

Sewall Wetland Consulting, Inc.

PO Box 880 Fall City, WA 98024 Phone: 253-859-0515

July 20, 2018

Noordin Sayani Terra Firma Development Co. Ltd 1080 Howe Street Vancouver B.C. V6Z2T1 Canada

RE: Parcels #31052900303100 & 200 – Montesa Critical Area Report City of Marysville, Washington SWC Job #18-102

Dear Noordin,

This report describes our observations of any jurisdictional wetlands, streams or buffers on or within 200' of your property (Parcels #31052900303100 & 200, referred to as "Montesa") located on the north side of 156<sup>th</sup> Street NE, in the City of Marysville, Washington (the "site"). *Note, the site does not include any of the parcel to the east of the Type F water as this is being changed through a boundary line adjustment.* 

The site is an irregular shaped 64.93 acre property located in Section 29, Township 31 north, range 5 east of the W.M.

The purpose of this study is to determine and confirm if the findings of the previous Jay Group wetland study from 2007 are still accurate, and if not, make any adjustments to the older delineations. The Jay Group had delineated wetlands and streams on the site and had also prepared a wetland mitigation plan for the previous fill of several wetlands. The results of the mitigation project were to join Wetland X with Wetland CP through a long strip of wetland creation. This work was completed prior to any work we conducted on the site.

#### METHODOLOGY

Ed Sewall of Sewall Wetland Consulting, Inc. inspected the site between February 21 and May 25 of 2018.

The site was reviewed using methodology described in the *Washington State Wetlands Identification Manual* (WADOE, March 1997). This is the methodology currently recognized by the City of Marysville and the State of Washington for wetland determinations and delineations. The site was also inspected using the methodology described in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987), and the *Western Mountains, Valleys and Coast region Supplement* (Version 2.0) dated June 24, 2010, as required by the US Army Corps of Engineers.



Above: Snohomish County Parcel Viewer depicting study area.



Above: Aerial photograph of the study area.

### **OBSERVATIONS**

### Existing Site Documentation.

Prior to visiting the site, a review of several natural resource inventory maps was conducted. Resources reviewed included the City of Marysville Critical Areas map, National Wetland Inventory Map, the NRCS Soil Survey online mapping and Data, WADNR Fpars stream mapping and the WDFW Priority Habitats mapping website.

### City of Marysville Critical Areas Map

According to the City of Marysville Critical Areas Maps, there is a Type F water with a 150' buffer along the eastern side of the site. A wetland is also depicted bordering this stream as well as one on the northwest and northeast corner of the site.



City of Marysville Critical Areas Map

#### National Wetlands Inventory (NWI)

The NWI map depicts a wetland near the northwest corner of the site. West Fork of Quilceda Creek is depicted as a linear wetland along the west side of the railroad track.



Above: NWI Map of the area of the site.

### Soil Survey

According to the NRCS Soil Mapper website, the site is mapped with Custer soils on the center of the site, surrounded by Norma soils and a small area of Terric medisaprists on the northwest. All of these soils in an undrained condition are considered hydric soils.



Above: NRCS Soil map of the study area.

## WADNR Fpars

The WADNR Fpars stream typing map for the site depicts no streams on the site. West Fork of Quilceda Creek, a Type F water is depicted west of the railroad tracks off-site.



Above WDNR Fpars Stream Typing map.

## **WDFW Priority Habitats**

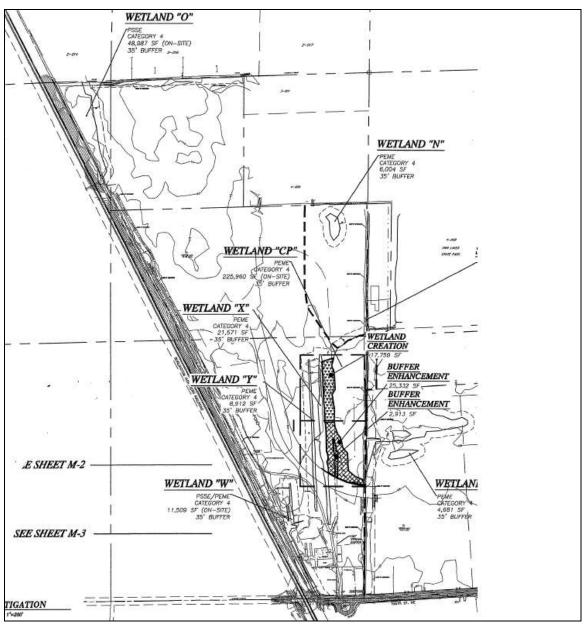
According to the WDFW Priority Habitats mapping website, there is a wetland along the northwest side of the site. Twin Lakes, a shoreline of the state is depicted as a priority habitat to the east of the site as well as the ditched tributary that drains from the lakes.



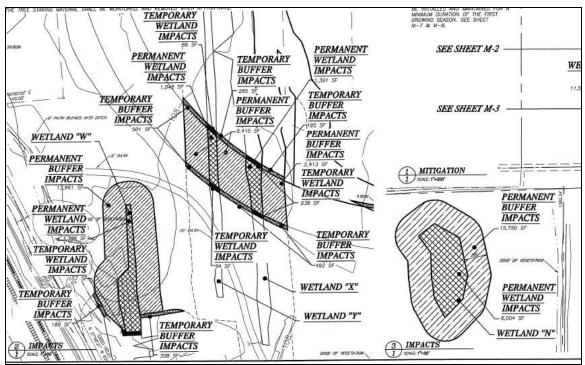
Above: WDFW Priority Habitats Map of the site.

## The Jay Group Critical Areas Study, Twin Lakes 2007 - 2010

A study and delineation of the site was prepared and submitted to the City in 2010 (see attached plans). FZieldwork was conducted in 2007. This included delineation of six (6) wetlands on the site. This study included a mitigation plan for the filling of two wetlands (Wetlands N and a portion of W) as well as impacts to wetlands associated with the road crossing of the creek and wetlands X & Y. A wetland creation area was used to mitigate these impacts by creating wetland between Wetlands X and CP.



Above: Jay Group 2007 delineation of the site also showing mitigation for impacts that subsequently occurred on the site.



Above: Portion of Jay Group mitigation plan depicting wetland impacts that have since occurred and been mitigated by the associated mitigation work. This included filling Wetland N, portions of X, Y and W.

The results of the work done following the Jay Group work was the filling of Wetland N, portions of Wetlands X, Y and W, and the combining of Wetlands X and CP into one wetland through the wetland creation connection. This work was completed before our study was conducted in 2018.

### **Field observations**

### Uplands

The site consists of a large agricultural field with a forested area along its eastern edge. The site is routinely tilled and planted with various crops and hay. During our inspection of the site in the winter/spring of 2018, it was fallow and then vegetated with rye (*Secale ceral*).

Soil pits excavated within the upland areas of the site generally showed a varied soil profile but they primarily reflected the Custer soil series.

#### Wetlands

A series of 38 hydrology monitoring points were excavated throughout the site to determine where wetland hydrology was present. These were concentrated along the previous wetland delineation edges as well as scattered through the agricultural field to confirm the hydrologic patterns of the site related to wetland hydrology (*see attached wetland map depicting monitoring points*).

The findings of the hydrology monitoring revealed that the previous delineations conducted by the Jay Group remain accurate for the wetlands that were not filled. The following is a description of these wetlands;

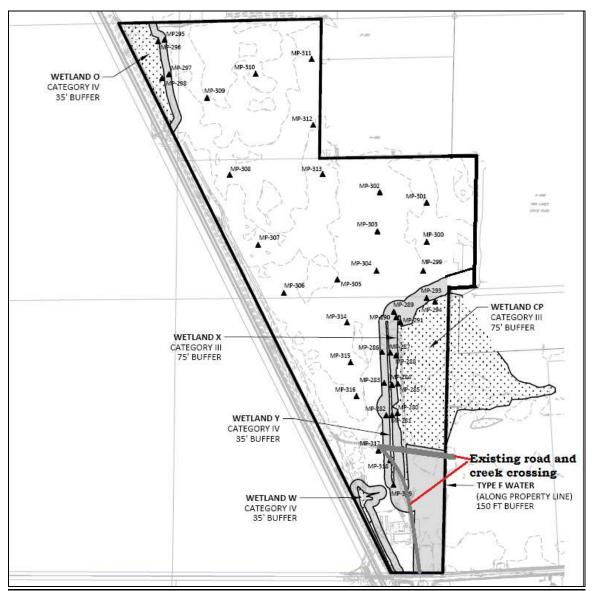
### Wetland O

Wetland O is a scrub-shrub wetland located along the northwest corner of the site. The previous 2007 wetland flag locations were re-staked by the surveyor and found to be accurate. This wetland is vegetated by a mix of sitka willow and reed canary grass and some blackberry. A deep drainage ditch is located along its north boundary at the property line and is the northern extent of this feature.

Soil pits excavated in the wetland revealed a loam with a soil matrix color of 10YR 2/2 with few, fine, faint redoximorphic concentrations. Soil saturation was found within 12" of the surface in the early growing season (*Monitor points #296 & #298*).

City of Marysville Code (MMC 22E.010.060 Wetland rating and classification) states: Wetlands shall be classified as Category I, II, III, or IV using the Washington State Department of Ecology's Wetland Rating System for Western Washington, Publication No. 04-06-025, or as amended hereafter. As a result the wetland area was rated using the 2014 Wetland Rating system.

Using the 2014 WADOE Wetland Rating system and rating the wetland as a depressional wetland, this wetland scored a total of 15 points with 5 for habitat. This indicates a Category IV wetland. Category IV wetlands



in the City of Marysville have a 35' buffer measured from the wetland edge.

Above: Hydrology monitoring points and locations of wetlands on the site.

## Wetland X/CP

Wetland X/CP is what was previously delineated by the Jay Group as Wetland X, and Wetland CP, which were subsequently joined by a wetland creation project between the linear ditch like Wetland X, and the forested Wetland CP. The previous 2007 wetland flag locations were restaked by the surveyor and found to be accurate.

This wetland is characterized by emergent, scrub-shrub and forested wetland classes. The forested areas contain black cottonwood, red alder, sitka and pacific willow, red osier dogwood, salmonberry, reed canary grass, lady fern and skunk cabbage. The scrub shrub portion is a mix of red osier dogwood and sitka willow, and the emergent portion reed canary grass mixed with soft rush and cattail. The small Type F tributary that drains from Twin Lakes to the West Fork of Quilceda Creek passes through this wetland in a ditched and diked configuration. An existing road with large culvert crossing passes along the south edge of the wetland as was permitted in the previous Jay Group work on this site.

Soil pits excavated in the wetland revealed a loam with a soil matrix color of 10YR 2/2 with few, fine, faint redoximorphic concentrations. Soil saturation was found within 12" of the surface in the early growing season (*Monitor points #280, 285,288, 291, 294 & 319*).

Using the 2014 WADOE Wetland Rating system and rating the wetland as a depressional wetland, this wetland scored a total of 18 points with 6 for habitat. This indicates a Category III wetland. Category III wetlands in the City of Marysville have a 75' buffer measured from the wetland edge.

### <u>Wetland Y</u>

Wetland Y is a small linear emergent wetland in a well-defined ditch located just west of Wetland X/CP. The previous 2007 wetland flag locations were re-staked by the surveyor and found to be accurate. An existing gravel road passes over this wetland as was permitted in the previous Jay Group work on this site.

This wetland is vegetated by a mix of soft rush and reed canary grass.

Soil pits excavated in the wetland revealed a loam with a soil matrix color of 10YR 2/2-3/2 with few, fine, faint redoximorphic concentrations. Soil saturation was found within 12" of the surface in the early growing season (*Monitor points #281, 284, 287 & 318*).

Using the 2014 WADOE Wetland Rating system and rating the wetland as a depressional wetland, this wetland scored a total of 15 points with 5 for habitat. This indicates a Category IV wetland. Category IV wetlands in the City of Marysville have a 35' buffer measured from the wetland edge.

### Wetland W

Wetland W is a well-defined excavated, remnant farm ditch, part of which was filled in the 2007 activities associated with the Jay Group study and mitigation project. The previous 2007 wetland flag locations were restaked by the surveyor and found to be accurate.

This wetland is vegetated by a mix of soft rush, reed canary grass, cattail and creeping buttercup.

Soil pits excavated in the wetland revealed a loam with a soil matrix color of 10YR 2/2 overlying B-horizon of 2.5Y 3/2 with few, fine, faint redoximorphic concentrations. Soil saturation was found within 12" of the surface in the early growing season during two consecutive site visits.

Using the 2014 WADOE Wetland Rating system and rating the wetland as a depressional wetland, this wetland scored a total of 15 points with 5 for habitat. This indicates a Category IV wetland. Category IV wetlands in the City of Marysville have a 35' buffer measured from the wetland edge.

### Streams

A small intermittent stream located in a dug ditch passes along the east side of the site. This drains water from Twin Lakes to the south and off-site where it drains into the West Fork of Quilceda Creek. This stream has been mapped by the City of Marysville as a Type F stream. Type F stream have a 150' buffer measured from the OHWM (MMC 22E.010.220).

### Twin Lakes

Twin Lakes is located to the east of the center of the site. Twin lakes is a man-made water body that is designated as a Shoreline of the State.

According to City of Marysville Code Chapter 22E.010.220.1.a, the buffer of twin lakes is restricted to the County Park property lines. Therefore no buffer extends from Twin Lakes onto the site.

22E.010.220 Fish and wild	life habitat buffer areas.		SHARE
an undisturbed area of native v	areas shall be required for regulated activi egetation established to protect the integrit in any net loss of the functions and values dths are established:	y, functions and v	alues of the affected habitat. Activities
	Streams	Buffer	]
	Type S	200 feet	
	Quilceda Creek	100 feet	
	Ebey Slough	25 feet	
	Except in the following location:		
	north and south shore of Ebey		
	Slough between the western city limits and 47th Ave. NE		
	Туре F	150 feet	
	Gissberg Twin Lakes	Lake setbacks	
		correspond to	
		county park	
		boundaries	
	Туре Np	100 feet	
	Type Ns	50 feet	7

Although no buffer from Twin Lakes extends onto the site, the Shoreline Management Zone is 200' from the lake and any proposed use within the 200' shoreline area would require going through the Shoreline Permit process.

### Wildlife Use of the site

The only wildlife observed on the site consisted of stellar jays, several common crows, a winter wren, and black capped chickadees. Signs of other wildlife using the site included coyote scat and tracks, deer and raccoon tracks.

The site undoubtedly supports numerous human-tolerant species typically found in the Marysville area including raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), common crow (*Corvus caurinus*), Norway rat (*Rattus norvegus*), house mouse (*Mus musculus*), European starling (*Sturnus vulgaris*), coyote (*Canis lutris*), garter snake (*Thamnophis sirtalis*), winter wren and house sparrow (*Passer domesticus*).

No state or federally listed species were observed on or near the site.

If you have any questions in regards to this report or need additional information, please feel free to contact me at (253) 859-0515 or at <u>esewall@sewallwc.com</u>.

Sincerely, Sewall Wetland Consulting, Inc.

# Sent

Ed Sewall Senior Wetlands Ecologist PWS #212 Attached: Wetland Delineation Map Wetland Rating Form Wetland Data Sheets

#### REFERENCES

Cowardin, L., V. Carter, F. Golet, and E. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service, FWS/OBS-79-31, Washington, D. C.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1. U. S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, Mississippi.

Muller-Dombois, D. and H. Ellenberg. 1974. Aims and Methods of Vegetation Ecology. John Wiley & Sons, Inc. New York, New York.

Munsell Color. 1988. Munsell Soil Color Charts. Kollmorgen Instruments Corp., Baltimore, Maryland.

National Technical Committee for Hydric Soils. 1991. Hydric Soils of the United States. USDA Misc. Publ. No. 1491.

Reed, P., Jr. 1988. National List of Plant Species that Occur in Wetlands: Northwest (Region 9). 1988. U. S. Fish and Wildlife Service, Inland Freshwater Ecology Section, St. Petersburg, Florida.

Reed, P.B. Jr. 1993. 1993 Supplement to the list of plant species that occur in wetlands: Northwest (Region 9). USFWS supplement to Biol. Rpt. 88(26.9) May 1988.

USDA NRCS & National Technical Committee for Hydric Soils, September 1995. Field Indicators of Hydric Soils in the United States - Version 2.1

City of Marysville Municipal Code



Above: looking north across site, site vegetated with rye. Below: looking north with Wetlands Y and X/CP to right.



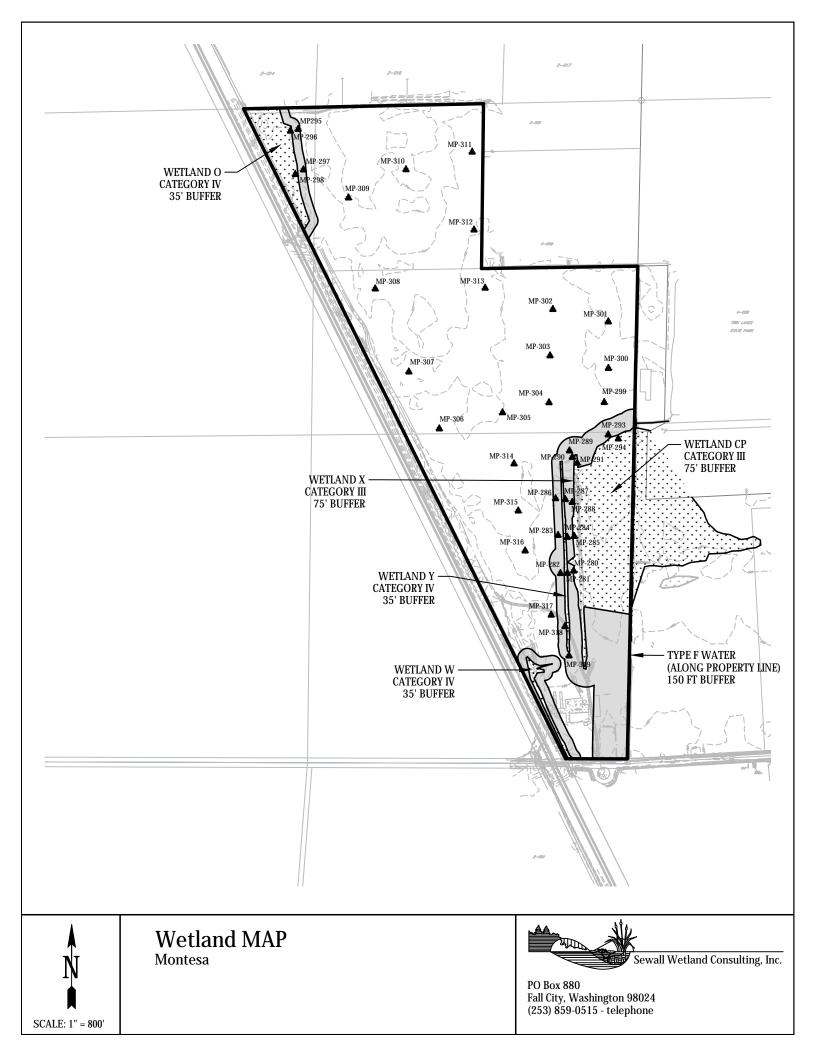


*Above: Looking east across Wetlands Y and X/CP Below:Looking east across the north end of site.* 





Above: Looking south along west side of site. Railroad tracks to right behind tree line.



