# Critical Areas Report for the Highland Terrace Subdivision

# La Center, Washington

Prepared for:

Chris Sundstrom Evergreen Homes NW 13217 NW 30<sup>th</sup> Ct. Vancouver, Washington 98685 (360) 624-3116

Prepared by:

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May 2016

# **SIGNATURE PAGE**

The information and data in this report were compiled and prepared under the supervision and direction of the undersigned.

<u>Hate Lyn Wills</u> Kate Lyn Wills

Biologist

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# **INTRODUCTION**

Ecological Land Services, Inc. (ELS) has completed this critical areas report including wetland delineation on behalf of the applicant, Chris Sundstrom. The study area consists of Clark County Tax Parcels 258636-000, 258704-000, 258702-000, 258727-000, 258644-000, and 258763-000 located south of NW Bolen Street and north of NW Pacific Highway in La Center, Washington, within in a portion of Section 33, Township 5 North, Range 1 East, of the Willamette Meridian (Figure 1). The applicant is proposing to subdivide six adjacent parcels totaling approximately 26.06 acres, zoned as MDR-16, into 97 lots to be used for single-family dwellings with associated shared driveways, stormwater facilities, utility installation, and road improvements. ELS conducted a site visit on March 23, 2016 to inventory site conditions within the study area for the preparation of this critical areas report as required under *La Center Municipal Code (LCMC) Chapter 18.300.040*.

### SITE DESCRIPTION

The two northern parcels (258704000 and 258636000) are bordered to the north by NW Bolen Street. These northern parcels share a gravel driveway which divides the parcels east to west. Both parcels contain single family dwellings with numerous outbuildings and pastureland. The three southern parcels (258702000, 258727000, and 258644000) are bordered to the south by NW Pacific Highway. Both the southwestern (258702000) and southeastern parcel (258644000) contain no structures and consist of pastureland. The southcentral parcel (258727000) contains a single family dwelling with various outbuildings in the northeastern corner with pastureland and a small barn on the southern portion of the parcel. The eastern parcel (258763000) contains two single-family dwellings with numerous outbuildings and consists primarily of pastureland with a forested area containing a scrub/shrub understory along the southern boundary. Property surrounding the study area consists of single-family residences and pastureland (Figure 2, Photoplate 1).

# METHODS

### Critical Areas Delineation

The wetland delineation followed the Routine Determination Method according to the U.S. Army Corps of Engineers', *Wetland Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (Version 2.0)* (U.S. Army Engineer Research and Development Center 2010).

The Routine Determination Method examines three parameters—vegetation, soils, and hydrology—to determine if wetlands exist in a given area. Hydrology is critical in determining what is wetland, but is often difficult to assess because hydrologic conditions can change periodically (hourly, daily, or seasonally). Consequently, it is necessary to determine if hydrophytic vegetation and hydric soils are present, which would indicate that water is present for long enough duration to support a wetland plant community. By definition, wetlands are 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 are regulated as "Waters of the United States" by the U.S. Army Corps of Engineers (Corps) and as "Waters of the State" by the Washington Department of Ecology (Ecology), and locally by *LCMC 19.15.120*.

ELS evaluated the property for the presence of wetlands and located five wetlands within the study area. Fieldwork was conducted on March 23, 2016. Vegetation, soil, and hydrology information was collected from ten test plots to determine the location and extent of wetlands onsite. Wetlands boundaries and test plot locations were mapped with a hand-held GPS unit with sub-meter accuracy. Wetland boundaries were delineated mainly by changes in topography, vegetation, and evidence of hydrology. Test Plot data sheets can be found in Appendix A.

# VEGETATION

Dominant vegetation in the wetlands consisted mainly of; **Trees:** Oregon ash (*Fraxinus latifolia*, FACW), mature Pacific crabapple (*Malus fusca*, FACW); **Saplings/Shrubs:** Oregon ash, Pacific crabapple, evergreen blackberry (*Rubus laciniatus*, FACU); **Herbs:** reed canarygrass (*Phalaris arundinacea*, FACW), creeping buttercup (*Ranunculus repens*, FACW), orchard grass (*Dactylis glomerata*, FACU), velvet grass (*Holcus lanatus*, FAC), soft rush (*Juncus effuses*, FACW); and **Woody vines:** Himalayan blackberry (*Rubus armeniacus*, FACU).

Dominant vegetation in the upland areas consisted mainly of; **Trees:** Oregon ash, mature Pacific crabapple; **Saplings/Shrubs:** common snowberry (*Symphoricarpos albus*, FACU), Oregon ash, Pacific crabapple, evergreen blackberry; **Herbs:** meadow foxtail (*Alopecurus pratensis*, FAC), swordfern (*Polystichum munitum*, FACU), creeping buttercup, orchard grass, velvet grass; and **Woody vines:** Himalayan blackberry.

The indicator status, following the scientific names, indicates the likelihood of the species to be found in wetlands. Listed from most likely to least likely to be found in wetlands, the indicator status categories are:

- **OBL** (obligate wetland) occur almost always under natural conditions in wetlands.
- **FACW** (facultative wetland) usually occur in wetlands, but occasionally found in non-wetlands.
- **FAC** (facultative) equally likely to occur in wetlands or non-wetlands.
- FACU (facultative upland) usually occur in non-wetlands, but occasionally found in wetlands.
- **UPL** (obligate upland) occur almost always under natural conditions in non-wetlands.
- **NI** (no indicator) insufficient data to assign to an indicator category.

### SOILS

The U.S.D.A. National Resources Conservation Service (NRCS) map depicts seven soil units within the study area: (CwA) Cove silty clay loam, thin solum, 0 to 3 percent slopes; (GeB) Gee silt loam, 0 to 9 percent slopes; (GeD) Gee silt loam, 8 to 20 percent slopes; (GeE) Gee silt

loam, 20 to 30 percent slopes; (HcB) Hesson clay loam, 0 to 8 percent slopes; (HoG) Hillsboro silt loam, 30 to 65 percent slopes; (OdB) Odne silt loam, 0 to 5 percent slopes (NRCS 2016)(Figure 4). Cove silty clay loam, thin solum, consists of very deep, poorly drained soils found on flood plains from alluvial deposits. Gee silt loam consists of very deep, moderately well drained soil found on terraces from alluvial deposits. Hesson clay loam consists of very deep, well drained soil found on terraces from alluvial deposits. Hillsboro silt loam consists of very deep, well drained soil found on terraces from alluvial deposits. Odne silt loam consists of very deep, well drained soil found on terraces from alluvial deposits. Odne silt loam consists of very deep, poorly drained soil found on terraces and in drainageways from alluvial deposits. Cove silty clay loam, thin solum and Odne silt loam are both mapped as hydric on the NRCS Hydric Soil List for Washington (2015).

The evaluated soil within wetland Test Plots 2, 3, 5, 7, and 9, consisted primarily of very dark brown (10YR2/2) silty loam in the upper profile (~ 0 to 8 inches below ground surface (BGS)) and dark gray (10YR4/1) silty clay loam with dark yellowish brown (10YR4/6) redox concentrations in the lower profile (~ 8 to 16 inches BGS). Test Plots 2, 3, 5, and 9 meet the hydric soil indicator F3 Depleted Matrix while Test Plot 7 meets the hydric soil indicator F6 Redox Dark Surface.

The evaluated soil within upland Test Plots 1, 4, 6, 8, and 10, consisted of dark brown (10YR3/3) silty loam from 0 to 16 inches BGS. Appendix A contains the test plot data sheets. Table 1 below summarizes the soil units mapped onsite by NRCS.

Soil Series	Unit Symbol	Percent Slope	Drainage Class	Hydric Soil?
Cove silty clay loam, thin solum	CwA	0 to 3	Poorly drained	Yes
Gee silt loam	GeB	0 to 8	Moderately well drained	No
Gee silt loam	GeD	8 to 20	Moderately well drained	No
Gee silt loam	GeE	20 to 30	Moderately well drained	No
Hesson clay loam	HcB	0 to 8	Well drained	No
Hillsboro silt loam	HoG	30 to 65	Well drained	No
Odne silt loam	OdB	0 to 5	Poorly drained	Yes

Table 1: Summary of NRCS Soil Survey Data

# HYDROLOGY

ELS delineated four slope wetlands (A-D) and one depressional wetland (E) onsite. Wetlands A and B are emergent, slope wetlands located at the base of sloped pastureland within the southern parcels and is regularly mowed. Both wetlands (A and B) drain into roadside ditches along NW Pacific Highway and flow southeast. Wetlands C and D are emergent, slope wetlands located mid-hillslope within the eastern parcel. Wetland C is upslope of Wetland D and likely drains to it through groundwater. The area surrounding both wetlands (C and D) has been disturbed via clearing in the past. Wetland E is an emergent, scrub/shrub, forested, depressional wetland located adjacent to NW Pacific Highway. A berm approximately 3-feet tall divides the wetland from the road and roadside ditch, however, the wetland drains to the ditch via a culvert under an existing driveway in this location. Wetland hydrology likely comes from a shallow groundwater table, hillside runoff, and precipitation. Hydroperiods of the wetlands include seasonally flooded,

occasionally flooded, and saturated only. All of the wetland test plots met primary hydrology indicators including Surface Water (A1), High Water Table (A2), Saturation (A3), and Water-Stained Leaves (B9). The wetlands provide flood storage and delay, and groundwater recharge functions.

# NATIONAL WETLANDS INVENTORY

The National Wetlands Inventory (NWI) map does not indicate wetlands within the study area (Figure 5). ELS observations were inconsistent with the NWI map in that there were five wetlands found onsite. NWI maps are typically used to gather general wetland information about a region and due to the large scale necessary for regional mapping, are limited in accuracy for localized analyses.

# CRITICAL AREAS SUMMARY

### Wetlands

Four slope wetlands (A-D) and one depressional wetland (E) were delineated onsite. Wetlands A and B are emergent, slope wetlands that total 29,542 square feet and 19,643 square feet respectively. Wetlands C and D are emergent, slope wetlands that total 1,385 square feet and 1,156 square feet respectively. Wetland E is an emergent, scrub/shrub, forested, depressional wetland that totals 594 square feet. The wetland boundaries were delineated by changes in topography, vegetation, and evidence of hydrology. Dominant vegetation in the wetlands consisted mainly of; Oregon ash, mature and sapling Pacific crabapple, evergreen blackberry, reed canarygrass, creeping buttercup, orchard grass, velvet grass, soft rush and Himalayan blackberry. Wetland hydrology likely comes from a shallow groundwater table, hillside runoff, and precipitation. Hydroperiods of the wetlands include seasonally flooded, occasionally flooded, and saturated only. The wetlands provide flood storage and delay, and groundwater recharge functions. According to the Washington State Wetland Rating System for Western Washington: 2014 Update (Hruby); Wetlands A-D are Category IV slope wetlands scoring 5 points for water quality functions, 3 points for hydrologic functions, and 5 points for habitat functions, while Wetland E is a Category IV depressional wetland scoring 5 points for water quality functions, 4 points for hydrologic functions, and 5 points for habitat functions. Wetland rating forms can be found in Appendix B.

# **Buffers**

Standard wetland buffers are based on land use intensity in conjunction with the wetland rating category from the wetland rating form (*LCMC 18.300.090.6.h*). Table 18.300.090(6)(h)(i)-1 of the LCMC was used to determine the buffer width. Residential land with more than one residential unit per acre is considered a high intensity land use according to *Guidance on Widths of Buffers and Ratios for Compensatory Mitigation for Use with the Western Washington Wetland Rating System (Table 8C-3)*; therefore the designated buffer width for Wetlands A-E is 50-feet. The buffer area is dominated by mowed pasture grasses with scattered trees and shrubs. Table 2 below summarizes the critical areas onsite.

### Table 2. Summary of Critical Areas.

Critical Area	Category <sup>1</sup> /Cowardin Class <sup>2</sup> /HGM Class <sup>3</sup>	Size Onsite	Buffer Width <sup>4</sup>
Wetland A	IV, emergent, slope	29,542 sq. ft.	50 feet
Wetland B	IV, emergent, slope	19,643 sq. ft.	50 feet
Wetland C	IV, emergent, slope	1,385 sq. ft.	50 feet
Wetland D	IV, emergent, slope	1,156 sq. ft.	50 feet
Wetland E	IV, emergent, scrub/shrub, forested, depressional	594 sq. ft.	50 feet

<sup>1</sup>Hruby 2004

<sup>2</sup>Cowardin et al. 1979

<sup>3</sup>NRCS 2008

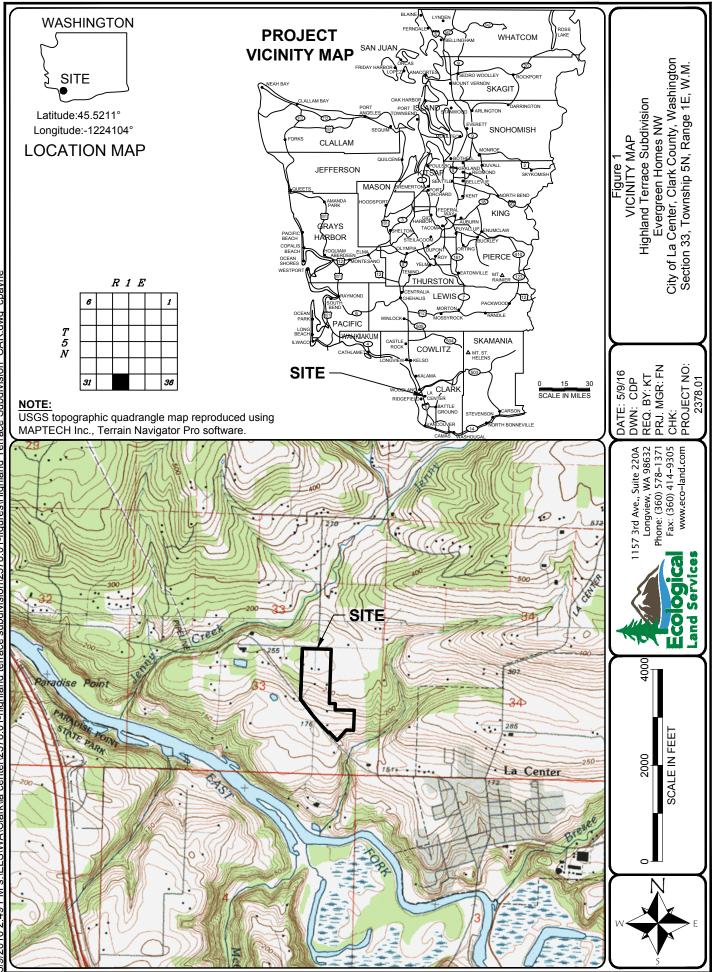
<sup>4</sup>LCMC 18.300.090(6)(h)(i)-1

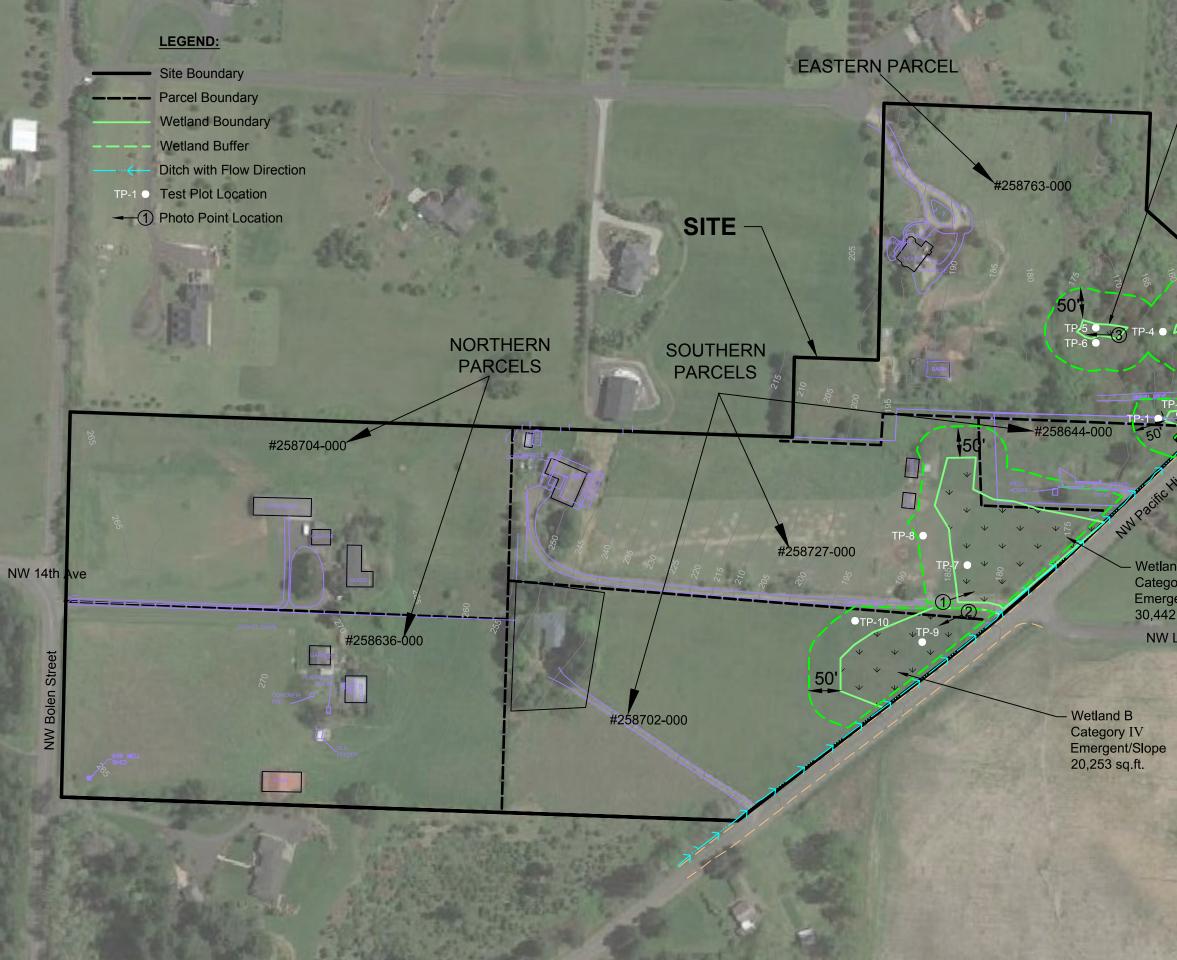
# **LIMITATIONS**

ELS bases the above listed determinations and conclusions on standard scientific methodology and best professional judgment. In our opinion, the conclusions should agree with local, state, and federal regulatory agencies. However, this should be considered a preliminary jurisdictional determination and should be used at your own risk until it has been reviewed and approved in writing by the appropriate regulatory agencies.

### **REFERENCES**

- City of La Center. 2012. La Center Municipal Code, Critical Areas 18.300. La Center, Washington.
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- U.S. Fish & Wildlife Service (USFWS). 2012. National Wetlands Inventory. Online document <a href="http://www.wetlandsfws.er.usgs.gov/NWI/index.html">http://www.wetlandsfws.er.usgs.gov/NWI/index.html</a>. Website accessed March 2016.





Wetland C Category IV Emergent/ Slope 1,385 sq.ft.

TP-3

Wetland D Category IV Emergent/ Slope 1,156 sq.ft.

Wetland E Category IV Emergent/ Scrub-Shrub/ Forested/ Depressional 594 sq.ft.

Wetland A Category IV Emergent/Slope 30,442 sq.ft.

NW Larsen Drive





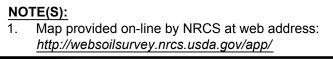
Figure 3 PROPOSED CONDITIONS Highland Terrace Subdivision Evergreen Homes NW City of La Center, Clark County, Washington Section 33, Township 5N, Range 1E, W.M. Wetland C Category IV Emergent/ Slope 1,385 sq.ft. Wetland D Category IV Emergent/ Slope 1,156 sq.ft. DATE: 5/9/16 DWN: CDP REQ. BY: KT PRJ. MGR: FN CHK: PROJECT NO: Wetland E Category IV Emergent/ Scrub-Shrub/ Suite 220A , WA 98632 )) 578-1371 ) 414-9305 o-land.com Forested/ NW Pacific Depressional 594 sq.ft. Ave., S jview, (360) 3rd A Long one: =ax: 57 Wetland A Category IV Emergent/Slope 30,442 sq.ft. NW Larsen Drive 300 IN FEET 150 CALE 0



### LEGEND:

Cw	Α	Cove	silty	clay	loan	า thin	solum,	0 to	3	perce	ent	slopes.	Hydric.
	_	-				-							

- **GeB** Gee silt loam, 0 to 8 percent slopes. Not hydric.
- **GeD** Gee silt loam, 8 to 20 percent slopes. Not hydric.
- **GeE** Gee silt loam, 20 to 30 percent slopes. Not hydric.
- **HoG** Hilsboro silt loam, 30 to 65 percent slopes. Not hydric.
- OdB Odne silt loam, 0 to 5 percent slopes. <u>Hydric.</u>



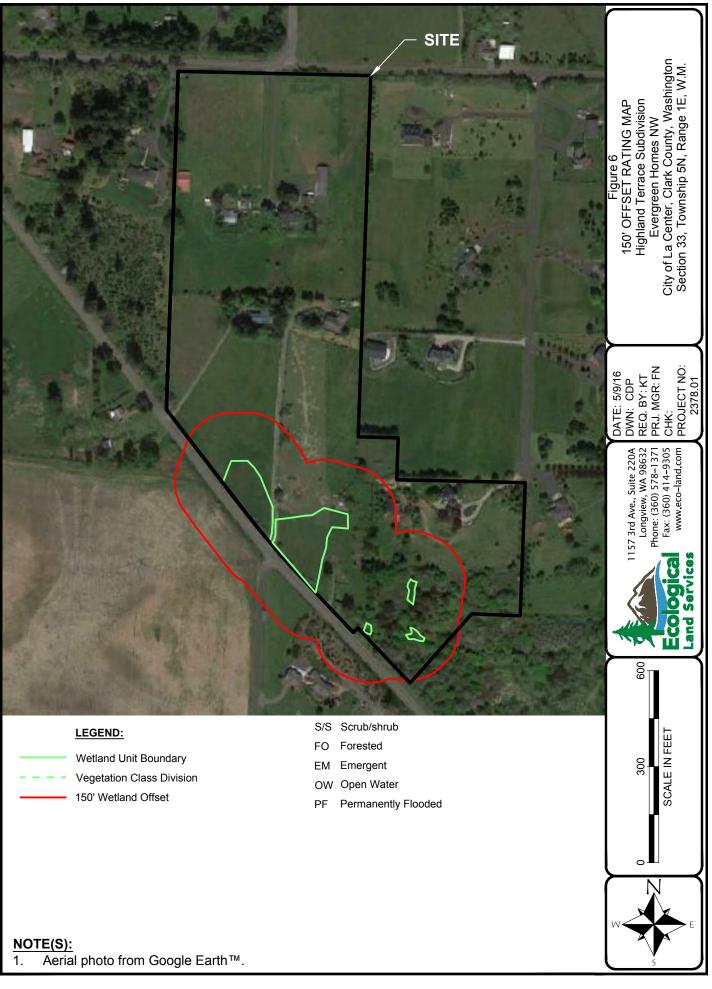


No mapped wetlands indicated onsite by US Fish & Wildlife Service.

### LEGEND:

Freshwater Emergent Wetland Freshwater Pond





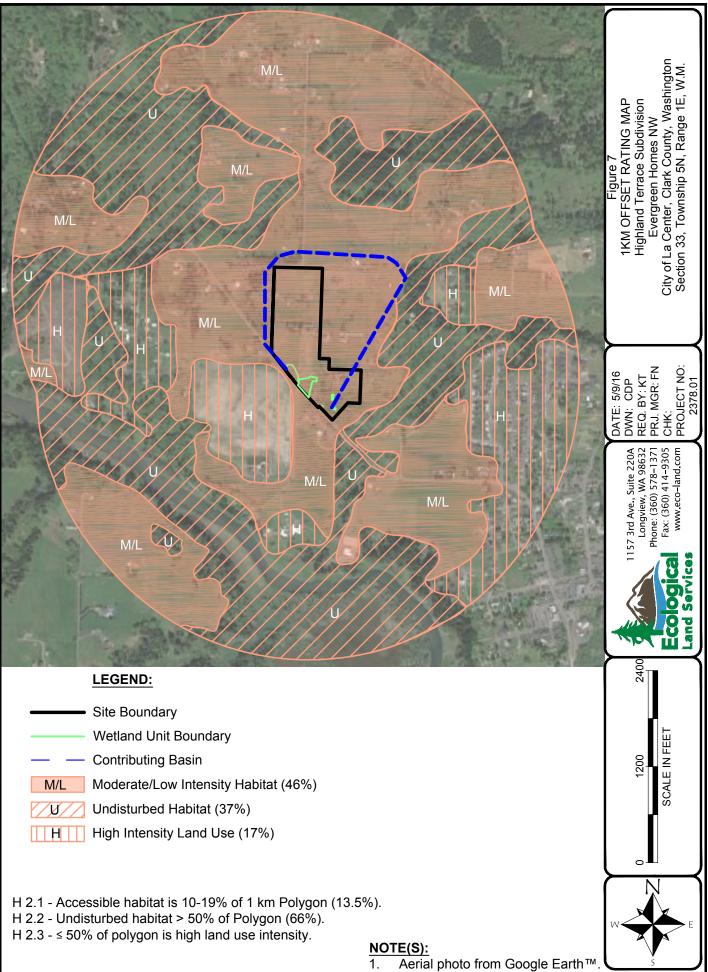




Photo 1 was taken from the driveway facing between Wetland Α and B, facing southeast, across Wetland A. This photo was taken to document the existing dominant, mowed vegetation and natural downward slope of the wetland.

Photo 2 was taken from the driveway between Wetland A and B, facing northwest, across Wetland B. NW Pacific Highway can be seen on the left hand side of the photo. This photo was taken to document the existing dominant, mowed vegetation and natural downward slope of the wetland.

