857		BURNT BRIDGE CREEK	Dissolved Oxygen	(w)
2857		BURNT BRIDGE CREEK	Temperature	(w)
2857		BURNT BRIDGE CREEK	Fecal Coliform	(w)
	46969	BURNT BRIDGE CREEK	Fecal Coliform	(w)
	47728	BURNT BRIDGE CREEK	Dissolved Oxygen	(W)
	48686	BURNT BRIDGE CREEK	Temperature	(w)
2859		DWYER CREEK	Dissolved Oxygen	(w)
2861	0.000	LACAMAS LAKE	Total Phosphorus	(w)
	43465	LACAMAS LAKE	PCB	(t)
	49046	COLUMBIA RIVER	Dissolved Oxygen	(w)
	48933	COLUMBIA RIVER	Temperature	(w)
	49044	COLUMBIA RIVER	Dissolved Oxygen	(w)
	21540	COLUMBIA RIVER	Temperature	(w)
	16774	WASHOUGAL RIVER	Fecal Coliform	(w)
2869		COLUMBIA RIVER (BROUGHTON REACH)	Temperature	(w)
2874		ROUND LAKE	pH	(w)
2874		ROUND LAKE	Dissolved Oxygen	(w)
2875		COLUMBIA RIVER (BROUGHTON REACH)	Temperature	(w)
2877		LACAMAS CREEK	Temperature	(w)
2877		LACAMAS CREEK	Dissolved Oxygen	(w)
2877		LACAMAS CREEK	pH	(w)
2880		COLUMBIA RIVER (BROUGHTON REACH)	Temperature	(w)
	21539	COLUMBIA RIVER	Temperature	(w)
2882		COLUMBIA RIVER	Temperature	(w)
2886	6294	COLUMBIA RIVER (BROUGHTON REACH)	Temperature	(W)

Medium: water(w), tissue(t), sediment(s), other(o)

Page 2

Ecology, GIS Technical Services

Dawson's Ridge Project

APPLICANT:

McIntosh Ridge PRD, LLC 16420 SE McGillivray Blvd., Ste. 103-197 Vancouver, WA 98683

PURPOSE: Wetland Delineation and

Assessment

TMDL's for WRIA 28
Dawson's Ridge
Camas, Washington



PROPOSED ACTIVITIES IN:

Columbia Slope Watershed

LEGAL: SE & NE 1/4 of Sect. 08 & SW1/4

Sect. 9, T1N, R3E, W.M., NEAR: Camas, Washington COUNTY: Clark County DATE: October 28, 2016 Appendix B8

### 303(d) Catagory 5 Assessed Waters for WRIA 28

Map#	Listing	Waterbody	<u>Parameter</u>	Medium
2781	40869	LAKE RIVER	Temperature	(w)
2781	40870	LAKE RIVER	Fecal Coliform	(w)
2791	6705	COLUMBIA RIVER	Fecal Coliform	(w)
2804	22066	SALMON CREEK	рН	(w)
2806	48932	COLUMBIA RIVER	Temperature	(w)
	49048	COLUMBIA RIVER	Dissolved Oxygen	(w)
	22018	WHIPPLE CREEK	Fecal Coliform	(w)
	22067	WEAVER CREEK	pH	(w)
	22065	SALMON CREEK	pH	(w)
	53206	LAKE RIVER	2,3,7,8-TCDD	(t)
	53207	LAKE RIVER	4,4'-DDE	(t)
	53208	LAKE RIVER	Dieldrin	(t)
	53209	LAKE RIVER	PCB	(t)
	22047	SALMON CREEK	Temperature	(w)
	22055	SALMON CREEK	Dissolved Oxygen	(w)
	22063 22053	SALMON CREEK	pH Bissets d Ossans	(w)
	22061	CURTIN CREEK	Dissolved Oxygen	(w)
2815		CURTIN CREEK	pH Discolved Oneses	(w)
2815		CHINA LATERAL CHINA LATERAL	Dissolved Oxygen Temperature	(w)
2816		FIFTH PLAIN CREEK	Temperature	(w) (w)
2816		FIFTH PLAIN CREEK	Dissolved Oxygen	(w)
	42172	VANCOUVER LAKE	PCB	(t)
	42187	VANCOUVER LAKE	4.4'-DDE	(t)
	42282	VANCOUVER LAKE	Toxaphene	(t)
	53204	VANCOUVER LAKE	2,3,7,8-TCDD	(t)
	53205	VANCOUVER LAKE	Dieldrin	(t)
2826	7907	FIFTH PLAIN CREEK	Temperature	(w)
2826	7908	FIFTH PLAIN CREEK	Dissolved Oxygen	(w)
2827	7862	CHINA DITCH	Dissolved Oxygen	(w)
2827	7865	CHINA DITCH	Temperature	(w)
2831	7945	SHANGHAI CREEK	Temperature	(w)
2831	7946	SHANGHAI CREEK	Dissolved Oxygen	(W)
2831		SHANGHAI CREEK	pH	(w)
2833		VANCOUVER LAKE	Total Phosphorus	(w)
2833	20000	VANCOUVER LAKE	Fecal Coliform	(w)
2835		FIFTH PLAIN CREEK	Dissolved Oxygen	(w)
2836		LACAMAS CREEK	Temperature	(w)
2836		LACAMAS CREEK	Dissolved Oxygen	(w)
2837		LACAMAS CREEK	Temperature	(w)
2837 2838		LACAMAS CREEK	Dissolved Oxygen	(w)
2838		MATNEY CREEK	Dissolved Oxygen	(w)
	22016	MATNEY CREEK MATNEY CREEK	Temperature Fecal Coliform	(w)
2839		BURNT BRIDGE CREEK	Fecal Coliform	(w) (w)
2839		BURNT BRIDGE CREEK	Temperature	(w)
2841		BURNT BRIDGE CREEK	Fecal Coliform	(w)
2841		BURNT BRIDGE CREEK	Dissolved Oxygen	(w)
2842		BURNT BRIDGE CREEK	Fecal Coliform	(w)
2842		BURNT BRIDGE CREEK	Dissolved Oxygen	(w)
2842		BURNT BRIDGE CREEK	Temperature	(w)
	45236	BURNT BRIDGE CREEK	Fecal Coliform	(w)
2843	47731	BURNT BRIDGE CREEK	Dissolved Oxygen	(w)
2843	48689	BURNT BRIDGE CREEK	Temperature	(w)

Medium: water(w), tissue(t), sediment(s), other(o)

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Ecology, GIS Technical Services

### Dawson's Ridge Project

### APPLICANT:

McIntosh Ridge PRD, LLC 16420 SE McGillivray Blvd., Ste. 103-197 Vancouver, WA 98683

PURPOSE: Wetland Delineation and Assessment

TMDL's for WRIA 28
Dawson's Ridge
Camas, Washington



### PROPOSED ACTIVITIES IN:

Columbia Slope Watershed

LEGAL: SE & NE 1/4 of Sect. 08 & SW1/4

Sect. 9, T1N, R3E, W.M., NEAR: Camas, Washington COUNTY: Clark County DATE: October 28, 2016 Appendix B9