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US Army Corps of Engineers

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VegetationSolit or Hydrology	significantly disturb		Normal Circumstances" present? Yes No
Vegetation	naturally problemat	tia? (lf ne	eded, explain any answers in Remarks.)
IMMARY OF FINDINGS - Attach si	te map showing sam	pling point l	ocations, transects, important features, etc.
		is the Sempled	
Vetland Hydrology Present? Yes		within a Wetlad	nd? Yes No
temerka: _ Agricultural A			
- drange Three	what a to 1.	Jahres	1 + he
			- ///-
GETATION - Use scientific names		Second Indiana'	Dominance Test worksheet:
es Stratum (Plot size:)	Absolute Dom % Cover Spec	inant indicator	
			That Are OBL, FACW, or FAC: (A)
			Total Number of Dominant 7
·			Total Number of Dominant Species Across All Strats: (B)
			Percent of Dominent Species / CC/
apling/Shrub Stratum (Plot size:	= Tol:	BI Cover	That Are OBL, FACW, or FAC: (A/B)
			Prevalence index worksheet:
·			Total % Cover of Multiply by:
*			OBL species x1 =
			FACW species x2 =
	= Tok		FAC species x 3 = FACU species x 4 =
erb Stratum (Piot size:)			UPL species x 5 =
JACUS EFFRENS	70	FACL	Column Totsis: (A) (B)
Lotus comiectures	· <u> </u>	FA6	4
			Prevalence Index = B/A =
·			Hydroghytis Vegetation Indicators: Dominance Test is >50%
			Prevelence Index is s3.0 <sup>1</sup>
			Morphological Adaptations' (Provide supporting
			data in Remarks or on a separate sheet)
			Wetland Non-Vascular Plants <sup>1</sup>
			Problematic Hydrophytic Vegetation' (Explain) Indicators of hydric soil and wetland hydrology must
			be present, unless disturbed or problematic.
D			
0		al Cover	
0	)	al Cover	thutmohutio
0		ai Cover	Hydrophytic Vegetation
0	) 		

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Sampling Point: SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Redox Features Color (moist) % Type Depth Matrix Loo<sup>2</sup> Texture Remarks Color (moist) (inches) 10yAZIZ 10 TPA **F**FA 107K3/7 16 Type: C=Concentration, D=Depietion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>1</sup>: \_\_\_\_ 2 cm Muck (A10) History (A1) \_\_\_\_ Sandy Redox (S5) \_\_\_\_ Red Parent Material (TF2) Stripped Matrix (S6) Histic Epipedon (A2) Loamy Mucky Mineral (F1) (except MLRA 1) \_\_\_\_ Other (Explain in Remarks) Black Histic (A3) Loamy Gleyed Matrix (F2) Hydrogen Sutlide (A4) Depleted Below Derk Surface (A11) Depleted Matrix (F3) ...... <sup>3</sup>Indicators of hydrophytic vegetation and Redox Dark Surface (F6) Thick Dark Surface (A12) -Depleted Dark Surface (F7) wattand hydrology must be present. Sandy Mucky Mineral (S1) Sendy Gleyed Matrix (S4) Radox Depressions (F8) unless disturbed or problematic. Restrictive Layer (if present): Type: Hydric Soil Present? Yes \_ No Depth (inches): Remarks No idrates HYDROLOGY

#### Welland Hydrology Indicators: Secondary Indicators (2 or more required) Primary indicators (minimum of one required, check all that apply) Water-Stained Leaves (89) (except MLRA Water-Stained Leaves (89) (MLRA 1, 2, \_ Surface Water (A1) High Water Table (A2) 1, 2, 4A, and 4B) 4A, and 4B) ..... Salt Crust (B11) Drainage Patterns (B10) Saturation (A3) \_\_\_\_ Aquatic Invertebrates (B13) \_\_\_ Dry-Season Water Table (C2) Water Marks (B1) Saturation Visible on Aerial Imagery (C8) Hydrogen Sulfide Odor (C1) Sediment Deposits (82) Oxidized Rhizospheres along Living Roots (C3) \_\_\_\_ Geomorphic Position (D2) Drift Deposits (B3) \_\_\_\_ Shallow Aquitand (D3) Aigsi Met or Crust (B4) \_\_\_\_ Presence of Reduced iron (C4) FAC-Neutral Test (D5) Recent Iron Reduction in Tilled Soils (C6) Iron Deposits (85) Surface Soil Cracks (86) Stunted or Stressed Plants (D1) (LRR A) ..... Raised Ant Mound's (D6) (LRR A) Inundiation Visible on Aerial Imagery (87) Frost-Heave Hummocks (D7) Other (Explain in Remarks) \_\_\_\_ Sparsely Vegetated Concave Surface (B8) Field Observations: No \_\_\_\_\_ Depth (inches): Surface Water Present? Yas Water Table Present? Depth (inches): Yes Depth (inches): Saturation Present? No Watland Hydrology Present? Yas No Yes\_ (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available Remarks: No wheeles

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# wet ¥

Montesa	ChatCounty M	mysulle sampling Date 2-1
icam/Owner:	(inj, control, second	State: WA Sampling Point: 287
atigator(s): Ed Sewall	Section, Township.	Range
Sform (hillslope, terrace, etc.)	Local relief (concav	s. convex, none): Slope (%):
		Long Datum:
Map Unit Name:		NWI classification:
climatic / hydrologic conditions on the site typical	for this time of year? Yes	(If no, explain in Remarks.)
Vegetation Soli or Hydrology	significantly disturbed? A	re "Normel Circumstances" present? Yes No
Vegetation, Soli, or Hydrology		needed, explain any answers in Remarks.)
MMARY OF FINDINGS - Attach site	men showing sempling noin	t locations, transects, important features, etc.
drophytic Vegetation Present? Yes	No is the Samp	led Area
dric Soil Present? Yes Itland Hydrology Present? Yes	No Within a Wet	tiand? Yes No
marks: A br /		
- Harisvirsal Ha	eld . 4. 1111.	
- drange throng	wr sir(/dinne	S + T, M
<b>GETATION - Use scientific names of</b>	f plants.	
e Stratum (Plot size: )	Absolute Dominant Indicate	· •
se stretum (Pibt size:)	% Cover Species? Status	
·		Species Across All Strats: (B)
		Percent of Dominant Species
	= Total Cover	That Are OBL, FACW, or FAC: (A/B)
olino/Shrub Stratum (Plot size:	ر 	Prevalence index worksheet;
		Total % Cover of: Multiply by:
		OBL species x1=
		FACW species ×2 *
		FAC species x 3 #
no Stratum (Plot size:)	* Total Cover	FACU species x 4 =
Turcus a FRISUS	80 th	UPL spacies x 5 = (b)
Holers Int	20 540	Column Totals: (A) (B)
		Prevalence Index = B/A =
		Hydrophytic Vegetation Indicatore:
		Dominance Test is >50%
		Prevalence Index is \$3.0 <sup>1</sup> Morphological Adaptations' (Provide supporting
		deta in Remarks or on a separate sheet)
		Wetland Non-Vascular Plants*
·		Problematic Hydrophytic Vegetation' (Explain)
		<ul> <li>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</li> </ul>
	* Total Cover	- No proverti urinen universitätik.
pody Vine Stratum (Ptot size:)		
	* Total Cover	Present? Yes No
Bare Ground in Herb Stratum		

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OIL									mpting Point:	
Profile Desc	cription: (Describ	e to the depth	needed to docum	ent the Indica	tor or co	milion the	absence	of Indicator	<b>ra.</b> )	
Depth	Matrix			Features						
(inches)	Color (moist)		Color (moist)	<u> </u>	<u>e'</u> e	£	Texture	· ·····	Remerks	
12_	ION ZI	2								
11.	loint	7	CM	and a		· · · · ·	1mg			
	Chille the									
				deligerations between						
				*****				*****		
								_		
	oncentration, D=D	minting Ohter	adurant Materix		Contend Sta	od Graine	21.00	ation Pi al	ore Lining. M*	Matrix
	Indicators: (Appl					No of Dita			ematic Hydric	
-			Sandy Redox (5					Muck (A10		
Histosol	• •		Stripped Matrix				any sales	Parent Mat	•	
	pipedon (A2) istic (A3)		Loamy Mucky N		cent Nil A	84 1)	Address .		n Remarke)	
	en Sulfide (A4)		Loanny Gleyed I		~					
	d Below Dark Suffi		Depleted Matrix							
	ark Surface (A12)		Redox Dark Sur				<sup>3</sup> Indicato	rs of hydrog	hytic vegetatio	n and
	Mucky Mineral (S1)		Depleted Dark S				wetia	nd hydrolog	y must be pres	ent,
	Sleved Matrix (S4)		Redox Depress				unies	s disturbed	or problematic.	
	Layer (If present)			*******		·····		*****		
Type:	· · · · · · ·						lvdric Soil	Brosent?	Yes -	No
	ches):						170316-0011			
Remarks:										
YDROLO	)GY									
	drology indicator		**************************************							
timary Indi	cators (minimum o	t one required.	check all that apply	<u>ù</u>					ions (2 or more	
Surface	Water (A1)		Water-Glai	ned Leaves (B	i9) (excep	nt Mil.RA	W		d Leaves (89)	(WILJAA 1,
High W	ater Table (A2)		1, 2, 44	, and 48)				4A, and 4	8)	
Saturati	ion (A3)		Salt Crust	(B11)			D	rainage Pat	tems (B10)	
Water h	Marks (B1)		Aquatic Im	entebrates (B	13)		0	ry-Season )	Nater Table (C	2)
	nt Deposits (B2)		Hydrogen	Sulfide Odor (	01)			sturation Vi	sible on Aerial i	Imagery (C
	ipcieits (B3)			hizospheres a		g Roots (	(C3) G	eomorphic	Position (D2)	
	ist or Crust (84)			Reduced in				hallow Aqui		
	posits (85)			n Reduction in		ils (C6)		AC-Neutral	- ,	
	soil Cracks (86)			Stressed Plan		• •			Jounds (D6) (L	RR A)
				lein in Remai					Hummocks (D)	-
	lion Visible on Aeri			AND 11 11 11 11 11 11 11 11 11 11 11 11 11	N#7		r			
	ly Vegetated Conc	ave Sumace (Bi	P)							
Field Obse	rvations:		1		1					
Surface Wa	ter Present?	Yes N	o Depth (in	;hes):						
Water Table	e Present?	Yes	p Depith (in	:hes);	l				_	
Saturation F	Present?	Yes N	o Depth (in	ches):	I	Wetland	t Hydrolog	y Present?	Yes	No

(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, serial photos, previous (nspections), if available:

was wet on subsequit site visits when 12" - F surface

Remarks:

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		werc
		ountains, Valleys, and Coast Region
minutes Martesa	ChulCounty M	Larysville Sampling Date 2-1
aplicent/Owner:	Chyroconiy.	State: WA Sampling Point 294
vestigator(e): Ed Scwall	Section, Township,	
		vs. convex, none): Slope (%):
		Long: Detum:
bil Map Unit Name:		NWI classification:
e climatic / hydrologic conditions on the site typical for	this time of year? YesN	o (if no, explain in Remarks.)
e VegetationSoil or Hydrology		ve "Normel Circumstances" present? Yes No
e Vegetation	naturally problematic? (I	lf needed, explain any answers in Remarks.)
UMMARY OF FINDINGS - Attach site me	p showing sampling poin	nt locations, transacts, important features, etc.
tydrophytic Vegetation Present? Yes	No	1
Hydric Soil Present? Yes	No is the Samp	-
National Hydrology Present? Yes	No	
Remarks: _ Agricultural Filel	12	
tomarks - Agricultural Fiel - drawaye through	it site / ditche	s + tite
GETATION - Use scientific names of pl		
	Absolute Dominant Indicat	or   Dominance Test worksheet:
res Stratum (Ptot size:)	% Cover Boecles? Status	
		That Are OBL, FACW, or FAC: (A)
		Total Number of Dominant(B)
	- Total Cover	That Are OBL, FACW, or FAC: (A/B)
aolino/Shrub Stratum (Plot size:)		Prevalence index worksheet:
l		Total % Cover of: Multiply by:
l		OBL species x 1 =
l		FACW species × 2 *
		FAC spacies x 3 =
·		
lent Stratum (Plot size: )	= Total Cover	FACU species ×4 =
ii		FACU species ×4 =
in <u>Phalons;</u> <u>Condress</u> )	Low FAC	FACU species         x 4 =           UPL species         x 5 =           Column Totals:         (A)
Phalmes and an	Fac	FACU species         x 4 *           UPL species         x 5 *           Calumn Totals:         (A)           Prevalence Index * B/A *         (B)
Herb Strotum (Plot size:) 	Fac	FACU species         x 4 *           UPL species         x 5 *           Calumn Totals:         (A)           Prevalence Index * BIA *           Hydpolphytic Vegetation Indicators:
terb Stretum (Plot size:) 	<u>////</u>	FACU species         x 4 =           UPL species         x 5 =           Calumn Totals:         (A)           Prevalence Index = B/A =           Hydpdshyds Vegetation Indicators:           Z         5 %%
lero Stratum (Plot size:) Phalans; and new	<u>////</u>	FACU species X 4 = UPL species X 5 = Calumn Totals: (A) (B)     Prevalence Index = B/A = Hygrdphytic Vegetation Indicators:     Z Dominance Test is >50%    Prevalence Index is 3.0 '     Morphological Adaptations' (Provide supporting
lero Stretum (Plot eize:) Phalani; and nen	<u>////</u>	FACU species       x 4 *         UPL species       x 5 *         Calumn Totals:       (A)         Prevalence Index * B/A *         Hydrophytic Vegetation Indicators:         Dominance Test (s >50%         Prevalence Index is 3.0 <sup>15</sup> Morphological Adaptations' (Provide supporting data in Remarks or on a separate street)
ent Stretum (Piot ess:) Phalm; cudara		FACU species
ero Stretum (Plot size:) Phalans) and and		FACU species
erb Strehum (Plot size:) 		FACU species
Internet Stretum (Plot size:)		FACU species
ion         Stratum         (Plot size:)		FACU species X 4 = UPL species X 5 = Column Totals: (A) (B)     Prevalence Index = BIA = Hydrophytic Vegetation indicators:     Dominance Test is >50%     Prevalence Index is s3.0°     Morphotogical Adaptetions' (Provide supporting     data in Remarks or on a separate sheet)     Wetland Non-Vaacular Plants'     Problematic Hydrophytic Vegetation' (Explain)     'Indicators of nydric soil and wetland hydrology must be present, unless disturbed or problematic.     Hydrophytic
i	F73 (	FACU species X 4 = UPL species X 5 = Column Totals: (A) (B)     Prevalence Index = B/A = Hygrophytic Vegetation Indicators:     Dominance Test is >50%     Prevalence Index is 3.0°     Morphological Adaptetions" (Provide supporting         data in Remarks or on a separate sheet)     Wetland Non-Vaccular Plans'     Problematic Hydrophytic Vegetation" (Explain)     '_Indicators of hydric soil and wetlend hydrology must     be present, unless disturbed or problematic.     Hydrophytic     Vegetation
erb Sitelum (Plot size:) Phalas; condress	FA (	FACU species X 4 = UPL species X 5 = Column Totals: (A) (B)     Prevalence Index = B/A = Hydrophytic Vegetation Indicators:     L Dominance Test is >50%    Prevalence Index is \$3.0°     Morphotogical Adaptistions' (Provide supporting     data in Remarks or on a separate sheet)    Uvide and the second se