Photo 3 was taken within Wetland C facing north. This photo was taken to document the dominant vegetation in this location. Note the brush piles in the background as evidence of clearing.

Land Services

Fax: (360) 414-9305

DATE: 8/25/15 DWN: KT PRJ. MGR: FN PROJ.#: 2378.01

Photoplate 1 Project Name: Highland Terrace Subdivision Client: Evergreen Homes NW La Center, Washington

# APPENDIX A: WETLAND DETERMINATION DATA FORMS

Project/Site: Highland Terrace Subdivsion		City/Co	unty: La Cen	ter/Clark S	ampling Date:	4/6/16	
Applicant/Owner: Evergreen Homes NW		0.00	State: W		Sampling Point: TP1		
Investigator(s): Wills, Kate'Lyn		Sectio		, Range: 33, 5N, 1			
Landform (hillslope, terrace, etc.): hillslope				, Range. <u>55, 514, 11</u>	_	Slope (%):	50/
	Local relief: convex Lat: 45.521107 Long:-122.4			410450	Datum:		570
Subregion (LRR): A		107		WI classification: No		NAD03	
Soil Map Unit Name: Gee silt loam, 20-30 percent slop							
Are climatic / hydrologic conditions on the site typical fo							
Are Vegetation , Soil , or Hydrology significantly				Circumstances" pres			
Are Vegetation, Soil, or Hydrology naturally pr		•		any answers in Rema	,		
SUMMARY OF FINDINGS – Attach site map	showing sa	ampling po	int locatio	ns, transects, in	nportant fea	atures, etc.	
Hydrophytic Vegetation Present? Yes 🗌 No 🛛		la tha Sa	mpled Area				
Hydric Soils Present? Yes 🗌 No 🛛	$\triangleleft$			Vee			
Wetland Hydrology Present? Yes 🗌 No 🛛	3	within a	Wetland?	Yes	No⊠		
Remarks:	_						
VEGETATION (Use scientific names)							
	Absolute	Dominant	Indicator	Dominance Test	Worksheet		
Tree Stratum (Plot size: ft radius)	% Cover	Species?	Status				
1. Malus fusca	50%	yes	FACW	Number of Domina	ant Species	3	(A)
2. Fraxinus latifolia	20%	ves	FACW	That Are OBL, FA	CW, or FAC:		_ (,,)
3.	<u>~~~~</u> %	y03	17,000	,	,		
4.	%			Total Number of D	ominant	6	(B)
				Species Across Al	l Strata:	0	(D)
Total Cover:	70%					50	
				Percent of Domina	ant Species	50	(A/B)
Sapling/Shrub Stratum (Plot size:ft. radius)				That Are OBL, FA			
1. Malus fusca	40%	yes	FACW	Prevalence Index			
2. Symphoricarpos albus	5%	no	FACU	Total % Co		Multiply by	
3.	<u> </u>	no	17,00	OBL species		$\frac{1}{x 1=}$	·
4	%			FACW species			
4	<u></u> %			FAC species			
Total Cover:	45%			FACU species		x 4=	
Herb Stratum (Plot size: ft radius)	=0/		<b>E</b> 4 <b>O</b> 1 1	UPL species		x 5=	(D)
1. Dactylis glomerata	5%	yes	FACU	Column Totals:		(A)	(B)
2. Polystichum munitum	5%	yes	FACU		alence Index =		
3	%			Hydrophytic Veg			
4.	%			🔲 1 – Rapid Te	est for Hydropl	hytic Vegetatior	1
	70			🗌 2 – Dominar	nce Test is >50	0%	
5.	%			3 - Prevalen	ce Index is ≤3	.0 <sup>1</sup>	
6.					ogical Adaptati		
	%					ks or on a separ	ate sheet
7.	%						
8.	%			Wetland No.	n-Vascular Pla	ants <sup>1</sup>	
Total Cover:	10%					/egetation <sup>1</sup> (Exp	lain)
Woody Vine Stratum (Plot size: ft radius)	1070					egotation (LA	iuii)
1. Rubus armeniacus	409/	1/00	EACU	<sup>1</sup> Indicators of hud-	io coil and wat	land hydrology	
	40%	yes	FACU	<sup>1</sup> Indicators of hydr	ic son and wet	lianu nyurology	

%

40%

Total Cover:

% Bare Ground in Herb Stratum 95%

Remarks:

2.

Must be present, unless disturbed or problematic.

Yes⊟ No⊠

Hydrophytic Vegetation Present?

(inches) Color (moist) 0-16 10YR3/3			Redox Features			
0-16 10YR3/3	%	Color (moist)	% Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	100%	<u> </u>	%		silty loam	
	%		%			
	%		%			
	%		%			
	%		%			
	%		%			
	%		%			
	%		%			
Type: C=Concentration, D= Hydric Soil Indicators: (Appl Histosal (A1) Histic Epipedon (A2)			t <b>herwise noted.)</b> ox (S5)		Indicators for Problematic 2 cm Muck (A10) Red Parent Material (TF2)	Hydric Soils
					Very Shallow Dark Surface	
Black Histic (A3)		-	ky Mineral (F1) ( <b>except MLI</b>	RA 1) 🛛 🗌	Other (Explain in Remarks	5)
Hydrogen Sulfide (A4)		🗌 Loamy Gley	ved Matrix (F2)			
Depleted Below Dark Surfa	ace (A11)	Depleted M	atrix (F3)			
Thick Dark Surface (A12)		Redox Dark	Surface (F6)			
Sandy Mucky Minerals (S1	1)	Depleted D	ark Surface (F7)	3	Indicators of hydrophytic veg	etation and
Sandy Gleyed Matrix (S4)	,	Redox Dep			Wetland hydrology must b	
Restrictive Layer (if present)	).				Wettand Hydrology must b	
Type:	,-			Hydr	ic Soil Present?	Yes⊡ No[
Depth (inches):						
Remarks:						
Wetland Hydrology Indicato	rs:				Secondary Indicators	
Primary Indicators (min of one	a required: ci	heck all that annly	9		(2 or more required)	
Primary Indicators (min. of one	e required; c	heck all that apply	()			
Surface Water (A1)	e required; c	☐ Water-Stair ☐ Salt Crust (	ed Leaves (B9) ( <b>except ML</b> 311)	RA 1, 2, 4A,	Water Stained Lea (MLRA 1, 2, 4A, a) Drainage Patterns	aves (B9) <b>nd 4B)</b> (B10)
Surface Water (A1) High Water Table (A2) Saturation (A3)	e required; c	☐ Water-Stair ☐ Salt Crust ( ☐ Aquatic Inve	ed Leaves (B9) ( <b>except ML</b> B11) ertebrates (B13)	RA 1, 2, 4A,	Water Stained Lea <b>&amp; 4B</b> ) (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Water	aves (B9) <b>nd 4B)</b> (B10) r Table (C2)
] Surface Water (A1) ] High Water Table (A2) ] Saturation (A3) ] Water Marks (B1)	e required; c	☐ Water-Stair ☐ Salt Crust ( ☐ Aquatic Invo ☐ Hydrogen S	ed Leaves (B9) ( <b>except ML</b> 311) ertebrates (B13) iulfide Odor (C1)		Water Stained Lea <b>&amp; 4B</b> ) (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Water Saturation Visible	aves (B9) <b>nd 4B)</b> (B10) r Table (C2) on Aerial Imagery (C9
Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)	<u>e required; c</u>	U Water-Stair Salt Crust ( Aquatic Invo Hydrogen S Oxidized Rl	ed Leaves (B9) ( <b>except ML</b> 311) ertebrates (B13) fulfide Odor (C1) hizospheres along Living Ro		□ Water Stained Lea <b>&amp; 4B</b> ) (MLRA 1, 2, 4A, a □ Drainage Patterns □ Dry-Season Water □ Saturation Visible □ Geomorphic Positi	aves (B9) nd 4B) (B10) r Table (C2) on Aerial Imagery (C9 ion (D2)
Surface Water (A1)High Water Table (A2)Saturation (A3)Water Marks (B1)Sediment Deposits (B2)Drift Deposits (B3)	<u>e required; c</u>	Water-Stair Salt Crust ( Aquatic Invo Hydrogen S Oxidized RI Presence o	ed Leaves (B9) ( <b>except ML</b> B11) ertebrates (B13) ulfide Odor (C1) nizospheres along Living Roo f Reduced Iron (C4)	ots (C3)	□ Water Stained Lea <b>&amp; 4B)</b> (MLRA 1, 2, 4A, a □ Drainage Patterns □ Dry-Season Water □ Saturation Visible □ Geomorphic Positi □ Shallow Aquitard (	aves (B9) <b>nd 4B)</b> (B10) r Table (C2) on Aerial Imagery (C9 ion (D2) D3)
<ul> <li>Surface Water (A1)</li> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> </ul>	<u>e required; c</u>	Water-Stair Salt Crust ( Aquatic Invo Hydrogen S Oxidized RI Presence o Recent Iron	ed Leaves (B9) ( <b>except ML</b> B11) ertebrates (B13) ulfide Odor (C1) nizospheres along Living Ro f Reduced Iron (C4) Reduction in Tilled Soils (C	ots (C3) 6)	□ Water Stained Lea <b>&amp; 4B</b> ) (MLRA 1, 2, 4A, a □ Drainage Patterns □ Dry-Season Water □ Saturation Visible □ Geomorphic Positi □ Shallow Aquitard ( □ FAC-Neutral Test	aves (B9) nd 4B) (B10) r Table (C2) on Aerial Imagery (C9 ion (D2) D3) (D5)
Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)         Iron Deposits (B5)	<u>e required; c</u>	Water-Stair Salt Crust ( Aquatic Invo Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S	ed Leaves (B9) ( <b>except ML</b> B11) ertebrates (B13) ulfide Odor (C1) nizospheres along Living Ro f Reduced Iron (C4) Reduction in Tilled Soils (C Stressed Plants (D1) (LRR A	ots (C3) 6)	□ Water Stained Lea <b>&amp; 4B)</b> (MLRA 1, 2, 4A, a □ Drainage Patterns □ Dry-Season Water □ Saturation Visible □ Geomorphic Positi □ Shallow Aquitard (	aves (B9) nd 4B) (B10) r Table (C2) on Aerial Imagery (C9 ion (D2) D3) (D5)
<ul> <li>Surface Water (A1)</li> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> <li>Iron Deposits (B5)</li> <li>Surface Soil Cracks (B6)</li> </ul>		<ul> <li>□ Water-Stair</li> <li>□ Salt Crust (</li> <li>□ Aquatic Invo</li> <li>□ Hydrogen S</li> <li>□ Oxidized RI</li> <li>□ Presence o</li> <li>□ Recent Iron</li> <li>□ Stunted or S</li> <li>□ Other (Explage)</li> </ul>	ed Leaves (B9) ( <b>except ML</b> B11) ertebrates (B13) ulfide Odor (C1) nizospheres along Living Ro f Reduced Iron (C4) Reduction in Tilled Soils (C Stressed Plants (D1) (LRR A	ots (C3) 6)	□ Water Stained Lea <b>&amp; 4B</b> ) (MLRA 1, 2, 4A, a □ Drainage Patterns □ Dry-Season Water □ Saturation Visible □ Geomorphic Positi □ Shallow Aquitard ( □ FAC-Neutral Test	aves (B9) <b>nd 4B)</b> (B10) r Table (C2) on Aerial Imagery (C9 ion (D2) D3) (D5) Is (D6) ( <b>LRR A</b> )
<ul> <li>Surface Water (A1)</li> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> <li>Iron Deposits (B5)</li> <li>Surface Soil Cracks (B6)</li> </ul>		<ul> <li>□ Water-Stair</li> <li>□ Salt Crust (</li> <li>□ Aquatic Invo</li> <li>□ Hydrogen S</li> <li>□ Oxidized RI</li> <li>□ Presence o</li> <li>□ Recent Iron</li> <li>□ Stunted or S</li> <li>□ Other (Explage)</li> </ul>	ed Leaves (B9) ( <b>except ML</b> B11) ertebrates (B13) ulfide Odor (C1) nizospheres along Living Ro f Reduced Iron (C4) Reduction in Tilled Soils (C Stressed Plants (D1) (LRR A	ots (C3) 6)	□       Water Stained Lea         ●       (MLRA 1, 2, 4A, a)         □       Drainage Patterns         □       Dry-Season Water         □       Saturation Visible         □       Geomorphic Positi         □       Shallow Aquitard (         □       FAC-Neutral Test         □       Raised Ant Mound	aves (B9) <b>nd 4B)</b> (B10) r Table (C2) on Aerial Imagery (CS ion (D2) D3) (D5) Is (D6) ( <b>LRR A</b> )
<ul> <li>Surface Water (A1)</li> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> <li>Iron Deposits (B5)</li> <li>Surface Soil Cracks (B6)</li> <li>Inundation Visible on Aeria</li> </ul>		<ul> <li>□ Water-Stair</li> <li>□ Salt Crust (</li> <li>□ Aquatic Invo</li> <li>□ Hydrogen S</li> <li>□ Oxidized RI</li> <li>□ Presence o</li> <li>□ Recent Iron</li> <li>□ Stunted or S</li> <li>□ Other (Explage)</li> </ul>	ed Leaves (B9) ( <b>except ML</b> B11) ertebrates (B13) ulfide Odor (C1) nizospheres along Living Ro f Reduced Iron (C4) Reduction in Tilled Soils (C Stressed Plants (D1) (LRR A	ots (C3) 6)	□       Water Stained Lea         ●       (MLRA 1, 2, 4A, a)         □       Drainage Patterns         □       Dry-Season Water         □       Saturation Visible         □       Geomorphic Positi         □       Shallow Aquitard (         □       FAC-Neutral Test         □       Raised Ant Mound	aves (B9) <b>nd 4B)</b> (B10) r Table (C2) on Aerial Imagery (CS ion (D2) D3) (D5) Is (D6) ( <b>LRR A</b> )
Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aeria		□ Water-Stair □ Salt Crust ( □ Aquatic Invo □ Hydrogen S □ Oxidized RI □ Presence o □ Recent Iron □ Stunted or S □ Other (Expla 7)	ed Leaves (B9) ( <b>except ML</b> B11) ertebrates (B13) ulfide Odor (C1) nizospheres along Living Ro f Reduced Iron (C4) Reduction in Tilled Soils (C Stressed Plants (D1) (LRR A	ots (C3) 6)	□       Water Stained Lea         ●       (MLRA 1, 2, 4A, a)         □       Drainage Patterns         □       Dry-Season Water         □       Saturation Visible         □       Geomorphic Positi         □       Shallow Aquitard (         □       FAC-Neutral Test         □       Raised Ant Mound	aves (B9) <b>nd 4B)</b> (B10) r Table (C2) on Aerial Imagery (C9 ion (D2) D3) (D5) Is (D6) ( <b>LRR A</b> )
Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aeria         Field Observations:         Surface Water Present?	al Imagery (B	<ul> <li>Water-Stair</li> <li>Salt Crust (</li> <li>Aquatic Invention</li> <li>Hydrogen S</li> <li>Oxidized RI</li> <li>Presence o</li> <li>Recent Iron</li> <li>Stunted or S</li> <li>Other (Explain</li> <li>7)</li> </ul>	ed Leaves (B9) ( <b>except ML</b> 311) ertebrates (B13) iulfide Odor (C1) nizospheres along Living Rou f Reduced Iron (C4) Reduction in Tilled Soils (C Stressed Plants (D1) ( <b>LRR A</b> in in Remarks)	ots (C3) 6) .)	□       Water Stained Lea         ●       (MLRA 1, 2, 4A, a)         □       Drainage Patterns         □       Dry-Season Water         □       Saturation Visible         □       Geomorphic Positi         □       Shallow Aquitard (         □       FAC-Neutral Test         □       Raised Ant Mound	aves (B9) <b>nd 4B)</b> (B10) r Table (C2) on Aerial Imagery (C9 ion (D2) D3) (D5) Is (D6) (LRR A)
Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aeria         Field Observations:         Surface Water Present?         Y         Vater Table Present?	al Imagery (B ∕es □	Water-Stair     Salt Crust (     Aquatic Invention     Hydrogen S     Oxidized RI     Presence o     Recent Iron     Stunted or S     Other (Explain 7)	ed Leaves (B9) ( <b>except ML</b> 311) ertebrates (B13) iulfide Odor (C1) nizospheres along Living Rou f Reduced Iron (C4) Reduction in Tilled Soils (C Stressed Plants (D1) ( <b>LRR A</b> in in Remarks)	ots (C3) 6) .)	□ Water Stained Lea	aves (B9) <b>nd 4B)</b> (B10) r Table (C2) on Aerial Imagery (C9 ion (D2) D3) (D5) Is (D6) ( <b>LRR A</b> )
Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aeria         Field Observations:         Surface Water Present?         Yater Table Present?         Saturation Present?	al Imagery (B Yes □ Yes □	Water-Stair     Salt Crust (     Aquatic Invention     Hydrogen S     Oxidized RI     Presence o     Recent Iron     Stunted or S     Other (Explain 7)	ed Leaves (B9) ( <b>except ML</b> 311) ertebrates (B13) iulfide Odor (C1) nizospheres along Living Ro f Reduced Iron (C4) Reduction in Tilled Soils (C Stressed Plants (D1) ( <b>LRR</b> A in in Remarks) Depth (Inches): Depth (Inches):	ots (C3) 6) .)	□ Water Stained Lea	aves (B9) nd 4B) (B10) r Table (C2) on Aerial Imagery (C9 ion (D2) D3) (D5) Is (D6) (LRR A) mocks (D4)
Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aeria         Field Observations:         Surface Water Present?         Yater Table Present?         Yaturation Present?         Yaturation Present?         Yaturation Present?	al Imagery (B Yes Yes Yes Yes	<ul> <li>Water-Stair</li> <li>Salt Crust (</li> <li>Aquatic Invention</li> <li>Hydrogen S</li> <li>Oxidized RI</li> <li>Presence o</li> <li>Recent Iron</li> <li>Stunted or S</li> <li>Other (Explain</li> <li>7)</li> </ul>	ed Leaves (B9) ( <b>except ML</b> B11) ertebrates (B13) ulfide Odor (C1) nizospheres along Living Ro f Reduced Iron (C4) Reduction in Tilled Soils (C Stressed Plants (D1) ( <b>LRR</b> A in in Remarks) Depth (Inches): Depth (Inches): Depth (Inches):	ots (C3) 6) .) Wetla	□ Water Stained Lea	aves (B9) <b>nd 4B)</b> (B10) r Table (C2) on Aerial Imagery (C9 ion (D2) D3) (D5) Is (D6) ( <b>LRR A</b> ) mocks (D4)
Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aeria         Field Observations:         Surface Water Present?         Yater Table Present?         Yater Table Present?         Yater Table Present?         Saturation Present?         Yater Table Recorded Data (Street)	al Imagery (B Yes Yes Yes Yes	<ul> <li>Water-Stair</li> <li>Salt Crust (</li> <li>Aquatic Invention</li> <li>Hydrogen S</li> <li>Oxidized RI</li> <li>Presence o</li> <li>Recent Iron</li> <li>Stunted or S</li> <li>Other (Explain</li> <li>7)</li> </ul>	ed Leaves (B9) ( <b>except ML</b> B11) ertebrates (B13) ulfide Odor (C1) nizospheres along Living Ro f Reduced Iron (C4) Reduction in Tilled Soils (C Stressed Plants (D1) ( <b>LRR</b> A in in Remarks) Depth (Inches): Depth (Inches): Depth (Inches):	ots (C3) 6) .) Wetla	□ Water Stained Lea	aves (B9) nd 4B) (B10) r Table (C2) on Aerial Imagery (CS ion (D2) D3) (D5) Is (D6) ( <b>LRR A</b> ) mocks (D4)
Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aeria         Field Observations:         Surface Water Present?         Y         Vater Table Present?	al Imagery (B Yes Yes Yes Yes	<ul> <li>Water-Stair</li> <li>Salt Crust (</li> <li>Aquatic Invention</li> <li>Hydrogen S</li> <li>Oxidized RI</li> <li>Presence o</li> <li>Recent Iron</li> <li>Stunted or S</li> <li>Other (Explain</li> <li>7)</li> </ul>	ed Leaves (B9) ( <b>except ML</b> B11) ertebrates (B13) ulfide Odor (C1) nizospheres along Living Ro f Reduced Iron (C4) Reduction in Tilled Soils (C Stressed Plants (D1) ( <b>LRR</b> A in in Remarks) Depth (Inches): Depth (Inches): Depth (Inches):	ots (C3) 6) .) Wetla	□ Water Stained Lea	aves (B9) <b>nd 4B)</b> (B10) r Table (C2) on Aerial Imagery (C9 ion (D2) D3) (D5) Is (D6) ( <b>LRR A</b> ) mocks (D4)
Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aeria         Field Observations:         Surface Water Present?         Yater Table Present?         Yater Table Present?         Yater Table Present?         Saturation Present?         Yater Table Recorded Data (Street)	al Imagery (B Yes Yes Yes Yes	<ul> <li>Water-Stair</li> <li>Salt Crust (</li> <li>Aquatic Invention</li> <li>Hydrogen S</li> <li>Oxidized RI</li> <li>Presence o</li> <li>Recent Iron</li> <li>Stunted or S</li> <li>Other (Explain</li> <li>7)</li> </ul>	ed Leaves (B9) ( <b>except ML</b> B11) ertebrates (B13) ulfide Odor (C1) nizospheres along Living Ro f Reduced Iron (C4) Reduction in Tilled Soils (C Stressed Plants (D1) ( <b>LRR</b> A in in Remarks) Depth (Inches): Depth (Inches): Depth (Inches):	ots (C3) 6) .) Wetla	□ Water Stained Lea	aves (B9) <b>nd 4B)</b> (B10) r Table (C2) on Aerial Imagery (C9 ion (D2) D3) (D5) Is (D6) ( <b>LRR A</b> ) mocks (D4)
Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aeria         ield Observations:         urface Water Present?         Yater Table Present?         Yaturation Present?         Yaturation Present?         Yescribe Recorded Data (Streen)	al Imagery (B Yes Yes Yes Yes	<ul> <li>Water-Stair</li> <li>Salt Crust (</li> <li>Aquatic Invention</li> <li>Hydrogen S</li> <li>Oxidized RI</li> <li>Presence o</li> <li>Recent Iron</li> <li>Stunted or S</li> <li>Other (Explain</li> <li>7)</li> </ul>	ed Leaves (B9) ( <b>except ML</b> B11) ertebrates (B13) ulfide Odor (C1) nizospheres along Living Ro f Reduced Iron (C4) Reduction in Tilled Soils (C Stressed Plants (D1) ( <b>LRR</b> A in in Remarks) Depth (Inches): Depth (Inches): Depth (Inches):	ots (C3) 6) .) Wetla	□ Water Stained Lea	aves (B9) nd 4B) (B10) r Table (C2) on Aerial Imagery (C ion (D2) D3) (D5) Is (D6) ( <b>LRR A</b> ) mocks (D4)

Project/Site: Highland Terrace Subdivsion		City/Co	unty:La Cen	ter/Clark Sampling Date	e: 4/6/16	
Applicant/Owner: Evergreen Homes NW			State: W	A Sampling	g Point: TP2	
Investigator(s): Wills, Kate'Lyn		Sectio	on, Township	, Range: 33, 5N, 1E		
Landform (hillslope, terrace, etc.): depression		Local relief: co			Slope (%):<	1%
Subregion (LRR):A		1107			: NAD83	
Soil Map Unit Name: Gee silt loam, 20-30 percent slop	bes			WI classification: None		
Are climatic / hydrologic conditions on the site typical features of the site typical features of the site state of the						
Are Vegetation, Soil, or Hydrology significant				Circumstances" present? Yes	No	
Are Vegetation, Soil, or Hydrology naturally p		· ·		iny answers in Remarks.)		
SUMMARY OF FINDINGS – Attach site map	showing s	sampling po	int locatio	ns, transects, important fe	eatures, etc.	
Hydrophytic Vegetation Present? Yes 🛛 No [		le the Sa	mpled Area			
Hydric Soils Present? Yes 🛛 No [		within a V		Yes⊠ No⊡		
Wetland Hydrology Present? Yes 🛛 No [		within a	Netiana:			
Remarks:						
VEGETATION (Use scientific names)				1		
	Absolute	Dominant	Indicator	Dominance Test Worksheet		
<u>Tree Stratum</u> (Plot size:ft radius)	% Cover	Species?	Status			
1. Fraxinus latifolia	40%	yes	FACW	Number of Dominant Species	4	(A)
2. <i>Malus fusca</i>	30%	yes	FACW	That Are OBL, FACW, or FAC:		
3	%			Total Number of Dominant		
4.	%			Species Across All Strata:	5	(B)
Total Cover:	70%			opecies / cross / in otrata.		
Sapling/Shrub Stratum (Plot size:ft. radius)				Percent of Dominant Species That Are OBL, FACW, or FAC	80	(A/B)
1. Fraxinus latifolia	30%	yes	FACW	Prevalence Index worksheet		
2. Malus fusca	30%	yes	FACW	Total % Cover of:	Multiply by:	
3. Crataegus douglasii	10%	no	FAC	OBL species	x 1=	
4. Symphoricarpos albus	5%	no	FACU	FACW species		
5. Oemleria cerasiformis	5%	no	FACU	FAC species	_ x 2= _ x 3=	
Total Cover:	80%			FACU species	x 4=	
Herb Stratum (Plot size: ft radius)				UPL species	x 5=	
1. ,	%			Column Totals:	(A)	(B)
2.	%			Prevalence Index		( )
3.	%			Hydrophytic Vegetation India	cators:	
4.	0/			1 – Rapid Test for Hydro	phytic Vegetation	
	%			☑ 2 – Dominance Test is >	50%	
5.	%			3 - Prevalence Index is ≤	3.0 <sup>1</sup>	
6.	%			4 - Morphological Adapta		
				supporting data In Rema	rks or on a separa	te sheet)
7	%					
8	%			Wetland Non-Vascular P		
Total Cover:	%			Problematic Hydrophytic	Vegetation <sup>1</sup> (Expla	ain)
Woody Vine Stratum (Plot size: ft radius)						
1. Rubus armeniacus	20%	yes	FACU	<sup>1</sup> Indicators of hydric soil and w		
2	%			Must be present, unless distur	ped or problematic	
Total Cover:	20%					

### Hydrophytic Vegetation Present?

Yes⊠ No⊡

Remarks:

% Bare Ground in Herb Stratum 100%

		pth needed to doo				,	
Depth Matrix			Redox Featu	Iroc			
(inches) Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-6 2.5YR3/2	100%		%	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		silty loam	
6-16 10YR4/1	70%	10YR4/6	30%	С	М	silty clay loam	
	%		%				
	%		%				
	%		%				
	%		%				
	%		%				
	%		%				
					and Grai	ins. <sup>2</sup> Location: PL=Pore Linin	
Hydric Soil Indicators: (App	plicable to al			)		Indicators for Problematic	c Hydric Soils
Histosal (A1)		Sandy Redo				2 cm Muck (A10)	
Histic Epipedon (A2)		Stripped Mat	rix (S6)			Red Parent Material (TF2	
		Loamy Muck	v Minoral (E1) (	oveent ML B	A 1)	<ul> <li>Very Shallow Dark Surface</li> <li>Other (Explain in Remark</li> </ul>	
Black Histic (A3)					A 1)		(5)
Hydrogen Sulfide (A4)		Loamy Gleye					
Depleted Below Dark Sur	· · ·	Depleted Ma					
Thick Dark Surface (A12)		Redox Dark	( )				
Sandy Mucky Minerals (S			rk Surface (F7)			<sup>3</sup> Indicators of hydrophytic ve	getation and
Sandy Gleyed Matrix (S4)		Redox Depre	essions (F8)		T	Wetland hydrology must	be present
Restrictive Layer (if presen	it):						
Times							
Туре:					H	ydric Soil Present?	Yes⊠ No⊡
Depth (inches):							
Remarks:							
Remarks.							
HYDROLOGY							
Wetland Hydrology Indicate							
	ors					Secondary Indicator	c
Wettand Hydrology maleat	ors:					Secondary Indicator (2 or more required)	
		heck all that apply)				Secondary Indicator (2 or more required)	
Primary Indicators (min. of or		heck all that apply)				(2 or more required)	
Primary Indicators (min. of or				except MLF	RA 1, 2, 4	(2 or more required)	eaves (B9)
Primary Indicators (min. of or		Water-Staine	ed Leaves (B9) (	except MLF	RA 1, 2, 4	(2 or more required)	eaves (B9) and 4B)
Primary Indicators (min. of or Surface Water (A1) High Water Table (A2)		☐ Water-Staine ☐ Salt Crust (B	ed Leaves (B9) ( 11)	except MLF	RA 1, 2, 4	(2 or more required)	eaves (B9) <b>and 4B)</b> s (B10)
Primary Indicators (min. of or Surface Water (A1) High Water Table (A2) Saturation (A3)		☐ Water-Staine ☐ Salt Crust (B ☐ Aquatic Inve	ed Leaves (B9) 11) rtebrates (B13)	except MLF	RA 1, 2, 4	(2 or more required) Water Stained Le (MLRA 1, 2, 4A, Drainage Pattern Dry-Season Wate	eaves (B9) <b>and 4B)</b> is (B10) er Table (C2)
Primary Indicators (min. of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		☐ Water-Staine ☐ Salt Crust (B ☐ Aquatic Inve ☐ Hydrogen Su	ed Leaves (B9) ( 11) rtebrates (B13) ilfide Odor (C1)			(2 or more required) Water Stained Le (4A, & 4B) (MLRA 1, 2, 4A, Drainage Pattern Dry-Season Wate Saturation Visible	eaves (B9) <b>and 4B)</b> is (B10) er Table (C2) e on Aerial Imagery (C9)
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Project/Site: Highland Terrace Subdivsion		City/Co	unty: <u>La Cen</u>	ter/Clark Sampling Date: 4/6/16	
Applicant/Owner: Evergreen Homes NW			State: W	A Sampling Point: T	P3
Investigator(s): Wills, Kate'Lyn		Sectio	on, Township	, Range: 33, 5N, 1E	
Landform (hillslope, terrace, etc.): terrace		Local relief: sl			ope (%): <u>1%</u>
Subregion (LRR): A		107	Long:-122.	410450 Datum: NAD83	3
Soil Map Unit Name: Gee silt loam, 20-30 percent slop	es			WI classification: None	
Are climatic / hydrologic conditions on the site typical for					
Are Vegetation, Soil, or Hydrology significantl				Circumstances" present? Yes 🛛 No 🗌	
Are Vegetation, Soil, or Hydrology naturally p	roblematic?	(If need	led, explain a	any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map	showing s	ampling po	int locatio	ons, transects, important features	, etc.
Hydrophytic Vegetation Present? Yes X No	]		mpled Area	<u> </u>	·
Hydric Soils Present? Yes ⊠ No [			Wetland?	Yes⊠ No⊡	
Wetland Hydrology Present? Yes No [ Remarks:					
VEGETATION (Use scientific names)					
	Absolute	Dominant	Indicator	Dominance Test Worksheet	
Tree Stratum (Plot size:ft radius)	% Cover	Species?	Status	Number of Dominant Species	<b>a</b> (1)
1.	%			Number of Dominant Species That Are OBL, FACW, or FAC:	<u>3</u> (A)
2	%			That Are OBL, FACW, of FAC:	
3				Total Number of Dominant	
4.	%			Species Across All Strata:	(B)
Total Cover:	%			Opecies Across Air Strata.	
Sapling/Shrub Stratum (Plot size:ft. radius)				Percent of Dominant Species — That Are OBL, FACW, or FAC	(A/B)
1. Rubus laciniatus	5%	yes	FACU	Prevalence Index worksheet	
2. Malus fusca	5%	yes	FACW		Itiply by:
3	%			OBL species x 1=	
4	%		-	FACW species x 2=	
5	%		-	FAC species x 3=	
Total Cover:	10%			FACU species x 4=	
Herb Stratum (Plot size: ft radius)				UPL species x 5=	
1. Phalaris arundinacea	80%	yes	FACW	Column Totals: (A)	(B)
2. Juncus effusus	40%	yes	FACW	Prevalence Index = B/A=	
3. Ranunculus repens	20%	no	FAC	Hydrophytic Vegetation Indicators:	
<sup>4.</sup> Trifolium repens	20%	no	FAC	<ul> <li>1 – Rapid Test for Hydrophytic Ve</li> <li>2 – Dominance Test is &gt;50%</li> </ul>	egetation
5. Equisetum arvense	10%	no	FAC	$\square$ 3 - Prevalence Index is $\leq 3.0^1$	
6.				4 - Morphological Adaptations <sup>1</sup> (P	Provide
	%			supporting data In Remarks or on	
7.	%			1	. ,
8.	%			Wetland Non-Vascular Plants <sup>1</sup>	
Total Cover: Woody Vine Stratum (Plot size: ft radius)	170%			Problematic Hydrophytic Vegetati	on <sup>1</sup> (Explain)
1.	%			<sup>1</sup> Indicators of hydric soil and wetland hy	drology
2.	<u>%</u>			Must be present, unless disturbed or pr	
Total Cover:	<u> </u>				
Total Cover:				Hydrophytic Vegetation Present?	
				ing a spright regulation resoult	

% Bare Ground in Herb Stratum

%

Remarks:

Yes⊠ No⊡

		nent the ind				
Depth Matrix		Redox Featu	ires			
(inches) Color (moist) %	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
<u>0-8</u> 10YR2/2 100%		%			silty loam	
<u>8-16</u> <u>10YR4/1</u> <u>80%</u>	10YR4/6	20%			silty clay loam	
<u>%</u>		<u>~~</u> %				
<u> </u>		%				
%		%				
<u> </u>		%				
		%			21	
<sup>1</sup> Type: C=Concentration, D=Depletion, R Hydric Soil Indicators: (Applicable to all					ndicators for Problematic	
Histosal (A1)	Sandy Redox (S		)		2 cm Muck (A10)	
Histic Epipedon (A2)	Stripped Matrix				Red Parent Material (TF2)	
		. ,			Very Shallow Dark Surface	
Black Histic (A3)	Loamy Mucky M		except MLRA	.1) 🗌	Other (Explain in Remarks)	)
Hydrogen Sulfide (A4)	Loamy Gleyed N					
Depleted Below Dark Surface (A11)	Depleted Matrix					
Thick Dark Surface (A12) Sandy Mucky Minerals (S1)	Redox Dark Sur     Depleted Dark S	. ,		з.		
Sandy Gleyed Matrix (S4)	Redox Depressi	· · ·		°In	dicators of hydrophytic vege	
Restrictive Layer (if present):				`	Wetland hydrology must b	e present
Restrictive Layer (il present).						
Туре:				Hydrid	c Soil Present?	
						Yes⊠ No⊡
Depth (inches):						
Remarks:						
HYDROLOGY						
Wetland Hydrology Indicators:					Secondary Indicators (2 or more required)	
Primary Indicators (min. of one required; ch						
, , , , , , , , , , , , , , , , , , , ,	neck all that apply)					
	neck all that apply)				Water Stained Lea	ves (B9)
Surface Water (A1)	Water-Stained L		(except MLR/	A 1, 2, 4A, a	& 4B) (MLRA 1, 2, 4A, ar	nd 4B)
High Water Table (A2)	Water-Stained L     ☐ Salt Crust (B11)	. ,	(except MLR/	A 1, 2, 4A, a	& 4B) (MLRA 1, 2, 4A, an	nd 4B) (B10)
☐ High Water Table (A2) ⊠ Saturation (A3)	⊠ Water-Stained L □ Salt Crust (B11) □ Aquatic Inverteb	orates (B13)	(except MLR/	A 1, 2, 4A, a	& 4B) (MLRA 1, 2, 4A, ar Drainage Patterns Dry-Season Water	nd 4B) (B10) Table (C2)
<ul> <li>☐ High Water Table (A2)</li> <li>☑ Saturation (A3)</li> <li>☐ Water Marks (B1)</li> </ul>	Water-Stained L     Salt Crust (B11)     Aquatic Invertet     Hydrogen Sulfid	orates (B13) le Odor (C1)			& 4B) (MLRA 1, 2, 4A, ar Drainage Patterns Dry-Season Water Saturation Visible of	nd 4B) (B10) Table (C2) on Aerial Imagery (C9)
<ul> <li>☐ High Water Table (A2)</li> <li>☑ Saturation (A3)</li> <li>☐ Water Marks (B1)</li> <li>☐ Sediment Deposits (B2)</li> </ul>	Water-Stained L Salt Crust (B11) Aquatic Invertet Hydrogen Sulfid	orates (B13) le Odor (C1) spheres alon	g Living Roots		& 4B) (MLRA 1, 2, 4A, ar Drainage Patterns Dry-Season Water Saturation Visible of Geomorphic Positio	nd 4B) (B10) Table (C2) on Aerial Imagery (C9) on (D2)
<ul> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> </ul>	Water-Stained L Salt Crust (B11) Aquatic Invertet Hydrogen Sulfid Oxidized Rhizos	prates (B13) le Odor (C1) spheres alon duced Iron (	g Living Roots C4)		& 4B) (MLRA 1, 2, 4A, ar Drainage Patterns Dry-Season Water Saturation Visible of Geomorphic Positio Shallow Aquitard (I	nd 4B) (B10) Table (C2) on Aerial Imagery (C9) on (D2) D3)
<ul> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> </ul>	Water-Stained L Salt Crust (B11) Aquatic Invertet Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec	prates (B13) le Odor (C1) spheres alon duced Iron (d duction in Til	g Living Roots C4) led Soils (C6)		& 4B) (MLRA 1, 2, 4A, ar Drainage Patterns Dry-Season Water Saturation Visible of Geomorphic Position Shallow Aquitard (I FAC-Neutral Test (	nd 4B) (B10) Table (C2) on Aerial Imagery (C9) on (D2) D3) (D5)
<ul> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> <li>Iron Deposits (B5)</li> </ul>	Water-Stained L Salt Crust (B11) Aquatic Invertet Hydrogen Sulfid Oxidized Rhizos Presence of Rea Recent Iron Rec Stunted or Stres	prates (B13) le Odor (C1) spheres alon duced Iron ( duction in Til ssed Plants (	g Living Roots C4) led Soils (C6)		& 4B) (MLRA 1, 2, 4A, ar Drainage Patterns Dry-Season Water Saturation Visible of Geomorphic Position Shallow Aquitard (I FAC-Neutral Test ( Raised Ant Mounds	nd 4B) (B10) Table (C2) on Aerial Imagery (C9) on (D2) D3) (D5) s (D6) (LRR A)
<ul> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> <li>Iron Deposits (B5)</li> <li>Surface Soil Cracks (B6)</li> </ul>	Water-Stained L Salt Crust (B11) Aquatic Inverted Hydrogen Sulfid Oxidized Rhizos Presence of Red Recent Iron Red Stunted or Stres Other (Explain in	prates (B13) le Odor (C1) spheres alon duced Iron ( duction in Til ssed Plants (	g Living Roots C4) led Soils (C6)		& 4B) (MLRA 1, 2, 4A, ar Drainage Patterns Dry-Season Water Saturation Visible of Geomorphic Position Shallow Aquitard (I FAC-Neutral Test (	nd 4B) (B10) Table (C2) on Aerial Imagery (C9) on (D2) D3) (D5) s (D6) (LRR A)
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<ul> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> <li>Iron Deposits (B5)</li> <li>Surface Soil Cracks (B6)</li> <li>Inundation Visible on Aerial Imagery (B7</li> </ul> Field Observations: Surface Water Present? Yes ⊠ Water Table Present? Yes ⊠ Saturation Present? Yes ⊠ (Includes Capillary fringe) Describe Recorded Data (Stream gauge, mage)	✓ Water-Stained L         ☐ Salt Crust (B11)         ☐ Aquatic Invertet         ☐ Hydrogen Sulfid         ☐ Oxidized Rhizos         ☐ Presence of Red         ☐ Recent Iron Red         ☐ Stunted or Stress         ☐ Other (Explain in 7)         No ☐ Dept         No ☐ Dept	h (Inches): h (Inches): h (Inches): h (Inches):	g Living Roots C4) led Soils (C6) D1) ( <b>LRR A</b> ) 1 <u>2</u>	(C3)	& 4B) (MLRA 1, 2, 4A, ar Drainage Patterns Dry-Season Water Saturation Visible of Geomorphic Position Shallow Aquitard (I FAC-Neutral Test ( Raised Ant Mounds Frost-Heave Humm	nd 4B) (B10) Table (C2) on Aerial Imagery (C9) on (D2) D3) (D5) s (D6) (LRR A) nocks (D4)
<ul> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> <li>Iron Deposits (B5)</li> <li>Surface Soil Cracks (B6)</li> <li>Inundation Visible on Aerial Imagery (B7</li> </ul> Field Observations: Surface Water Present? Yes ⊠ Water Table Present? Yes ⊠ Saturation Present? Yes ⊠ (Includes Capillary fringe) Describe Recorded Data (Stream gauge, mage)	✓ Water-Stained L         ☐ Salt Crust (B11)         ☐ Aquatic Invertet         ☐ Hydrogen Sulfid         ☐ Oxidized Rhizos         ☐ Presence of Red         ☐ Recent Iron Red         ☐ Stunted or Stress         ☐ Other (Explain in 7)         No ☐ Dept         No ☐ Dept	h (Inches): h (Inches): h (Inches): h (Inches):	g Living Roots C4) led Soils (C6) D1) ( <b>LRR A</b> ) 1 <u>2</u>	(C3)	& 4B) (MLRA 1, 2, 4A, ar Drainage Patterns Dry-Season Water Saturation Visible of Geomorphic Position Shallow Aquitard (I FAC-Neutral Test ( Raised Ant Mounds Frost-Heave Humm	nd 4B) (B10) Table (C2) on Aerial Imagery (C9) on (D2) D3) (D5) s (D6) (LRR A) nocks (D4)
<ul> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> <li>Iron Deposits (B5)</li> <li>Surface Soil Cracks (B6)</li> <li>Inundation Visible on Aerial Imagery (B7</li> </ul> Field Observations: Surface Water Present? Yes ⊠ Water Table Present? Yes ⊠ Saturation Present? Yes ⊠ (Includes Capillary fringe) Describe Recorded Data (Stream gauge, mage)	✓ Water-Stained L         ☐ Salt Crust (B11)         ☐ Aquatic Invertet         ☐ Hydrogen Sulfid         ☐ Oxidized Rhizos         ☐ Presence of Red         ☐ Recent Iron Red         ☐ Stunted or Stress         ☐ Other (Explain in 7)         No ☐ Dept         No ☐ Dept	h (Inches): h (Inches): h (Inches): h (Inches):	g Living Roots C4) led Soils (C6) D1) ( <b>LRR A</b> ) 1 <u>2</u>	(C3)	& 4B) (MLRA 1, 2, 4A, ar Drainage Patterns Dry-Season Water Saturation Visible of Geomorphic Position Shallow Aquitard (I FAC-Neutral Test ( Raised Ant Mounds Frost-Heave Humm	nd 4B) (B10) Table (C2) on Aerial Imagery (C9) on (D2) D3) (D5) s (D6) (LRR A) nocks (D4)

Project/Site: Highland Terrace Subdivsion		City/Co	ounty:La Cent	er/Clark Sampling Date:		
Applicant/Owner: Evergreen Homes NW			State: W	A Sampling	Point: TP4	
Investigator(s): Wills, Kate'Lyn				, Range: <u>33, 5N, 1E</u>		
Landform (hillslope, terrace, etc.): hillslope		Local relief: <u>co</u>			Slope (%): <u>5%</u>	%
Subregion (LRR): A	Lat: 45.521	107	Long:-122.4	410450 Datum:	NAD83	
Soil Map Unit Name: Hillsboro silt loam, 30 to 65 perce	nt slopes		N	WI classification: None		
Are climatic / hydrologic conditions on the site typical for	or this time of	year?Yes⊠	No∏ (If r	no, explain Remarks.)		
Are Vegetation, Soil, or Hydrology significant	y disturbed?	Ar	ea "Normal C	Circumstances" present? Yes	No	
Are Vegetation, Soil, or Hydrology naturally plant	oblematic?	(If need	ded, explain a	iny answers in Remarks.)		
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.						
Hydrophytic Vegetation Present? Yes 🗌 No 🛛		Is the Sa	mpled Area			
Hydric Soils Present? Yes 🗌 No 🛛			Wetland?	Yes⊟ No⊠		
Wetland Hydrology Present? Yes 🗌 No 🛛	$\leq$	u	ronana			
Remarks:						
VEGETATION (Use scientific names)						
				1		
	Absolute	Dominant	Indicator	Dominance Test Worksheet		
Tree Stratum (Plot size: ft radius)	% Cover	Species?	Status	_		
1	%			Number of Dominant Species	1	(A)
2.	%			That Are OBL, FACW, or FAC:		
3.	0/					
4.	%		-	Total Number of Dominant	5	(B)
Total Cover:	%			Species Across All Strata:		( )
					20	(A/B)
				Percent of Dominant Species		(,,,,,,)
Sapling/Shrub Stratum (Plot size:ft. radius)				That Are OBL, FACW, or FAC		
1. <u>Malus fusca</u>	35%	yes	FACW	Prevalence Index worksheet		
2. Rubus laciniatus	10%	yes	FACU	Total % Cover of:	Multiply by:	
3. Quercus garryana	5%	no	FACU	OBL species	x 1=	
4.	%			FACW species	x 2=	
5.	%			FAC species	x 3=	
Total Cover:				FACU species	x 4=	
Herb Stratum (Plot size: ft radius)				UPL species	x 5=	_
1. Dactylis glomerata	15%	yes	FACU	Column Totals:	(A)	(B)
2. Polystichum munitum	10%	ves	FACU	Prevalence Index =	( )	(2)
3.	<u> </u>	,00	17,00	Hydrophytic Vegetation Indica		
4.	/0			1 – Rapid Test for Hydrop		
4.	%					
				2 – Dominance Test is >5	0%	

%

%

%

%

% 10% yes

FACU

25%

10%

Total Cover:

Total Cover:

ft radius)

% Bare Ground in Herb Stratum <u>70%</u> Remarks:Bare ground is partially covered with moss.

Woody Vine Stratum (Plot size:

1. Rubus armeniacus

5.

6.

7.

8.

2.

□ 3 - Prevalence Index is  $\leq 3.0^{1}$ 

U Wetland Non-Vascular Plants<sup>1</sup>

Hydrophytic Vegetation Present?

4 - Morphological Adaptations<sup>1</sup> (Provide

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology

Must be present, unless disturbed or problematic.

supporting data In Remarks or on a separate sheet)

Yes∏ No⊠

Profile De	escription: (Desc	ribe to the dep	oth needed to d	ocument the ind	icator or conf	irm the	e absence of indicators.)	Gamping Fond. 114
Depth	Matrix	x		Redox Feat	ures			
(inches)	Color (moist)	%	Color (moist)		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-16	10YR3/3	100%		%				
		%		%				
		<u>%</u>		<u>%</u>				
				<u>%</u>				
		<u>%</u> %		<u>%</u> %				
		<u> </u>		<u></u>				
		%		%	·			
<sup>1</sup> Type: (	C=Concentration.		M=Reduced Ma		or Coated Sar	nd Grai	ins. <sup>2</sup> Location: PL=Pore Lining	a. M=Matrix
Hydric Se	oil Indicators: (A		LRRs, unless	otherwise noted			Indicators for Problematic	
Histos	· · ·		Sandy Re				2 cm Muck (A10)	
☐ Histic	Epipedon (A2)		Stripped N	1atrix (S6)			Red Parent Material (TF2	) - (TE40)
	Listic (A2)			oku Minorol (E1)		1)	Very Shallow Dark Surfac	
	Histic (A3)			icky Mineral (F1)		)	Other (Explain in Remark	5)
	gen Sulfide (A4)			eyed Matrix (F2)				
	ted Below Dark Su	· · ·	Depleted I					
1	Dark Surface (A12	,		rk Surface (F6)			3	
-	Mucky Minerals (			Dark Surface (F7)			<sup>3</sup> Indicators of hydrophytic veg	
	Gleyed Matrix (Se		C Redox De	pressions (F8)			Wetland hydrology must	be present
Restrictiv	ve Layer (if prese	ent):						
Туре:						н	ydric Soil Present?	
турс								Yes⊡ No⊠
Depth (ind	ches):							
Remarks:						1		
HYDRO								
Wetland	Hydrology Indica	itors:					Secondary Indicators (2 or more required)	3
Primary Ir	ndicators (min. of	one required; cl	neck all that app	ly)				
	× ×	•		• /			Water Stained Le	aves (B9)
Surfac	e Water (A1)		🗌 Water-Sta	ined Leaves (B9)	(except MLRA	A 1, 2, 4		
🗌 High V	Vater Table (A2)		Salt Crust	(B11)			Drainage Patterns	s (B10)
Satura	ation (A3)		🗌 Aquatic In	vertebrates (B13)			Dry-Season Wate	r Table (C2)
U Water	Marks (B1)		🗌 Hydrogen	Sulfide Odor (C1)			Saturation Visible	on Aerial Imagery (C9)
Sedim	ent Deposits (B2)			Rhizospheres alor		; (C3)	Geomorphic Posi	
	eposits (B3)			of Reduced Iron (		. ,	Shallow Aquitard	(D3)
	Mat or crust (B4)			n Reduction in Til	,		☐ FAC-Neutral Test	
	eposits (B5)			Stressed Plants	. ,		Raised Ant Moun	
1	e Soil Cracks (B6	)		lain in Remarks)	() (,		Frost-Heave Hum	
	ation Visible on Ae							
		0,7(						
	servations:	Vaa 🗖		Denth (Instan)				
1	Vater Present?	Yes 🗌	No 🖂	Depth (Inches):		\A/ -	Mond Hydrology Descent?	
	ble Present?	Yes 🗌	No 🖂	Depth (Inches):		vve	etland Hydrology Present?	Yes 🗌 No 🖂
i	n Present?	Yes 🗌	No 🖂	Depth (Inches):				
	Capillary fringe) Recorded Data (S	Stream dauge in	nonitoring well	aerial photos prev	ious inspectio	ns)if a	available:	
2000100		cam gaago, n						
Remarks:								

Project/Site: Highland Terrace Subdivsion		City/County: La Center/Clark Sampling Date: 4/6/16					
Applicant/Owner: Evergreen Homes NW	State: WA Sampling Point: <u>TP5</u> Section, Township, Range: 33, 5N, 1E						
Investigator(s): Wills, Kate'Lyn							
Landform (hillslope, terrace, etc.): <u>hillslope</u>		Local relief: co		Slope (%): <u>3%</u>			
Subregion (LRR):A Soil Map Unit Name: Hillsboro silt loam, 30 to 65 perce	Lat: 45.521	107	_ Long: <u>-122.</u>	410450 Datum: NAD83			
Are climatic / hydrologic conditions on the site typical for	ent slopes	Vaar2 VaaM					
Are Vegetation , Soil, or Hydrology significant				Circumstances" present? Yes⊠ No⊡			
Are Vegetation, Soil, or Hydrology asignificanti Are Vegetation, Soil, or Hydrology anaturally p				any answers in Remarks.)			
		•		-			
SUMMARY OF FINDINGS – Attach site map	<u> </u>	ampling po	bint locatio	ons, transects, important features, etc.			
Hydrophytic Vegetation Present? Yes 🗌 No		Is the Sa	mpled Area				
Hydric Soils Present? Yes 🛛 No			Wetland?	Yes⊠ No⊡			
Wetland Hydrology Present? Yes 🛛 No [							
				e starting to grow back. Vegetation is highly disturbed.			
Opportunistic upland blackberries are dominating the s	shrub and woo	bay vine stratu	ms causing t	the primary vegetation indicators to be lacking.			
VEGETATION (Use scientific names)							
Tree Stratum (Plot size: ft radius)	Absolute % Cover	Dominant	Indicator Status	Dominance Test Worksheet			
<u>1. (Piot size.</u> It radius)	<u>% Cover</u> %	Species?	Status	Number of Dominant Species 2 (A)			
•	<u> </u>			Number of Dominant Species       2       (A)         That Are OBL, FACW, or FAC:			
2	<u>~~~</u> %						
3	<u> </u>			Total Number of Dominant 5 (B)			
4 Total Cover:	<u>%</u>			Species Across All Strata:			
	/0			40 (A/B)			
				Percent of Dominant Species			
Sapling/Shrub Stratum (Plot size:ft. radius)				That Are OBL, FACW, or FAC			
1. Rubus laciniatus	40%	yes	FACU	Prevalence Index worksheet			
2	%			Total % Cover of: Multiply by:			
3	%			OBL species x 1=			
4	%			FACW species <u>35</u> x 2= <u>70</u>			
5	%			FAC species <u>25</u> x 3= <u>75</u>			
Total Cover:	40%			FACU species 80 x 4= 320			
Herb Stratum (Plot size: ft radius)				UPL species x 5=			
1. Dactylis glomerata	30%	yes	FACU	Column Totals: 140 (A) 465 (B)			
2. Ranunculus repens	20%	yes	FAC	Prevalence Index = B/A= <u>3.3</u>			
3. Juncus effusus	20%	yes	FACW	Hydrophytic Vegetation Indicators:			
4. Phalaris arundinacea	15%	no	FACW	□ 1 – Rapid Test for Hydrophytic Vegetation			
				$\square$ 2 – Dominance Test is >50%			
5. Cirsium arvense	5%	no	FAC	$\square$ 3 - Prevalence Index is $\leq 3.0^1$			
6.	%			4 - Morphological Adaptations <sup>1</sup> (Provide			
7				supporting data In Remarks or on a separate sheet)			
7	<u>     %    </u> %			Wetland Non-Vascular Plants <sup>1</sup>			
8Tatal Caucar							
Total Cover:	90%			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
<u>Woody Vine Stratum</u> (Plot size: ft radius) 1. <i>Rubus armeniacus</i>	10%	Voc	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology			
1. <u>Rubus armeniacus</u> 2.	<u> </u>	yes	FACU	Must be present, unless disturbed or problematic.			
	10%			indist de present, uniess disturbed of problematic.			
Total Cover:	1070						
				Hydrophytic Vegetation Present?			
% Bare Ground in Herb Stratum <u>%</u>	;			Yes⊡ No⊠			
Remarks: Area has been cleared in past years and on							
Opportunistic upland blackberries are dominating the s	shrub and woo	ody vine stratu	ms causing t	the primary vegetation indicators to be lacking.			