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HL.	ription: (Describe t	a the strength -					the sheen	
		o the deper r				or comun	I THE SUBSIC	A CH (HONCHOUTH)
epth sches)	Matrix Color (moint)	*	Calor (moist)	K Englures	Type	Loc <sup>2</sup>	Texture	Remarks
10	100R3/2		A. 1. 2. 10	And the second House second		AND REAL PROPERTY AND		
	10000		Fer	5	T.		- 4	7
6	1011 Zp	-	Fer		<u>FM</u>		2007	
			•					
	********		*******					
								-
VDE: C=C	oncentration, D=Depi	stion, RM=Re	duced Matrix, CS	S=Covered	for Coste	d Sand G		ocation: PL=Pore Lining, M=Matri
dric Soli	Indicators: (Applice	ibie to all LR	Ra, unless other	when note	ed.)			tors for Problematic Hydric Soli
Histosol	(A1)		Sandy Redox (	S5)				om Muck (A10)
	pipedon (A2)	- 1417	Siripped Matrix					ed Parent Material (TF2)
	istic (A3)		Loamy Mucky Mucky			MLRA 1)	°	ther (Explain in Remarks)
	en Sulfide (A4)		Loamy Gleyed		n 1			
	d Below Dark Surface	(A11)	Depleted Matrix				5	اد
	ark Surface (A12)		Redox Dark Su					itors of hydrophytic vegetation and tand hydrology must be present,
	Aucky Mineral (S1)		Depleted Dark		(I)			ess disturbed or problematic.
	Sleyed Matrix (S4)		Radox Depresa	1033 (10)			1	
	Layer (if present):							/
Type:			-					xil Present? Yes No
								XIPTESMIX/ 1975
							1.1,44.2	
emarks: (DROLO						1997 B FARMA (1998) STAR (	1	
emarks: /DROLO lettend Hy	NGY	oe required. c	heck at the acc	<b>y</b> )				condary indicators (2 or more result
emarks: DROLO letiend Hy	NGY drology Indicators:	oe required. C	heck at that acc		vs (59) (e	ixcept ML	Sa	
emarks: (DROLO fetland Hy rimary Indi	NGY drology Indicators: cators (minimum of o Water (A1)	oe required. C	Water-Sta			ixcept ML	Sa	condary indicators (2 or more result
emarks: /DROLO fetland Hy fimary Indi Surface High W	NGY drology Indicators: cators (minimum of o Water (A1) ater Table (A2)	çe required. C	Water-Sta	ined Leav A, and 48		ixcept ML	<u>Sas</u> <u>Sas</u> 	condary insicators (2 or more result Water-Stained Leaves (B9) (MLM 4A, and 4B) Drainage Patterns (B10)
emarks: (DROLO retrand Hy rimery indi Surface High W Seturati	NGY drology Indicators: cators (minimum of o Water (A1) ater Table (A2)	qe required. C	Water-Sia 1, 2, 4/	ined Leav 4, and 48 (811)	)	ixcept ML	<u>Sas</u> <u>Sas</u> 	condany indicators (2 or more restrict Water-Stained Leaves (B9) (MLR 44, and 48) Drainage Patterns (B10) Dry-Season Water Table (C2)
emarks: /DROLO fetland Hy timery indi High W Saturati Water A	NGY drology Indicators: cators (minimum of o Water (A1) ater Table (A2) (on (A3) fanta (B1)	çe required. C	Water-Sia 1, 2, 4/ Salt Cruat	ined Leav A, and 48 (B11) vertebrate	) 16 (B13)	xcept ML	<u>Sas</u> <u>Sas</u> 	condary insicators (2 or more result Water-Stained Leaves (B9) (MLM 4A, and 4B) Drainage Patterns (B10)
emarks: /DROLO letiand Hy cimary Indi Surface High W Saturati Water M Sedime	NGY drplogy Indicators: cators (minimum of o Water (A1) ater Table (A2) ion (A3)	çe required. C	Weter-Sia 1, 2, 4/ Salt Crust Aquatic In Hydrogen	ined Leav A, and 48 (B11) vertebrate Sulfide O	) 16 (B13) dor (C1)	-	\$85 RA	condany indicators (2 or more restrict Water-Stained Leaves (B9) (MLR 44, and 48) Drainage Patterns (B10) Dry-Season Water Table (C2)
emarks: /DROLO letiand Hy imary Indi Surface High W Saturati Water M Sedime Drift De	NGY drology Indicators: destrs (minimum of o Water (A1) ater Table (A2) for (A3) Aarks (B1) ni Deposite (B2)	ge required. S	Weter-Sia 1, 2, 4/ Salt Crust Aquatic In Hydrogen	ined Leav A, and 48 (B11) verlabrate Sulfide Or Rhizosphe	) dor(C1) reasiong	Living Ro	Sat RA Dis (C3)	Water-Stained Leaves (B9) (MLR 44, and 48) Drainage Patterns (B10) Dry-Season Weter Table (G2) Saturation Visible on Aerial Image Geomorphic Position (D2) Stalaw Aquitard (D3)
emarks: /DROLO leftand Hy imary Indj Surface High WA Saturati Water A Sedime Orift De Algol M	NGY cators (minimum of o water (A1) ater Table (A2) (on (A3) karks (B1) ni Deposits (B2) posts (B3)	ge lequired. S	Weter-Sia     1, 2, 4/     Salt Crust     Aquatic In     Hydrogen     Oxidized I	ined Leav A, and 48 (811) vertabrate Sulfide Or Rhizosphe of Reduce	) dor (C1) mea slong ed iron (C	Living Ro 4)	Sav RA Dits (C3) 3)	vondary indicators (2. or more restrict Water-Stained Leaves (B9) (MLM 4A, and 4B) Drainage Patterns (B10) Dry-Sesson Weter Table (C2) Saturation Visible on Aensi Image Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
emarks: DROLO leftand Hy imary Indi Surface High WA Surface High WA Surface Drift De Drift De Algel M Iron De	NGY drology Indicators: cators (minimum of o Water (A1) ater Table (A2) con (A3) Aarks (B1) ni Deposits (B2) posits (B3) at or Crust (B4)	oe required. C	Water-Sia 1, 2, 4/ Saft Cruat Aquatic In Hydrogen Oxidized I Presence Recent Inc	ined Leav A, and 48 (811) vertebrate Sulfide O Rhizosphe of Reduce on Reduce	) dor (C1) maa along ad iron (C ion in Tille	Living Ro 4)	Sec Sec 	Water-Stained Leaves (B9) (MLR 44, and 48) Drainage Patterns (B10) Dry-Season Weter Table (G2) Saturation Visible on Aerial Image Geomorphic Position (D2) Stalaw Aquitard (D3)
emarks: /DROLO retrand Hy cimary indi Surface High Wi Saturati Water A Soline Orif De Algel M Iron De Surface	NGY driplogy Indicators: cators (minimum of o Water (A1) ater Table (A2) ion (A3) karks (B1) mi Deposits (B2) posits (B3) at or Crust (B4) posits (B5)		Water-Sia 1, 2, 4/ Saft Cruat Aquatic In Hydrogen Oxidized I Presence Recent Inc	ined Leav A, and 48 (811) vertebrate Sulfide O Rhizosphe of Reduct on Reducti r Stressed	) dor (C1) rea slong ed iron (C ion in Tille I Plants (E	Living Ra 4) Id Soils (C	Satis (C3)	vondary indicators (2. or more restrict Water-Stained Leaves (B9) (MLM 4A, and 4B) Drainage Patterns (B10) Dry-Sesson Weter Table (C2) Saturation Visible on Aensi Image Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
emarks: /DROLO letiand Hy imary Indi Surface High WA Sedime Orih De Algel M Iron De Surface Iron De Inundat	NGY drology Indicators: eators (minimum of o Water (A1) ater Table (A2) (A1) aters (B1) ri Deposits (B2) posits (B3) at or Crust (B4) posits (B5) S ol Cracts (B6)	magery (87)	Water-Sia 1, 2, 4/ Saft Crual Aquatic In Hydrogen Oxidized I Presence Recent inc Stunted o Other (Ex	ined Leav A, and 48 (811) vertebrate Sulfide O Rhizosphe of Reduct on Reducti r Stressed	) dor (C1) rea slong ed iron (C ion in Tille I Plants (E	Living Ra 4) Id Soils (C	Satis (C3)	vondary Indicators (2. or. more result Water-Stained Leaves (B9) (MLR 4A, and 4B) Drainage Patterns (B10) Dry-Season Weter Table (C2) Saluration (Weter Table (C2) Schaltwa Aquitard (D3) FAC-Neutral Test (D5) Rajsed Ant Mounds (D6) (LRR A)
emarks: (DROLO fetland Hy timery Indi Surface High Wa Saturati Water A Sodime Orih De Algel M Fon De Surface Inundat Sparsei	NGY drology indicators: cators (minimum of o Water (A1) ater Table (A2) ton (A3) karks (B1) mi Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Vitable on Aerial II by Vegetated Concern	magery (87)	Water-Sia 1, 2, 4/ Saft Crual Aquatic In Hydrogen Oxidized I Presence Recent inc Stunted o Other (Ex	ined Leav A, and 48 (811) vertebrate Sulfide O Rhizosphe of Reduct on Reducti r Stressed	) dor (C1) rea slong ed iron (C ion in Tille I Plants (E	Living Ra 4) Id Soils (C	Satis (C3)	vondary Indicators (2. or. more result Water-Stained Leaves (B9) (MLR 4A, and 4B) Drainage Patterns (B10) Dry-Season Weter Table (C2) Saluration (Weter Table (C2) Schaltwa Aquitard (D3) FAC-Neutral Test (D5) Rajsed Ant Mounds (D6) (LRR A)
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emarks: /DROLO reliand Hy imany Indi Surface High Wa Seturation Orith Des- Inumdation Sopresi- Inumdation Sopresi- Indiceses Unface Water Table sturation F columber of the seturation F columber of the	KGY driplogy Indicators: centors (minimum of o Water (A1) ater Table (A2) (on (A3) Aarks (B1) ril Deposits (B2) posits (B3) at or Crust (B4) posits (B5) s Oil Cracks (B6) ion Visible on Aerial I by Vegetated Concess ter Present? Y Present? Y Present? Y	magery (87) e Surfece (88) es No es No es No	Weter-Sia     1, 2, 4     Sat Crust     Aquesic In     Hydrogen     Oxidized I     Presence     Recent Irc     Stunted o     Other (Ex     Depth (In     Depth (In	ined Leav A, and 48 (B11) vertebrate Sulfide Or Reduct of Reduct on Reduct o	) dor (C1) rea along ed Iron (C Ion in Tille Plants (E emarks)	Living Ro 4) d Soils (C 17) (LRR J	RA	vondary indicators (2 or more result Water-Stained Leaves (B9) (MLR 4A, and 4B) Drainage Petterns (B10) Dry-Season Weter Table (C2) Saturation Visible on Aentel Image Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D5) (LRR A) Frost-Heave Hummocka (D7)
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ject/Site: Monte			Marysville Sampling Date 2-2 State: WA Sampling Point 297
estigator(s): 52 5	Sewall	Section Tow	mship, Range:
diam (bibeinen inwan air )		Logat ratial (	(conceve. convex, none):Slope (%):
handlan it DD1	1 ob		Long: Detum:
			NWI classification:
Il Map Unit Name:			No (If no, explain in Remarks.)
Elimatic / hydrologic conditions on	n the site typical for this time of	year? Yes	Are "Normel Circumstances" present? Yes No
a Vegetation Solit (			
Vegetation, Soil,			
IMMARY OF FINDINGS -	Attach site map showi	ng sempling	point locations, transects, important features, etc
iverophytic Vegetation Present?	Yan Ma		
tydric Soil Present?	Yes No	is the	Sempled Area
Vetland Hydrology Present?	Yes No	within	n a Wedand? Yes No
	wal Field		
- Andrew	Throughout so:	4 1.1.2	there is the
	·····	11/0/11	MO FITH
EGETATION - Use scientif			
ree Stretum (Piot size:	Absolu	nte Dominant I rer Species?	Status .
TOP CUBICITY (PRO \$28.			
·			
·			
			1
		* Total Cove	rer Percent of Dominent Species / /// (A/B)
aniine/Shrub Stratum (Piot size:			
`			
·			OBL species X1 =
·			
•			FAC species x 3 =
·		= Total Cove	
erb Stratum (Plot size:	1		tittl annalus a fim
Phalms and	una 10	<u> </u>	Column Totals: (A) (B)
·			Prevalence Index = B/A =
·			
•			Deminante Text is within
·			Burnelin future at al
· .			Morphological Adaptations' (Provide supporting
			(asta in yoamarka or on a separate sheet)
			Wetland Non-Vascular Plants'
<u>,</u>			Problematic Hydrophytic Vegetation' (Explain) <sup>7</sup> Indicators of hydric soil and wetland hydrology must
			be present, unless disturbed or problematic.
0		* Total Cove	er er
0			
0 11 <u>Voody Vine Stratum</u> (Ptot size:	)		Attention after the
D			Hydrophytic Vegetation
D 1 <del>Voody Vine Stratum</del> (Ptot size:			Vegetation No

Western Mountains, Valleys, and Coast - Interim Version

Sampling Point: \_ SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Matrix Redox Features Depth Color (moist) Loc<sup>2</sup> Texture Remarks Color (moist) % Type **Onches** 10/2 2/2 1mg 16 <sup>2</sup>Location: PL=Pore Lining, M=Matrix, Indicators for Problematic Hydric Solis": <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Costed Sand Grains. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) \_\_\_\_ 2 cm Muck (A10) \_\_\_\_ Sendy Redox (S5) Histosol (A1) \_\_\_\_ Histic Epipedon (A2) Stripped Matrix (86) Loamy Mucky Mineral (F1) (except MLRA 1) Other (Explain in Remarks) Black Histic (A3) Loamy Gleyed Matrix (F2) Hydrogen Sulfide (A4) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) <sup>1</sup>Indicators of hydrophytic vegetation and Thick Dark Surface (A12) Depleted Dark Surface (F7) wetland hydrology must be present. Sandy Mucky Mineral (81) unless disturbed or problematic. Sendy Gleyed Matrix (S4) Radox Depressions (F8) Restrictive Layer (if present): Type: Hydric Soli Present? Yes No Depth (inches): Remarks: No shah HYDROLOGY Wetland Hydrology Indicators: Secondary indicators (2 or more required) Primary indicators (minimum of one required; check all that apply) \_\_\_\_ Water-Stained Leaves (89) (except MLRA Water-Stained Leaves (B9) (MLPA 1, 2, \_ Surface Water (A1) 4A, and 4B) High Water Table (A2) 1, 2, 4A, and 48) \_\_\_\_ Salt Crust (B11) Drainage Patterns (B10) Saturation (A3) \_\_\_\_ Dry-Season Water Table (C2) \_\_\_\_ Aquatic Invertebrates (B13) Water Marks (B1) Saturation Visible on Aerial Imagery (C9) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (D2) Drift Deposits (B3) Presence of Reduced iron (C4) Shallow Aquitard (D3) Algel Mat or Crust (84) ------Recent from Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Iron Deposits (B5) Surface Soil Cracks (86) Stunied or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Other (Explain in Remarks) Inundation Visible on Aerial Imagery (87)

Depth (inches):

Depth (inches):

No reflectors

Depth (Inches):

US Army Corps of Engineers

Field Observations:

Surface Water Present?

Water Table Present?

Saturation Present?

Remarks:

Sparsely Vegetated Conceve Surface (B8)

Yet

Yes

Yes

No

No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, serial photos, previous inspections), if available:

Western Mountaina, Valleys, and Coast - Interim Version

No

Wetland Hydrology Present? Yes

#### wet w

iecusite: Montesa	City/County	Marysville Sampling Date Z	- /2
sicant/Owner:		State: WA Sempling Point:	PN
	Section, To	wnship, Range:	
		I (concave, convex, none): Slope (%):	
		Long: Deturn:	
I Map Unit Name:		NWI classification:	
climatic / hydrologic conditions on the site typical for	a dala time of used Ver	Ala (if an avaiate in Remarks )	
VegetationSoil or Hydrology			
Vegetation Soll or Hydrology		(If needed, explain any answers in Remarks.)	
		· · · · ·	
		g point locations, transects, important feature	s, etc.
ydrophytic Vegetation Present? Yes	No is the with		
ydric Soil Present? Yes	No. is th	te Sampled Area	
etiand Hydrology Present? Yes		sin a Wetland? Yes No	1
omarks - Agricultural File,	11		
- drange through	ut a tre I all	Johnes intitud	
GETATION - Use scientific names of p			
ee Stratum (Pict size:)	Absolute Dominant % Cover Species?	Sistua	
		i high des of politities is opolition	(A)
		FLORE PROFESSION OF EACHINGTING A	(B)
		Percent of Dominant Species (11)	
	* Tolai Co	wer Percent of Dominant Species	(A/B)
aplino/Shrub Stratum (Plot size:)		Provalence index worksheet:	
		The second second second second	
		1	_
		FAC species x 3 =	-
	» Totei Co		
arb Stratum (Plot size:)	100	FTCh UPL species x5=	
		Column Totals: (A)	_ (8)
		Prevalence index = B/A =	
			=
		Deminantan Text in SCOR	
		Prevelence Index is \$3.0 <sup>1</sup>	
		Morphological Adaptations' (Provide suppo	ning
		data in Remarks or on a separate sheet)	'
		Problematic Hydrophytic Vegetation' (Expla	in )
		<sup>1</sup> Indicators of hydric solit and wetland hydrology	
),		significante de signi lo aux ante manaite ingenougy	
		be present, unlese disturbed or problematic.	
). 	= Tolai Co		
)		wer	
0			
)		Hydrophytic Vegetation Present? Yes No	

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yofile Description: (i	Describe to the dep	th needed to document the	e indicator or con	firm the absence	of indicators.)
)eoth	Matrix	Redox Feetu	res.	-	
nches) Color (	moist) %	Color (moist) %	Type Log	Texture	Remarks
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TAN	1-21-			4	
L_ 43,	7.512	<u> </u>		⋟_ ==	
					······································
	- OwDenietion OM	Reduced Matrix, CS=Cove	red or Costed San	d Grains <sup>7</sup> Lo	cation: PL=Pore Lining, M=Matrix.
ype: C=Concentration	A. Coupresson, run	LRRs, unless otherwise n	oted 1		ors for Problematic Hydric Solis":
*	. (Approximate and				m Muck (A10)
Histord (A1)		Sandy Redox (S5)		notado	d Perent Material (TF2)
Histic Epipedon (A	2)	Stripped Matrix (S5)			
Black Histic (A3)		Loamy Mucky Mineral		(1)O#	ter (Explain in Remarks)
Hydrogen Sullide (		Loamy Gleyed Matrix (	r2)		
_ Depieted Selow De		Depleted Matrix (F3)		<b>.</b>	61. A
Thick Dark Surface	a (A12)	Redox Dark Surface (P			ors of hydrophytic vegetation and
Sandy Mucky Mins	aral (S1)	Depleted Dark Surface			and hydrology must be present,
Sandy Gleyed Mat	rix (S4)	Redox Depressions (Fi	8)	unie	ss disturbed or problematic.
testrictive Layer (if p	resent):				/
Type:					
•••				Nurtric Sol	Present? Yes No
Depth (inches):				(1741) 00	
lemants:					
				secondry and second second	
YDROLOGY	idicatora :				
YDROLOGY Weffand Hydrology In		vý chack silikal apply)		Sex	vndarv Indicators (2 or more resuited
YDROLOGY Weffand Hydrology In Primary Indicators (mic	nimum of one require	sd, check sil ihat sopir)			vndery Indicatora (2 or more resulted)
YDROLOGY Weffand Hydrology In Prinsery Indicators (mic Surface Water (A1	<u>simum of one require</u> )	Water-Steined Le	eves (89) (except		Water-Stained Leaves (89) (MLRA 1
YDROLOGY Weffand Hydrology In Primary Indicators (mic	<u>simum of one require</u> )	Water-Steined Le 1, 2, 4A, and 4		MLRA	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B)
YDROLOGY Weffand Hydrology In Prinsery Indicators (mic Surface Water (A1	<u>simum of one require</u> )	Water-Steined Le 1, 2, 4A, and 4 Sati Crusi (811)	(8)	MLRA	Water-Stained Leaves (89) (MLRA 1, 4A, and 48) Drainage Pattems (810)
YDROLOGY Nofland Hydrology In Trimary Indicators (mik Surface Water (A1 High Water Table	<u>simum of one require</u> )	Water-Steined Le 1, 2, 4A, and 4	(8)	MLRA	Water-Stained Leaves (B9) (MLRA 1; 4A, and 4B) Drainage Pattems (B10) Dry-Season Water Table (C2)
YDROLOGY Wolfland Hydrology R Crimery Indicastors (mik Surface Water (A1 High Water Table Saturstion (A3)	nimum of one require ) (A2)	Water-Steined Le 1, 2, 4A, and 4 Sati Crusi (811)	48) nies (B13)	MLRA	Water-Stained Leaves (89) (MLRA 1, 4A, and 48) Drainage Pattems (810)
YDROLOGY Welland Hydrology Ie Surface Water (A1 High Water Table Saturation (A3) Water Marks (B1) Sedimeni Deposit	<u>simum of one require</u> ) (A2) s (B2)	Water-Steined Le 1, 2, 4A, and 4 Sett Crust (B11) Aquatic Invertebra Hydrogen Sulfide	48) nies (B13)	MLRA	Water-Stained Leaves (B9) (MLRA 1; 4A, and 4B) Drainage Pattems (B10) Dry-Season Water Table (C2)
YDROLOGY Weiliand Hydrology R Surface Water (A1 High Water Table Saturation (A3) Water Marks (B1) Sedimeni Deposit Orit Deposits (B3)	<u>eimens of one require</u> ) (A2) s (B2)	Water-Steined Le 1, 2, 4A, and 4 Sett Crust (B11) Aquatic Invertebri Hydrogen Sulfide Oxidized Rhizoep	t8) odor (C1) heres along Living	MLRA	Water-Stained Leaves (89) (MLPA 1; 4A, and 48) Drainage Patterns (810) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (
YDROLOGY Wetland Hydrology In Surface Water (A1 High Water Table Saturstion (A3) Water Marks (B1) Sedimeni Depolit Orift Depolits (B3) Agai Mat or Crust	<u>ernum of one requira</u> ) (A2) s (B2) (B4)	Wster-Steined Le     1, 2, 4A, and 4     Sett Crust (B11)     Aquatic Invertebr     Hydrogen Sulfide     Oxidized Rhizoep     Presence of Redu	tilis) Odor (C1) Heres along Living Joed Iron (C4)	MLRA	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3)
YDROLOGY Welland Hydrology In Primary Indicators (min Surface Water (A1 High Water Table Saturstion (A3) Water Marks (B1) Orth Deposits (B3) Algal Met or Crust Iron Deposits (B5)	<u>kinum of one nacuite</u> } (A2) s (B2) } (B4)	Water-Steined Le     1, 2, 4A, and 4     Sett Crust (B11)     Aquatic Invertein:     Hydrogen Sulfide     Oxidized Rhicoage     Presence of Redi     Recent Iron Radu	eles (B13) Odor (C1) Heres along Living Loed Iron (C4) Indion in Tilled Soils	MERA	Water-Stained Leaves (B9) (MLRA 1, 44, and 4B) Drainage Pattems (B10) Dry-Sesson Water Table (C2) Saturation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
YDROLOGY Welland Hydrology In Primary Insidentra (Mir Surface Water (A1 High Water Table Satustion (A3) Water Marks (B1) Sediment Deposits (B3) Agai Mat or Crust Iron Deposits (B3) Surface Soit Creck	<u>vimum of one recuers</u> ) (A2) a (B2) (B4) (B4) (S3 (B6)	Weter-Steined Le     1, 2, 4A, and (     Sati Crust (B11)     Aquasic Invertient     Hydrogen Sulfide     Oxidized Rhizoeg     Presence of Red     Resent from Red     Stuntled or Stress	48) Odor (C1) heres along Living used iran (C4) ustion in Tilled Sola ed Plants (D1) (LR	MERA	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Sesson Water Table (C2) Securation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitart (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
YDROLOGY Welland Hydrology In Surface Water (A1 High Water Table Saturation (A3) Water Marks (B1) Sedimeni Depositi Orift Deposits (B3) Algal Mat or Crust Iron Deposits (B3) Surface Soil Crack Invration Visible	<u>kimum of one require</u> ) (A2) s (B2) 1 (B4) (B4) on Aeriel Imagery (E	Weter-Steined Le     1, 2, 4A, and     Sett Crust (B11)     Aquetic Invertieber     Dixidized Rhizoep     Presence of Red     Recent Iron Red     Stunted or Stress 87) Dither (Explein in	48) Odor (C1) heres along Living used iran (C4) ustion in Tilled Sola ed Plants (D1) (LR	MERA	Water-Stained Leaves (B9) (MLRA 1, 44, and 4B) Drainage Pattems (B10) Dry-Sesson Water Table (C2) Saturation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
YDROLOGY Welland Hydrology In Surface Water (A1 High Water Table Saturation (A3) Water Marks (B1) Sedimeni Depositi Orift Deposits (B3) Algal Mat or Crust Iron Deposits (B3) Surface Soil Crack Invration Visible	<u>vimum of one recuers</u> ) (A2) a (B2) (B4) (B4) (S3 (B6)	Weter-Steined Le     1, 2, 4A, and     Sett Crust (B11)     Aquetic Invertieber     Dixidized Rhizoep     Presence of Red     Recent Iron Red     Stunted or Stress 87) Dither (Explein in	48) Odor (C1) heres along Living used iran (C4) ustion in Tilled Sola ed Plants (D1) (LR	MERA	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Sesson Water Table (C2) Securation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitart (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
YDROLOGY Welland Hydrology In Surface Water (A1 High Water Table Saturation (A3) Water Marks (B1) Sedimeni Depositi Orift Deposits (B3) Algal Mat or Crust Iron Deposits (B3) Surface Soil Crack Invration Visible	<u>kimum of one require</u> ) (A2) s (B2) 1 (B4) (B4) on Aeriel Imagery (E	Weter-Steined Le     1, 2, 4A, and     Sett Crust (B11)     Aquetic Invertieber     Dixidized Rhizoep     Presence of Red     Recent Iron Red     Stunted or Stress 87) Dither (Explein in	48) Odor (C1) heres along Living used iran (C4) ustion in Tilled Sola ed Plants (D1) (LR	MERA	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Sesson Water Table (C2) Securation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitart (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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YDROLOGY Welland Hydrology In Surface Water (A1 Surface Water (A1 Satisce Water (A1 Satisce Water (A1 Satisce (B1) Satisce (B1) Orth Deposits (B3) Agei Mat or Crust Iron Deposits (B3) Surface Soli Creci Inurdation Visible Sparsely Vegatate Field Observations: Surface Water Present?	<u>imum of one require</u> ) (A2) s (B2) (B4) (B4) on Aeriel Imagery (E id Conceve Surface 1? Yes Yes	Weter-Steined Le     1, 2, 4A, and (     Sett Crust (B11)     Aquasic Inverteion     Hydrogen Sulfide     Oxidized Rhizoeg     Presence of Redi     Recent from Redi     Stuntled or Stress 87) Other (Explein in (B8)     Depth (inches);     Depth (inches);	48) ates (B13) Odor (C1) heres along Living used iron (C4) action in Tilled Solit action in Tilled Solit Remarks)	MLRA	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Securation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
YDROLOGY Welland Hydrology In Primary Indicators (Inti Surface Water (A1 High Water Table Seturation (A3) Water Marks (B1) Orth Deposits (B3) Algsi Met or Crust Iron Deposits (B5) Surface Soid Cred Inurdation Viable Sparsely Vegetate Pield Observations: Surface Water Present? Aburen Table Present?	imum of one requere ) (A2) s (B2) (B4) cs (B6) on Aerial Imagery (E d Conceve Surface 1? Yes Yes	Weter-Steined Le     1, 2, 4A, and (     Sett Crust (B11)     Aquatic Invertient)     Hydrogen Sulfide     Oxidized Rhizoeg     Presence of Redi     Recent from Redi     Stunted or Stress 87) Other (Explain in (B8) No Depth (inches).	48) ates (B13) Odor (C1) heres along Living used iron (C4) action in Tilled Solit action in Tilled Solit Remarks)	MLRA	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Sesson Water Table (C2) Securation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitart (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
YDROLOGY Welland Hydrology In Primary Indicators (min Surface Water (A1 High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Agei Mat or Crust Iron Deposits (B3) Surface Soli Cract Inundation Visible Sparsely Vegetate Sparsely Vegetate Pield Observations: Surface Water Present?	<u>simum of one require</u> ) (A2) s (B2) (B4) (B4) cs (B6) on Aeriel Imagery (E id Concave Surface 1? Yes Yes Yes	Weter-Steined Le     1, 2, 4A, and (     Sett Crust (B11)     Aquasic Inverteion     Hydrogen Sulfide     Oxidized Rhizoeg     Presence of Redi     Recent from Redi     Stuntled or Stress 87) Other (Explein in (B8)     Depth (inches);     Depth (inches);	Ites (B13) Odor (C1) Heres along Living Joston in Tilled Solit et Plants (D1) (LR Remarks)	MLRA	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Securation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
YDROLOGY Welland Hydrology In Primary Indicators (min Surface Water (A1 High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Agei Mat or Crust Iron Deposits (B3) Surface Soli Cract Inundation Visible Sparsely Vegetate Sparsely Vegetate Pield Observations: Surface Water Present?	<u>simum of one require</u> ) (A2) s (B2) (B4) (B4) cs (B6) on Aeriel Imagery (E id Concave Surface 1? Yes Yes Yes	Weter-Steined Le     1, 2, 44, end (     Sett Crust (B11)     Aquasic Inverteion     Hydrogen Sulfide     Oxidized Rhizoeg     Presence of Redi     Recent from Redi     Stuntled or Stress 87) Other (Explein in (B8)     Depth (inches):     No Depth (inches):     Sulfide     Depth (inches):     No Depth (inches):     No Depth (inches):     No Depth (inches):     Sulfide     Depth (inches):     Sulfide     Depth (inches):     Depth (inc	Ites (B13) Odor (C1) Heres along Living Joston in Tilled Solit et Plants (D1) (LR Remarks)	MLRA	Water-Stained Leaves (B9) (MLRA 1 4A, and 4B) Drainage Patterns (B10) Dry-Sesson Water Table (C2) Securation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Tast (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
YDROLOGY Welland Hydrology In Primary Indicators (min Surface Water (A1 High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Agei Mat or Crust Iron Deposits (B3) Surface Soli Cract Inundation Visible Sparsely Vegetate Sparsely Vegetate Pield Observations: Surface Water Present?	<u>simum of one require</u> ) (A2) s (B2) (B4) (B4) cs (B6) on Aeriel Imagery (E id Concave Surface 1? Yes Yes Yes	Weter-Steined Le     1, 2, 44, end (     Sett Crust (B11)     Aquasic Inverteion     Hydrogen Sulfide     Oxidized Rhizoeg     Presence of Redi     Recent from Redi     Stuntled or Stress 87) Other (Explein in (B8)     Depth (inches):     No Depth (inches):     Sulfide     Depth (inches):     No Depth (inches):     No Depth (inches):     No Depth (inches):     Sulfide     Depth (inches):     Sulfide     Depth (inches):     Depth (inc	Ites (B13) Odor (C1) Heres along Living Joston in Tilled Solit et Plants (D1) (LR Remarks)	MLRA	Water-Stained Leaves (B9) (MLRA 1 4A, and 4B) Drainage Patterns (B10) Dry-Sesson Water Table (C2) Securation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Tast (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
YDROLOGY Welland Hydrology In Zimary Initiastra (Initi Surface Water (A1 High Water Table Saturstion (A3) Water Marks (B1) Sedimeni Deposits (B3) Hon Deposits (B3) Jaria (Mark Construction Inundation Visible Sparsely Vogetae Field Observations: Surface Water Present? Saturation Present? Includes ceptilery tring Describe Recorded De	<u>simum of one require</u> ) (A2) s (B2) (B4) (B4) cs (B6) on Aeriel Imagery (E id Concave Surface 1? Yes Yes Yes	Weter-Steined Le     1, 2, 44, end (     Sett Crust (B11)     Aquasic Inverteion     Hydrogen Sulfide     Oxidized Rhizoeg     Presence of Redi     Recent from Redi     Stuntled or Stress 87) Other (Explein in (B8)     Depth (inches):     No Depth (inches):     Sulfide     Depth (inches):     No Depth (inches):     No Depth (inches):     No Depth (inches):     Sulfide     Depth (inches):     Sulfide     Depth (inches):     Depth (inc	Ites (B13) Odor (C1) Heres along Living Joston in Tilled Solit et Plants (D1) (LR Remarks)	MLRA	Water-Stained Leaves (B9) (MLRA 1 4A, and 4B) Drainage Patterns (B10) Dry-Sesson Water Table (C2) Securation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Tast (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
YDROLOGY Welland Hydrology In Zimary Initiastra (Initi Surface Water (A1 High Water Table Saturstion (A3) Water Marks (B1) Sedimeni Deposits (B3) Hon Deposits (B3) Jaria (Mark Construction Inundation Visible Sparsely Vogetae Field Observations: Surface Water Present? Saturation Present? Includes ceptilery tring Describe Recorded De	<u>simum of one require</u> ) (A2) s (B2) (B4) (B4) cs (B6) on Aeriel Imagery (E id Concave Surface 1? Yes Yes Yes	Weter-Steined Le     1, 2, 44, end (     Sett Crust (B11)     Aquasic Inverteion     Hydrogen Sulfide     Oxidized Rhizoeg     Presence of Redi     Recent from Redi     Stuntled or Stress 87) Other (Explein in (B8)     Depth (inches):     No Depth (inches):     Sulfide     Depth (inches):     No Depth (inches):     No Depth (inches):     No Depth (inches):     Sulfide     Depth (inches):     Sulfide     Depth (inches):     Depth (inc	Ites (B13) Odor (C1) Heres along Living Joston in Tilled Solit et Plants (D1) (LR Remarks)	MLRA	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Securation Visible on Aerial Imagery ( Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

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NA Les		n Mountains, Valleys, and Coast Region Mary s.v. Ile
	City/County:	Calipting Date
plicant/Owner:		Sum PT Garmany Funn
restigator(s): 21 Ocwall	Section, Town	ship, Range:
ndform (hillslope, terrace, etc.).	Local relief (o	Stops (%):
bragion (LRR)-	Lat	Long: Detum:
il Map Unit Name:	*****	NWI dessification:
e climatic / hydrologic conditions on the site typical for		No (if no, explain in Remarks.)
e Vegetation Soil or Hydrology	significantly disturbed?	Are "Normal Circumstances" present? Yes No
e Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any answers in Remarks.)
IMMARY OF FINDINGS - Attach site ma	o showing sempling	point locations, transects, important features, etc.
tydrophytic Vegetation Present? Yes		Sampled Area
tydric Soil Present? Yes		a Wetland? Yes No
Vetland Hydrology Present? Yes		
the the shall be the I		
- drange through	t site/Jih	has rtite
EGETATION - Use scientific names of plu		
	Absolute Dominant in	dicator   Dominance Test worksheet: /
ree Stretum (Plot size:)		
·		That Are OBL, FACW, or FAC: (A)
		Species Across All Strata: (B)
·		Percent of Dominent Species (A/B)
apling/Shrub Stratum (Piot size:)	* Tolai Cove	That Are OBL, FACW, or FAC: (A/B)
		Prevalence index worksheet:
		Total % Cover of Multiply by
		FAC species x 3 =
iero Stratum (Piot size:)	= Total Cove	
Phalan anytime	100 1	A ( UPL species x5= ()
·		Column Totals: (A) (B)
l.		Prevalence Index = B/A =
k		Hydrophytic Vegetation Indicators:
		Dominance Test is >50%
۶		Prevalence Index is \$3.01
		Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
L		Welland Non-Vascular Pfants'
)		Problematic Hydrophytic Vegetation' (Explain)
0		Indicators of hydric soil and wetland hydrology must
1		be present, unless disturbed or problematic.
**	* Total Cover	
		Hydrophytic
Noody Vine Stratum (Ptot size:)		
Vocdy Vine Stratum (Ptot size:)		Vegetation
Voody Vine Stratum (Ptot size:)	= Total Cover	Present? Yes No

Western Mountains, Valleys, and Coast - Interim Version

Sampling Point: SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Rodox Features Color (moist) % Type\* Loc\* Texture Depth Matrix Remarks Color (moist) (inches % Zun 1422/2 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Costed Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrie Hydric Solt Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>1</sup>: \_\_\_\_ 2 pm Muck (A10) History (A1) \_\_\_\_ Sandy Redox (85) Stripped Matrix (56) ...... Histic Epipedon (A2) Other (Explain in Remarks) Loamy Mucky Mineral (F1) (except MLRA 1) Black Histic (A3) Hydrogen Sutfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depieted Matrix (F3) Indicators of hydrophytic vegetation and Radox Dark Surface (P6) Thick Dark Surface (A12) wetland hydrology must be present, Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic. Restrictive Layer (If present): Type: Hydric Soli Present? Yes \_ No Depth (inches): Remarks: No planters HYDROLOGY Welland Hydrology Indicators: Secondary indicators (2 or more required) Primary indicators (minimum of one required: check all that apply) Water-Stained Leaves (89) (MLIA 1, 2, \_\_\_\_ Water-Steined Leaves (89) (except MLRA Surface Water (A1) 1, 2, 4A, and 4B) 4A, and 4B) High Water Table (A2) Salt Crust (B11) Drainage Patterns (B10) \_\_\_\_ Saturation (A3) \_\_\_ Dry-Season Water Table (C2) Aquatic Invertebrates (B13) Water Marks (B1) Seturation Visible on Aerial Imagery (C9) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Oxidized Rhizoepheres along Living Roots (C3) \_\_\_\_ Geomorphic Position (D2) Drift Deposits (83) \_\_\_\_ Shallow Aquitand (D3) Algal Mat or Crust (B4) Presence of Reduced iron (C4) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) iron Deposits (B5) -----Stunted or Stressed Plants (D1) (LRR A) ...... Raised Ant Mounds (D6) (LRR A) \_\_\_\_ Surface Soil Cracks (86) Inundation Visible on Aerial Imagery (87) \_\_\_ Frost-Heave Hummocks (D7) Other (Explain in Remarks) \_\_\_\_ Sparsely Vegetated Concave Surface (B8) Field Observations: Depth (inches): Surface Water Present? Water Table Present? Questin (inches): No Yes Saturation Present? Depth (inches): Wetland Hydrology Present? Yes Yes\_

Remarks:

NO Identes

(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, serial photos, previous inspections), if available;

US Army Corps of Engineers

WETLAND DETERMINATION	ATA FORM - Western Mo	untains, Valleys, and Coast Region	
Markesa	M	mysuille sampling Date 2-18-18	
picant/Owner:	City/County:	State: WA Sampling Point: 294	
	Section, Township, R		
		. convex, nane): Siope (%):	
		Long: Datum:	
Map Unit Name:		NWI cleastification:	
climatic / hydrologic conditions on the site typical for		(If no, explain in Remarks.)	
Vegetation Soil or Hydrology	alonificantly dist shart? Are	* Normel Circumstances* present? Yes No	
Vegetation Soil or Hydrology		needed, explain any answers in Remarks.)	
IMMART OF FINDINGS - Attach site ma	p snowing sempling point	locations, transects, important features, etc.	
ydrophytic Vegetation Present? Yes	No Is the Sample	nt Arme	
ydrophytic Vegetation Present? Yes ydric Soil Present? Yes fatland Hydrology Present? Yes	No within a Wetla		
fatland Hydrology Present? Yes	No		
amarka: _ Agricultural Fiel			
- drawge through	+ site / ditches	+ tile	
GETATION - Use scientific names of plu	ints.		
	Absolute Dominant Indicator	Dominance Test worksheet:	
ee Stretum (Plot size:)	% Cover Species? Status	Number of Dominant Species	
		That Are OBL, FACW, or FAC: (A)	
······································		Total Number of Dominant Species Across All Strats: (B)	
		That Are OBL, FACW, or FAC:	
	- Total Cover		
anling/Shrub Stratum (Plot size:)	<b>*</b>		
Amurba	40 FAC	Prevalence index worksheet:	
Alow ruba	410 FAC 30 FAC	Prevalence index worksheet: Total % Cover of Multiply by	
Alow ruba	410 FAC 30 FAC	Prevalence index worksheet:	
Almanda Solix Stehens Ribus discolor	- 410 FAC - 32 FAC - 32 FAC	Prevalence Index worksheet: <u>Total % Cover of</u> . Multiply by. OBL species x 1 =	
Almurian Solix Stehen Repus discolor	- 410 FAC - 32 FAC - 32 FAC	Prevelence Index worksheet:           Total % Cover of:         Multiply br.           OBL species         x1 =	
Alwards Sylix 31/chich Techus discolor en Strahm (Plot size:)		Previsionce Index worksheet:           Total % Cover of:         Multiply by:           OBL species         x 1 *           PACW species         x 2 *           FAC species         x 4 *           UPL species         x 5 *	
Alwar and a Soli x sticking This discribent ets. Stratum (Plot sze:)		Prevelence Index worksheet:           Total % Cover of:         Multiply br.           OBL species         x1 =	
Alwar roba Sali x Strichica Techors discolor and Stratum (Plot size:)		Previsionce Index worksheet:           Total % Cover of:         Multiply by:           OBL species         x 1 *           PACW species         x 2 *           FAC species         x 4 *           UPL species         x 5 *	
Alwar Aug Szi z strikin Teinus discrite		Prevalence Index worksheet:           Total % Cover of:         Multiply by:           OBL species         x 1 =	
Alwar 10 m Sylix Striken Fibus discriment 10. Straken (Pictuse:)	240 FAC 30 FAC 30 FAC 	Prevalence index worksheet:           Total % Cover of:         Multiply by:           OBL species         x 1 =	
Alwar ruba Shi x shi hi an JE by s discribe		Prevalence Index worksheet:           Total % Cover of:         Multiply bo:           OBL species         x1 =           PACW species         x2 =           FAC species         x3 =           FAC species         x3 =           FAC species         x5 =           Column Totals:         (A)           Prevalence Index = BIA =	
Alwa Auga Sali x Strichica Techus discolor an Statum (Plot size:)	Lip         FAC           32         FAC           33         FAC           33         FAC           34         FAC           35         FAC           36         FAC           37         FAC           38         FAC           39         FAC           30         FAC           31         FAC           32         FAC           33         FAC           34         FAC           55         FAC	Prevalence index worksheet:           Total % Cover of:         Multiply by:           OBL species         x 1 =	
Alwar rub n Syli x Strichich Rubus disculor Mostelum (Pictaze:)	240 FAC 32 FAC 32 FAC 	Prevalence Index worksheet:           Total % Cover of:         Multiply by:           OBL species         x 1 =	
Alww rub m Soli x Stichich Techus discrite 10. Stalwa (Plot size:)	2410 FAC 30 FAC 30 FAC 30 FAC FAC FAC FAC FAC FAC FAC FAC	Prevsience Index workshest:         Total % Cover of:         Multiply bc.         OBL species       ×1 =	
Alward and a stricture of the stricture	2410 FAC 30 FAC 30 FAC 52 FAC 52 Cover 	Prevalence Index worksheet:         Total % Cover of:         OBL species         X 1 =         PACW species         X 2 =         FAC species         X 4 =         UPL species         X 5 =         Column Totals:         (A)         Prevalence Index = B/A =         Hydrophytic Vegetation Indicators:         >*Continance Test is >50%	
Alward and a strike and a strik	Lip         FAC           32         FAC           33         FAC           34         FAC           35         FAC           36         FAC           37         FAC           38         FAC           39         FAC           30         FAC           31         FAC           32         FAC	Prevsience Index workshest:         Total % Cover of:         Multiply bc.         OBL species       ×1 =	
A how rub m Sili x Shi how m The bus discribed De Stalute (Plot size:) 		Prevsience Index worksheet:         Total % Cover of:         Multiply by:         OBL species       x 1 =	
A how A von Site i Strategen (Plot size:)	Lip         FAC           32         FAC           33         FAC           34         FAC           35         FAC           36         FAC           37         FAC           38         FAC           39         FAC           30         FAC           31         FAC           32         FAC	Prevalence Index worksheet:         Total % Cover of:         Multiply by:         OBL species       x 1 =	
Alward and a stricture of the stricture	Lip         FAC           32         FAC           33         FAC           34         FAC           35         FAC           36         FAC           37         FAC           38         FAC           39         FAC           30         FAC           31         FAC           32         FAC	Prevsience Index worksheet:         Total % Cover of:         Multiply by:         OBL species       x 1 =	