#### Sampling Point: TP5

Depth									
	Matrix			Redox Feat		. 0	_		
(inches)	Color (moist)	%	Color (mois		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-10	10YR2/2	100%	40\/D 4/0	%			silty clay loam		
10-16	10YR4/1	80%	10YR4/6	20%	C	M	clay loam		
		<u>%</u> %		<u> </u>			·		
		<u>%</u>		%%					
		%		<u>%</u>					
		<u> </u>		%					
·		%		%					
<sup>1</sup> Type:	C=Concentration		RM=Reduced M		or Coated S	and Grains	<sup>2</sup> Location: PL=Pore Lining	n. M=Matrix	
Histos	<b>oil Indicators: (Ap</b> al (A1) Epipedon (A2)	oplicable to a	II LRRs, unless	edox (S5)	.)		Indicators for Problematio ] 2 cm Muck (A10) ] Red Parent Material (TF2	)	
							Very Shallow Dark Surface		
	Histic (A3)			ucky Mineral (F1)	(except MLF	RA 1) 🛛 🗌	Other (Explain in Remark	s)	
Hydro	gen Sulfide (A4)		🗌 Loamy G	leyed Matrix (F2)					
Deplet	ted Below Dark Su	rface (A11)	🛛 Depleted	Matrix (F3)					
Thick	Dark Surface (A12	)	🗌 Redox Da	ark Surface (F6)					
Sandy	/ Mucky Minerals (	S1)	Depleted	Dark Surface (F7)		<sup>3</sup> I	<sup>3</sup> Indicators of hydrophytic vegetation and		
	Gleyed Matrix (S4	,		epressions (F8)			Wetland hydrology must be present		
	ve Layer (if prese	,							
Type:		,				Hydr	ic Soil Present?		
Depth (in	ches).							Yes⊠ No∏	
Remarks:									
HYDRO	DLOGY								
Wetland	Hydrology Indica	tors:					Secondary Indicators		
Primary I	ndicators (min. of c	one required; c					(2 or more required)	5	
			check all that ap	ply)			(2 or more required)	>	
<ul> <li>➢ High V</li> <li>➢ Satura</li> <li>○ Water</li> <li>○ Sedim</li> <li>○ Drift D</li> <li>○ Algal I</li> <li>○ Iron D</li> <li>○ Surfac</li> <li>○ Inunda</li> </ul>	Marks (B1) nent Deposits (B2) Deposits (B3) Mat or crust (B4) Deposits (B5) ce Soil Cracks (B6) ation Visible on Aer		☐ Water-Sta ☐ Salt Crus ☐ Aquatic Ir ☐ Hydroger ☐ Oxidized ☐ Presence ☐ Recent Ir ☐ Stunted c ☐ Other (Ex	ained Leaves (B9)	) ng Living Roo C4) Iled Soils (C6	ots (C3)	Water Stained Le & 4B) (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate	aves (B9) and 4B) s (B10) er Table (C2) e on Aerial Imagery (C9) tion (D2) (D3) c (D5) ds (D6) (LRR A)	
<ul> <li>☐ High V</li> <li>☐ Satura</li> <li>☐ Water</li> <li>☐ Sedim</li> <li>☐ Drift D</li> <li>☐ Algal I</li> <li>☐ Iron D</li> <li>☐ Surface</li> <li>☐ Surface V</li> <li>Water Tal</li> <li>Saturation</li> </ul>	Nater Table (A2) ation (A3) Marks (B1) nent Deposits (B2) Deposits (B3) Mat or crust (B4) peposits (B5) ce Soil Cracks (B6)		☐ Water-Sta ☐ Salt Crus ☐ Aquatic Ir ☐ Hydroger ☐ Oxidized ☐ Presence ☐ Recent Ir ☐ Stunted c ☐ Other (Ex	ained Leaves (B9) t (B11) overtebrates (B13) o Sulfide Odor (C1 Rhizospheres alor of Reduced Iron ( on Reduction in Ti or Stressed Plants	) ng Living Roo (C4) Iled Soils (C6 (D1) ( <b>LRR A</b>	ots (C3) 5) .)	Water Stained Le <b>&amp; 4B</b> ) (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate Saturation Visible Geomorphic Posi Shallow Aquitard FAC-Neutral Test Raised Ant Moun	aves (B9) and 4B) s (B10) er Table (C2) e on Aerial Imagery (C9) tion (D2) (D3) c (D5) ds (D6) (LRR A)	

Project/Site: <u>Highland Terrace Subdivsion</u> Applicant/Owner: Evergreen Homes NW	City/County:La Cent			
Investigator(s): Wills, Kate'Lyn				o, Range: 33, 5N, 1E
Landform (hillslope, terrace, etc.): hillslope		Local relief: co		Slope (%): <u>5%</u>
Subregion (LRR):A	Lat: 45.521	107	Long:-122.	
Soil Map Unit Name: Hillsboro silt loam, 30 to 65 perce	ent slopes			IWI classification: None
Are climatic / hydrologic conditions on the site typical for Are Vegetation , Soil , or Hydrology significantly Are Vegetation , Soil , or Hydrology naturally pr SUMMARY OF FINDINGS – Attach site map	y disturbed? oblematic?	Ar (If need	ea "Normal ( led, explain a	Circumstances" present? Yes⊠ No⊡ any answers in Remarks.)
	-	amping po		ons, transects, important leatures, etc.
Hydrophytic Vegetation Present? Yes No 2 Hydric Soils Present? Yes No 2 Wetland Hydrology Present? Yes No 2 Remarks: Area has been cleared in past years and or of charcoal.	3	within a	mpled Area Wetland? egetation are	Yes  No⊠ e starting to grow back. Evidence of a burn pile, large piece
VEGETATION (Use scientific names)				
Tree Stratum (Plot size: ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet
1	%			Number of Dominant Species 1 (A)
2	%			That Are OBL, FACW, or FAC:
3.	%			Total Number of Dominant
4 Total Cover:	% %			Species Across All Strata:
	70			25 (A/B)
Sapling/Shrub Stratum (Plot size:ft. radius)				That Are OBL, FACW, or FAC
1. <u>Rubus laciniatus</u>	40%	yes	FACU	Prevalence Index worksheet
2. Rosa nutkana 3.	<u> </u>	no	FAC	Total % Cover of: Multiply by:
1	<u> %</u>			OBL species         x 1=           FACW species         x 2=
4 5	%			FAC species         x 2=           x 3=
Total Cover:	45%			FACU species x 4=
Herb Stratum (Plot size: ft radius)				UPL species x 5=
1. Ranunculus repens	15%	yes	FAC	Column Totals: (A) (B)
2. Dactylis glomerata	15%	yes	FACU	Prevalence Index = B/A=
3. Cirsium arvense	5%	no	FAC	Hydrophytic Vegetation Indicators:
4. Tolmiea menziesii	5%	no	FAC	<ul> <li>1 – Rapid Test for Hydrophytic Vegetation</li> <li>2 – Dominance Test is &gt;50%</li> </ul>
5. Taraxacum officinale	5%	no	FACU	$\square$ 3 - Prevalence Index is $\leq 3.0^1$
6. Tanacetum vulgare	5%	no	FACU	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide</li> <li>supporting data In Remarks or on a separate sheet</li> </ul>
7	%			
8 Total Cover:	<u>%</u> 50%			<ul> <li>Wetland Non-Vascular Plants<sup>1</sup></li> <li>Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)</li> </ul>
Woody Vine Stratum (Plot size: ft radius)	JU /0			
1. Rubus armeniacus	10%	yes	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology
2.	%			Must be present, unless disturbed or problematic.
Total Cover:	10%			Hydrophytic Vegetation Present?
% Bare Ground in Herb Stratum 30%				Yes No
Remarks:				

#### Sampling Point: TP6

Profile De	escription: (Descri	be to the dep	oth needed to d	ocument the ind	licator or co	onfirm th	e absence of indicators.)			
Depth	Matrix			Redox Feat	ures					
(inches)	Color (moist)	%	Color (moist)		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0-16	10YR3/3	99%	7.5YR3/4	1%	C	M	silty loam			
		%		%						
		%		%						
		%		%						
		%		%						
		%		%						
		%		%						
		%		%						
<sup>1</sup> Type: C	C=Concentration, D	=Depletion, R	M=Reduced Ma	trix, CS=Covered	l or Coated S	Sand Gra	ains. <sup>2</sup> Location: PL=Pore Linir	ig, M=Matrix		
Hydric So	oil Indicators: (App	olicable to all			.)		Indicators for Problemati	c Hydric Soils		
Histos			Sandy Red				2 cm Muck (A10)			
Histic Epipedon (A2)			Stripped N	latrix (S6)			Red Parent Material (TF2			
							Very Shallow Dark Surfa			
	Histic (A3)		-	cky Mineral (F1)	(except MLF	RA 1)	Other (Explain in Remark	<s)< td=""></s)<>		
	gen Sulfide (A4)			eyed Matrix (F2)						
Deplet	ed Below Dark Surf	face (A11)	Depleted N	/latrix (F3)						
Thick [	Dark Surface (A12)		🗌 Redox Dai	rk Surface (F6)						
Sandy	Mucky Minerals (S	1)	Depleted [	Dark Surface (F7)			<sup>3</sup> Indicators of hydrophytic vegetation and			
Sandy	Gleyed Matrix (S4)		🗌 Redox De	pressions (F8)			Wetland hydrology must be present			
-	/e Layer (if presen									
<b>T</b>							hudria Cail PressentO			
Type:						н	lydric Soil Present?	Yes⊡ No⊠		
Depth (inc	ches):									
Remarks:										
HYDRO										
Wetland I	Hydrology Indicate	ors:					Secondary Indicator			
Primary Ir	ndicators (min. of or	ne required: ch	neck all that app	lv)			(2 or more required)	),		
1 milary ii			ioon an that app	.,,,			Water Stained Le	aves (R9)		
□ Surfac	e Water (A1)		🗆 Water-Stai	ined Leaves (B9)	(except ML	RA 1. 2.				
	Vater Table (A2)		Salt Crust		(except me	, <b>,</b>	Drainage Patterr			
☐ Satura				vertebrates (B13)			Dry-Season Wat			
	Marks (B1)			Sulfide Odor (C1)				e on Aerial Imagery (C9)		
						(C2)				
	ent Deposits (B2)			hizospheres alor		DIS(C3)	Geomorphic Pos			
	eposits (B3)			of Reduced Iron (			Shallow Aquitard			
-	Mat or crust (B4)			n Reduction in Ti		-	FAC-Neutral Tes			
	eposits (B5)			Stressed Plants	(D1) ( <b>LRR A</b>	.)	Raised Ant Mour			
	e Soil Cracks (B6)		— 、 ・	lain in Remarks)			Frost-Heave Hur	nmocks (D4)		
🗌 Inunda	ation Visible on Aeri	al Imagery (B	7)							
Field Obe	servations:									
				Dopth (Inchas):						
		Yes ∐ Yes ∏	No 🖂	Depth (Inches):		10/-	otland Hydrology Procont?			
		Yes 🗌	No 🖂 No 🖾	Depth (Inches):		vve	etland Hydrology Present?			
				Depth (Inches):				Yes 🗌 No 🛛		
	Capillary fringe) Recorded Data (Str			perial photos pro	vious increat	tions) if	available:			
Describe		can yauye, n	nonitoring well, a	ionai priotos, pre						

Project/Site: Highland Terrace Subdivsion		City/Co	ounty:La Cen	ter/Clark Sampling Date: 4/6/16		
Applicant/Owner: Evergreen Homes NW	State: WA Sampling Point: TP7					
Investigator(s): Wills, Kate'Lyn		Sectio	on, Township	o, Range: <u>33, 5N, 1E</u>		
Landform (hillslope, terrace, etc.): hillslope		Local relief: co		Slope (%): <u>1%</u>		
Subregion (LRR):A		107				
Soil Map Unit Name: Odne silt loam, 0 to 5 percent slo				IWI classification: None		
Are climatic / hydrologic conditions on the site typical for Are Vegetation , Soil, or Hydrology significantly Are Vegetation, Soil, or Hydrology naturally p SUMMARY OF FINDINGS – Attach site map	y disturbed? oblematic? showing s	Ar (If need	rea "Normal ( ded, explain a	Circumstances" present? Yes☐ No⊠ any answers in Remarks.)		
Hydrophytic Vegetation Present?       Yes □       No □         Hydric Soils Present?       Yes □       No □			mpled Area Wetland?	Yes⊠ No⊡		
Wetland Hydrology Present? Yes 🛛 No						
Remarks: This test plot is located in a pasture that red VEGETATION (Use scientific names)		mowing				
	Absolute	Dominant	Indicator	Dominance Test Worksheet		
Tree Stratum (Plot size: ft radius)	% Cover	Species?	Status	Number of Deminent Operation		
1 2	% %			Number of Dominant Species       1       (A)         That Are OBL, FACW, or FAC:		
3	%			Total Number of Dominant		
4	%			Total Number of Dominant (B)		
Total Cover:	%			Species Across All Strata:		
Sapling/Shrub Stratum (Plot size:ft. radius)				Percent of Dominant Species (A/B) That Are OBL, FACW, or FAC		
1				Prevalence Index worksheet		
2	%			Total % Cover of: Multiply by:		
3	%			OBL species x 1=		
4.	<u>%</u> %			FACW species         10         x 2=         20           FAC species         30         x 3=         90		
5 Total Cover:	<u>%</u>					
Herb Stratum (Plot size: ft radius)	70			FACU species         60         x 4=         240           UPL species         x 5=         x 5=         x 5=		
1. Dactylis glomerata	60%	VOC	FACU	Column Totals:         100         (A)         350         (B)		
2. Holcus lanatus	30%	yes yes	FAC	Prevalence Index = B/A=3.5		
3. Juncus effusus	10%	no	FACW	Hydrophytic Vegetation Indicators:		
4.	1076	110	TACI	☐ 1 – Rapid Test for Hydrophytic Vegetation		
<b>*.</b>	%			2 – Dominance Test is >50%		
5.	%			$\square$ 3 - Prevalence Index is ≤3.0 <sup>1</sup>		
6.	%			<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide</li> <li>supporting data In Remarks or on a separate sheet)</li> </ul>		
7.	%					
8.	%			Wetland Non-Vascular Plants <sup>1</sup>		
Total Cover: Woody Vine Stratum (Plot size: ft radius)	100%			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)		
· · · · · · · · · · · · · · · · · · ·	%			<sup>1</sup> Indicators of hydric soil and wetland hydrology		
1 2	%			Must be present, unless disturbed or problematic.		
	<u>%</u>			Must be present, unless disturbed of problematic.		
Total Cover:	/0			Hydrophytic Vegetation Present?		
% Bare Ground in Herb Stratum <u>%</u>						
Remarks: this test plot is located in a pasture that reci	eves regular r	nowing.				

		ment the indic			•	
Depth Matrix		Redox Featu	res			
(inches) Color (moist) %	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-8 10YR2/2 100%		%			silty clayloam	
<u>8-16 10YR2/2 70%</u>	7.5YR3/4	30%	С	Μ	silty clay loam	
<u>%</u>		<u>%</u>				
<u>%</u>		<u>%</u> %				
<u> </u>		<u> </u>				
<u>%</u>		%				
<u> </u>		%				
<sup>1</sup> Type: C=Concentration, D=Depletion, R			or Coated Sa	nd Grair		
Hydric Soil Indicators: (Applicable to all					Indicators for Problematic	Hydric Soils
Histosal (A1)	Sandy Redox				2 cm Muck (A10)     Red Parent Material (TF2)	
		x (30)			Very Shallow Dark Surfac	
Black Histic (A3)	Loamy Mucky	Mineral (F1) (e	except MLRA	(1)	Other (Explain in Remarks	
☐ Hydrogen Sulfide (A4)	Loamy Gleyed		•	,	_ 、:	,
Depleted Below Dark Surface (A11)	Depleted Matr					
Thick Dark Surface (A12)	Redox Dark S	urface (F6)				
Sandy Mucky Minerals (S1)	Depleted Dark	Surface (F7)			<sup>3</sup> Indicators of hydrophytic veg	getation and
Sandy Gleyed Matrix (S4)	Redox Depres	sions (F8)			Wetland hydrology must l	
Restrictive Layer (if present):					· · · ·	•
T						
Туре:				Ну	dric Soil Present?	Yes⊠ No⊡
Depth (inches):						
Remarks:						
HYDROLOGY						
Wetland Hydrology Indicators:					Secondary Indicators	<u>,                                     </u>
Wetland Hydrology mulcators.					(2 or more required)	)
Primary Indicators (min. of one required; ch	eck all that apply)					
					Water Stained Lea	aves (B9)
Surface Water (A1)	Water-Stained		except MLRA	A 1. 2. 4		
High Water Table (A2)	Salt Crust (B1	,		, ,		and 4B)
Saturation (A3)	Aquatic Invert			, ,	Drainage Patterns	and 4B) s (B10)
				, ,	Dry-Season Wate	and 4B) s (B10) r Table (C2)
Water Marks (B1)	Hydrogen Sulf	ide Odor (C1)			Dry-Season Wate	and 4B) s (B10) r Table (C2) on Aerial Imagery (C9)
Sediment Deposits (B2)	☐ Hydrogen Sulf ☐ Oxidized Rhiz	ide Odor (C1) ospheres along	-		Dry-Season Wate     Saturation Visible     Geomorphic Posit	and 4B) s (B10) r Table (C2) on Aerial Imagery (C9) tion (D2)
<ul> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> </ul>	<ul> <li>☐ Hydrogen Sulf</li> <li>☐ Oxidized Rhiz</li> <li>☐ Presence of R</li> </ul>	ide Odor (C1) ospheres along educed Iron (C	4)		Dry-Season Wate     Saturation Visible     Geomorphic Posit     Shallow Aquitard	and 4B) s (B10) r Table (C2) on Aerial Imagery (C9) tion (D2) (D3)
<ul> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> </ul>	Hydrogen Sult Oxidized Rhiz Presence of R Recent Iron R	ide Odor (C1) ospheres along educed Iron (C eduction in Tille	4) ed Soils (C6)		Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test	and 4B) s (B10) r Table (C2) on Aerial Imagery (C9) tion (D2) (D3) (D5)
<ul> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> <li>Iron Deposits (B5)</li> </ul>	Hydrogen Sull Oxidized Rhiz Presence of R Recent Iron R Stunted or Str	ide Odor (C1) ospheres along educed Iron (C eduction in Tille essed Plants (I	4) ed Soils (C6)		Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test Raised Ant Mound	and 4B) (B10) r Table (C2) on Aerial Imagery (C9) ion (D2) (D3) (D5) ds (D6) (LRR A)
<ul> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> <li>Iron Deposits (B5)</li> <li>Surface Soil Cracks (B6)</li> </ul>	Hydrogen Sull Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explain	ide Odor (C1) ospheres along educed Iron (C eduction in Tille essed Plants (I	4) ed Soils (C6)		Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test	and 4B) s (B10) r Table (C2) on Aerial Imagery (C9) tion (D2) (D3) (D5) ds (D6) (LRR A)
<ul> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> <li>Iron Deposits (B5)</li> </ul>	Hydrogen Sull Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explain	ide Odor (C1) ospheres along educed Iron (C eduction in Tille essed Plants (I	4) ed Soils (C6)		Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test Raised Ant Mound	and 4B) s (B10) r Table (C2) on Aerial Imagery (C9) tion (D2) (D3) (D5) ds (D6) (LRR A)
<ul> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> <li>Iron Deposits (B5)</li> <li>Surface Soil Cracks (B6)</li> </ul>	Hydrogen Sull Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explain	ide Odor (C1) ospheres along educed Iron (C eduction in Tille essed Plants (I	4) ed Soils (C6)		Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test Raised Ant Mound	and 4B) s (B10) r Table (C2) on Aerial Imagery (C9) tion (D2) (D3) (D5) ds (D6) (LRR A)
<ul> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> <li>Iron Deposits (B5)</li> <li>Surface Soil Cracks (B6)</li> <li>Inundation Visible on Aerial Imagery (B7)</li> </ul>	Hydrogen Sull Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explain	ide Odor (C1) ospheres along educed Iron (C eduction in Tille essed Plants (I	4) ed Soils (C6)		Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test Raised Ant Mound	and 4B) s (B10) r Table (C2) on Aerial Imagery (C9) tion (D2) (D3) (D5) ds (D6) (LRR A)
□ Sediment Deposits (B2)         □ Drift Deposits (B3)         □ Algal Mat or crust (B4)         □ Iron Deposits (B5)         □ Surface Soil Cracks (B6)         □ Inundation Visible on Aerial Imagery (B7         Field Observations:         Surface Water Present?       Yes □         Water Table Present?       Yes ⊠	Hydrogen Sull Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explain)	ide Odor (C1) ospheres along educed Iron (C eduction in Tille essed Plants (E in Remarks) oth (Inches): 8	4) ed Soils (C6) D1) ( <b>LRR A</b> )	s (C3)	Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test Raised Ant Mound	and 4B) (B10) r Table (C2) on Aerial Imagery (C9) ion (D2) (D3) (D5) ds (D6) (LRR A) mocks (D4)
□ Sediment Deposits (B2)         □ Drift Deposits (B3)         □ Algal Mat or crust (B4)         □ Iron Deposits (B5)         □ Surface Soil Cracks (B6)         □ Inundation Visible on Aerial Imagery (B7         Field Observations:         Surface Water Present?       Yes □         Water Table Present?       Yes ⊠         Saturation Present?       Yes ⊠	Hydrogen Sull Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explain)	ide Odor (C1) ospheres along educed Iron (C eduction in Tille essed Plants (E in Remarks) pth (Inches):	4) ed Soils (C6) D1) ( <b>LRR A</b> )	s (C3)	<ul> <li>Dry-Season Wate</li> <li>Saturation Visible</li> <li>Geomorphic Posit</li> <li>Shallow Aquitard</li> <li>FAC-Neutral Test</li> <li>Raised Ant Mound</li> <li>Frost-Heave Hum</li> </ul>	and 4B) (B10) r Table (C2) on Aerial Imagery (C9) ion (D2) (D3) (D5) ds (D6) (LRR A)
<ul> <li>☐ Sediment Deposits (B2)</li> <li>☐ Drift Deposits (B3)</li> <li>☐ Algal Mat or crust (B4)</li> <li>☐ Iron Deposits (B5)</li> <li>☐ Surface Soil Cracks (B6)</li> <li>☐ Inundation Visible on Aerial Imagery (B7</li> </ul> Field Observations: Surface Water Present? Yes ☐ Water Table Present? Yes ⊠ Saturation Present? Yes ⊠ Saturation Present? Yes ⊠ (Includes Capillary fringe)	Hydrogen Sull Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explain ) No De No De No De No De	ide Odor (C1) ospheres along educed Iron (C eduction in Tille essed Plants (E in Remarks) oth (Inches): 8 oth (Inches): 4	4) ed Soils (C6) D1) ( <b>LRR A</b> )	s (C3)	Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test Raised Ant Mound Frost-Heave Hum tland Hydrology Present?	and 4B) (B10) r Table (C2) on Aerial Imagery (C9) ion (D2) (D3) (D5) ds (D6) (LRR A) mocks (D4)
□ Sediment Deposits (B2)         □ Drift Deposits (B3)         □ Algal Mat or crust (B4)         □ Iron Deposits (B5)         □ Surface Soil Cracks (B6)         □ Inundation Visible on Aerial Imagery (B7         Field Observations:         Surface Water Present?       Yes □         Water Table Present?       Yes ⊠         Saturation Present?       Yes ⊠	Hydrogen Sull Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explain ) No De No De No De No De	ide Odor (C1) ospheres along educed Iron (C eduction in Tille essed Plants (E in Remarks) oth (Inches): 8 oth (Inches): 4	4) ed Soils (C6) D1) ( <b>LRR A</b> )	s (C3)	Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test Raised Ant Mound Frost-Heave Hum tland Hydrology Present?	and 4B) (B10) r Table (C2) on Aerial Imagery (C9) ion (D2) (D3) (D5) ds (D6) (LRR A) mocks (D4)
<ul> <li>☐ Sediment Deposits (B2)</li> <li>☐ Drift Deposits (B3)</li> <li>☐ Algal Mat or crust (B4)</li> <li>☐ Iron Deposits (B5)</li> <li>☐ Surface Soil Cracks (B6)</li> <li>☐ Inundation Visible on Aerial Imagery (B7</li> </ul> Field Observations: Surface Water Present? Yes ☐ Water Table Present? Yes ⊠ Saturation Present? Yes ⊠ Saturation Present? Yes ⊠ (Includes Capillary fringe)	Hydrogen Sull Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explain ) No De No De No De No De	ide Odor (C1) ospheres along educed Iron (C eduction in Tille essed Plants (E in Remarks) oth (Inches): 8 oth (Inches): 4	4) ed Soils (C6) D1) ( <b>LRR A</b> )	s (C3)	Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test Raised Ant Mound Frost-Heave Hum tland Hydrology Present?	and 4B) (B10) r Table (C2) on Aerial Imagery (C9) ion (D2) (D3) (D5) ds (D6) (LRR A) mocks (D4)
<ul> <li>☐ Sediment Deposits (B2)</li> <li>☐ Drift Deposits (B3)</li> <li>☐ Algal Mat or crust (B4)</li> <li>☐ Iron Deposits (B5)</li> <li>☐ Surface Soil Cracks (B6)</li> <li>☐ Inundation Visible on Aerial Imagery (B7</li> </ul> Field Observations: Surface Water Present? Yes ☐ Water Table Present? Yes ⊠ Saturation Present? Yes ⊠ Saturation Present? Yes ⊠ (Includes Capillary fringe)	Hydrogen Sull Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explain ) No De No De No De No De	ide Odor (C1) ospheres along educed Iron (C eduction in Tille essed Plants (E in Remarks) oth (Inches): 8 oth (Inches): 4	4) ed Soils (C6) D1) ( <b>LRR A</b> )	s (C3)	Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test Raised Ant Mound Frost-Heave Hum tland Hydrology Present?	and 4B) (B10) r Table (C2) on Aerial Imagery (C9) ion (D2) (D3) (D5) ds (D6) (LRR A) mocks (D4)
<ul> <li>☐ Sediment Deposits (B2)</li> <li>☐ Drift Deposits (B3)</li> <li>☐ Algal Mat or crust (B4)</li> <li>☐ Iron Deposits (B5)</li> <li>☐ Surface Soil Cracks (B6)</li> <li>☐ Inundation Visible on Aerial Imagery (B7</li> </ul> Field Observations: Surface Water Present? Yes ☐ Water Table Present? Yes ⊠ Saturation Present? Yes ⊠ Saturation Present? Yes ⊠ (Includes Capillary fringe) Describe Recorded Data (Stream gauge, mage)	Hydrogen Sull Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explain ) No De No De No De No De	ide Odor (C1) ospheres along educed Iron (C eduction in Tille essed Plants (E in Remarks) oth (Inches): 8 oth (Inches): 4	4) ed Soils (C6) D1) ( <b>LRR A</b> )	s (C3)	Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test Raised Ant Mound Frost-Heave Hum tland Hydrology Present?	and 4B) (B10) r Table (C2) on Aerial Imagery (C9) ion (D2) (D3) (D5) ds (D6) (LRR A) mocks (D4)
<ul> <li>☐ Sediment Deposits (B2)</li> <li>☐ Drift Deposits (B3)</li> <li>☐ Algal Mat or crust (B4)</li> <li>☐ Iron Deposits (B5)</li> <li>☐ Surface Soil Cracks (B6)</li> <li>☐ Inundation Visible on Aerial Imagery (B7</li> </ul> Field Observations: Surface Water Present? Yes ☐ Water Table Present? Yes ⊠ Saturation Present? Yes ⊠ Saturation Present? Yes ⊠ (Includes Capillary fringe) Describe Recorded Data (Stream gauge, mage)	Hydrogen Sull Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explain ) No De No De No De No De	ide Odor (C1) ospheres along educed Iron (C eduction in Tille essed Plants (E in Remarks) oth (Inches): 8 oth (Inches): 4	4) ed Soils (C6) D1) ( <b>LRR A</b> )	s (C3)	Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test Raised Ant Mound Frost-Heave Hum tland Hydrology Present?	and 4B) (B10) r Table (C2) on Aerial Imagery (C9) ion (D2) (D3) (D5) ds (D6) (LRR A) mocks (D4)
<ul> <li>☐ Sediment Deposits (B2)</li> <li>☐ Drift Deposits (B3)</li> <li>☐ Algal Mat or crust (B4)</li> <li>☐ Iron Deposits (B5)</li> <li>☐ Surface Soil Cracks (B6)</li> <li>☐ Inundation Visible on Aerial Imagery (B7</li> </ul> Field Observations: Surface Water Present? Yes ☐ Water Table Present? Yes ⊠ Saturation Present? Yes ⊠ Saturation Present? Yes ⊠ (Includes Capillary fringe) Describe Recorded Data (Stream gauge, mage)	Hydrogen Sull Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explain ) No De No De No De No De	ide Odor (C1) ospheres along educed Iron (C eduction in Tille essed Plants (E in Remarks) oth (Inches): 8 oth (Inches): 4	4) ed Soils (C6) D1) ( <b>LRR A</b> )	s (C3)	Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test Raised Ant Mound Frost-Heave Hum tland Hydrology Present?	and 4B) (B10) r Table (C2) on Aerial Imagery (C9) ion (D2) (D3) (D5) ds (D6) (LRR A) mocks (D4)
<ul> <li>☐ Sediment Deposits (B2)</li> <li>☐ Drift Deposits (B3)</li> <li>☐ Algal Mat or crust (B4)</li> <li>☐ Iron Deposits (B5)</li> <li>☐ Surface Soil Cracks (B6)</li> <li>☐ Inundation Visible on Aerial Imagery (B7</li> </ul> Field Observations: Surface Water Present? Yes ☐ Water Table Present? Yes ⊠ Saturation Present? Yes ⊠ Saturation Present? Yes ⊠ (Includes Capillary fringe) Describe Recorded Data (Stream gauge, mage)	Hydrogen Sull Oxidized Rhiz Presence of R Recent Iron R Stunted or Str Other (Explain ) No De No De No De No De	ide Odor (C1) ospheres along educed Iron (C eduction in Tille essed Plants (E in Remarks) oth (Inches): 8 oth (Inches): 4	4) ed Soils (C6) D1) ( <b>LRR A</b> )	s (C3)	Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test Raised Ant Mound Frost-Heave Hum tland Hydrology Present?	and 4B) (B10) r Table (C2) on Aerial Imagery (C9) ion (D2) (D3) (D5) ds (D6) (LRR A) mocks (D4)

Project/Site: Highland Terrace Subdivsion		City/Co	unty: <u>La Cen</u>			
Applicant/Owner: Evergreen Homes NW			State: W			
Investigator(s): Wills, Kate'Lyn				o, Range: 33, 5N, 1E		
Landform (hillslope, terrace, etc.): hillslope		Local relief: co		Slope (%): <u>2%</u>		
Subregion (LRR): A		107				
Soil Map Unit Name: Odne silt loam, 0 to 5 percent slo	pes		N	IWI classification: None		
Are climatic / hydrologic conditions on the site typical for	or this time of	year?Yes⊠	No (If	no, explain Remarks.)		
Are Vegetation⊠, Soil□, or Hydrology□ significantly	y disturbed?	Ar	ea "Normal	Circumstances" present? Yes 🗌 No🖂		
Are Vegetation, Soil, or Hydrology naturally p	oblematic?	(If need	led, explain a	any answers in Remarks.)		
SUMMARY OF FINDINGS – Attach site map	-	sampling po	oint locatio	ons, transects, important features, etc.		
Hydrophytic Vegetation Present? Yes No 2 Hydric Soils Present? Yes No 2			mpled Area			
Wetland Hydrology Present? Yes Ves		within a	Wetland?	Yes⊡ No⊠		
Remarks: This test plot is located in a pasture that rec		r mowing				
VEGETATION (Use scientific names)						
Tree Stratum (Plot size: ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet		
1.	<u>%</u>	opecies:	Olalus	Number of Dominant Species 0 (A)		
0	%			That Are OBL, FACW, or FAC:		
3	%					
3 4.	<u> </u>			Total Number of Dominant 1 (B)		
Total Cover:	%			Species Across All Strata:		
<u>Sapling/Shrub Stratum</u> (Plot size:ft. radius) 1.	%			Percent of Dominant Species (A/B) That Are OBL, FACW, or FAC Prevalence Index worksheet		
1 2	%			Total % Cover of: Multiply by:		
2	0/			OBL species x 1=		
4.	0/			FACW species x 2=		
5.	%			FAC species         x 2=           x 3=		
Total Cover:				FACU species x 4=		
Herb Stratum (Plot size: ft radius)	/0			UPL species x 5=		
1. Dactylis glomerata	70%	yes	FACU	Column Totals:         (A)         (B)		
2. Holcus lanatus	15%	no	FAC	Prevalence Index = B/A=		
3. trifolium repens	10%	no	FACU	Hydrophytic Vegetation Indicators:		
4. Taraxacum officinale	5%	no	FACU	1 – Rapid Test for Hydrophytic Vegetation		
5.	%			□ 2 – Dominance Test is >50% □ 3 - Prevalence Index is $\leq 3.0^1$		
6.	%			<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide</li> <li>supporting data In Remarks or on a separate sheet)</li> </ul>		
7.	%					
8.	%			Wetland Non-Vascular Plants <sup>1</sup>		
Total Cover:	100%			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)		
Woody Vine Stratum (Plot size: ft radius)						
1 (Field 0.20 (Field 0.20)	%			<sup>1</sup> Indicators of hydric soil and wetland hydrology		
2.	<u> </u>			Must be present, unless disturbed or problematic.		
	<u> </u>					
Total Cover:	70					
% Bare Ground in Herb Stratum <u>%</u>	iouoo rogular	mourina		Hydrophytic Vegetation Present? Yes⊡ No⊠		
Remarks: This test plot is located in a pasture that rec	ieves regular	mowing.				

## SOIL

Profile Description: (Describe to the de	pth needed to docu				absence of indicators.)	
Depth Matrix		Redox Featu	ires			
(inches) Color (moist) %	Color (moist)	%		Loc <sup>2</sup>	Texture	Remarks
0-16 10YR3/3 100%		%	<u></u>		silty loam	
<u></u>		%				
%		%				
%		%				
%		%_				
<u> </u>		%				
		%				
		<u>%</u>		10 ·	2	
<sup>1</sup> Type: C=Concentration, D=Depletion, F Hydric Soil Indicators: (Applicable to al Histosal (A1)		erwise noted.		d Grain	Indicators for Problematic	
Histic Epipedon (A2)	Stripped Matri				Red Parent Material (TF2	
					Very Shallow Dark Surfac	
Black Histic (A3)	🗌 Loamy Mucky		except MLRA	1)	Other (Explain in Remark	s)
Hydrogen Sulfide (A4)	Loamy Gleyed	d Matrix (F2)				
Depleted Below Dark Surface (A11)	Depleted Matr	ix (F3)				
Thick Dark Surface (A12)	Redox Dark S	urface (F6)				
Sandy Mucky Minerals (S1)	Depleted Dark	Surface (F7)			<sup>3</sup> Indicators of hydrophytic ve	getation and
Sandy Gleyed Matrix (S4)	Redox Depres	sions (F8)			Wetland hydrology must	0
Restrictive Layer (if present):						
, , , ,						
Туре:				Hy	dric Soil Present?	
						Yes⊡ No⊠
Depth (inches):						
Remarks:						
HYDROLOGY						
HYDROLOGY					Secondary Indicator	c
HYDROLOGY Wetland Hydrology Indicators:					Secondary Indicators (2 or more required)	s
	heck all that apply)					S
Wetland Hydrology Indicators:	heck all that apply)					
Wetland Hydrology Indicators: Primary Indicators (min. of one required; c	Water-Stained		except MLRA	1, 2, 4	(2 or more required)	eaves (B9) and 4B)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; c			except MLRA	1, 2, 4	(2 or more required)	eaves (B9) and 4B)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; c	Water-Stained	1)	except MLRA	1, 2, 4	(2 or more required)	eaves (B9) <b>and 4B)</b> s (B10)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; c Surface Water (A1) High Water Table (A2)	☐ Water-Stained ☐ Salt Crust (B1	1) ebrates (B13)	except MLRA	1, 2, 4	(2 or more required) Water Stained Le A, & 4B) (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate	eaves (B9) <b>and 4B)</b> s (B10)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; c Surface Water (A1) High Water Table (A2) Saturation (A3)	☐ Water-Stained ☐ Salt Crust (B1 ☐ Aquatic Inverte	1) ebrates (B13) fide Odor (C1)			(2 or more required) Water Stained Le A, & 4B) (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate	eaves (B9) and 4B) s (B10) er Table (C2) e on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	☐ Water-Stained ☐ Salt Crust (B1 ☐ Aquatic Inverte ☐ Hydrogen Sulf ☐ Oxidized Rhize	1) ebrates (B13) fide Odor (C1) ospheres alon	g Living Roots		(2 or more required) Water Stained Le A, & 4B) (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate Saturation Visible Geomorphic Posi	eaves (B9) and 4B) s (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	☐ Water-Stained ☐ Salt Crust (B1 ☐ Aquatic Inverte ☐ Hydrogen Sulf ☐ Oxidized Rhiz ☐ Presence of R	1) ebrates (B13) fide Odor (C1) ospheres alon deduced Iron (C	g Living Roots C4)		(2 or more required) Water Stained Le A, & 4B) (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate Saturation Visible Geomorphic Posi Shallow Aquitard	eaves (B9) and 4B) s (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) (D3)
Wetland Hydrology Indicators:         Primary Indicators (min. of one required; c         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)	<ul> <li>□ Water-Stained</li> <li>□ Salt Crust (B1</li> <li>□ Aquatic Inverte</li> <li>□ Hydrogen Sulf</li> <li>□ Oxidized Rhize</li> <li>□ Presence of R</li> <li>□ Recent Iron R</li> </ul>	1) ebrates (B13) fide Odor (C1) ospheres alon deduced Iron (C eduction in Till	g Living Roots C4) ed Soils (C6)		(2 or more required) Water Stained Le (MLRA 1, 2, 4A, a Drainage Pattern Dry-Season Wate Saturation Visible Geomorphic Posi Shallow Aquitard FAC-Neutral Test	eaves (B9) and 4B) s (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) (D3) t (D5)
Wetland Hydrology Indicators:         Primary Indicators (min. of one required; c         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)         Iron Deposits (B5)	□ Water-Stained □ Salt Crust (B1 □ Aquatic Inverte □ Hydrogen Sulf □ Oxidized Rhize □ Presence of R □ Recent Iron R □ Stunted or Str	1) ebrates (B13) fide Odor (C1) ospheres alon leduced Iron (C eduction in Till essed Plants (	g Living Roots C4) ed Soils (C6)		(2 or more required) Water Stained Le A, & 4B) (MLRA 1, 2, 4A, a Drainage Pattern Dry-Season Wate Saturation Visible Geomorphic Posi Shallow Aquitard FAC-Neutral Test Raised Ant Moun	eaves (B9) and 4B) s (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) (D3) t (D5) ids (D6) (LRR A)
Wetland Hydrology Indicators:         Primary Indicators (min. of one required; c         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)	<ul> <li>□ Water-Stained</li> <li>□ Salt Crust (B1</li> <li>□ Aquatic Inverte</li> <li>□ Hydrogen Sulf</li> <li>□ Oxidized Rhize</li> <li>□ Presence of R</li> <li>□ Recent Iron Re</li> <li>□ Stunted or Stre</li> <li>□ Other (Explain</li> </ul>	1) ebrates (B13) fide Odor (C1) ospheres alon leduced Iron (C eduction in Till essed Plants (	g Living Roots C4) ed Soils (C6)		(2 or more required) Water Stained Le (MLRA 1, 2, 4A, a Drainage Pattern Dry-Season Wate Saturation Visible Geomorphic Posi Shallow Aquitard FAC-Neutral Test	eaves (B9) and 4B) s (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) (D3) t (D5) ids (D6) (LRR A)
Wetland Hydrology Indicators:         Primary Indicators (min. of one required; c         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aerial Imagery (E	<ul> <li>□ Water-Stained</li> <li>□ Salt Crust (B1</li> <li>□ Aquatic Inverte</li> <li>□ Hydrogen Sulf</li> <li>□ Oxidized Rhize</li> <li>□ Presence of R</li> <li>□ Recent Iron Re</li> <li>□ Stunted or Stre</li> <li>□ Other (Explain</li> </ul>	1) ebrates (B13) fide Odor (C1) ospheres alon leduced Iron (C eduction in Till essed Plants (	g Living Roots C4) ed Soils (C6)		(2 or more required) Water Stained Le A, & 4B) (MLRA 1, 2, 4A, a Drainage Pattern Dry-Season Wate Saturation Visible Geomorphic Posi Shallow Aquitard FAC-Neutral Test Raised Ant Moun	eaves (B9) and 4B) s (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) (D3) t (D5) ids (D6) (LRR A)
Wetland Hydrology Indicators:         Primary Indicators (min. of one required; of         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aerial Imagery (E	<ul> <li>Water-Stained</li> <li>Salt Crust (B1</li> <li>Aquatic Inverte</li> <li>Hydrogen Sulf</li> <li>Oxidized Rhize</li> <li>Presence of R</li> <li>Recent Iron Re</li> <li>Stunted or Stre</li> <li>Other (Explain 87)</li> </ul>	1) ebrates (B13) fide Odor (C1) ospheres alon teduced Iron (0 eduction in Till essed Plants ( in Remarks)	g Living Roots C4) ed Soils (C6)		(2 or more required) Water Stained Le A, & 4B) (MLRA 1, 2, 4A, a Drainage Pattern Dry-Season Wate Saturation Visible Geomorphic Posi Shallow Aquitard FAC-Neutral Test Raised Ant Moun	eaves (B9) and 4B) s (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) (D3) t (D5) ids (D6) (LRR A)
Wetland Hydrology Indicators:         Primary Indicators (min. of one required; c         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aerial Imagery (E         Field Observations:         Surface Water Present?	Water-Stained         Salt Crust (B1         Aquatic Inverte         Hydrogen Sulf         Oxidized Rhize         Presence of R         Recent Iron R         Stunted or Str         Other (Explain         87)	1) ebrates (B13) fide Odor (C1) ospheres alon deduced Iron (C eduction in Till essed Plants ( in Remarks) pth (Inches):	g Living Roots C4) ed Soils (C6)	(C3)	(2 or more required) Water Stained Le (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate Saturation Visible Geomorphic Posi Shallow Aquitard FAC-Neutral Test Raised Ant Moun Frost-Heave Hum	eaves (B9) and 4B) s (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) (D3) t (D5) ids (D6) (LRR A)
Wetland Hydrology Indicators:         Primary Indicators (min. of one required; c         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aerial Imagery (E         Field Observations:         Surface Water Present?       Yes         Water Table Present?       Yes	□ Water-Stained         □ Salt Crust (B1         □ Aquatic Inverte         □ Hydrogen Sulf         □ Oxidized Rhize         □ Presence of R         □ Recent Iron Re         □ Stunted or Stre         □ Other (Explain         37)         No ⊠ De         No ⊠ De         No ⊠ De	1) ebrates (B13) fide Odor (C1) ospheres alon teduced Iron (C eduction in Till essed Plants ( in Remarks) pth (Inches): pth (Inches):	g Living Roots C4) ed Soils (C6) D1) ( <b>LRR A</b> )	(C3)	(2 or more required) Water Stained Le A, & 4B) (MLRA 1, 2, 4A, a Drainage Pattern Dry-Season Wate Saturation Visible Geomorphic Posi Shallow Aquitard FAC-Neutral Test Raised Ant Moun	eaves (B9) and 4B) s (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) (D3) t (D5) ids (D6) (LRR A) nmocks (D4)
Wetland Hydrology Indicators:         Primary Indicators (min. of one required; of         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aerial Imagery (B         Field Observations:         Surface Water Present?         Yes         Saturation Present?	□ Water-Stained         □ Salt Crust (B1         □ Aquatic Inverte         □ Hydrogen Sulf         □ Oxidized Rhize         □ Presence of R         □ Recent Iron Re         □ Stunted or Stre         □ Other (Explain         37)         No ⊠ De         No ⊠ De         No ⊠ De	1) ebrates (B13) fide Odor (C1) ospheres alon deduced Iron (C eduction in Till essed Plants ( in Remarks) pth (Inches):	g Living Roots C4) ed Soils (C6) D1) ( <b>LRR A</b> )	(C3)	(2 or more required) Water Stained Le (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate Saturation Visible Geomorphic Posi Shallow Aquitard FAC-Neutral Test Raised Ant Moun Frost-Heave Hum	eaves (B9) and 4B) s (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) (D3) t (D5) ids (D6) (LRR A)
Wetland Hydrology Indicators:         Primary Indicators (min. of one required; of         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aerial Imagery (B         Field Observations:         Surface Water Present?         Yes         Saturation Present?         Yes         Includes Capillary fringe)	□ Water-Stained         □ Salt Crust (B1         □ Aquatic Inverte         □ Hydrogen Sulf         □ Oxidized Rhize         □ Presence of R         □ Recent Iron R         □ Other (Explain         37)         No ⊠ De         No ⊠ De	1) ebrates (B13) fide Odor (C1) ospheres alon educed Iron (C eduction in Till essed Plants ( in Remarks) pth (Inches): pth (Inches): pth (Inches):	g Living Roots C4) ed Soils (C6) D1) ( <b>LRR A</b> )	(C3) Wet	(2 or more required) Water Stained Le A, & 4B) (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate Saturation Visible Geomorphic Posi Shallow Aquitard FAC-Neutral Test Raised Ant Moun Frost-Heave Hum	eaves (B9) and 4B) s (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) (D3) t (D5) ids (D6) (LRR A) nmocks (D4)
Wetland Hydrology Indicators:         Primary Indicators (min. of one required; of         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aerial Imagery (B         Field Observations:         Surface Water Present?         Yes         Saturation Present?	□ Water-Stained         □ Salt Crust (B1         □ Aquatic Inverte         □ Hydrogen Sulf         □ Oxidized Rhize         □ Presence of R         □ Recent Iron R         □ Other (Explain         37)         No ⊠ De         No ⊠ De	1) ebrates (B13) fide Odor (C1) ospheres alon educed Iron (C eduction in Till essed Plants ( in Remarks) pth (Inches): pth (Inches): pth (Inches):	g Living Roots C4) ed Soils (C6) D1) ( <b>LRR A</b> )	(C3) Wet	(2 or more required) Water Stained Le A, & 4B) (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate Saturation Visible Geomorphic Posi Shallow Aquitard FAC-Neutral Test Raised Ant Moun Frost-Heave Hum	eaves (B9) and 4B) s (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) (D3) t (D5) ids (D6) (LRR A) nmocks (D4)
Wetland Hydrology Indicators:         Primary Indicators (min. of one required; of         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aerial Imagery (B         Field Observations:         Surface Water Present?         Yes         Saturation Present?         Yes         Includes Capillary fringe)	□ Water-Stained         □ Salt Crust (B1         □ Aquatic Inverte         □ Hydrogen Sulf         □ Oxidized Rhize         □ Presence of R         □ Recent Iron R         □ Other (Explain         37)         No ⊠ De         No ⊠ De	1) ebrates (B13) fide Odor (C1) ospheres alon educed Iron (C eduction in Till essed Plants ( in Remarks) pth (Inches): pth (Inches): pth (Inches):	g Living Roots C4) ed Soils (C6) D1) ( <b>LRR A</b> )	(C3) Wet	(2 or more required) Water Stained Le A, & 4B) (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate Saturation Visible Geomorphic Posi Shallow Aquitard FAC-Neutral Test Raised Ant Moun Frost-Heave Hum	eaves (B9) and 4B) s (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) (D3) t (D5) ids (D6) (LRR A) nmocks (D4)
Wetland Hydrology Indicators:         Primary Indicators (min. of one required; of         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aerial Imagery (E         Field Observations:         Surface Water Present?         Yes         Saturation Present?         Yes         Includes Capillary fringe)         Describe Recorded Data (Stream gauge, frince)	□ Water-Stained         □ Salt Crust (B1         □ Aquatic Inverte         □ Hydrogen Sulf         □ Oxidized Rhize         □ Presence of R         □ Recent Iron R         □ Other (Explain         37)         No ⊠ De         No ⊠ De	1) ebrates (B13) fide Odor (C1) ospheres alon educed Iron (C eduction in Till essed Plants ( in Remarks) pth (Inches): pth (Inches): pth (Inches):	g Living Roots C4) ed Soils (C6) D1) ( <b>LRR A</b> )	(C3) Wet	(2 or more required) Water Stained Le A, & 4B) (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate Saturation Visible Geomorphic Posi Shallow Aquitard FAC-Neutral Test Raised Ant Moun Frost-Heave Hum	eaves (B9) and 4B) s (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) (D3) t (D5) ids (D6) (LRR A) nmocks (D4)
Wetland Hydrology Indicators:         Primary Indicators (min. of one required; of         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aerial Imagery (B         Field Observations:         Surface Water Present?         Yes         Saturation Present?         Yes         Includes Capillary fringe)	□ Water-Stained         □ Salt Crust (B1         □ Aquatic Inverte         □ Hydrogen Sulf         □ Oxidized Rhize         □ Presence of R         □ Recent Iron R         □ Other (Explain         37)         No ⊠ De         No ⊠ De	1) ebrates (B13) fide Odor (C1) ospheres alon educed Iron (C eduction in Till essed Plants ( in Remarks) pth (Inches): pth (Inches): pth (Inches):	g Living Roots C4) ed Soils (C6) D1) ( <b>LRR A</b> )	(C3) Wet	(2 or more required) Water Stained Le A, & 4B) (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate Saturation Visible Geomorphic Posi Shallow Aquitard FAC-Neutral Test Raised Ant Moun Frost-Heave Hum	eaves (B9) and 4B) s (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) (D3) t (D5) ids (D6) (LRR A) nmocks (D4)
Wetland Hydrology Indicators:         Primary Indicators (min. of one required; of         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)         Iron Deposits (B5)         Surface Soil Cracks (B6)         Inundation Visible on Aerial Imagery (E         Field Observations:         Surface Water Present?         Yes         Saturation Present?         Yes         Includes Capillary fringe)         Describe Recorded Data (Stream gauge, frince)	□ Water-Stained         □ Salt Crust (B1         □ Aquatic Inverte         □ Hydrogen Sulf         □ Oxidized Rhize         □ Presence of R         □ Recent Iron R         □ Other (Explain         37)         No ⊠ De         No ⊠ De	1) ebrates (B13) fide Odor (C1) ospheres alon educed Iron (C eduction in Till essed Plants ( in Remarks) pth (Inches): pth (Inches): pth (Inches):	g Living Roots C4) ed Soils (C6) D1) ( <b>LRR A</b> )	(C3) Wet	(2 or more required) Water Stained Le A, & 4B) (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate Saturation Visible Geomorphic Posi Shallow Aquitard FAC-Neutral Test Raised Ant Moun Frost-Heave Hum	eaves (B9) and 4B) s (B10) er Table (C2) e on Aerial Imagery (C9) ition (D2) (D3) t (D5) ids (D6) (LRR A) nmocks (D4)
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## WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Highland Terrace Subdivsion		City/Co	ounty: <u>La Cen</u>		
Applicant/Owner: Evergreen Homes NW			State: W		: TP9
Investigator(s): Wills, Kate'Lyn				o, Range: <u>33, 5N, 1E</u>	
Landform (hillslope, terrace, etc.): hillslope		Local relief: co			Slope (%): <u>1%</u>
Subregion (LRR): <u>A</u>	Lat: 45.521	107	_ Long: <u>-122</u> .	.410450 Datum: NAD	083
Soil Map Unit Name: Odne silt loam, 0 to 5 percent slo				IWI classification: None	
Are climatic / hydrologic conditions on the site typical for	or this time of	year? Yes⊠	No🗌 (If	no, explain Remarks.)	
Are Vegetation⊠, Soil□, or Hydrology□ significant	y disturbed?	Ar	rea "Normal (	Circumstances" present? Yes□ No⊠	
Are Vegetation, Soil, or Hydrology naturally p	oblematic?	(If need	ded, explain a	any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map	showing s	ampling po	oint locatio	ons, transects, important feature	es. etc.
Hydrophytic Vegetation Present? Yes I No					
Hydrophytic Vegetation Present? Tes I No 2 Hydric Soils Present? Yes X No [			mpled Area		
Wetland Hydrology Present? Yes 🛛 No [		within a	Wetland?	Yes⊠ No⊡	
Remarks: This test plot is located in a pasture that rec		mouring			
VEGETATION (Use scientific names)	Abaaluta	Dominant	Indicator	Deminance Test Workshoet	
Trop Stratum (Plat size: ft radius)	Absolute % Cover	Dominant	Indicator	Dominance Test Worksheet	
<u>Tree Stratum</u> (Plot size: ft radius) 1.	<u>% Cover</u> %	Species?	Status	Number of Dominant Species	1 (A)
0	<u>%</u>			That Are OBL, FACW, or FAC:	1 (A)
2	<u>%</u>				
3	<u> </u>			Total Number of Dominant	2 (P)
	<u>%</u>			Species Across All Strata:	2 (B)
Total Cover:	70				
Sapling/Shrub Stratum (Plot size:ft. radius)	0/			Percent of Dominant Species That Are OBL, FACW, or FAC	<u>50</u> (A/B)
1	%			Prevalence Index worksheet	
2	%				Multiply by:
3				OBL species x 1=	
4.	%			FACW species x 2=	
5	%			FAC species 70 x 3=	
Total Cover:	%			FACU species <u>30</u> x 4=	
Herb Stratum (Plot size:ft radius)	C00/			UPL species x 5=	
1. Holcus lanatus	60%	yes	FAC	Column Totals: 100 (A)	330 (B)
2. Dactylis glomerata	30%	yes	FACU	Prevalence Index = B/	
3. <u>Alopecurus pratensis</u>	10%	no	FAC	Hydrophytic Vegetation Indicators	
4.	%			□ 1 – Rapid Test for Hydrophytic	vegetation
	0/			$\begin{array}{ c c c } \hline & 2 & - & \text{Dominance Test is } >50\% \\ \hline & 3 & - & \text{Prevalence Index is } \le 3.0^1 \end{array}$	
5	%				(Drovido
6.	%			4 - Morphological Adaptations <sup>1</sup> supporting data In Remarks or	
7.	%				on a separate sileel
8.	<u> </u>			☐ Wetland Non-Vascular Plants <sup>1</sup>	
Total Cover:				Problematic Hydrophytic Veget	ation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: ft radius)					
1	<u>%</u>			<sup>1</sup> Indicators of hydric soil and wetland	
2	<u>%</u> %			Must be present, unless disturbed or	problematic.
Total Cover:	%			Hydrophytic Vegetation Present?	
% Bare Ground in Herb Stratum%					Yes⊟ No⊠
Remarks: This test plot is located in a pasture that rec	ieves regular	mowing.			
	-	-			