Western Mountaine, Valleys, and Coast - Interim Version

Septh needed to document the indicator or confirm Redax Features Color (moist) % Type' 190' C M J S-112	
Color (molal) % Type' Loc'	• • • • • • • • • • • • • • • • • • •
	• • • • • • • • • • • • • • • • • • •
cmd suby	
and	
	·
RM=Reduced Matrix, CS=Covered or Costed Sand G	Prains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils":
	2 cm Muck (A10)
	Red Parent Material (TF2)
	A THE PARTY STREET
	No. 7
	Indicators of hydrophytic vegetation and
	wetland hydrology must be present,
Radox Depressions (F8)	unless disturbed or problematic.
	Hydric Soll Present? Yes No
gana an an an an an anna an a' amai adar ain air air air air air an an an ann ann an an an an an an ann an a	
	Proceedings to discuss (2) as more analysis.
	Secondary Indicators (2 or more required)
Water-Stained Leaves (B9) (except Mil	LRA Water-Stained Leaves (B9) (MLRA 1, 1
1. 2. 4A. and 4B)	4A, and 4B)
	Drainage Patterns (B10)
	Dry-Sesson Water Table (C2)
	Saturation Visible on Aerist Imagery (C
Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Recent Iron Reduction in Tilled Soils (C	C6) FAC-Neutral Test (D5)
	· · · · · · · · · · · · · · · · · · ·
	Frost-Heave Hummocks (D7)
	Prost-meave munimouse (D7)
ce (88)	
/	
No Depth (inches):	
	Band Hydrology Present? Yes No
No Depan (increat: We	neur Lincold Lossur, 188 160
	), if evailable;
<ul> <li>monitoring well, serial photos, previous inspections;</li> </ul>	
monitoring well, series photos, previous inspections, m which 12" cf 5 b 5 y - not g te	
	1, 2, 4A, and 4B)       Seft Crust (B11)       Aquatic Invertabrates (B13)       Hydrogen sulfide Odor (C1)       Oxidized Rhizospheres along Living Ri       Presence of Reduced Iron (C4)       Recent Iron Reduction in Tilled Solis (C       Stimted or Stressed Plants (D1) (LRR)       y (B7)       Other (Explain in Remarks)       ce (B8)       No     Depth (inches):       Dapth (inches):

US Army Corps of Engineers

specifisite: Montesa	, <u> </u>	City/County:	1-14	sysuille Sampling Date 2-1
plicant/Owner:				State: WA_ Sampling Point
estigator(s): Ed Scwall		Section, Tov	vnship, Rai	194:
ndiarm (hillslope, terrace, etc.):		Local relief	(concava. v	convex, none): Stope (%):
bregion (LRR)	Lat			Long: Detum:
Il Map Unit Name:				NWI classification:
r climatic / hydrologic conditions on the site typical for th	ils time of ye	ar? Yes	No	(If no, explain in Remarks.)
Vegetation Soil or Hydrology	significantly	disturbed?	Are `	Normal Circumstances" present? Yes No
Vegetation Soli or Hydrology	naturally pro	blematic?		eded, explain any answers in Remarks.)
IMMARY OF FINDINGS - Attach site mat	showing	sempling	a point i	ocations, transects, important features, etc.
ydrophytic Vegetation Present? Yes ydric Soil Present? Yes fetland Hydrology Present? Yes smarks Agri'er Ikral Fire la Ar an ye Throw y har	No	withi	sempled n # Wetler	rd? Yes No
GETATION - Use scientific names of pla				<u>, ,,, c</u>
		Dominant	Indicator	Dominance Test worksheet:
res Stratum (Plot size:)		Species?		Number of Dominant Species (A)
				That Are OBL, FACW, or FAC: (A)
·				Total Number of Dominant Z (B)
	***			
		- Total Cov		Percent of Dominent Species (AVB) That Are OBL, FACW, or FAC:
aplino/Shrub Stratum (Plot pize:)			FAC	
	32			Prevalence Index worksheet:
				Totel % Cover of: Multiply by:
٠ 				OBL species         x1 =           FACW species         x2 =
·			****	FAC species x 3 #
		= Total Con		FACU species x4=
erb Stratum (Plot size:)			Fre	UPL spacies x 5 =
	50			Calumn Totals: (A) (B)
				Prevalence Index = B/A =
				Hydrophyse Vegetation Indicators: Dominance Test is >50%
				Prevalence Index is \$3.0 <sup>1</sup>
		• ••••••		Morphological Adaptations' (Provide supporting
				data in Remarks or on a separate sheet)
·				
				Weiland Non-Vascular Plants*
		·		Welland Non-Vaecular Plants' Problematic Hydrophytic Vegetation' (Explain)
·		·		Wetland Non-Vacuus Plants'     Problematic Hydrophytic Vegetation' (Explain)     Indicators of hydric soil and wetland hydrology must
		·		Welland Non-Vaecular Plants' Problematic Hydrophytic Vegetation' (Explain)
0				Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				Wetland Non-Vascular Plants'     Problamatic Hydrophytic Vegetation' (Explain)     'Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problamatic.     Hydrophytic     Vegetation
0			••••••••••••••••••••••••••••••••••••••	Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

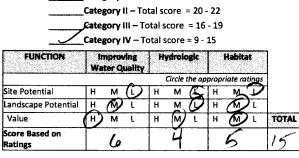
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Sampling Point: SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Texture Remarks Color (moist) Color (mpist) % Type Loc (inches) 10m 1042313 14 Type: C=Concentration, D=Depistion, RM=Reduced Matrix, CS=Covered or Costed Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix Hydric Soil indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>1</sup> \_\_\_\_ 2 cm Muck (A10) Sandy Redox (S5) Histosol (A1) ...... Red Parent Material (TF2) Stripped Matrix (SB) Histic Epipedon (A2) \_\_\_ Other (Explain in Remarks) Loamy Mucky Mineral (F1) (except MLRA 1) Black Histic (A3) Hydrogen Suifide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Indicators of hydrophytic vagetation and Redox Dark Surface (F6) Thick Dark Surface (A12) ----Depleted Dark Surface (F7) wetland hydrology must be preservi, Sandy Mucky Mineral (S1) Sendy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic. Restrictive Layer (If present): Type: Hydric Soil Present? Yes No Depth (inches): Remarks: No Much HYDROLOGY Wetland Hydrology Indicators: Secondary indicators (2 or more required) Primary Indicators (minimum of one required: check all that apply) \_\_\_\_ Water-Stained Leaves (89) (except MLRA Water-Stained Leaves (B9) (MLRA 1, 2, Surface Water (A1) 1, 2, 4A, and 4B) 4A, and 4B} High Weter Table (A2) \_\_\_ Saturation (A3) Drainage Patlams (B10) Salt Crust (B11) Dry-Season Water Table (C2) \_\_\_\_ Aquatic Invertebrates (B13) Water Marks (B1) Seturation Visible on Aerial Imagery (C8) Hydrogen Sulfide Odor (C1) \_\_\_\_ Sediment Deposits (82) Oxidized Rhizospheres along Living Roots (C3) \_\_\_\_ Geomorphic Position (D2) Drift Deposits (B3) \_\_\_\_ Algel Met or Crust (B4) Presence of Reduced iron (C4) Shallow Aquitard (D3) FAC-Neutral Test (D5) \_ Iron Deposits (85) Recent Iron Reduction in Tilled Soils (C6) \_ Stunied or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) \_\_\_\_ Surface Soil Cracks (86) Inundation Visible on Aerial Imagery (87) Frost-Heave Hummocks (D7) Other (Explain in Remarks) \_ Spersely Vegetated Conceve Surface (B8) Field Observations: Soth (inches): Surface Water Present? Yee / Depth (inches): Water Table Present? Yes No Saturation Present? Depth (Inches): Wetland Hydrology Present? Va No Yes No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: No intertors

US Army Corps of Engineers

Wetland name or number \_\_\_\_

<b>RATING SUMMARY – Western</b>	Washington
Name of wetland (or ID #): O Rated by S cnell Trained by Ecology?	Date of site visit: <u>2-</u> 18 - 18 /esNo Date of training
HGM Class used for rating Deputer Wetland has mult	iple HGM classes?YN
NOTE: Form is not complete without the figures requested Source of base aerial photo/map	(figures can be combined).
	or special characteristics)
1. Category of wetland based on FUNCTIONS	
Category I - Total score = 23 - 27	
Category II – Total score = 20 - 22	Score for each function based
<b>Category III –</b> Total score = 16 - 19	on three
Category IV Total score = 9 - 15	<b>ratings</b> {order of ratings is not
FUNCTION Improving Hydrologic Habitat	important)
Water Quality Circle the appropriate ratings	9 = H,H,H
Site Potential H M (L) H M (C) H M	8 = H,H,M 7 = H,H,L
landscape Potential H M I H M I H M I	7 = H,N,L 7 = H M M



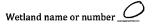
Score for each function based on three ratings (order of ratings is not important)
9 = H,H,H
8 = H,H,M
7 = H,H,L
7 = H,M,M
6 = H,M,L
6 = M,M,M
5 = H,L,L
5 = M,M,L
4 = M,L,L
3 = L,L,L

#### 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	1 11
Wetland of High Conservation Value	1
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	1 H
Interdunal	11111
None of the above	0

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1



#### 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 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)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

#### **Riverine Wetlands**

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including 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
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)	L3.1, L3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

#### Slope Wetlands

Map of:	To answer questions: Figure #
Cowardin plant classes	H 1.1, H 1.4
Hydroperiods	H 1.2
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (can be added to figure above)	S 4.1
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 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)	S 3.1, S 3.2
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	\$ 3.3

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Wetland name or number \_

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

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

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

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

NO - go to

YES - the wetland class is Tidal Fringe - go to 1.1

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

NO - Saltwater Tidal Fringe (Estuarine) YES - Freshwater Tidal Fringe If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an Estuarine wetland and is not scored. This method cannot be used to score functions for estuarine wetlands.

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

NO-go to 3 YES - The wetland class is Flats It 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).

#### YES - The wetland class is Lake Fringe (Lacustrine Fringe)

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

NO - go to 4

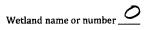
YES - The wetland class is Slope

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.

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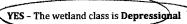


YES - The wetland class is Riverine

NO - go to b **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



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

NO - go to 8

YES - The wetland class is Depressional

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

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

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

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Wetland name or number

DEPRESSIONAL AND FLATS WETLANDS		
Water Quality Functions - Indicators that the site functions to improve v	vater 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	t (no outlet).	
	points = 3	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flow		
Management for a second s	points = 2	-
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing Wetland is a flat decreasing (OUESTION 7 or law) where evidet is a surgeorative flowing discharge of the surgeorative flowing the surgeorative flow		2
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch.		
0.1.2. The soil 2 in below the surface (or duff laver) is true clay or true organic (use NRCS definitions).	and the second sec	
0 1.3. <u>Characteristics and distribution of persistent plants</u> (Emergent, Scrub-shrub, and/or Forested Co		
Wetland has persistent, ungrazed, plants > 95% of area	points = 5	
Wetland has persistent, ungrazed, plants > ½ of area	points = 3	
Wetland has persistent, ungrazed plants $> 1/_{10}$ of area	points = 1	~
Wetland has persistent, ungrazed plants <1/10 of area	points = 0	<u>ک</u> ـــ
0 1.4. Characteristics of seasonal ponding or inundation:		
This is the area that is ponded for at least 2 months. See description in manual.		
Area seasonally ponded is > ½ total area of wetland	points = 4	
Area seasonally ponded is > ¼ total area of wetland	points = 2	
Area seasonally ponded is < ¼ total area of wetland	(points = 0)	
otal for D 1 Add the points in the	e boxes above	5

D 2.0. Does the landscape have the potential to support the water quality function of the	e site?	
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0	Ċ
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 ) lo = 0	•
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 (No = 0)	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in question Source	rns D 2.1-D 2.3? Yes = 1 No = 0	0
Total for D 2 Add the points	in the boxes above	1

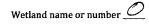
Rating of Landscape Potential If score is: 3 or 4 = H 1 or 2 = M 0 = L Record the rating on the first page

D 3.0. Is the water quality improvemen	y the site valuable to society?
D 3.1. Does the wetland discharge directly 303(d) list?	mi) to a stream, river, lake, or marine water that is on the $(Yes = B No = 0)$
D 3.2. Is the wetland in a basin or sub-basir	uatic resource is on the 303(d) list? Yes = 1 to = 0
D 3.3. Has the site been identified in a wate if there is a TMDL for the basin in wh	I plan as important for maintaining water quality (answer YES found)?
Total for D 3	Add the points in the boxes above

Rating of Value If score is: \_\_\_\_\_\_4 = H \_\_\_\_1 = M \_\_\_\_0 = L

Record the rating on the first page

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DEPRESSIONAL AND FLATS W Hydrologic Functions - Indicators that the site functions to re		ion
0 4.0. Does the site have the potential to reduce flooding and erosion?		
0 4.1. Characteristics of surface water outflows from the wetland:	······································	1
Wetland is a depression or flat depression with no surface water leaving i Wetland has an intermittently flowing stream or ditch, OR highly constri Wetland is a flat depression (QUESTION 7 on key), whose outlet is a perm Wetland has an unconstricted, or slightly constricted, surface outlet that	cted permanently flowing outletpoints = 2 nanently flowing ditch points = 1	2
9.4.2. <u>Depth of storage during wet periods:</u> Estimate the height of ponding above with no outlet, measure from the surface of permanent water or if dry, the surface of the permanent water or if dry, the surface of the permanent water or if dry, the surface of the permanent water or if dry, the surface of the permanent water or if dry, the surface of the permanent water or if dry, the permanent wa	•	
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	•	
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	1
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 = D	0
4.3. <u>Contribution of the wetland to storage in the watershed</u> : Estimate the rai contributing surface water to the wetland to the area of the wetland unit	tio of the area of upstream basin	
The area of the basin is less than 10 times the area of the unit	points = 5	
The area of the basin is 10 to 100 times the area of the unit	(points = 3	
The area of the basin is more than 100 times the area of the unit	points = 0	3
Entire wetland is in the Flats class	points = 5	فسرر
otal for D 4	Add the points in the boxes above	5
ating of Site Potential If score is:12-16 = H6-11 = M0-5 = L	Record the rating on the	first pa
5.0. Does the landscape have the potential to support hydrologic func	tions of the site?	
5.1. Does the wetland receive stormwater discharges?	Yes = 1 No = 0	6
5.2. Is >10% of the area within 150 ft of the wetland in land uses that general	te excess runoff? Yes = 1 No = 0	0
5.3. Is more than 25% of the contributing basin of the wetland covered with in	ntensive human land uses (residential at	
>1 residence/ac, urban, commercial, agriculture, etc.)?	Yes = 1 $No = 0$	0
otal for D 5	Add the points in the boxes above	0
ating of Landscape Potential If score is: 3 = H 1 or 2 = M 0 = L	Record the rating on the	first pa
6.0. Are the hydrologic functions provided by the site valuable to socie	ety?	
9.6.1. <u>The unit is in a landscape that has flooding problems</u> . Choose the descript the wetland unit being rated. Do not add points. <u>Choose the highest scar</u> . The wetland captures surface water that would otherwise flow down-gra damaged human or natural resources (e.g., houses or salmon redds):	e if more than one condition is met.	
<ul> <li>Flooding occurs in a sub-basin that is immediately down-gradient of</li> </ul>	unit. points = 2	ļ
Surface flooding problems are in a sub-basin farther down-gradient.	points = 1	1
Flooding from groundwater is an issue in the sub-basin.	points = 1	
The existing or potential outflow from the wetland is so constrained by h	uman or natural conditions that the	
water stored by the wetland cannot reach areas that flood. Explain why		
There are no problems with flooding downstream of the wetland.	points = 0	1
		6
6.2. Has the site been identified as important for flood storage or flood conve		
	yance in a regional flood control plan? Yes = 2 No = 0 Add the points in the boxes above	

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These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that site functions to provide important habitat	
H 1.0. Does the site have the potential to provide habitat?	
H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold	
of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.	
Aouttic bed 4 structures or more: points = 4 Experient 3 structures: points = 2	
Evergent     3 structures: points = 2     Scrub-shrub (areas where shrubs have > 30% cover)     2 structures: points = 1	
Forested (areas where trees have > 30% cover) 2 structures: points = 0	
If the unit has a Forested class, check if:	
The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover)	i [
that each cover 20% within the Forested polygon	`
H 1.2. Hydroperiods	
Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ½ ac to count (see text for descriptions of hydroperiods).	
Permanently flooded or inundated 4 or more types present: points = 3	
Seasonally flooded or inundated 3 types present: points = 2	
Occasionally flooded or inundated 2 types present: points = 1	
Saturated only 1 type present points >0	
Permanently flowing stream or river in, or adjacent to, the wetland	
Seasonally flowing stream in, or adjacent to, the wetland	l
Lake Fringe wetland 2 points	2
Freshwater tidal wetland 2 points	0
H 1.3. Richness of plant species	
Count the number of plant species in the wetland that cover at least 10 ft <sup>2</sup> .	
Different patches of the same species can be combined to meet the size threshold and you do not have to name	
the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle	
If you counted: > 19 species points = 2	ĺ
5 - 19 species points = 1	$\circ$
<5 species (points = 0)	
H 1.4. Interspersion of habitats	
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the roting is always high.	
None = 0 points	
All three diagrams in this row are HIGH = 3points	)

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H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. The number of checks is the number of points.	
Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).	
Standing snags (dbh > 4 in) within the wetland	
Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m)	
over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)	
Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree	
slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered	
where wood is exposed)	
At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are	
permanently or seasonally inundated (structures for egg-laying by amphibians)	
Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of	1
strata)	3
Total for H 1 Add the points in the boxes above	3
Rating of Site Potential If score is:15-18 = H7-14 = M 💋 -6 = L Record the rating on	the first page
H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).	
Colculate: $\bigcirc$ % undisturbed habitat $\frac{40}{10}$ + [(% moderate and low intensity land uses)/2] $\frac{20}{10}$ = $\frac{20}{10}$ %	
If total accessible habitat is:	
> 1/3 (33.3%) of 1 km Polygon points = 3	
20-33% of 1 km Polygon (points = 2)	0
10-19% of 1 km Polygon points = 1	_
< 10% of 1 km Polygon points = 0	C
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	
Calculate: $15\%$ undisturbed habitat $\frac{1}{2}$ (% moderate and low intensity land uses)/2] $\frac{20}{2} = \frac{35}{2}\%$	
Undisturbed habitat > 50% of Polygon points = 3	
Undisturbed habitat 10-50% and in 1-3 patches points = 2-	,
Undisturbed habitat 10-50% and > 3 patches	
Undisturbed habitat < 10% of 1 km Polygon points = 0	
12.3. Land use intensity in 1 km Polygon: If	
> 50% of 1 km Polygon is high intensity land use points = (- 2)	
	0
Total for H 2 Add the points in the boxes above	5
Rating of Landscape Potential If score is:4-6 = H /1-3 = M<1 = L Record the rating on the second the	të first pagë
H 3.0. Is the habitat provided by the site valuable to society?	
+ 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score	
that applies to the wetland being rated.	
Site meets ANY of the following criteria: points = 2	
<ul> <li>It has 3 or more priority habitats within 100 m (see next page)</li> </ul>	
It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)	
It is mapped as a location for an individual WDFW priority species	

- It is mapped as a location for an individual WDFW priority species
   It is a Wetland of High Conservation Value as determined by the Department of Natural Resources
- ---- It has been categorized as an important habitat site in a local or regional comprehensive plan, in a
- Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1

Site does not meet any of the critera above
Rating of Value If score is: \_\_2 = H \_\_1 = M \_\_0 = L

points = 0 Record the rating on the first page

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## **WDFW Priority Habitats**

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

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

- Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various species of native fish and
  wildlife (full descriptions in WDFW PHS report).
- Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
- Old-growth/Mature forests: <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).
- <u>A Riparian</u>: 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.