#### SOIL

Profile Description: (Describe to the de					,	
Depth Matrix		Redox Featu	res			
(inches) Color (moist) %	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-6 10YR3/2 100%		%			silty loam	
<u>6-16 10YR4/2 85%</u>	10YR4/6	15%	С	М	silty clay loam	
<u>%</u>		%				
<u> </u>		%				
<u></u>		%				
<u> </u>		%				
<u> </u>		%				
<sup>1</sup> Type: C=Concentration, D=Depletion, F				and Grai		
Hydric Soil Indicators: (Applicable to al					Indicators for Problemati	c Hydric Soils
Histosal (A1)	Sandy Redox				2 cm Muck (A10)	-
Histic Epipedon (A2)	Stripped Matr	ix (S6)			<ul> <li>Red Parent Material (TF2</li> <li>Very Shallow Dark Surfa</li> </ul>	
Black Histic (A3)	Loamy Mucky	(Mineral (F1) (	avcent MI R	Δ 1)	Other (Explain in Remark	
☐ Hydrogen Sulfide (A4)	Loamy Gleye			~ ')		(3)
Depleted Below Dark Surface (A11)	Depleted Mat					
Thick Dark Surface (A12)	Redox Dark S	. ,				
Sandy Mucky Minerals (S1)	Depleted Dark	• •			<sup>3</sup> Indicators of hydrophytic ve	actation and
Sandy Gleyed Matrix (S4)	Redox Depres	( )			Wetland hydrology must	•
Restrictive Layer (if present):						i be present
Reserve Layer (il preserv).						
Туре:				Hy	dric Soil Present?	
						Yes⊠ No⊡
Depth (inches):						
Remarks:						
HYDROLOGY						
HYDROLOGY Wetland Hydrology Indicators:					Secondary Indicator	
Wetland Hydrology Indicators:	heck all that apply)				Secondary Indicator (2 or more required)	
	heck all that apply)				(2 or more required)	)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; c		d Leaves (B9) (	except MLF	RA 1. 2. 4	(2 or more required)	) eaves (B9)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; c	heck all that apply) □ Water-Stained □ Salt Crust (B1		except MLF	RA 1, 2, 4	(2 or more required)	) eaves (B9) <b>and 4B)</b>
Wetland Hydrology Indicators: Primary Indicators (min. of one required; c Surface Water (A1) High Water Table (A2)	☐ Water-Stained ☐ Salt Crust (B1	1)	except MLF	RA 1, 2, 4	(2 or more required)	) eaves (B9) and <b>4B)</b> ns (B10)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; c Surface Water (A1) High Water Table (A2) Saturation (A3)	☐ Water-Stained ☐ Salt Crust (B1 ☐ Aquatic Invert	1) tebrates (B13)	except MLF	RA 1, 2, 4	(2 or more required) Water Stained Le (A, & 4B) (MLRA 1, 2, 4A, Drainage Patterr Dry-Season Wat	) eaves (B9) and 4B) Is (B10) er Table (C2)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	☐ Water-Stained ☐ Salt Crust (B1 ☐ Aquatic Invert ☐ Hydrogen Sul	1) tebrates (B13) fide Odor (C1)			(2 or more required) Water Stained Le (A, & 4B) (MLRA 1, 2, 4A, Drainage Patterr Dry-Season Wat Saturation Visible	) and 4B) ns (B10) er Table (C2) e on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	☐ Water-Stained ☐ Salt Crust (B1 ☐ Aquatic Invert ☐ Hydrogen Sul ☐ Oxidized Rhiz	1) ebrates (B13) fide Odor (C1) cospheres along	g Living Roo		(2 or more required) Water Stained Le (A, & 4B) (MLRA 1, 2, 4A, Drainage Patterr Dry-Season Wat Saturation Visible Geomorphic Pos	) eaves (B9) and 4B) ns (B10) er Table (C2) e on Aerial Imagery (C9) iition (D2)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	<ul> <li>□ Water-Stained</li> <li>□ Salt Crust (B1</li> <li>□ Aquatic Invert</li> <li>□ Hydrogen Sul</li> <li>□ Oxidized Rhiz</li> <li>□ Presence of F</li> </ul>	1) tebrates (B13) fide Odor (C1) cospheres along Reduced Iron (C	g Living Roo	ts (C3)	(2 or more required) Water Stained Le (MLRA 1, 2, 4A, Drainage Patterr Dry-Season Wat Saturation Visible Geomorphic Pos Shallow Aquitare	eaves (B9) and 4B) ns (B10) er Table (C2) e on Aerial Imagery (C9) sition (D2) f (D3)
Wetland Hydrology Indicators:         Primary Indicators (min. of one required; c         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or crust (B4)	<ul> <li>□ Water-Stained</li> <li>□ Salt Crust (B1</li> <li>□ Aquatic Invert</li> <li>□ Hydrogen Sul</li> <li>□ Oxidized Rhiz</li> <li>□ Presence of F</li> <li>□ Recent Iron R</li> </ul>	11) tebrates (B13) fide Odor (C1) cospheres along Reduced Iron (C Reduction in Till	g Living Roo (4) ed Soils (C6	ts (C3)	(2 or more required) Water Stained Le (MLRA 1, 2, 4A, Drainage Patterr Dry-Season Wat Saturation Visible Geomorphic Pos Shallow Aquitard FAC-Neutral Tes	eaves (B9) and 4B) ss (B10) er Table (C2) e on Aerial Imagery (C9) sition (D2) d (D3) st (D5)
Wetland Hydrology Indicators: Primary Indicators (min. of one required; c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or crust (B4) Iron Deposits (B5)	<ul> <li>□ Water-Stained</li> <li>□ Salt Crust (B1</li> <li>□ Aquatic Invert</li> <li>□ Hydrogen Sul</li> <li>□ Oxidized Rhiz</li> <li>□ Presence of F</li> <li>□ Recent Iron R</li> <li>□ Stunted or Str</li> </ul>	1) tebrates (B13) fide Odor (C1) cospheres along Reduced Iron (C Reduction in Till ressed Plants (	g Living Roo (4) ed Soils (C6	ts (C3)	(2 or more required) Water Stained Le (MLRA 1, 2, 4A, Drainage Patterr Dry-Season Wat Saturation Visible Geomorphic Pos Shallow Aquitaro FAC-Neutral Tes Raised Ant Mour	eaves (B9) and 4B) ns (B10) er Table (C2) e on Aerial Imagery (C9) sition (D2) d (D3) st (D5) nds (D6) (LRR A)
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Wetland Hydrology Indicators: Primary Indicators (min. of one required; c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B Field Observations:	<ul> <li>Water-Stained</li> <li>Salt Crust (B1</li> <li>Aquatic Invert</li> <li>Hydrogen Sul</li> <li>Oxidized Rhiz</li> <li>Presence of F</li> <li>Recent Iron R</li> <li>Stunted or Str</li> <li>Other (Explain</li> <li>7)</li> </ul>	11) tebrates (B13) fide Odor (C1) cospheres along Reduced Iron (C Reduction in Till ressed Plants ( in Remarks)	g Living Roo (4) ed Soils (C6	ts (C3)	(2 or more required) Water Stained Le (MLRA 1, 2, 4A, Drainage Patterr Dry-Season Wat Saturation Visible Geomorphic Pos Shallow Aquitaro FAC-Neutral Tes Raised Ant Mour	eaves (B9) and 4B) ns (B10) er Table (C2) e on Aerial Imagery (C9) sition (D2) d (D3) st (D5) nds (D6) (LRR A)
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## WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Highland Terrace Subdivsion		City/Co	unty: <u>La Cen</u>		
Applicant/Owner: Evergreen Homes NW			State: W		ng Point: <u>TP10</u>
Investigator(s): Wills, Kate'Lyn				, Range: <u>33, 5N, 1E</u>	
Landform (hillslope, terrace, etc.): <u>hillslope</u>		Local relief: co			Slope (%): <u>5%</u>
Subregion (LRR): <u>A</u>		107			m: NAD83
Soil Map Unit Name: Odne silt loam, 0 to 5 percent slo	pes		N	WI classification: None	
Are climatic / hydrologic conditions on the site typical for Are Vegetation⊠, Soil□, or Hydrology□ significantl	y disturbed?	Ar	ea "Normal (	Circumstances" present? Yes	No⊠
Are Vegetation, Soil, or Hydrology naturally p	roblematic?	(If need	led, explain a	any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map Hydrophytic Vegetation Present? Yes 🛛 No [				<b></b>	features, etc.
Hydric Soils Present? Yes Ves			mpled Area		
Wetland Hydrology Present? Yes Ves		within a	Wetland?	Yes⊡ No⊠	
Remarks: This test plot is located in a pasture that red		r mowing.			
VEGETATION (Use scientific names)					
Tree Stratum (Plot size: ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Workshee	t
1.	<u>% Cover</u> %	Opecies:	Status	Number of Dominant Species	6 2 (A)
0	%			That Are OBL, FACW, or FAC	
2 3	<u> </u>				
4.	%		-	Total Number of Dominant	3 (B)
Total Cover:	%			Species Across All Strata:	( )
Sapling/Shrub Stratum (Plot size:ft. radius)	0/			Percent of Dominant Species That Are OBL, FACW, or FAC	D
1	<u>     %   </u> %			Prevalence Index workshee	
2	<u> </u>		·	Total % Cover of: OBL species	Multiply by: x 1=
	0/			FACW species	x 2=
4 5	<u> </u>			FAC species	
Total Cover:	%			FACU species	x 3= x 4=
Herb Stratum (Plot size: ft radius)	///			UPL species	x 5=
1. Dactylis glomerata	45%	yes	FACU	Column Totals:	(A) (B)
2. Holcus lanatus	30%	yes	FAC	Prevalence Inde	
3. Alopecurus pratensis	20%	yes	FAC	Hydrophytic Vegetation Ind	
4. Festuca arundinacea	5%	no	FAC	1 – Rapid Test for Hydr	ophytic Vegetation
	%			<ul> <li>2 – Dominance Test is</li> <li>3 - Prevalence Index is</li> </ul>	
5 6				4 - Morphological Adap	
- 	%			supporting data In Rem	arks or on a separate sheet)
7.	%				
8.	%			Wetland Non-Vascular	
Total Cover:	100%			Problematic Hydrophytic	c Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: ft radius)	- <i>i</i>			1	a
1	%			<sup>1</sup> Indicators of hydric soil and	
2	<u>%</u> %			Must be present, unless distu	irbed or problematic.
Total Cover:	%			Hydrophytic Vagatation Pres	cont?
% Bare Ground in Herb Stratum <u>%</u>				Hydrophytic Vegetation Pres	Yes⊠ No⊡
Remarks:This test plot is located in a pasture that rec	ieves regular	mowing.			