Wetland Rating System for Western WA: 2014 Update Rating Form - Effective January 1, 2015 Wetland name or number  $\underline{\mathcal{O}}$ 

### **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.	승규는 물건
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal,	
With a salinity greater than 0.5 ppt     Yes –Go to SC 1.1     No= Not an estuarine wettan	
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 332-30-15 Yes = Category I No - Go to SC 1.	1 (*** )
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are Spartina, see page 25) — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-	Cat. i
mowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = Category No = Categor	
SC 2.0. Wetlands of High Conservation Value (WHCV)           SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value?           Yes – Go to SC 2.2         No – Go to SC 2.           SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?         Yes = Category           Yes = Category         No = Not a WHC	3 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 WHC	1
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 WHC	
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 k 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 jun	
more of the first 32 in of the soil profile? Yes – Go to <b>SC 3.3</b> No – Gover 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 pond? Yes – Go to SC 3.3 No = is not a bo	c)
SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least 6 30% cover of plant species listed in Table 4? Yes = Is a Category ( bog No – Go to SC 3. NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion 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 t plant species in Table 4 are present, the wetland is a bog.	4 bγ
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of th 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 bo</b>	

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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.	
<ul> <li>Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).</li> </ul>	
Yes = Category I No = Not e 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?	l
— The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks	
- The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt)	
during most of the year in at least a portion of the lagoon (needs to be measured neur the bottom)	Cat. I
Yes – Go to SC 5.1 No = Not a wetland in a coastal goon 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
The wetland is larger than $1/_{10}$ ac (4350 ft <sup>2</sup> )	
Yes = Category I No = Category I	
SC 6.0. Interdunal Wetlands	
Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If	
you answer yes you will still need to rate the wetland based on its habitat functions.	
In practical terms that means the following geographic areas:	
Long Beach Peninsula: Lands west of SR 103     Grayland-Westport: Lands west of SR 105	Catl
Ocean Shores-Copalis: Lands west of SR 115 and SR 109	
Yes – Go to SC 6.1 No = not an interdunal wetland for rating	
SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M	Cat. II
for the three aspects of function)? Yes = Category 1 No - Go to SC 6.2	Ì
SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?	Cat. III
Yes = Category II No – Go to SC 6.3 SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?	
Yes = Category III No = Category IV	
	Cat. IV
Category of wetland based on Special Characteristics	AIA
If you answered No for all types, enter "Not Applicable" on Summary Form	IVA

Wetland name or number

## **RATING SUMMARY – Western Washington**

Montesa

Name of wetland (or ID #): TCMA Wet X/CP Date of site visit: Rated by\_\_\_ \_ Trained by Ecology?\_\_ Yes \_\_\_No Date of training\_\_

HGM Class used for rating \_\_\_\_\_\_ Wetland has multiple HGM classes?\_\_\_Y \_\_\_\_N

**NOTE:** Form is not complete without the figures requested (figures can be combined). Source of base aerial photo/map \_\_\_\_

OVERALL WETLAND CATEGORY TT [based on functions \_\_\_\_\_ or special characteristics \_\_\_]

### 1. Category of wetland based on FUNCTIONS

Category I - Total score = 23 - 27 Category II – Total score = 20 - 22 Category III - Total score = 16 - 19 Category IV - Total score = 9 - 15 FUNCTION Improving Hydrologic Habitat Water Quality Circle the appropriate ratings Site Potential (M) L H (M)н H (M) L Landscape Potential Н THU L н (M) L н (M) Value н MO Н M) TOTAL Ηh м Ł L Score Based on 5 18 ່ວ Ratings

	Score for each function based on three ratings (order of ratings is not important)
	9 = H,H,H
	8 = H,H,M
1	7 = H,H,L
	7 = H,M,M
	6 = H,M,L
	6 = M,M,M
	5 ≃ H,L,L
1	5 = M,M,L
	4 = M,L,L
1	3 = L,L,L

1

### 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	1
Old Growth Forest	1
Coastal Lagoon	1 11
Interdunal	11111
None of the above	

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## X/CP Wetland name or number

## 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 Połygon: Area that extends 1 km from entire wetland edge - including połygons 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)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

### **Riverine Wetlands**

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (con 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 polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L3.3	

#### **Slope Wetlands**

Map of:	To answer questions: Figure A
Cowardin plant classes	H 1.1, H 1.4
Hydroperiods	H 1.2
Plant cover of dense trees, shrubs, and herbaceous plants	S1.3
Plant cover of <b>dense, rigid</b> trees, shrubs, and herbaceous plants (can be added to figure above)	S 4.1
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 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)	\$ 3.1, \$ 3.2
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	\$ 3.3

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## HGM Classification of Wetlands in Western Washington

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

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

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

NO - go to 2 YES - the wetland class is Tidal Fringe - go to 1.1

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

NO - Saltwater Tidal Fringe (Estuarine) If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.

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

NO – go to 3 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).

YES - The wetland class is Lake Fringe (Lacustrine Fringe)

NO-go to 4

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 waterpleaves the wetland without being impounded.

NO - go to 5

YES – The wetland class is Slope

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

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

- \_\_\_\_The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
- \_\_\_\_The overbank flooding occurs at least once every 2 years.

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X/CP Wetland name or number

 NO - go to 6
 YES - The wetland class is Riverine

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

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

NO - go to 7

YES - The wetland class is Depressional

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

NO – go to 8

YES - The wetland class is Depressional

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

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

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

If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.

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Wetland name or number 1/CP

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	t (no outlet).	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flow	points = 3 ring outlet. points = 2	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowin	the second se	_
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch	~ .	2
D 1.2. The soil 2 in below the surface (or duff laver) is true clay or true organic (use NRCS definitions).	and the second se	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested C	owardin classes):	
Wetland has persistent, ungrazed, plants > 95% of area	points = 5	
Wetland has persistent, ungrazed, plants > ½ of area	points = 3	
Wetland has persistent, ungrazed plants > $1/_{10}$ of area	points = 1	2
Wetland has persistent, ungrazed plants $< 1/10$ of area	points = 0	
D 1.4. Characteristics of seasonal ponding or inundation:		
This is the area that is ponded for at least 2 months. See description in manual.		
Area seasonally ponded is > ½ total area of wetland	points = 4	
Area seasonally ponded is > ¼ total area of wetland	points = 2	7
Area seasonally ponded is < ¼ total area of wetland	points = 0	2
Total for D 1. Add the points in th	e boxes above	7

ne site?	
Yes = 1 No = 0	C
Yes = 1 to = 0	1
Yes = No = 0	0
ions D 2.1-D 2.3? Yes = 1 No =0	0
s in the boxes above	)
	Yes = $1 No = 0$ Yes = $1 0 = 0$ Yes = $No = 0$ ons D 2.1-D 2.3? Yes = $1 00 = 0$

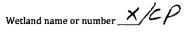
Rating of Landscape Potential If score is: \_\_\_3 or 4 = H \_\_\_1 or 2 = M \_\_\_\_0 = L Record the rating on the first page

D 3.0. Is the water quality improvement provided by the site valuab	le to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, r 303(d) list?	iver, lake, or marine water that is on the $Yes = 2$ No = 0	}
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is o	on the 303(d) list? (Yes $=$ No = 0	١
D 3.3. Has the site been identified in a watershed or local plan as importar if there is a TMDL for the basin in which the unit is found)?	nt for maintaining water quality (poswer YES Yes = 2 No = 0	2
Total for D 3	Add the points in the boxes above	4
	Add the points in the boxes above	Ľ

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

Record the rating on the first page

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DEPRESSIONAL AND FLATS WETLANDS Hydrologic Functions - Indicators that the site functions to reduce flooding and stream d	egradation
2 4.0. Does the site have the potential to reduce flooding and erosion?	CEIGGALIOIT
0 4.1. Characteristics of surface water outflows from the wetland:	F
Wetland is a depression or flat depression with no surface water leaving it (no outlet) poir Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch poir	nts = 4 points = 2 nts = 1 7 nts = 0
0 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For w	
with no outlet, measure from the surface of permanent water or if dry, the deepest part.         Marks of ponding are 3 ft or more above the surface or bottom of outlet       points         Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet       points	= 7 = 5
Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet	=1 3
0.4.3. <u>Contribution of the wetland to storage in the watershed</u> : Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.	
The area of the basin is less than 10 times the area of the unit     points       The area of the basin is 10 to 100 times the area of the unit     Doints       The area of the basin is more than 100 times the area of the unit     points       Entire wetland is in the Flats class     points	=3
Total for D 4 Add the points in the boxes ab	ove 8
tating of Site Potential if score is: 12-16 = H 6-11 = M 0-5 = L Record the rati	ng on the first pag
5.0. Does the landscape have the potential to support hydrologic functions of the site?	<u> </u>
0.5.1. Does the wetland receive stormwater discharges? Yes = 1 No	=0 0
) 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? (res = 1) to	=0 +
) 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (reside >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 bio	
Total for D 5 Add the points in the boxes ab	ove Z_
tating of Landscape Potential If score is: 3 = H 1 or 2 = M 0 = L Record the rational	ng on the first pag
) 6.0. Are the hydrologic functions provided by the site valuable to society?	<u></u>
0.6.1. <u>The unit is in a landscape that has flooding problems</u> . Choose the description that best matches conditions the wetland unit being rated. Do not add points. <u>Choose the highest score if more than one condition is may</u> The wetland captures surface water that would otherwise flow down-gradient into areas where flooding h damaged human or natural resources (e.g., houses or salmon redds):	<u>et</u> . nas
Flooding occurs in a sub-basin that is immediately down-gradient of unit. points     Surface flooding problems are in a sub-basin farther down-gradient. points     Flooding from groundwater is an issue in the sub-basin. points	= 1 = 1
The existing or potential outflow from the wetland is so constrained by human or natural conditions that t water stored by the wetland cannot reach areas that flood. <i>Explain why</i> points. There are no problems with flooding downstream of the wetland.	=0
0 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control	plan?
Varia D. Ma	
Yes ≈ 2 No Fotal for D 6 Add the points in the boxes ab	- <u> </u>

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## Wetland name or number $\times / C P$

These questions apply to wetlands of all HGM classes.	
HABITAT FUNCTIONS - Indicators that site functions to provide important habitat	
H 1.0. Does the site have the potential to provide habitat?	
H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of % ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.        Aquatic bed       4 structures or more: pointer        Ebrergent       3 structures: points = 2        Scrab-shrub (areas where shrubs have > 30% cover)       2 structures: points = 1        Forested (areas where trees have > 30% cover)       1 structure: points = 0        If the unit has a Forested class, check if:       1	
The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon	14
H 1.2. Hydroperiods         Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or % ac to count (see text for descriptions of hydroperiods).	• •
H 1.3. Richness of plant species	<u>ا</u>
Count the number of plant species in the wetland that cover at least 10 ft <sup>2</sup> . Different parches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoll, reed canarygrass, purple loosestrife, Canadian thistle if you counted: > 19 species points = 2 5 - 19 species points = 0 < 5 species points = 0	>
H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. <i>If you have four or more plant classes or three classes and open water, the rating is always high.</i> None = 0 points Low = 1 point Moderate = 2 points All three diagrams in this row are HIGH = 3points	2

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Wetland name or number $\underline{\times}/CP$	
H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. The number of checks is the number of points.	
Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).	
Standing snags (dbh > 4 in) within the wetland	
Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m)	
over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)	
Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree	
slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered	
where wood is exposed)	
At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are	
permanently or seasonally inundated (structures for egg-laying by amphibians)	
invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of	2
strata)	
Total for H 1 Add the points in the boxes above	10
Rating of Site Potential If score is: 15-18 = H7-14 = M0-6 = L Record the rating of	the first page
H 2.0. Does the landscape have the potential to support the habitat functions of the site?	_
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).	
Calculate: 5 % undisturbed habita $\frac{35}{12}$ + [(% moderate and low intensity land uses)/2]/7 = $\frac{72}{12}$ %	
If total accessible habitat is:	
> 1/3 (33.3%) of 1 km Polygon	
20-33% of 1 km Polygon (points = 2)	)
10-19% of 1 km Polygon points = 1	2
< 10% of 1 km Polygon points = 0	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	
Calculate: $10^{\circ}$ % undisturbed habitat $35 + [(\% \text{ moderate and low intensity land uses})/2] = 27^{\circ} %$	
Undisturbed habitat > 50% of Polygon points = 3	
Undisturbed habitat 10-50% and in 1-3 patches	1
Undisturbed habitat 10-50% and > 3 patches	
Undisturbed habitat < 10% of 1 km Polygon points = 0	L L
H 2.3. Land use intensity in 1 km Polygon: if	
> 50% of 1 km Polygon is high intensity land use points = (- 2)	
≤ 50% of 1 km Polygon is high intensity (points = 0	
Total for H 2 Add the points in the boxes above	3
Rating of Landscape Potential If score is:4-6 = H1-3 = M<1 = L Record the rating on	the first page
H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score	
that applies to the wetland being rated.	
Site meets ANY of the following criteria: points = 2	
<ul> <li>It has 3 or more priority habitats within 100 m (see next page)</li> </ul>	
It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)	
<ul> <li>It is mapped as a location for an individual WDFW priority species</li> </ul>	
It is a Wetland of High Conservation Value as determined by the Department of Natural Resources	
It has been categorized as an important habitat site in a local or regional comprehensive plan, in a	
Shoreline Master Plan, or in a watershed plan	
Site has 1 or 2 priority habitats (listed on next page) within 100 m	
Site does not meet any of the criteria above points = 0	1
Rating of Value If score is:2 = H1 = M0 = L Record the rating o	) the first page

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## **WDFW Priority Habitats**

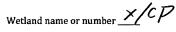
Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. http://wdfw.wa.gov/publications/00165/wdfw00165.pdf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

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

- Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various species of native fish and
  wildlife (full descriptions in WDFW PHS report).
- Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
- Old-growth/Mature forests: <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.

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#### CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetla	nd Type	Category
Check o	ff any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	
	Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, Vocentral and	
	Vegetated, and	
	- With a salinity greater than 0.5 ppt Yes -Go to SC 1.1 No= Not an estuarine wetland	
	Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I No - Go to SC 1.2	Cat. I
SC 1.2.	s the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
	<ul> <li>The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i>, see page 25)</li> <li>At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-</li> </ul>	Cat. i
	mowed grassland. The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = Category I No = Category II	Cat. II
SC 2.1.	Wetlands of High Conservation Value (WHCV)         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         s the wetland listed on the WDNR database as a Wetland of High Conservation Value?       No – Go to SC 2.2         Yes – Go to SC 2.2       No – Go to SC 2.2         S the wetland listed on the WDNR database as a Wetland of High Conservation Value?       Yes – Gategory I	Cat. I
	s the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
	Yes – Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? Yes = Category I No = Not a WHCV	
SC 3.0.		
	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.	
	Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? Yes – Go to SC 3.3 (No – Go to SE 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 take pr pond? Yes – Go to SC 3.3 No = is not bog	
	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.	Cat. I
SC 3.4.	is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = Is a Category I bog No = Is not a bog	

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Wetland name or number  $\underline{\times/CP}$ 

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 Flsh and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate</i> <i>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> </ul>	
<ul> <li>Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).</li> </ul>	
Yes = Category I No = Not a forested wetland for this section	Cat. I
SC 5.0. Wetlands in Coastal Lagoons	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
<ul> <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> </ul>	
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)	Cat. I
Yes - Go to SC 5.1 No = Not a wetland in a coastal lagdon	
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 % 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 $\frac{1}{10}$ ac (4350 ft <sup>2</sup> )	
Yes = Category I No = Category II	
SC 6.0. Interdunal Wetlands	
Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If	
you answer yes you will still need to rate the wetland based on its habitat functions.	
In practical terms that means the following geographic areas: — Long Beach Peninsula: Lands west of SR 103	
Grayland-Westport: Lands west of SR 105	Cati
Ocean Shores-Copalis: Lands west of SR 115 and SR 109	
Yes - Go to SC 6.1 No not an interdunal wetland for rating	
SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M	Cat. II
for the three aspects of function)? Yes = Category I No – Go to SC 6.2	
SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?	C 111
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	
105 - Canegory III 140 - Calegory IV	Cat. IV
Category of wetland based on Special Characteristics	ALA
If you answered No for all types, enter "Not Applicable" on Summary Form	141

## Montessa

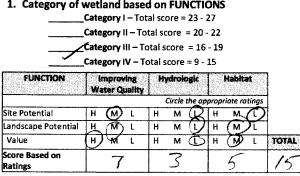
## **RATING SUMMARY – Western Washington**

Name of wetland (or ID #):	ty Terra Date of site visit: 2-18-18
Rated by 50 Send	Trained by Ecology?YesNo Date of training
HGM Class used for rating	Wetland has multiple HGM classes?YN

NOTE: Form is not complete without the figures requested (figures can be combined). Source of base aerial photo/map \_\_\_\_

OVERALL WETLAND CATEGORY \_\_\_\_\_ (based on functions \_\_\_\_ or special characteristics \_\_\_\_)

### 1. Category of wetland based on FUNCTIONS



	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
1	7 = H,M,M
	6 = H,M,L
	6 = M,M,M
	5 = H,L,L
	5 = M,M,L
	4 = M,L,L
1	3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	1 11
Wetland of High Conservation Value	1
Bog	1
Mature Forest	I
Old Growth Forest	1
Coastal Lagoon	I II
Interdunal	I II HI IV
None of the above	

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1

## Wetland name or number

## 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	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 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)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

### **Riverine Wetlands**

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	1
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 polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

### Slope Wetlands

Map of:	To answer questions: Figure #
Cowardin plant classes	H 1.1, H 1.4
Hydroperiods	H 1.2
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (can be added to figure above)	S 4.1
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 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)	S 3.1, S 3.2
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	\$ 3.3

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Wetland name or number

## HGM Classification of Wetlands in Western Washington

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

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

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

(NO - go to 🕽

YES - the wetland class is Tidal Fringe - go to 1.1

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

NO - Saltwater Tidal Fringe (Estuarine) YES - Freshwater Tidal Fringe If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an Estuarine wetland and is not scored. This method cannot be used to score functions for estuarine wetlands.