## SOIL

	th needed to document the indicator or c	onfirm the absence of indicators.)	· •
Depth Matrix	Redox Features		
(inches) Color (moist) %	Color (moist) % Type <sup>1</sup>	Loc <sup>2</sup> Texture	Remarks
0-16 10YR3/3 100%	<u> </u>	silty loam	Remarks
<u> </u>	%		
<u> </u>	<u> </u>		<u> </u>
<u> </u>	%		
<u>%</u>	%		
	%		
<u> </u>			
<ul> <li><sup>1</sup>Type: C=Concentration, D=Depletion, RI</li> <li>Hydric Soil Indicators: (Applicable to all</li> <li>Histosal (A1)</li> <li>Histic Epipedon (A2)</li> <li>Black Histic (A3)</li> <li>Hydrogen Sulfide (A4)</li> </ul>	M=Reduced Matrix, CS=Covered or Coated LRRs, unless otherwise noted.) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except ML Loamy Gleyed Matrix (F2)	Indicators for Problema 2 cm Muck (A10) Red Parent Material (TI Very Shallow Dark Surf	tic Hydric Soils F2) face (TF12)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)		
Thick Dark Surface (A12)	Redox Dark Surface (F6)	2	
Sandy Mucky Minerals (S1)	Depleted Dark Surface (F7)	<sup>3</sup> Indicators of hydrophytic	vegetation and
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	Wetland hydrology mu	st be present
Restrictive Layer (if present):			
Туре:		Hydric Soil Present?	Yes⊡ No⊠
Depth (inches):			
Remarks:			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicat	
		(2 or more require	
Primary Indicators (min. of one required; ch	eck all that apply)	(2 or more require	d) Leaves (B9)
		(2 or more required	d) Leaves (B9) A, and 4B)
Surface Water (A1)	Water-Stained Leaves (B9) (except ML	(2 or more required) Water Stained LRA 1, 2, 4A, & 4B) (MLRA 1, 2, 4A	d) Leaves (B9) <b>A, and 4B)</b> rns (B10)
<ul> <li>Surface Water (A1)</li> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> </ul>	<ul> <li>☐ Water-Stained Leaves (B9) (except ML</li> <li>☐ Salt Crust (B11)</li> <li>☐ Aquatic Invertebrates (B13)</li> </ul>	(2 or more require Water Stained LRA 1, 2, 4A, & 4B) (MLRA 1, 2, 4A Drainage Patte Dry-Season Wa	d) Leaves (B9) <b>A, and 4B)</b> vrns (B10) ater Table (C2)
<ul> <li>Surface Water (A1)</li> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> </ul>	<ul> <li>Water-Stained Leaves (B9) (except ML</li> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> </ul>	(2 or more require Water Stained LRA 1, 2, 4A, & 4B) (MLRA 1, 2, 4A Drainage Patte Dry-Season Wa Saturation Visit	d) Leaves (B9) <b>A, and 4B)</b> rrns (B10) ater Table (C2) ble on Aerial Imagery (C9)
<ul> <li>Surface Water (A1)</li> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> </ul>	<ul> <li>Water-Stained Leaves (B9) (except ML</li> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Living Ro</li> </ul>	(2 or more require Water Stained LRA 1, 2, 4A, & 4B) (MLRA 1, 2, 4A Drainage Patte Dry-Season Wa Saturation Visit pots (C3) Geomorphic Po	d) Leaves (B9) <b>A, and 4B)</b> rrns (B10) ater Table (C2) ble on Aerial Imagery (C9) position (D2)
<ul> <li>Surface Water (A1)</li> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> </ul>	<ul> <li>Water-Stained Leaves (B9) (except ML</li> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Living Rc</li> <li>Presence of Reduced Iron (C4)</li> </ul>	(2 or more required Water Stained LRA 1, 2, 4A, & 4B) (MLRA 1, 2, 4A Drainage Patte Dry-Season Wa Saturation Visit Dots (C3) Geomorphic Po Shallow Aquita	d) Leaves (B9) <b>A, and 4B)</b> rrns (B10) ater Table (C2) ble on Aerial Imagery (C9) position (D2) rd (D3)
<ul> <li>Surface Water (A1)</li> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> </ul>	<ul> <li>Water-Stained Leaves (B9) (except ML</li> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Living Rc</li> <li>Presence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled Soils (C</li> </ul>	(2 or more required Water Stained LRA 1, 2, 4A, & 4B) (MLRA 1, 2, 4A Drainage Patte Dry-Season Wa Saturation Visit Sots (C3) Geomorphic Po Shallow Aquita C6) FAC-Neutral Te	d) Leaves (B9) <b>A, and 4B)</b> Irns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3) est (D5)
<ul> <li>Surface Water (A1)</li> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> <li>Iron Deposits (B5)</li> </ul>	<ul> <li>Water-Stained Leaves (B9) (except ML</li> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Living Rc</li> <li>Presence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled Soils (C</li> <li>Stunted or Stressed Plants (D1) (LRR A)</li> </ul>	(2 or more required Water Stained LRA 1, 2, 4A, & 4B) (MLRA 1, 2, 4A Drainage Patte Dry-Season Wa Saturation Visit Sots (C3) Geomorphic Po Shallow Aquita C6) FAC-Neutral Te A) Raised Ant More	d) Leaves (B9) <b>A, and 4B)</b> Irns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3) est (D5) unds (D6) ( <b>LRR A</b> )
<ul> <li>Surface Water (A1)</li> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> <li>Iron Deposits (B5)</li> <li>Surface Soil Cracks (B6)</li> </ul>	<ul> <li>Water-Stained Leaves (B9) (except ML</li> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Living Ro</li> <li>Presence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled Soils (C</li> <li>Stunted or Stressed Plants (D1) (LRR A</li> <li>Other (Explain in Remarks)</li> </ul>	(2 or more required Water Stained LRA 1, 2, 4A, & 4B) (MLRA 1, 2, 4A Drainage Patte Dry-Season Wa Saturation Visit Sots (C3) Geomorphic Po Shallow Aquita C6) FAC-Neutral Te	d) Leaves (B9) <b>A, and 4B)</b> Irns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3) est (D5) unds (D6) ( <b>LRR A</b> )
<ul> <li>Surface Water (A1)</li> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> <li>Iron Deposits (B5)</li> </ul>	<ul> <li>Water-Stained Leaves (B9) (except ML</li> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Living Ro</li> <li>Presence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled Soils (C</li> <li>Stunted or Stressed Plants (D1) (LRR A</li> <li>Other (Explain in Remarks)</li> </ul>	(2 or more required Water Stained LRA 1, 2, 4A, & 4B) (MLRA 1, 2, 4A Drainage Patte Dry-Season Wa Saturation Visit Sots (C3) Geomorphic Po Shallow Aquita C6) FAC-Neutral Te A) Raised Ant More	d) Leaves (B9) <b>A, and 4B)</b> Irns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3) est (D5) unds (D6) ( <b>LRR A</b> )
<ul> <li>Surface Water (A1)</li> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> <li>Iron Deposits (B5)</li> <li>Surface Soil Cracks (B6)</li> <li>Inundation Visible on Aerial Imagery (B7)</li> </ul>	<ul> <li>Water-Stained Leaves (B9) (except ML</li> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Living Ro</li> <li>Presence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled Soils (C</li> <li>Stunted or Stressed Plants (D1) (LRR A</li> <li>Other (Explain in Remarks)</li> </ul>	(2 or more required Water Stained LRA 1, 2, 4A, & 4B) (MLRA 1, 2, 4A Drainage Patte Dry-Season Wa Saturation Visit Sots (C3) Geomorphic Po Shallow Aquita C6) FAC-Neutral Te A) Raised Ant More	d) Leaves (B9) <b>A, and 4B)</b> Irns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3) est (D5) unds (D6) ( <b>LRR A</b> )
<ul> <li>Surface Water (A1)</li> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> <li>Iron Deposits (B5)</li> <li>Surface Soil Cracks (B6)</li> </ul>	<ul> <li>Water-Stained Leaves (B9) (except ML</li> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Living Ro</li> <li>Presence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled Soils (C</li> <li>Stunted or Stressed Plants (D1) (LRR A</li> <li>Other (Explain in Remarks)</li> </ul>	(2 or more required Water Stained LRA 1, 2, 4A, & 4B) (MLRA 1, 2, 4A Drainage Patte Dry-Season Wa Saturation Visit Sots (C3) Geomorphic Po Shallow Aquita C6) FAC-Neutral Te A) Raised Ant More	d) Leaves (B9) <b>A, and 4B)</b> Irns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3) est (D5) unds (D6) ( <b>LRR A</b> )
<ul> <li>Surface Water (A1)</li> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> <li>Iron Deposits (B5)</li> <li>Surface Soil Cracks (B6)</li> <li>Inundation Visible on Aerial Imagery (B7</li> </ul>	□ Water-Stained Leaves (B9) (except ML         □ Salt Crust (B11)         □ Aquatic Invertebrates (B13)         □ Hydrogen Sulfide Odor (C1)         □ Oxidized Rhizospheres along Living Rc         □ Presence of Reduced Iron (C4)         □ Recent Iron Reduction in Tilled Soils (C         □ Stunted or Stressed Plants (D1) (LRR A         □ Other (Explain in Remarks)         )         No ☑       Depth (Inches):	(2 or more required Water Stained LRA 1, 2, 4A, & 4B) (MLRA 1, 2, 4A Drainage Patte Dry-Season Wa Saturation Visit Sots (C3) Geomorphic Po Shallow Aquita C6) FAC-Neutral Te A) Raised Ant Mon Frost-Heave He	d) Leaves (B9) <b>A, and 4B)</b> rrns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3) est (D5) unds (D6) ( <b>LRR A</b> ) ummocks (D4)
<ul> <li>Surface Water (A1)</li> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> <li>Iron Deposits (B5)</li> <li>Surface Soil Cracks (B6)</li> <li>Inundation Visible on Aerial Imagery (B7</li> </ul> Field Observations: Surface Water Present? Yes	□ Water-Stained Leaves (B9) (except ML         □ Salt Crust (B11)         □ Aquatic Invertebrates (B13)         □ Hydrogen Sulfide Odor (C1)         □ Oxidized Rhizospheres along Living RC         □ Presence of Reduced Iron (C4)         □ Recent Iron Reduction in Tilled Soils (C         □ Stunted or Stressed Plants (D1) (LRR A         □ Other (Explain in Remarks)         )	(2 or more required Water Stained LRA 1, 2, 4A, & 4B) (MLRA 1, 2, 4A Drainage Patte Dry-Season Wa Saturation Visit Sots (C3) Geomorphic Po Shallow Aquita C6) FAC-Neutral Te A) Raised Ant More	d) Leaves (B9) <b>A, and 4B)</b> rrns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3) est (D5) unds (D6) ( <b>LRR A</b> ) ummocks (D4)
□       Surface Water (A1)         □       High Water Table (A2)         □       Saturation (A3)         □       Water Marks (B1)         □       Sediment Deposits (B2)         □       Drift Deposits (B3)         □       Algal Mat or crust (B4)         □       Iron Deposits (B5)         □       Surface Soil Cracks (B6)         □       Inundation Visible on Aerial Imagery (B7         Field Observations:         Surface Water Present?       Yes □         Water Table Present?       Yes □         Saturation Present?       Yes □         (Includes Capillary fringe)       Ves □	Water-Stained Leaves (B9) (except ML         Salt Crust (B11)         Aquatic Invertebrates (B13)         Hydrogen Sulfide Odor (C1)         Oxidized Rhizospheres along Living Rc         Presence of Reduced Iron (C4)         Recent Iron Reduction in Tilled Soils (C         Stunted or Stressed Plants (D1) (LRR A         Other (Explain in Remarks)         No       Depth (Inches):         No       Depth (Inches):         No       Depth (Inches):	(2 or more required Water Stained Drainage Patte Dry-Season Wa Saturation Visit Sots (C3) Geomorphic Po Shallow Aquita C6) A) Raised Ant Mon Frost-Heave Ho Wetland Hydrology Present?	d) Leaves (B9) <b>A, and 4B)</b> rrns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3) est (D5) unds (D6) ( <b>LRR A</b> ) ummocks (D4)
□       Surface Water (A1)         □       High Water Table (A2)         □       Saturation (A3)         □       Water Marks (B1)         □       Sediment Deposits (B2)         □       Drift Deposits (B3)         □       Algal Mat or crust (B4)         □       Iron Deposits (B5)         □       Surface Soil Cracks (B6)         □       Inundation Visible on Aerial Imagery (B7         Field Observations:         Surface Water Present?       Yes □         Water Table Present?       Yes □         Saturation Present?       Yes □         (Includes Capillary fringe)       Ves □	Water-Stained Leaves (B9) (except ML         Salt Crust (B11)         Aquatic Invertebrates (B13)         Hydrogen Sulfide Odor (C1)         Oxidized Rhizospheres along Living Rc         Presence of Reduced Iron (C4)         Recent Iron Reduction in Tilled Soils (C         Stunted or Stressed Plants (D1) (LRR A         Other (Explain in Remarks)         No       Depth (Inches):         No       Depth (Inches):	(2 or more required Water Stained Drainage Patte Dry-Season Wa Saturation Visit Sots (C3) Geomorphic Po Shallow Aquita C6) A) Raised Ant Mon Frost-Heave Ho Wetland Hydrology Present?	d) Leaves (B9) <b>A, and 4B)</b> rrns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3) est (D5) unds (D6) ( <b>LRR A</b> ) ummocks (D4)
□       Surface Water (A1)         □       High Water Table (A2)         □       Saturation (A3)         □       Water Marks (B1)         □       Sediment Deposits (B2)         □       Drift Deposits (B3)         □       Algal Mat or crust (B4)         □       Iron Deposits (B5)         □       Surface Soil Cracks (B6)         □       Inundation Visible on Aerial Imagery (B7         Field Observations:         Surface Water Present?       Yes □         Water Table Present?       Yes □         Saturation Present?       Yes □         (Includes Capillary fringe)       Ves □	Water-Stained Leaves (B9) (except ML         Salt Crust (B11)         Aquatic Invertebrates (B13)         Hydrogen Sulfide Odor (C1)         Oxidized Rhizospheres along Living Rc         Presence of Reduced Iron (C4)         Recent Iron Reduction in Tilled Soils (C         Stunted or Stressed Plants (D1) (LRR A         Other (Explain in Remarks)         No       Depth (Inches):         No       Depth (Inches):         No       Depth (Inches):	(2 or more required Water Stained Drainage Patte Dry-Season Wa Saturation Visit Sots (C3) Geomorphic Po Shallow Aquita C6) A) Raised Ant Mon Frost-Heave Ho Wetland Hydrology Present?	d) Leaves (B9) <b>A, and 4B)</b> rrns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3) est (D5) unds (D6) ( <b>LRR A</b> ) ummocks (D4)
<ul> <li>Surface Water (A1)</li> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> <li>Iron Deposits (B5)</li> <li>Surface Soil Cracks (B6)</li> <li>Inundation Visible on Aerial Imagery (B7</li> </ul> Field Observations: Surface Water Present? Yes  Water Table Present? Yes  Saturation Present? Yes  Saturation Present? Yes  (Includes Capillary fringe) Describe Recorded Data (Stream gauge, mage)	Water-Stained Leaves (B9) (except ML         Salt Crust (B11)         Aquatic Invertebrates (B13)         Hydrogen Sulfide Odor (C1)         Oxidized Rhizospheres along Living Rc         Presence of Reduced Iron (C4)         Recent Iron Reduction in Tilled Soils (C         Stunted or Stressed Plants (D1) (LRR A         Other (Explain in Remarks)         No       Depth (Inches):         No       Depth (Inches):         No       Depth (Inches):	(2 or more required Water Stained Drainage Patte Dry-Season Wa Saturation Visit Sots (C3) Geomorphic Po Shallow Aquita C6) A) Raised Ant Mon Frost-Heave Ho Wetland Hydrology Present?	d) Leaves (B9) <b>A, and 4B)</b> rrns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3) est (D5) unds (D6) ( <b>LRR A</b> ) ummocks (D4)
□       Surface Water (A1)         □       High Water Table (A2)         □       Saturation (A3)         □       Water Marks (B1)         □       Sediment Deposits (B2)         □       Drift Deposits (B3)         □       Algal Mat or crust (B4)         □       Iron Deposits (B5)         □       Surface Soil Cracks (B6)         □       Inundation Visible on Aerial Imagery (B7         Field Observations:         Surface Water Present?       Yes □         Water Table Present?       Yes □         Saturation Present?       Yes □         (Includes Capillary fringe)       Ves □	Water-Stained Leaves (B9) (except ML         Salt Crust (B11)         Aquatic Invertebrates (B13)         Hydrogen Sulfide Odor (C1)         Oxidized Rhizospheres along Living Rc         Presence of Reduced Iron (C4)         Recent Iron Reduction in Tilled Soils (C         Stunted or Stressed Plants (D1) (LRR A         Other (Explain in Remarks)         No       Depth (Inches):         No       Depth (Inches):         No       Depth (Inches):	(2 or more required Water Stained Drainage Patte Dry-Season Wa Saturation Visit Sots (C3) Geomorphic Po Shallow Aquita C6) A) Raised Ant Mon Frost-Heave Ho Wetland Hydrology Present?	d) Leaves (B9) <b>A, and 4B)</b> rrns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3) est (D5) unds (D6) ( <b>LRR A</b> ) ummocks (D4)
<ul> <li>Surface Water (A1)</li> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> <li>Iron Deposits (B5)</li> <li>Surface Soil Cracks (B6)</li> <li>Inundation Visible on Aerial Imagery (B7</li> </ul> Field Observations: Surface Water Present? Yes  Water Table Present? Yes  Saturation Present? Yes  Saturation Present? Yes  (Includes Capillary fringe) Describe Recorded Data (Stream gauge, mage)	Water-Stained Leaves (B9) (except ML         Salt Crust (B11)         Aquatic Invertebrates (B13)         Hydrogen Sulfide Odor (C1)         Oxidized Rhizospheres along Living Rc         Presence of Reduced Iron (C4)         Recent Iron Reduction in Tilled Soils (C         Stunted or Stressed Plants (D1) (LRR A         Other (Explain in Remarks)         No       Depth (Inches):         No       Depth (Inches):         No       Depth (Inches):	(2 or more required Water Stained Drainage Patte Dry-Season Wa Saturation Visit Sots (C3) Geomorphic Po Shallow Aquita C6) A) Raised Ant Mon Frost-Heave Ho Wetland Hydrology Present?	d) Leaves (B9) <b>A, and 4B)</b> rrns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3) est (D5) unds (D6) ( <b>LRR A</b> ) ummocks (D4)
<ul> <li>Surface Water (A1)</li> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or crust (B4)</li> <li>Iron Deposits (B5)</li> <li>Surface Soil Cracks (B6)</li> <li>Inundation Visible on Aerial Imagery (B7</li> </ul> Field Observations: Surface Water Present? Yes  Water Table Present? Yes  Saturation Present? Yes  Saturation Present? Yes  (Includes Capillary fringe) Describe Recorded Data (Stream gauge, mage)	Water-Stained Leaves (B9) (except ML         Salt Crust (B11)         Aquatic Invertebrates (B13)         Hydrogen Sulfide Odor (C1)         Oxidized Rhizospheres along Living Rc         Presence of Reduced Iron (C4)         Recent Iron Reduction in Tilled Soils (C         Stunted or Stressed Plants (D1) (LRR A         Other (Explain in Remarks)         No       Depth (Inches):         No       Depth (Inches):         No       Depth (Inches):	(2 or more required Water Stained Drainage Patte Dry-Season Wa Saturation Visit Sots (C3) Geomorphic Po Shallow Aquita C6) A) Raised Ant Mon Frost-Heave Ho Wetland Hydrology Present?	d) Leaves (B9) <b>A, and 4B)</b> rrns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3) est (D5) unds (D6) ( <b>LRR A</b> ) ummocks (D4)
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□       Surface Water (A1)         □       High Water Table (A2)         □       Saturation (A3)         □       Water Marks (B1)         □       Sediment Deposits (B2)         □       Drift Deposits (B3)         □       Algal Mat or crust (B4)         □       Iron Deposits (B5)         □       Surface Soil Cracks (B6)         □       Inundation Visible on Aerial Imagery (B7         Field Observations:         Surface Water Present?       Yes □         Water Table Present?       Yes □         Saturation Present?       Yes □         Includes Capillary fringe)       Describe Recorded Data (Stream gauge, mage)	Water-Stained Leaves (B9) (except ML         Salt Crust (B11)         Aquatic Invertebrates (B13)         Hydrogen Sulfide Odor (C1)         Oxidized Rhizospheres along Living Rc         Presence of Reduced Iron (C4)         Recent Iron Reduction in Tilled Soils (C         Stunted or Stressed Plants (D1) (LRR A         Other (Explain in Remarks)         No       Depth (Inches):         No       Depth (Inches):         No       Depth (Inches):	(2 or more required Water Stained Drainage Patte Dry-Season Wa Saturation Visit Sots (C3) Geomorphic Po Shallow Aquita C6) A) Raised Ant Mon Frost-Heave Ho Wetland Hydrology Present?	d) Leaves (B9) <b>A, and 4B)</b> rrns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3) est (D5) unds (D6) ( <b>LRR A</b> ) ummocks (D4)

APPENDIX B: WETLAND RATING FORMS

# **RATING SUMMARY – Western Washington**

Name of wetland (or ID #): <u>A, B, C, D</u>Date of site visit: <u>3/3/2016</u>

Rated byFrancis NaglichTrained by Ecology?YesNo Date of training3/2015HGM Class used for ratingSlopeWetland has multiple HGM classes?YXN

**NOTE:** Form is not complete without the figures requested (figures can be combined). Source of base aerial photo/map <u>Google Earth</u>

# **OVERALL WETLAND CATEGORY IV** (based on functions <u>X</u> or special characteristics )

## 1. Category of wetland based on FUNCTIONS

Category I – Total score = 23 – 27

Category II – Total score = 20 – 22

Category III – Total score = 16 – 19

**X** Category IV – Total score = 9 – 15

FUNCTION	Improving Water Quality		Hydrologic		Habitat					
					Circle	the ap	propr	iate r	atings	
Site Potential	Н	М	$\bigcirc$	Н	Μ	$\bigcirc$	Н	Μ	0	
Landscape Potential	Н	$\mathbf{M}$	Ĺ	Н	Μ	Ō	Θ	Μ	Ĺ	
Value	Н	$\mathbf{M}$	L	Н	Μ	0	Н	Μ	0	TOTAL
Score Based on Ratings		5			3			5		13

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

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

# 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CAT	EGORY
Estuarine	Ι	II
Wetland of High Conservation Value		Ι
Bog		Ι
Mature Forest		Ι
Old Growth Forest		Ι
Coastal Lagoon	Ι	II
Interdunal	I II	III IV
None of the above	Not A	pplicable

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

## Lake Fringe Wetlands

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

#### Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of <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)	S 3.3	

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

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

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

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

**W** - 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)** *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.

• 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).

🚺 – go to 4

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

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

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

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

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

NO – go to 5

• The wetland class is **Slope** 

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

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

**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.* 

**N** – 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.



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.

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 j 100 ft of horizontal distance)	ft vertical drop in elevation for every	1
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	
S 1.2. <u>The soil 2 in below the surface (or duff layer)</u> 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 pollu	utants:	1
Choose the points appropriate for the description that best fits the plant have trouble seeing the soil surface (>75% cover), and uncut means not get 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	
Total for S 1	Add the points in the boxes above	2

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 i	n land uses that generate pollutants?	1
	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?		0
Other sources	Yes = 1 No = 0	
Total for S 2	Add the points in the boxes above	1
Rating of Landscape Potential If score is: X 1-2 = M 0 = L	Record the rating or	n the first page

S 3.0. Is the water quality improvement provided by the site value	able to society?	
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream 303(d) list?	, river, lake, or marine water that is on the Yes = 1 No = 0	1
S 3.2. Is the wetland in a basin or sub-basin where water quality is an is <i>on the 303(d) list</i> .	sue? At least one aquatic resource in the basin is Yes = 1 No = 0	0
S 3.3. Has the site been identified in a watershed or local plan as impor- if there is a TMDL for the basin in which unit is found.	cant for maintaining water quality? <i>Answer YES</i> Yes = 2 No = 0	0
Total for S 3	Add the points in the boxes above	1
Pating of Value If score is: 24 - H V 1 - M 0 - I	Pacord the rating on	the first page

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

Record the rating on the first page

<u>SLOPE WETLANDS</u>	
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 points appropriate for the description that best fits conditions in the wetland. <i>Stems of plants should be thick enough (usually &gt; '/</i>	0
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 conditionsnointe - 0Rating of Site Potential If score is: $1 = M$ $X_0 = L$ Record the rating on a	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	0
Rating of Landscape Potential If score is:       1 = M       X       0 = L       Record the rating on	the first page
S 6.0. Are the hydrologic functions provided by the site valuable to society?	
	0
S 6.1. Distance to the nearest areas downstream that have flooding problems:	0
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	0
The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) points = 2	U
The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds)points = 2Surface flooding problems are in a sub-basin farther down-gradientpoints = 1	U
The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) points = 2	0
The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds)points = 2Surface flooding problems are in a sub-basin farther down-gradientpoints = 1	0
The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds)points = 2Surface flooding problems are in a sub-basin farther down-gradientpoints = 1No flooding problems anywhere downstreampoints = 0	
The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds)points = 2Surface flooding problems are in a sub-basin farther down-gradientpoints = 1No flooding problems anywhere downstreampoints = 0S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	

NOTES and FIELD OBSERVATIONS:

1.0. Does the site have the potential to pro	•	vide important habitat		
1.1. Structure of plant community: <i>Indicators a</i>		strata within the Forestad	class Chock the	0
Cowardin plant classes in the wetland. Up				U
of ¼ ac or more than 10% of the unit if it is		-		
Aquatic bed		-	more: points = 4	
<u> </u>			ictures: points = 2	
Scrub-shrub (areas where shrubs have	e > 30% cover)		tures: points = 1	
Forested (areas where trees have > 3	)% cover)	1 stru	cture: points = 0	
If the unit has a Forested class, check	if:			
The Forested class has 3 out of 5 strat	a (canopy, sub-canopy, s	shrubs, herbaceous, moss/§	ground-cover)	
that each cover 20% within the Fores	ted polygon			
1.2. Hydroperiods				2
Check the types of water regimes (hydrope		_	ne has to cover	
more than 10% of the wetland or ¼ ac to c	ount (see text for descrip			
Permanently flooded or inundated		4 or more types pr	-	
X Seasonally flooded or inundated			resent: points = 2	
X Occasionally flooded or inundated			resent: points = 1	
<u>X</u> Saturated only			present: points = 0	
Permanently flowing stream or river i	-	etiand		
Seasonally flowing stream in, or adjac	ent to, the wetland		2	
Lake Fringe wetland Freshwater tidal wetland			2 points	
Freshwater tidal wetland			2 points	
1.3. Richness of plant species				0-A, B
Count the number of plant species in the v	vetland that cover at lea	st 10 ft <sup>2</sup> .		1-C, D
Different patches of the same species can l	e combined to meet the	e size threshold and you do	not have to name	
the species. Do not include Eurasian milf	oil, reed canarygrass, pi	urple loosestrife, Canadian	thistle	
If you counted: > 19 species			points = 2	
5 - 19 species			points = 1	
< 5 species	_		points = 0	
1.4. Interspersion of habitats				0
Decide from the diagrams below whether		-	-	
the classes and unvegetated areas (can inc			w, or none. <i>If you</i>	
have four or more plant classes or three cl	isses and open water, th	ie rating is always high.		
None = 0 points Low =	1 point	Moderate =	2 points	
	I point	moderate	2 points	
			$\sim$	
Il three diagrams				
Il three diagrams this row				

H 1.5. Special habitat features:	0
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) <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 <i>(structures for egg-laying by amphibians)</i>	
Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata)	
Total for H 1 Add the points in the boxes above	2-A, B. 3-C, D.
Rating of Site Potential If score is:       15-18 = H       7-14 = M       X       0-6 = L       Record the rating of the state of the st	i é la companya de la
H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
	1
	1
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).	1
H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i> ). <i>Calculate:</i> % undisturbed habitat <u>0</u> + [(% moderate and low intensity land uses)/2] <u>14.5</u> = <u>14.5</u> %	1
H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i> ). <i>Calculate:</i> % undisturbed habitat <u>0</u> + [(% moderate and low intensity land uses)/2] <u>14.5</u> = <u>14.5</u> % If total accessible habitat is:	1
H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i> ). <i>Calculate:</i> % undisturbed habitat_0 + [(% moderate and low intensity land uses)/2] <u>14.5</u> = <u>14.5</u> % If total accessible habitat is: > <sup>1</sup> / <sub>3</sub> (33.3%) of 1 km Polygon points = 3	1
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).Calculate:% undisturbed habitat $\underline{0}$ + [(% moderate and low intensity land uses)/2] 14.5 = 14.5 %If total accessible habitat is:> $^{1}/_{3}$ (33.3%) of 1 km Polygonpoints = 320-33% of 1 km Polygon	1
H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i> ). <i>Calculate:</i> % undisturbed habitat <u>0</u> + [(% moderate and low intensity land uses)/2] <u>14.5</u> = <u>14.5</u> % If total accessible habitat is: > <sup>1</sup> / <sub>3</sub> (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	1
H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i> ). <i>Calculate:</i> % undisturbed habitat <u>0</u> + [(% moderate and low intensity land uses)/2] <u>14.5</u> = <u>14.5</u> % If total accessible habitat is: > <sup>1</sup> / <sub>3</sub> (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	
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).         Calculate:       % undisturbed habitat 0 + [(% moderate and low intensity land uses)/2] 14.5 = 14.5 %         If total accessible habitat is:       > 1/3 (33.3%) of 1 km Polygon         points = 3       20-33% of 1 km Polygon         10-19% of 1 km Polygon       points = 1         < 10% of 1 km Polygon	
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).Calculate:% undisturbed habitat $\underline{0}$ + [(% moderate and low intensity land uses)/2] 14.5 = 14.5 %If total accessible habitat is:> $\frac{1}{3}$ (33.3%) of 1 km Polygon $20-33\%$ of 1 km Polygonpoints = 3 $20-33\%$ of 1 km Polygonpoints = 2 $10-19\%$ of 1 km Polygonpoints = 1 $< 10\%$ of 1 km Polygonpoints = 0H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. $Calculate:$ % undisturbed habitat 37 + [(% moderate and low intensity land uses)/2] 23 = 60 %	
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).Calculate:% undisturbed habitat $\underline{0}$ + [(% moderate and low intensity land uses)/2] 14.5 = 14.5 %If total accessible habitat is:> $\frac{1}{3}$ (33.3%) of 1 km Polygon $20-33\%$ of 1 km Polygonpoints = 3 $20-33\%$ of 1 km Polygonpoints = 1 $< 10\%$ of 1 km Polygonpoints = 0H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. $Calculate:$ % undisturbed habitat $\underline{37}$ + [(% moderate and low intensity land uses)/2] 23 = $\underline{60}$ %Undisturbed habitat > 50% of Polygonpoints = 3	
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).Calculate:% undisturbed habitat $\underline{0}$ + [(% moderate and low intensity land uses)/2] 14.5 = 14.5 %If total accessible habitat is:> $^{1}/_{3}$ (33.3%) of 1 km Polygonpoints = 320-33% of 1 km Polygonpoints = 210-19% of 1 km Polygonpoints = 1< 10% of 1 km Polygon	
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).Calculate:% undisturbed habitat $\underline{0}$ + [(% moderate and low intensity land uses)/2] 14.5 = 14.5 %If total accessible habitat is:> $\frac{1}{3}$ (33.3%) of 1 km Polygonpoints = 320-33% of 1 km Polygonpoints = 210-19% of 1 km Polygonpoints = 1< 10% of 1 km Polygon	
If total accessible habitat is:points = 3 $> 1/3$ (33.3%) of 1 km Polygonpoints = 320-33% of 1 km Polygonpoints = 210-19% of 1 km Polygonpoints = 1< 10% of 1 km Polygon	3
H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i> ). <i>Calculate:</i> % undisturbed habitat <u>0</u> + [(% moderate and low intensity land uses)/2] <u>14.5</u> = <u>14.5</u> % If total accessible habitat is: > <sup>1</sup> / <sub>3</sub> (33.3%) of 1 km Polygon 20-33% of 1 km Polygon 10-19% of 1 km Polygon <pre></pre>	3

#### 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:

- It has 3 or more priority habitats within 100 m (see next page)
- It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)
- It is mapped as a location for an individual WDFW priority species
- It is a Wetland of High Conservation Value as determined by the Department of Natural Resources

— It has been categorized as an important habitat site in a local or regional comprehensive plan, in a

- Shoreline Master Plan, or in a watershed plan
- Site has 1 or 2 priority habitats (listed on next page) within 100 m

Site does not meet any of the criteria above

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

points = 2

points = 1 points = 0

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. <u>http://wdfw.wa.gov/publications/00165/wdfw00165.pdf</u> or access the list from here: <u>http://wdfw.wa.gov/conservation/phs/list/</u>)

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

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

# **CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and	
— With a salinity greater than 0.5 ppt Yes –Go to SC 1.1 <b>Not an estuarine wetland</b>	
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 = <b>Category I</b> No - Go to <b>SC 1.2</b>	Cat. I
<ul> <li>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?</li> <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 <i>Spartina</i>, 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-mound grazesland.</li> </ul>	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 = <b>Category I</b> No = <b>Category II</b>	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? <u>http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</u> Yes – Contact WNHP/WDNR and go to SC 2.4	
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	
<ul> <li>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 Ves – Go to SC 3.3 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 need? Note: Conta SC 3.2 </li> </ul>	
<ul> <li>pond? Yes – Go to SC 3.3 Ves – Go to SC 3.3 Ves – Is not a bog</li> <li>SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = Is a Category I bog No – Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog.</li> <li>SC 3.4. Is an area with peats or mucks forested (&gt; 30% cover) with Sitka spruce, subalpine fir, western red cedar,</li> </ul>	Cat. I
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>	

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</i>	
the wetland based on its functions.	
— Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered	
canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of	
age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.	
— Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-200 years old OR the	
species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).	
Yes = Category I 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)	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 Vg = 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
— 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:	
<ul> <li>Long Beach Peninsula: Lands west of SR 103</li> </ul>	
Grayland-Westport: Lands west of SR 105	Cat I
— Ocean Shores-Copalis: Lands west of SR 115 and SR 109 Yes – Go to SC 6.1 No = not an interdunal wetland for rating	
res – 60 to 50 6.1	
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 = <b>Category I</b> No – Go to <b>SC 6.2</b>	
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	Not
If you answered No for all types, enter "Not Applicable" on Summary Form	Applicable

Wetland name or number <u>A, B, C, D</u>

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# **RATING SUMMARY – Western Washington**

Name of wetland (or ID #):Wetland EDate of site visit: 4/6/16Rated byFrancis NaglichTrained by Ecology?YesNo Date of training3/2015HGM Class used for ratingDepressionalWetland has multiple HGM classes?YXN

**NOTE**: Form is not complete without the figures requested (figures can be combined). Source of base aerial photo/map <u>Google Earth</u>

# **OVERALL WETLAND CATEGORY IV** (based on functions <u>X</u> 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 Hydrologic Habitat Water Quality		• •		at					
					Circle	the ap	propr	iate r	atings	
Site Potential	Н	Μ	0	Н	Μ	0	Н	Μ	0	
Landscape Potential	Н	$\mathbb{M}$	L	Н	$\mathbb{M}$	L	Ð	Μ	L	
Value	н	$\mathbf{M}$	L	н	М	Ū	Н	Μ	0	TOTAL
Score Based on Ratings		5			4			5		14

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

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

# 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY			
Estuarine	I II			
Wetland of High Conservation Value	I			
Bog	I			
Mature Forest	I			
Old Growth Forest	I			
Coastal Lagoon	Ι	II		
Interdunal	I II	III IV		
None of the above	Not Applicable			

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

## Lake Fringe Wetlands

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

#### Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of <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)	S 3.3	

# HGM Classification of Wetlands in Western Washington

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

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

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

N - 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)** *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.