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

NO-go to 3 YES - The wetland class is Flats If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.

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

YES - The wetland class is Lake Fringe (Lacustrine Fringe)

NO-go to 4

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

- \_\_\_\_The wetland is on a slope (slope can be very gradual),
- \_\_\_\_The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks, \_\_\_\_The water leaves the wetland without being impounded.
- NO go to 5

YES - The wetland class is Slope

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

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

- \_\_\_\_The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river.
- \_\_\_\_The overbank flooding occurs at least once every 2 years.

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## Wetland name or number

NQ - go to 6 YES - The wetland class is Riverine NOTE: The Riverine unit can contain depressions that are filled with water when the river is not flooding

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

NO - go to 7

YES - The wetland class is Depressional

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

NO - go to 8

### YES - The wetland class is Depressional

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

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

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

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DEPRESSIONAL AND FLATS WETLANDS Water Quality Functions - Indicators that the site functions to impro	ove 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 lear	ving it (no outlet).	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently	points = 3 flowing outlet. points = 2	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently fi		
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing (	• •	2
D 1.2. The soil 2 in below the surface (or duff laver) is true clay or true organic (use NRCS definiti		0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forest	ted Cowardin classes):	
Wetland has persistent, ungrazed, plants > 95% of area	points = 5	
Wetland has persistent, ungrazed, plants > ½ of area	points = 3	
Wetland has persistent, ungrazed plants > $1/_{10}$ of area	points = 1	5
Wetland has persistent, ungrazed plants $<^{1}/_{10}$ of area	points = 0	5
D 1.4. Characteristics of seasonal ponding or inundation:		
This is the area that is ponded for at least 2 months. See description in manual.		
Area seasonally ponded is > ½ total area of wetland	points = 4	
Area seasonally ponded is > 1/2 total area of wetland	points = 2	$\sim$
Area seasonally ponded is < 1/2 total area of wetland	points = 0	
Total for D 1 Add the points	in the boxes above	7

D 2.0. Does the landscape have the potential to support the water quality function	of the site?	
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 (No = 0)	0
D 2.2. is > 10% of the area within 150 ft of the wetland in land uses that generate pollutant	ts? Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 (No = 0)	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in a Source	questions D 2.1-D 2.3? Yes = 1 (No = 0	0
Total for D 2 Add the	points in the boxes above	1

Rating of Landscape Potential If score is:\_\_\_3 or 4 = H \_\_\_\_\_ for 2 = M \_\_\_\_0 = L Record the rating on the first page

D 3.0. Is the water quality improvement provided by the site valuable to society?		
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine v 303(d) list?	vater that is on the $\sqrt{es = 1}$ No = 0	I
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?	Ves=1 No=0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining wat if there is a TMDL for the basin in which the unit is found)?	ter quality (answer YES Yes = 2 No = 0	2
Total for D 3 Add the point	s in the boxes above	4

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

Record the rating on the first page

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## Wetland name or number $\underline{\checkmark}$

DEPRESSIONAL AND FLATS WETLANDS Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degrada	tion
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> : Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4 Wetland has an intermittently flowing stream or ditch. OR highly constricted permanently flowing outletpoints = 7 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch points = 1 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	2
D 4.2. <u>Depth of storage during wet periods</u> ; Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part. Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 The wetland is a "headwater" wetland points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in)	0
D 4.3. <u>Contribution of the wetland to storage in the watershed</u> : Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of the unit The area of the basin is 10 to 100 times the area of the unit The area of the basin is more than 100 times the area of the unit Entire wetland is in the Flats class Total for D 4 Add the points in the base above	0
Rating of Site Potential If score is: 12-16 = H6-11 = M0-5 = L Record the rating on the	
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?	, jii st page
D 5.0. Does the randocape nave the potential to support hydrologic functions of the siter D 5.1. Does the wetland receive stormwater discharges? Ves = $1 (No=0)$	0
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	0
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0	0
Total for D 5 Add the points in the boxes above	0
Rating of Landscape Potential If score is: 3 = H 1 or 2 = M 0 = L Record the rating on the	e first page
D 6.0. Are the hydrologic functions provided by the site valuable to society?	
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met. The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or saimon redds):         • Flooding occurs in a sub-basin that is immediately down-gradient of unit.       points = 2         • Surface flooding problems are in a sub-basin farther down-gradient.       points = 1         Flooding from groundwater is an issue in the sub-basin.       points = 1	
The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. <i>Explain why</i> points = 0	
There are no problems with flooding downstream of the wetland.	0
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	0
Yes = 2 No = 0	

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	potential to provide habitat?	vide important habitat	
1.1. Structure of plant commu	nity: Indicators are Cowardin classes and	strata within the Forested class. Check the	
		ombined for each class to meet the threshold	
	of the unit if it is smaller than 2.5 ac. Ad	-	
Aquatic bed		4 structures or more: points = 4	
Emergent		3 structures: points = 2	
	here shrubs have > 30% cover)	2 structures: points = 1	
·	e trees have > 30% cover)	1 structure: $points = 0^2$	
If the unit has a Fore.			-
		shrubs, herbaceous, moss/ground-cover)	$\mathcal{O}$
1.2. Hydroperiods	within the Forested polygon		
• • • • • • • • • • • • • • • • • • • •	animas (hudronoriads) present within th	ne wetland. The water regime has to cover	
	land or % ac to count (see text for descri	*	
Permanently flooded		4 or more types present: points = 3	
Seasonally flooded or		3 types present: points = 3	
Occasionally flooded		2 types present: points = $1$	
Saturated only	5 manuella	1 type present: points = $\theta$	
	stream or river in, or adjacent to, the we		
	eam in, or adjacent to, the wetland		
Lake Fringe wetland	·····	2 points	
Freshwater tidal wet	and	2 points	0
1.3. Richness of plant species			
Count the number of plan	t species in the wetland that cover at lea	st 10 ft <sup>2</sup> .	
		e size threshold and you do not have to name	
•	de Eurasian milfoil, reed canarygrass, p	urple loosestrife, Canadian thistle	
If you counted: > 19 specie		points = 2	
5 - 19 spe		points = 1	0
< 5 specie	<u>s</u>	points-0	<u> </u>
1.4. Interspersion of habitats			
		wardin plants classes (described in H 1.1), or Iflats) is high, moderate, low, or none, <i>If you</i>	
•	asses or three classes and open water of muc		
nave jour of more plant ca	isses of three classes and open water, in	ie ruting is utways high.	
$\frown$		$\frown$	
()	$(\bigcirc)$		
	$(\bigcirc)$		
Section 1	Low = 1 point	Moderate = 2 points	
None = 0 points			
None = 0 points			
Nane = 0 points	-		
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## **WDFW Priority Habitats**

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

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

- Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various species of native fish and
  wildlife (full descriptions in WDFW PHS report).
- Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
- Old-growth/Mature forests: <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.

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#### CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetla	nd Type	Category
Check of	ff 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	
F	Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	
	Yes = Category I No - Go to SC 1.2	Cat. I
SC 1.2. I	s the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	1
	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 Sporting, see page 25)	Cat. I
	- 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 has at least two of the following features: tidal channels, depressions with open water, or	Cat. II
	contiguous freshwater wetlands. Yes = Category I No = Category II	
60.2.0	Wetlands of High Conservation Value (WHCV)	<u> </u>
	las the WA Department of Natural Resources updated their website to include the list of Wetlands of High	
	Conservation Value? Yes – Go to SC 2.2 No – Go to SC 2.3	Cat. i
	s the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
36 2.2.1	Yes = Category i No = Note WHY	
50 2 2 1	s the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
	http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetiands.pdf	
1	Yes - Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV	
SC 2.4. H	las WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on	
	heir website? Yes = Category   No = Not a WHCV	
SC 3.0.		
	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.	
	Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or.	
	more of the first 32 in of the soil profile? Yes – Go to SC 3.3 No – Go to SC 3.2	
SC 3.2. D	Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep	1
c	over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or	4
F	bond? Yes - Go to SC 3.3 No is not a bos	1
SC 3.3. D	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	
	neasuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the	
	plant species in Table 4 are present, the wetland is a bog.	Cat. I
	s an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar,	
	western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the	ł
5	species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	1
	Yes = <b>is a Category I bog</b> No = <b>is not a bog</b>	l

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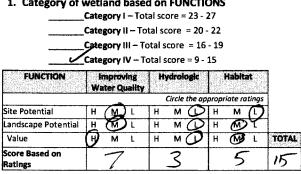
# Wetland name or number

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> <i>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</li> </ul>	
age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more. —— Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the	
species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).	
Yes = Category i No = Not a forested wetland for this Section	Cat. I
SC 5.0. Wetlands in Coastal Lagoons	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
— The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks	
The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt)	
during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)	Cat. i
Yes Go to SC 5.1 No=Not a wetland in a coastal Tapoor	
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 % of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-	1
mowed grassland.	
The wetland is larger than $1/_{10}$ ac (4350 ft <sup>2</sup> )	
Yes = Category I No = Category II	
SC 6.0. Interdunal Wetlands	
Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If	
you answer yes you will still need to rate the wetland based on its habitat functions.	
In practical terms that means the following geographic areas:	
Long Beach Peninsula: Lands west of SR 103	Catl
Grayland-Westport: Lands west of SR 105     Ocean Shores-Copalis: Lands west of SR 115 and SR 109	Curr
Yes - Go to SC 6.1 No =not an interdunal wetland for ration	
SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M	Cat. II
for the three aspects of function)? Yes = Category 1 No – Go to SC 6.2	
SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = Category II No - Go to SC 6.3	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	
If you answered No for all types, enter "Not Applicable" on Summary Form	NA

## Montese **RATING SUMMARY – Western Washington** Name of wetland (or ID #): WEMM W Date of site visit: 2-18-18 Rated by Ed Sand Trained by Ecology? Yes No Date of training HGM Class used for rating Defure Wetland has multiple HGM classes?\_\_\_Y NOTE: Form is not complete without the figures requested (figures can be combined). Source of base aerial photo/map \_\_\_\_

OVERALL WETLAND CATEGORY (based on functions or special characteristics )

### 1. Category of wetland based on FUNCTIONS



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	1
Bog	1
Mature Forest	1
Old Growth Forest	1
Coastal Lagoon	1 11
Interdunal	I II III IY
None of the above	

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1

## Wetland name or number

## 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 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)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

### **Riverine Wetlands**

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

#### Slope Wetlands

To enswer questions:	Figure #
H 1.1, H 1.4	
H 1.2	
51.3	
S 4.1	
S 2.1, S 5.1	
H 2.1, H 2.2, H 2.3	
S 3.1, S 3.2	
S 3.3	
	H 1.1, H 1.4 H 1.2 S 1.3 S 4.1 S 2.1, S 5.1 H 2.1, H 2.2, H 2.3 S 3.1, S 3.2

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## HGM Classification of Wetlands in Western Washington

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

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

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

NO - go to? YES - the wetland class is Tidal Fringe - go to 1.1

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

NO - Saltwater Tidal Fringe (Estuarine) YES - Freshwater Tidal Fringe If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is an Estuarine wetland and is not scored. This method cannot be used to score functions for estuarine wetlands.

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

NO - go to 8 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).

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

NO - go to 4

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.

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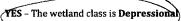
W Wetland name or number

NO - 20 to 6

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

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

NO - go to 7



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 OUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

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

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

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Wetland name or number

DEPRESSIONAL AND FLATS WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland:	
Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet).	1
points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. 60ints = 2	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	2
D 1.2. The soil 2 in below the surface (or duff laver) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0	0
D 1.3. <u>Characteristics and distribution of persistent plants</u> (Emergent, Scrub-shrub, and/or Forested Cowardin <u>classes</u> ): Wetland has persistent, ungrazed, plants > 95% of area	
Wetland has persistent, ungrazed, plants > ½ of area points = 3	1
Wetland has persistent, ungrazed plants > $1/_{10}$ of area points = 1	-
Wetland has persistent, ungrazed plants $<^{1}/_{10}$ of area points = 0	17
D 1.4. <u>Characteristics of seasonal ponding or inundation</u> : 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	1
Area seasonally ponded is > ¼ total area of wetland	12
Area seasonally ponded is < ¼ total area of wetland points = 0	
Total for D 1 Add the points in the boxes above	9
Total for D 1 Add the points in the boxes above Rating of Site Potential If score is: 12-16 = H	L

D 2.0. Does the landscape have the potential to support the water quality function	n of the siter	
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0	$\mathcal{C}$
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutar	ts? $Yes = 1$ No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in Source	questions D 2.1-D 2.3? Yes = 1 10 = 0	0
Total for D 2 Add the	points in the boxes above	

 D 3.0. Is the water quality improvement provided by the site valuable to society?

 D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?

 D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?
 //

 D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality lanswer YES if there is a TMDL for the basin in which the unit is found)?
 //

 Total for D 3
 Add the points in the boxes above
 //

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

Record the rating on the first page

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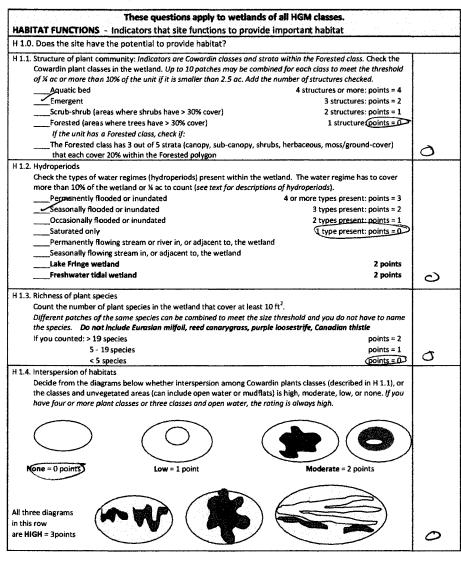
## N

Wetland name or number \_\_\_\_\_

DEPRESSIONAL AND FLATS WET		
Hydrologic Functions - Indicators that the site functions to reduc	e flooding and stream degradation	on
D 4.0. Does the site have the potential to reduce flooding and erosion?		
D 4.1. Characteristics of surface water outflows from the wetland:		
Wetland is a depression or flat depression with no surface water leaving it (n	o outlet) points = 4	
Wetland has an intermittently flowing stream or ditch, OR highly constricted	permanently flowing outletpoints = 25	
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permane	ently flowing ditch points = 1	Z
Wetland has an unconstricted, or slightly constricted, surface outlet that is p	ermanently flowing points = 0	
0 4.2. Depth of storage during wet periods: Estimate the height of ponding above the	he bottom of the outlet. For wetlands	
with no outlet, measure from the surface of permanent water or if dry, the de	epest part.	
Marks of ponding are 3 ft or more above the surface or bottom of outlet	points = 7	
Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet	points = 5	
Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet	points = 3	
The wetland is a "headwater" wetland	points = 3	
Wetland is flat but has small depressions on the surface that trap water	points = 1	0
Marks of ponding less than 0.5 ft (6 in)	points =02	
0 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of	of the area of upstream basin	
contributing surface water to the wetland to the area of the wetland unit itse		
The area of the basin is less than 10 times the area of the unit	points = 5	
The area of the basin is 10 to 100 times the area of the unit	points = 3	
The area of the basin is more than 100 times the area of the unit	points = 0	$\sim$
Entire wetland is in the Flats class	points = 5	<u> </u>
otal for D 4	dd the points in the boxes above	Z
tating of Site Potential If score is:12-16 = H6-11 = M0-5 = L	Record the rating on the f	irst pag
5.0. Does the landscape have the potential to support hydrologic function	s of the site?	
D 5.1. Does the wetland receive stormwater discharges?	Yes = No =	0
0.5.2. Is $>10\%$ of the area within 150 ft of the wetland in land uses that generate expression of the second sec	xcess runoff? Yes = No=0	-0
0 5.3. Is more than 25% of the contributing basin of the wetland covered with inter	sive human land uses (residential at	0
>1 residence/ac, urban, commercial, agriculture, etc.)?	Yes = No = 0	$\mathcal{O}$
Total for D 5	dd the points in the boxes above	0
lating of Landscape Potential If score is: 3 = H1 or 2 = M0 = L	Record the rating on the f	irst pag
0 6.0. Are the hydrologic functions provided by the site valuable to society?		
0.1. The unit is in a landscape that has flooding problems. Choose the description	that best matches conditions around	
the wetland unit being rated. Do not add points. Choose the highest score if i	more than one condition is met.	
The wetland captures surface water that would otherwise flow down-gradier	nt into areas where flooding has	
damaged human or natural resources (e.g., houses or salmon redds):		
<ul> <li>Flooding occurs in a sub-basin that is immediately down-gradient of unit</li> </ul>	. points = 2	
<ul> <li>Surface flooding problems are in a sub-basin farther down-gradient.</li> </ul>	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 huma	an or natural conditions that the	
water stored by the wetland cannot reach areas that flood. Explain why	points = 0	
There are no problems with flooding downstream of the wetland.	points = D	>
0 6.2. Has the site been identified as important for flood storage or flood conveyan		
s des mas end been mentined as important for nood storage of nood conveyan	Yes $= 2$ No $= 0$	0
Fotal for D 6	dd the points in the boxes above	$\sim$

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## Wetland name or number $\_\mathcal{W}$