**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).

**10**- go to 4

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

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

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

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

**10**- go to 5

**YES –** The wetland class is **Slope** 

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

- 5. Does the entire wetland unit **meet all** of the following criteria?
  - \_\_\_\_The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,

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

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

**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

**(E)** – 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.

DEPRESSIONAL AND FLATS WETLANDS Water Quality Functions - Indicators that the site functions to improve water quality		
D 1.0. Does the site have the potential to improve water quality?		
D 1.1. Characteristics of surface water outflows from the wetland:		
Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving i	points = 3	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flow	points = 2	1
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowin Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch		
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions).	Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested C	owardin classes):	1
Wetland has persistent, ungrazed, plants > 95% of area	points = 5	
Wetland has persistent, ungrazed, plants > $\frac{1}{2}$ of area	points = 3	
Wetland has persistent, ungrazed plants $> \frac{1}{10}$ of area	points = 1	
Wetland has persistent, ungrazed plants < <sup>1</sup> / <sub>10</sub> of area	points = 0	
D 1.4. Characteristics of seasonal ponding or inundation:		2
This is the area that is ponded for at least 2 months. See description in manual.		_
Area seasonally ponded is > ½ total area of wetland	points = 4	
Area seasonally ponded is > ¼ total area of wetland	points = 2	
Area seasonally ponded is < ¼ total area of wetland	points = 0	
Total for D 1 Add the points in th	e boxes above	4
Rating of Site Potential       If score is:       12-16 = H       6-11 = M       X       0-5 = L       Record the rating on the first page		
D 2.0. Does the landscape have the potential to support the water quality function of the sit	e?	
D 2.1. Does the wetland unit receive stormwater discharges?	/es = 1 No = 0	1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	'es = 1 No = 0	0
D 2.3. Are there septic systems within 250 ft of the wetland?	/es = 1 No = 0	1
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D Source	2.1-D 2.3? Yes = 1 No = 0	0
Total for D 2 Add the points in th		2
	d the rating on the fir	
	a the rating on the jin	st puge
D 3.0. Is the water quality improvement provided by the site valuable to society?		
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water t 303(d) list?	hat is on the Yes = 1 No = 0	1
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?	′es = 1 No = 0	0
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water qua if there is a TMDL for the basin in which the unit is found)?	ality ( <i>answer YES</i> Yes = 2 No = 0	0
Total for D 3 Add the points in th	e boxes above	1

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

Record the rating on the first page

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation         D 4.0. Does the site have the potential to reduce flooding and erosion?	DEPRESSIONAL AND FLATS WETLANDS		
	Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation		
	D 4.0. Does the site have the potential to reduce flooding and erosion?		
D 4.1. <u>Characteristics of surface water outflows from the wetland</u> :	D 4.1. Characteristics of surface water outflows from the wetland:		0
Wetland is a depression or flat depression with no surface water leaving it (no outlet)points = 4Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outletpoints = 2Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditchpoints = 1Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowingpoints = 0	Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outletpoints = 2Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditchpoints = 1		
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands 3		he outlet. For wetlands	3
with no outlet, measure from the surface of permanent water or if dry, the deepest part.		· · <b>_</b>	
Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7			
Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5		-	
Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3		•	
The wetland is a "headwater" wetland points = 3			
Wetland is flat but has small depressions on the surface that trap water points = 1			
Marks of ponding less than 0.5 ft (6 in) points = 0			-
D 4.3. <u>Contribution of the wetland to storage in the watershed</u> : <i>Estimate the ratio of the area of upstream basin</i> contributing surface water to the wetland to the area of the wetland unit itself.		pstream basin	0
The area of the basin is less than 10 times the area of the unit points = 5		-	
The area of the basin is 10 to 100 times the area of the unit points = 3	The area of the basin is 10 to 100 times the area of the unit	-	
The area of the basin is more than 100 times the area of the unit points = 0	The area of the basin is more than 100 times the area of the unit	-	
Entire wetland is in the Flats class points = 5	Entire wetland is in the Flats class	points = 5	
Total for D 4Add the points in the boxes above3			
Rating of Site Potential       If score is:       12-16 = H       6-11 = M       X       0-5 = L       Record the rating on the first page	Rating of Site Potential If score is: 12-16 = H 6-11 = M X 0-5 = L	Record the rating on the	e first page
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?	D 5.0. Does the landscape have the potential to support hydrologic functions of the site?		
D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0 1	D 5.1. Does the wetland receive stormwater discharges?	Yes = 1 No = 0	1
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0 0	D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	Yes = 1 No = 0	0
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0	-		0
			1
		Record the rating on the	e jirst page
D 6.0. Are the hydrologic functions provided by the site valuable to society?	D 6.0. Are the hydrologic functions provided by the site valuable to society?		
<ul> <li>D 6.1. <u>The unit is in a landscape that has flooding problems</u>. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. <u>Choose the highest score if more than one condition is met</u>. The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):</li> </ul>	<i>the wetland unit being rated. Do not add points. <u>Choose the highest score if more than one</u> The wetland captures surface water that would otherwise flow down-gradient into areas w damaged human or natural resources (e.g., houses or salmon redds):</i>	<u>condition is met</u> . here flooding has	0
• Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2		-	
• Surface flooding problems are in a sub-basin farther down-gradient. points = 1		-	
Flooding from groundwater is an issue in the sub-basin. points = 1	Flooding from groundwater is an issue in the sub-basin.	points = 1	
The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. <i>Explain why</i> points = 0			
There are no problems with flooding downstream of the wetland. points = 0	There are no problems with flooding downstream of the wetland.	points = 0	
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0			0
Total for D 6 Add the points in the boxes above <b>0</b>	Total for D.6 Add the points		0
Rating of Value If score is: $2-4 = H$ $1 = M$ $X_0 = L$ Record the rating on the first page			

<b>RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS</b>		
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 > $\frac{1}{2}$ area of wetland	points = 4	
Depressions present but cover < ½ area of wetland	points = 2	
R 1.2. Structure of plants in the wetland (areas with >90% cover at person height, <b>not</b> Cowardin Trees or shrubs > $^{2}/_{3}$ area of the wetland Trees or shrubs > $^{1}/_{3}$ area of the wetland Herbaceous plants (> 6 in high) > $^{2}/_{3}$ area of the wetland Herbaceous plants (> 6 in high) > $^{1}/_{3}$ area of the wetland Trees, shrubs, and ungrazed herbaceous < $^{1}/_{3}$ area of the wetland	classes) points = 8 points = 6 points = 6 points = 3 points = 0	
Total for R 1 Add the points in the boxes above		
Rating of Site Potential If score is:12-16 = H6-11 = M0-5 = L	Record the rating on the first page	
R 2.0. Does the landscape have the potential to support the water quality function of the	ne site?	
R 2.1. Is the wetland within an incorporated city or within its UGA?	Yes = 2 No = 0	
R 2.2. Does the contributing basin to the wetland include a UGA or incorporated area?	Yes = 1 No = 0	
R 2.3. Does at least 10% of the contributing basin contain tilled fields, pastures, or forests that he within the last 5 years?	ave been clearcut Yes = 1 No = 0	
R 2.4. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0	
R 2.5. Are there other sources of pollutants coming into the wetland that are not listed in question Other sources	ons R 2.1-R 2.4 Yes = 1 No = 0	
Total for R 2 Add the point	s in the boxes above	
Rating of Landscape Potential If score is: 3-6 = H 1 or 2 = M 0 = L	Record the rating on the 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 drain	s to one within 1 mi?	
	Yes = 1 No = 0	
R 3.2. Is the wetland along a stream or river that has TMDL limits for nutrients, toxics, or pathog	ens? Yes = 1 No = 0	
R 3.3. Has the site been identified in a watershed or local plan as important for maintaining wate		
YES if there is a TMDL for the drainage in which the unit is found)	Yes = 2 No = 0	
	s in the boxes above	
Rating of Value If score is:2-4 = H1 = M0 = L	Record the rating on the first page	

	<u>E WETLANDS</u>
Hydrologic Functions - Indicators that site functions to reduce	flooding and stream 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 fl	ow and the width of the
stream or river channel (distance between banks). Calculate the ratio: (average v	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	points = 4
If the ratio is 1-<5	points = 2
If the ratio is < 1	points = 1
R 4.2. Characteristics of plants that slow down water velocities during floods: Treat larg	e woody debris as forest or
shrub. Choose the points appropriate for the best description (polygons need to h	ave >90% cover at person
height. These are <u>NOT Cowardin</u> classes).	
Forest or shrub for >1/3 area OR emergent plants > 2/3 area	points = 7
Forest or shrub for $> 1/_{10}$ area OR emergent plants $> 1/_{3}$ area	points = 4
Plants do not meet above criteria	points = 0
Fotal for R 4 Add t	he points in the boxes above
Rating of Site Potential If score is:12-16 = H6-11 = M0-5 = L	Record the rating on the first page
R 5.0. Does the landscape have the potential to support the hydrologic function	s of the site?
R 5.1. Is the stream or river adjacent to the wetland downcut?	Yes = 0 No = 1
R 5.2. Does the up-gradient watershed include a UGA or incorporated area?	Yes = 1 No = 0
	Yes = 1 No = 0 Yes = 0 No = 1
R 5.3. Is the up-gradient stream or river controlled by dams?	
R 5.2. Does the up-gradient watershed include a UGA or incorporated area?         R 5.3. Is the up-gradient stream or river controlled by dams?         Total for R 5       Add t         Rating of Landscape Potential If score is:3 = H1 or 2 = M0 = L	Yes = 0 No = 1
R 5.3. Is the up-gradient stream or river controlled by dams?         Total for R 5       Add t         Rating of Landscape Potential If score is:3 = H1 or 2 = M0 = L	Yes = 0 No = 1 he points in the boxes above
R 5.3. Is the up-gradient stream or river controlled by dams?         Total for R 5       Add t         Rating of Landscape Potential If score is:3 = H1 or 2 = M0 = L         R 6.0. Are the hydrologic functions provided by the site valuable to society?	Yes = 0 No = 1 he points in the boxes above
R 5.3. Is the up-gradient stream or river controlled by dams?         Total for R 5       Add t         Rating of Landscape Potential If score is:3 = H1 or 2 = M0 = L         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.	Yes = 0 No = 1 he points in the boxes above Record the rating on the first pag
R 5.3. Is the up-gradient stream or river controlled by dams?         Fotal for R 5       Add t         Rating of Landscape Potential If score is:3 = H1 or 2 = M0 = L         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 problems for the state of the st	Yes = 0 No = 1 he points in the boxes above Record the rating on the first page that result in damage to
R 5.3. Is the up-gradient stream or river controlled by dams?   Total for R 5   Add t   Rating of Landscape Potential If score is:3 = H1 or 2 = M0 = L   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 problems thuman or natural resources (e.g., houses or salmon redds)	Yes = 0 No = 1 he points in the boxes above Record the rating on the first pag that result in damage to points = 2
R 5.3. Is the up-gradient stream or river controlled by dams?         Total for R 5       Add t         Rating of Landscape Potential If score is:3 = H1 or 2 = M0 = L         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 problems to the set flooding problems to the	Yes = 0 No = 1 he points in the boxes above Record the rating on the first pag
R 5.3. Is the up-gradient stream or river controlled by dams?         Total for R 5       Add t         Rating of Landscape Potential If score is:3 = H1 or 2 = M0 = L         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 problems thuman 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	Yes = 0 No = 1 he points in the boxes above Record the rating on the first page that result in damage to points = 2 points = 1 points = 0
R 5.3. Is the up-gradient stream or river controlled by dams?         Total for R 5       Add t         Rating of Landscape Potential If score is:3 = H1 or 2 = M0 = L         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 problems thuman or natural resources (e.g., houses or salmon redds) Surface flooding problems are in a sub-basin farther down-gradient	Yes = 0 No = 1 he points in the boxes above Record the rating on the first page that result in damage to points = 2 points = 1 points = 0
R 5.3. Is the up-gradient stream or river controlled by dams?         Total for R 5       Add t         Rating of Landscape Potential If score is:3 = H1 or 2 = M0 = L         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? <i>Choose the description that best fits the site.</i> The sub-basin immediately down-gradient of the wetland has flooding problems thuman 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         R 6.2. Has the site been identified as important for flood storage or flood conveyance in	Yes = 0 No = 1 he points in the boxes above Record the rating on the first page that result in damage to points = 2 points = 1 points = 0 a regional flood control plan?

LAKE FRINGE WETLANDS	<u> </u>
Water Quality Functions - Indicators that the site functi	ons to improve water quality
L 1.0. Does the site have the potential to improve water quality?	
L 1.1. Average width of plants along the lakeshore (use polygons of Cowardin classe	rs):
Plants are more than 33 ft (10 m) wide	points = 6
Plants are more than 16 ft (5 m) wide and <33 ft	points = 3
Plants are more than 6 ft (2 m) wide and <16 ft	points = 1
Plants are less than 6 ft wide	points = 0
L 1.2. Characteristics of the plants in the wetland: Choose the appropriate descript points, and do not include any open water in your estimate of coverage. The the dominant form or as an understory in a shrub or forest community. These of cover is total cover in the unit, but it can be in patches. Herbaceous does not be appropriate to the terminant form of the unit.	e herbaceous plants can be either se are not Cowardin classes. Area ot include aquatic bed.
Cover of herbaceous plants is >90% of the vegetated area	points = 6
Cover of herbaceous plants is $\frac{2}{3}$ of the vegetated area	points = 4
Cover of herbaceous plants is $\frac{1}{3}$ of the vegetated area	points = 3
Other plants that are not aquatic bed $> ^{2}/_{3}$ unit Other plants that are not aquatic bed in $> ^{1}/_{3}$ vegetated area	points = 3
Aquatic bed plants and open water cover > $^2/_3$ of the unit	points = 1 points = 0
	points - 0
Total for L 1 A	Add the points in the boxes above

L 2.0. Does the landscape have the potential to support the water quality function of the site?	
L 2.1. Is the lake used by power boats?	Yes = 1 No = 0
L 2.2. Is > 10% of the area within 150 ft of wetland unit on the upland side in land uses that generate pollutants?	
	Yes = 1 No = 0
L 2.3. Does the lake have problems with algal blooms or excessive plant growth such as milfoil? Yes = 1 No = 0	
Total for L 2 Add the point	s in the boxes above
Rating of Landscape Potential: If score is: 2 or 3 = H 1 = M 0 = L	Record the rating on the first page

L 3.0. Is the water quality improvement provided by the site valuable	o society?	
L 3.1. Is the lake on the 303(d) list of degraded aquatic resources?	Yes = 1 No = 0	
L 3.2. Is the lake in a sub-basin where water quality is an issue (at least one as 303(d) list)?	quatic resource in the basin is on the Yes = 1 No = 0	
L 3.3. Has the site been identified in a watershed or local plan as important for <i>if there is a TMDL for the lake or basin in which the unit is found.</i>	r maintaining water quality? <i>Answer YES</i> Yes = 2 No = 0	
Total for L 3	Add the points in the boxes above	
Rating of Value If score is:2-4 = H1 = M0 = L	Record the rating on the	e first page

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

LAKE FRINGE WETLANDS		
Hydrologic Functions - Indicators that the wetland unit functions to reduce shoreline erosion		
L 4.0. Does the site have the potential to reduce shoreline erosion?		
L 4.1. Distance along shore and average width of Cowardin classes along the lakeshore ( Choose the highest scoring description that matches conditions in the wetland.	<b>do not</b> include Aquatic bed):	
> ¾ of distance is Scrub-shrub or Forested at least 33 ft (10 m) wide	points = 6	
> ¾ of distance is Scrub-shrub or Forested at least 6 ft (2 m) wide	points = 4	
> ¼ distance is Scrub-shrub or Forested at least 33 ft (10 m) wide	points = 4	
Plants are at least 6 ft (2 m) wide (any type except Aquatic bed)	points = 2	
Plants are less than 6 ft (2 m) wide (any type except Aquatic bed)	points = 0	
Rating of Site Potential: If score is: 6 = M0-5 = L	Record the rating on the first page	
L 5.0. Does the landscape have the potential to support the hydrologic functions of the site?		
L 5.1. Is the lake used by power boats with more than 10 hp?	Yes = 1 No = 0	
L 5.2. Is the fetch on the lake side of the unit at least 1 mile in distance?	Yes = 1 No = 0	

 Total for L 5
 Add the points in the boxes above

 Rating of Landscape Potential If score is: \_\_2 = H \_\_1 = M \_\_0 = L
 Record the rating on the first page

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

L 6.1. Are there resources along the shore that can be impacted by erosion? If more than one resource is present, choose the one with the highest score.

There are human structures or old growth/mature forests within 25 ft of OHWM of the shore in the unit

	points = 2
There are nature trails or other paths and recreational activities within 25 ft of OHWM	points = 1
Other resources that could be impacted by erosion	points = 1
There are no resources that can be impacted by erosion along the shores of the unit	points = 0
Rating of Value: If score is: 2 = H 1 = M 0 = L	Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

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)	2	
Slope is 1% or less points = Slope is > 1%-2% points =		
Slope is > 2%-5% points = Slope is greater than 5% points =		
Side is greater than 5% 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 =		
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants:	- 0	
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 high than 6 in.		
Dense, uncut, herbaceous plants > 90% of the wetland area points =		
Dense, uncut, herbaceous plants > ½ of area points =		
Dense, woody, plants > ½ of area points =		
Dense, uncut, herbaceous plants > ¼ of area points =		
Does not meet any of the criteria above for plants points =		
Total for S 1Add the points in the boxes abor	ve	
Rating of Site Potential If score is:12 = H6-11 = M0-5 = LRecord the ratin	ng 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 Yes = 1 No =	= 0	
Total for S 2Add the points in the boxes above	ve	
Rating of Landscape Potential If score is:       1-2 = M       0 = L       Record the rating on the first page		
S 3.0. Is the water quality improvement provided by the site valuable to society?		
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No =	= 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 ba on the 303(d) list. Yes = 1 No =		
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? Answer if there is a TMDL for the basin in which unit is found. Yes = 2 No =		
Total for S 3 Add the points in the boxes abo	ve	

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

Record the rating on the first page

SLOPE WETLANDS	
<b>Hydrologic Functions</b> - Indicators that the site functions to reduce flood S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
<ul> <li>S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose th for the description that best fits conditions in the wetland. Stems of plants should be thick in), or dense enough, to remain erect during surface flows. Dense, uncut, rigid plants cover &gt; 90% of the area of the wetland</li> <li>All other conditions</li> <li>Rating of Site Potential If score is:1 = M0 = L</li> </ul>	
<ul> <li>S 5.0. Does the landscape have the potential to support the hydrologic functions of the set of the se</li></ul>	
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 dam 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
Rating of Value If score is: 2-4 = H 1 = M 0 = L	Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

		rovide important habitat	
1.0. Does the site have the pot	ential to provide habitat?		
Cowardin plant classes in the	wetland. Up to 10 patches may be	and strata within the Forested class. Check the e combined for each class to meet the threshold Add the number of structures checked. 4 structures or more: points = 4	2
<u> </u>		3  structures: points = 4	
X Scrub-shrub (areas whe	ere shruhs have > 30% cover)	2 structures: points = 1	
<u>X</u> Forested (areas where t		1 structure: points = 0	
If the unit has a Foreste	d class, check if:		
	out of 5 strata (canopy, sub-cano hin the Forested polygon	py, shrubs, herbaceous, moss/ground-cover)	
1.2. Hydroperiods			2
Check the types of water regi	mes (hydroperiods) present within d or ¼ ac to count ( <i>see text for de</i> s	n the wetland. The water regime has to cover scriptions of hydroperiods).	
Permanently flooded or		4 or more types present: points = 3	
X Seasonally flooded or ir	nundated	3 types present: points = 2	
 Occasionally flooded or		2 types present: points = 1	
<u>X</u> Saturated only		1 type present: points = 0	
Permanently flowing stre	eam or river in, or adjacent to, the	e wetland	
Seasonally flowing stream	m in, or adjacent to, the wetland		
Lake Fringe wetland		2 points	
Freshwater tidal wetlan	d	2 points	
1.3. Richness of plant species			0
	ecies in the wetland that cover at	least 10 ft <sup>2</sup> .	
		the size threshold and you do not have to name	
	-	s, purple loosestrife, Canadian thistle	
If you counted: > 19 species		points = 2	
5 - 19 specie	5	points = 1	
< 5 species		points = 0	
1.4. Interspersion of habitats			2
Decide from the diagrams be	low whether interspersion among	g Cowardin plants classes (described in H 1.1), or	
the classes and unvegetated a	areas (can include open water or	mudflats) is high, moderate, low, or none. <i>If you</i>	
have four or more plant class	es or three classes and open water	r, the rating is always high.	
( )			
None = 0 points	Low = 1 point	Moderate = 2 points	
Il three diagrams			
Il three diagrams this row re <b>HIGH</b> = 3points			

#### Wetland name or number <u>E</u>

	0
of points.	
ast 3.3 ft (1 m)	
30 degree	
weathered	
are	
1 for list of	
e boxes above	6
cord the rating on	the first po
	1
. = <u>14.5</u> %	
points = 3	
points = 2	
points = 1	
points = 0	
	3
= <u>60</u> %	
points = 3	
points = 2	
points = 1	
points = 0	
	0
	U
points = (- 2)	U
points = (- 2) points = 0	U
	5 = <u>14.5</u> % points = 3 points = 2 points = 1 points = 0 = <u>60</u> % points = 3 points = 2 points = 1

#### 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:

- It has 3 or more priority habitats within 100 m (see next page)
- It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)
- It is mapped as a location for an individual WDFW priority species
- It is a Wetland of High Conservation Value as determined by the Department of Natural Resources

— It has been categorized as an important habitat site in a local or regional comprehensive plan, in a

Shoreline Master Plan, or in a watershed plan

Site has 1 or 2 priority habitats (listed on next page) within 100 m

Site does not meet any of the criteria above

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

points = 2

points = 1

points 0 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. <u>http://wdfw.wa.gov/publications/00165/wdfw00165.pdf</u> or access the list from here: <u>http://wdfw.wa.gov/conservation/phs/list/</u>)

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

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

# **CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and	
— With a salinity greater than 0.5 ppt Yes –Go to SC 1.1 No Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I No - Go to SC 1.2	Cat. I
<ul> <li>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?</li> <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 <i>Spartina</i>, 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 unmowed grassland.</li> </ul>	Cat. I
<ul> <li>The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.</li> <li>Yes = Category I</li> <li>No = Category II</li> </ul>	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? <u>http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</u> 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	
<ul> <li>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.     </li> <li>SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or</li> </ul>	
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       NG = 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	
<ul> <li>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.</li> <li>SC 3.4. Is an area with peats or mucks forested (&gt; 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?</li> </ul>	Cat. I
Yes = Is a Category I bog No = Is not a bog	

Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i> — Old-growth forests (west of the Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more. — Mature forest (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 1	Not	Category of wetland based on Special Characteristics
Department of Fish and Wildlife's forests as priority habitats? <i>If you answer</i> YES you will still need to rate the wetland based on its functions. — Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more. — Mature forests (west of the Cascade Crest): Stands where the largest trees are 80 - 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm). Yes = Category 1 @= Not a forested wetland for this section SC 5.0. Wetlands in Coastal Lagoons Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland meet all of the following criteria of a wetland in a coastal lagoon? — 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 We – Not a wetland in a coastal lagoon SC 5.1. Does the wetland meet all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100). — At least % of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un- mowed grassland. — The wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If</i> <i>you answer yes you will still need to rate the wetland based on its habitat functions</i> . In practical terms that m	Cat. IV	
Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i> — Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more. — Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm). Yes = Category 1	Cat. III	Yes = Category II No – Go to SC 6.3
Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i> Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.  Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm). Yes = Category I Per Source and	Cat. II	for the three aspects of function)? Yes = <b>Category I</b> No – Go to <b>SC 6.2</b>
<ul> <li>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></li> <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> <li>Yes = Category I</li></ul>	Cat I	<ul> <li>you answer yes you will still need to rate the wetland based on its habitat functions.</li> <li>In practical terms that means the following geographic areas:</li> <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> </ul>
<ul> <li>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.</li> <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> <li>Yes = Category I IV = Not a forested wetland for this section</li> <li>SC 5.0. Wetlands in Coastal Lagoons</li> <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) Yes - Go to SC 5.1 Iv = Not a wetland in a coastal lagoon</li> <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 % 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 <sup>1</sup>/<sub>10</sub> ac (4350 ft<sup>2</sup>)</li> </ul>		SC 6.0. Interdunal Wetlands
<ul> <li>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> <li>Yes = Category I</li> <li>We = Not a forested wetland for this section</li> </ul> </li> <li>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 (<i>needs to be measured near the bottom</i>)</li></ul></li></ul>		mowed grassland. — The wetland is larger than $1/_{10}$ ac (4350 ft <sup>2</sup> )
<ul> <li>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> <li>Yes = Category I</li> <li>We = Not a forested wetland for this section</li> </ul> </li> <li>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></li></ul>	Cat. II	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).
<ul> <li>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></li> <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>	Cat. I	<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>
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SC 4.0. Forested Wetlands		<ul> <li>Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA</li> <li>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></li> <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>

Wetland name or number  $\underline{E}$ 

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