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## 

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 sings (dbh > 4 in) within the wetland Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland (or at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland for at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland. Invasive plants cover least than 25% of the wetland are in every stratum of plants [see H 1.1 for list of strong) Invasive plants cover least than 25% of the wetland that functions of the site? H 2.0. Does the landscape have the potential to support the habitat functions of the site? H 2.1. Accessible habitat (include only habitat flat directly abuts wetland unit). Calculate: S % undisturbed habitat 32 + (1% moderate and low intensity land uses)/21 = 1.5 % If total accessible habitat 15: > // (33.3%) of 1 km Polygon 20 joints = 2 10 joints = 2 10 joints = 2 10 joints = 10 H 2.2. Undisturbed habitat 10-50% and in 1.3 patches Undisturbed habitat 10-50% and > 3 patches Undisturbed habitat 20% of 1 km Polygon 11 joints = 0 H 2.3. Land use intensity in 1 km Polygon: if > 50% of 1 km Polygon if > 50% of 1 km Polygon if > 50% of 1 km Polygon if > 1.3. Loss 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 does are provide habitat for species valued in laws, regulations, or policies? Choose only t	H 1.5. Special habitat features:					
	Check the habitat features that are present in the wetland. The number of checks is the number of points.					
	Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).					
Undercurbankts are present for at least 6.6 f(2 m) and/or overhanging plants extends at least 3.3 ft (1 m)         over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)         Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed)         At least X as of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-loying by amphibions)         Invasive plants cover less than 25% of the wetland area in every stratum of plants [see H 1.1 for list of strato)         Total for H 1         Add the points in the boxes above         Rating of Site Potential If score is:1518 = H14= M046 = L         Record the rating on the first page         H 2.0. Does the landscape have the potential to support the habitat functions of the site?         H 2.1. Accessible habitat (include only habitat that directly abus wetland unit).         Calculate:       % undisturbed habitat 320+ [(% moderate and low intensity land uses)/2] (f =						
over a stream (or ditch) in, or contiguous with the wetland, for at less 13 ft [10 m)						
Stable scep banks of fine material that might be used by beaver or muskrat for deming (> 30 degree slope) OR signs of recent beaver activity are present ( <i>cut shrubs or trees that have nor yet weathered</i> where wood is exposed) 						
slope) OR igens of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed)		1				
where wood is exposed)						
At least % ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-loying by amphibians) [] invosive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strato) [] Total for H 1 Add the points in the boxes above [] Total for H 1 Action consister that direct that directly abus wetland unit). Calculate: [] % undisturbed habitat [] % undisturbed habitat 5.2 + [.[% moderate and low intensity land uses]/2] [] = % [] % undisturbed habitat 5.2 + [.[% moderate and low intensity land uses]/2] [] = % [] % undisturbed habitat 5.2 + [.[% moderate and low intensity land uses]/2] [] = % [] % undisturbed habitat 3.2 + [.[% moderate and low intensity land uses]/2] [] = % [] % undisturbed habitat 3.2 + [.[% moderate and low intensity land uses]/2] [] = % [] % undisturbed habitat 3.2 + [.[% moderate and low intensity land uses]/2] [] = % [] % undisturbed habitat 3.2 + [.[% moderate and low intensity land uses]/2] [] = % [] % undisturbed habitat 1.0 50% and in 1.3 patches [] % undisturbed habitat 1.0 50% and 3 patches [] % undisturbed habitat 1.0 50% and 3 patches [] % undisturbed habitat 1.0 50% and 3 patches [] % of 1 km Polygon is high intensity land use shore 1] % undisturbed habitat 1.0 50% of 1 km Polygon [] % undisturbed intensity [] % undisturbed intensity [] % undisturbed habitat 1.0 50% and 3 patches [] % (] % of 1 km Polygon [] % undisturbed habitat 1.0 50% and 3 patches [] % undisturbed habitat 1.0 50% and 3 patches [] % (] % undisturbed habitat 1.0 50% of 1 km Polygon [] % undisturbed habitat 1.0 50% and 3 patches [] % (] % (] % undisturbed habitat 1.0 50% and 3 patches [] % (] % (] % and use intens		1				
		1				
invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata) Chall for H 1 Add the points in the boxes above Rating of Sike Potential If score is:15-18 = H7-14 = M06 = L Record the rating on the first page H 2.0. Does the landscape have the potential to support the habitat functions of the site? H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit). Calculate:						
strate)       Add the points in the boxes above         Tatal for H 1       Add the points in the boxes above       Image: Construct of the strate of the st						
Total for H 1       Add the points in the boxes above       Image: the points in the points in the points in the boxes above       Image: the points in the		0				
Rating of Site Potential If score is:15-18 = H7-14 = M6-6 = L Record the rating on the first page H 2.0. Does the landscape have the potential to support the habitat functions of the site? H 2.1. Accessible habitat (include only, habitat that directly abuts wetland unit). Calculate:						
H 2.0. Does the landscape have the potential to support the habitat functions of the site? H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit). Calculate: % undisturbed habitat 32+ [(% moderate and low intensity land uses)/2] =		0				
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit). Calculate: % undisturbed habitat $32 + [(\% moderate and low intensity land uses)/2] = 15 %If total accessible habitat is:> 1/3 (3.3%) of 1 km Polygon20-33% of 1 km Polygon20-35% of Polygon20-36% Undisturbed habitat in 1-3 patches20-35% of 1 km Polygon is high intensity and use20-35% of 1 km Polygon is high intensity20-36 1 km Polygon is high intensity20-37 1 km Polygon is high intensity20-37 1 km Polygon is high intensity20-36 1 km Polygon is hi$	Rating of Site Potential if score is: 15-18 = H7-14 = M6-6 = L Record the rating of the statement	n the first page				
Calculate:       % undisturbed habitat $\underline{3} \underline{2} + [(\% moderate and low intensity land uses)/2] \underline{5} = \underline{5} \frac{5}{5}$ If total accessible habitat is:       > $\frac{1}{3}(33\%)$ of 1 km Polygon         20-33% of 1 km Polygon       points = 3         10-19% of 1 km Polygon       points = 1         <10% of 1 km Polygon	H 2.0. Does the landscape have the potential to support the habitat functions of the site?					
Calculate:       % undisturbed habitat $\underline{3} \underline{2} + [(\% moderate and low intensity land uses)/2] \underline{5} = \underline{5} \frac{5}{5}$ If total accessible habitat is:       > $\frac{1}{3}(33\%)$ of 1 km Polygon         20-33% of 1 km Polygon       points = 3         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).	1				
If total accessible habitat is: > $\frac{1}{1}$ (33.3%) of 1 km Polygon 20-33% of 1 km Polygon <pre>close of 1 km Polygon</pre> points = 2 points = 2 points = 2 points = 0 H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. Calculate: $\int \int %$ undisturbed habitat $\frac{20}{10} + [(\% moderate and low intensity land uses)/2] \int = \frac{3}{20} \%Undisturbed habitat in 1-50% and in 1-3 patchesUndisturbed habitat 10-50% and > 3 patchesUndisturbed habitat 10-50% and > 3 patchesUndisturbed habitat 10-50% and > 3 patchesUndisturbed habitat 10-50% of 1 km Polygon: If> 50% of 1 km Polygon is high intensity land use$ 50% of 1 km Polygon is high intensity land use$ 50% of 1 km Polygon is high intensity land use$ 50% of 1 km Polygon is high intensity land use$ 50% of 1 km Polygon is high intensity land use$ 50% of 1 km Polygon is high intensity land use$ 50% of 1 km Polygon is high intensity land use$ 50% of 1 km Polygon is high intensity land use$ 50% of 1 km Polygon is high intensity land use$ 20 km Points = 0H 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 scorethat applies to the wetland being rated.Site meets ANY of the following criteria:$ 1 this a Wetland of High Conservation Value as determined by the Department of Natural Resources$ 1 th is a Wetland of High Conservation Value as determined by the Department of Natural Resources$ 1 th as been categorized as an important habitat site in a local or regional comprehensive plan, in a$ Shoreline Master$	Coloridate: 0 % undistructed habitat 304 //% moderate and low intensity land user//21/5- 15%	1 1				
<pre>&gt; <sup>1</sup>/<sub>1</sub> (33.3%) of 1 km Polygon 20-33% of 1 km Polygon &lt;10-9% of 1 km Polygon &lt;10% of 1 km Polygon &lt;10% of 1 km Polygon &lt;10% of 1 km Polygon H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. Calculate: 1  % undisturbed habitat 32 + [(% moderate and low intensity land uses)/2] 1 = 3 0 % Undisturbed habitat &gt; 50% of Polygon Undisturbed habitat &gt; 50% of Polygon Undisturbed habitat 10-50% and &gt; 3 patches Undisturbed habitat &lt;10% of 1 km Polygon H 2.3. Land use intensity in 1 km Polygon: If &gt; 50% of 1 km Polygon is high intensity land use &gt; 50% of 1 km Polygon is high intensity and use &gt; 50% of 1 km Polygon is high intensity and use &gt; 50% of 1 km Polygon is high intensity and use &gt; 50% of 1 km Polygon is high intensity and use &gt; 50% of 1 km Polygon is high intensity and use &gt; 50% of 1 km Polygon is high intensity and use &gt; 50% of 1 km Polygon is high intensity and use &gt; 50% of 1 km Polygon is high intensity and use &gt; 50% of 1 km Polygon is high intensity Total for H 2 Rating of Landscape Potential If score is: 4-6 = H 1-3 = M &lt;1 = 1 Record the rating on the first page H 3.0. Is the habitat provided by the site valuable to society? H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score that applies to the wetland being rated. Site meets ANY of the following criteria: - 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. I ste has 1 or 2 priority habitats. I ste has 1 or 2 priority habitats. I this does not meet any of the criterjar above Diste does not meet any of the</pre>						
20-33% of 1 km Polygon       points = 2         10-19% of 1 km Polygon       points = 1         < 10% of 1 km Polygon		1 1				
10-19% of 1 km Polygon       points = 1         <10% of 1 km Polygon		1 1				
<pre>&lt; 10% of 1 km Polygon points = 0 H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. Calculate: / % undisturbed habitat 32 + [(% moderate and low intensity land uses)/2] / = 30% Undisturbed habitat &gt; 50% of Polygon points = 3 Undisturbed habitat 10-50% and &gt; 3 patches Undisturbed habitat 10% of 1 km Polygon If &gt; 50% of 1 km Polygon is high intensity land use \$ 50% of 1 km Polygon is high intensity land use \$ 50% of 1 km Polygon is high intensity land use \$ 50% of 1 km Polygon is high intensity land use \$ 50% of 1 km Polygon is high intensity land use \$ 50% of 1 km Polygon is high intensity land use \$ 50% of 1 km Polygon is high intensity land use \$ 50% of 1 km Polygon is high intensity land use \$ 50% of 1 km Polygon is high intensity land use \$ 50% of 1 km Polygon is high intensity land use \$ 50% of 1 km Polygon is high intensity land use \$ 50% of 1 km Polygon is high intensity land use \$ 200 mints = 0 \$ Points = 0 \$ Points = 0 \$ Points = 0 \$ Points = 1 \$ Points = 0 \$ Points = 1 \$ Points = 2 \$ Points = 1 \$ Points = 2 \$ Points = 1 \$ Points = 1 \$ Points = 1 \$ Points = 2 \$ Points = 1 \$ Points = 1 \$ Points = 2 \$ Points = 1 \$ Points =</pre>						
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Total for H 2       Add the points in the boxes above       Z         Rating of Landscape Potential If score is:       4-6 = H       1-3 = M       <1 = L						
Rating of Landscape Potential If score is:4-6 = H1-3 = M<1 = L		7				
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Wetland Rating System for Western WA: 2014 Update Rating Form – Effective January 1, 2015

## **WDFW Priority Habitats**

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

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

- Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various species of native fish and
  wildlife (full descriptions in WDFW PHS report).
- -- Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
- Old-growth/Mature forests: <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.

Wetland Rating System for Western WA: 2014 Update Rating Form - Effective January 1, 2015 Wetland name or number \_\_\_\_\_

#### CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

	and Type	Category
	off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met. . 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 SC1.1 No= Not an estuarine wetland	
SC 1.1.	Is the wetland within a National Wildlife Refuge, National Park, National Estuary Poserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I No - Go to SC 1.2	Cat. I
SC 1.2.	Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i> , see page 25) — At least % of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-	Cat. I
	mowed grassland. The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = Category I No = Category II	Cat. II
SC 2.1.	Wetlands of High Conservation Value (WHCV) Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? Yes – Go to SC 2.2 No – Go to SC 2.3 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	
SC 3.1.	. 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. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? Yes – Go to SC 3.3 No – Go to SC 3.2 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 of	
SC 3.3.	pond? Yes – Go to SC 3.3 No = Is not a bog 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.	
SC 3.4.	Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = is a Category I bog No = is not a bog	

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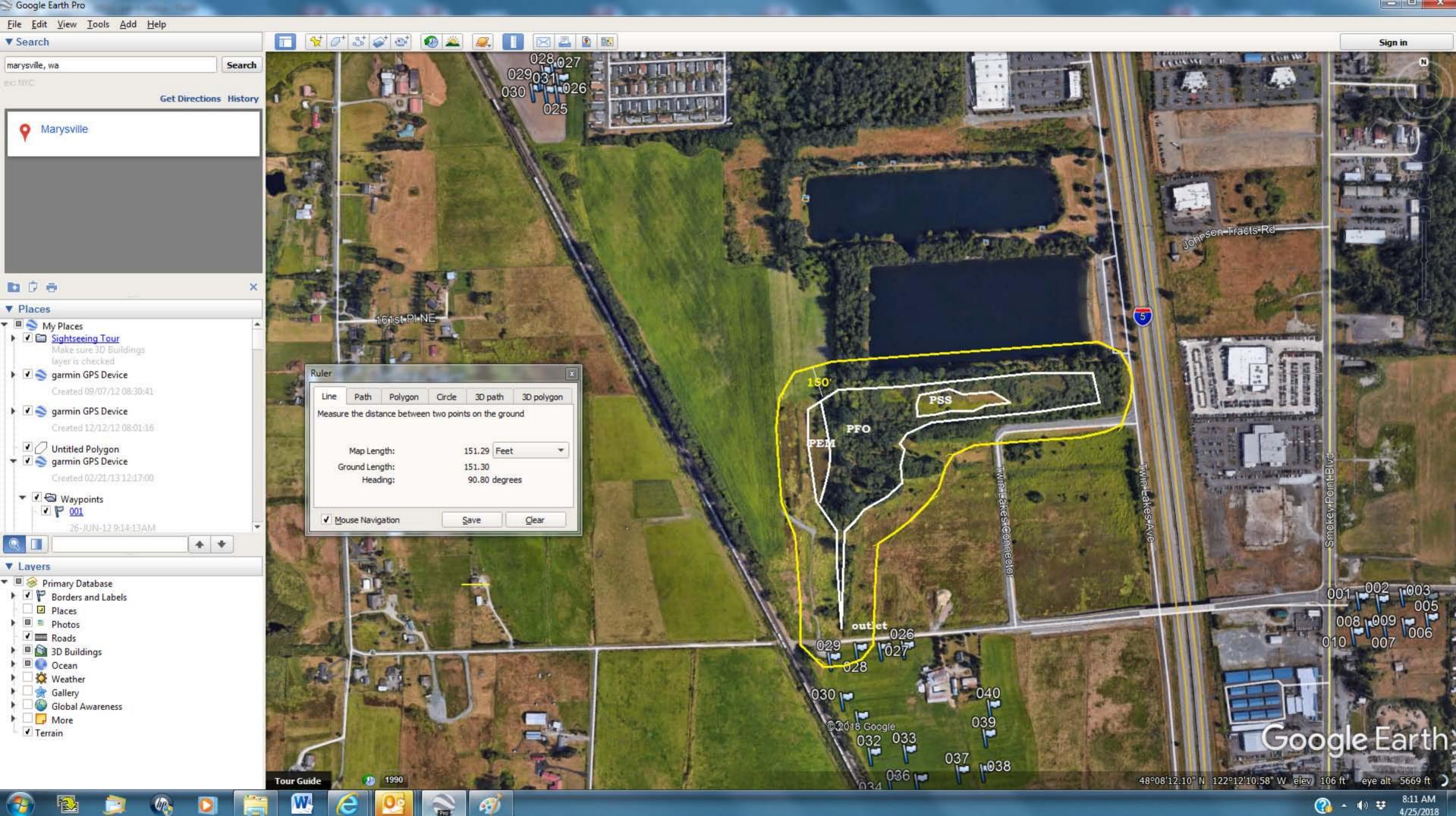
Does the wetland have at least 1 <u>contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildliffe's foresis as priority habitat? <i>If you answer YES you will still need to rate</i> <i>the wetland based</i> on <i>ks functions</i> . — Old-growth forests (west of Cascade crest). Stands of at least two tree species, forming a multi-layered conopy with occasional small openings, with at least 8 trees/ac (20 trees/ha) that are at least 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 (in [53 cm). Yes = Category! No = Nor & forested wetland for the species that make up the canopy have an average diameter (dbh) exceeding 21 (in [53 cm). Yes = Category! No = Nor & forested wetland for the species that make up the canopy have an average diameter (dbh) exceeding 21 (in [53 cm). Yes = Category! No = Nor & forested wetland for the species that make up the canopy have an average diameter (dbh) exceeding 21 (in [53 cm). Yes = Category! No = Nor & forested wetland for the species on <i>marine</i> waters that is sholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. — The lagoon in which the wetland is located contains ponded water that is saline or brackish [> 0.5, ppt] during most of the year in at least a portion of the lagoon (inceds to be meessified near the bottom) 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 labdward edge of the wetland based on its hobbitst functions. In practical terms that means the following geographic areas: — Long Beach Peninsula: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 105 Mes – Goto SC 6.5. SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions the form (rates H	SC 4.0. Forested Wetlands	
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 (B1 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 I No = Not a forested wetland for this section Cat. I SC 5.0. Wetlands in Coastal Lagoons Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholiv 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. pt) during most of the year in at least a portion of the lagoon (needs to be gwents) (> 0.5. pt) during most of the layoot of the lagoot of the lagoot of the bottom Yes - Go to SC 5.1 No = Not a wetland in a coastal lagoon SC 5.1. Does the wetland meet all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100). — At least % 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)? If you answer yes you will still need to rate the wetland based on its habitut functions. In practical terms that means the following geographic areas: — Long Beach Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 105 — Cotagory II No -Go to SC 6.2 SC 6.1. Is the wetland 1 ac or larger, or is it in a	Department of Fish and Wildlife's forests as priority habitats? If you answer YES you will still need to rate	
<ul> <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 = Category1 No = Not a forested wetland for the section Cat. 1</li> <li>SC 5.0. Wetlands in Coastal Lagoons</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 utiand lies in a depression adjacent to marine waters that is saline or brackish (&gt;0.5. pt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)</li> <li>Yes - Go to SC 5.1. Does the wetland meet all of the following tree 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> <li>Yes = Category 1 No = Category II</li> <li>SC 6.0. Interdunal Wetlands</li> <li>is the wetland vest of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If you answer yee you will still need to rate the wetland based on its habitat functions.</li> <li>In practical terms that means the following gregorphic 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 105</li> <li>Mo = Fort a larger?</li> <li>Yes = Category 1 No - Go to SC 6.2</li> <li>SC 6.3. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?</li>     &lt;</ul>	canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of	
SC 5.0. Wetlands in Coastal Lagoons         Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?         — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks         — The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5. ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)       Cat. I         SC 5.1. Does 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 X of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland.       — The wetland is larger than <sup>1</sup> / <sub>1.0</sub> ac (4350 ft <sup>2</sup> )       Cat. 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 hobitar functions. In practical terms that means the following geographic areas:       — Long Beach Peninsula: Lands west of SR 103       Cat. I         SC 6.1. Is the wetland 1 a cor larger and scores an 8 or 9 for the habitat functions. Interdunal wetland for rating Yes – Cotagory II No – Go to SC 6.2       Cat. II         SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = Category II No – Go to SC 6.3       Cat. III         Sc 6.3. Is the unit between 0.1 and 1 ac, or is it in a mos	Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the	
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<ul> <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;6.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be messfied near the bottom</i>) Yes – Go to SC 5.1 (No = Not a wetland in a coastal lagoon (<i>needs to be messfied near the bottom</i>).</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> <li>Yes = Category I No = Category II</li> <li>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 105</li> <li>Ocean Shores-Copalis: Lands west of SR 105</li> <li>C 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?</li> <li>Yes = Category II No – Go to SC 6.2</li> <li>SC 6.3. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?</li> <li>Yes = Category II No – Go to SC 6.3</li> <li>C 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?</li> <li>Yes = Category III No = Category IV</li> <li>Cat. IV</li> </ul> </li> <li>Category of wetland based on Special Characteristics</li> </ul>	SC 5.0. Wetlands in Coastal Lagoons	
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 (>6.5. ppt) during most of the year in at least a portion of the lagoon ( <i>needs to be measured near the bottom</i> ) Yes - Go to SC 5.1 No = Not a wetland in a coastal isoon 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 is larger than <sup>1</sup> / <sub>10</sub> 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 habitot functions. In practical terms that means the following geographic areas: — Long Beach Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 115 and SR 109 Yes – Go to SC 6.1 No mot an interdunal wetland for rating SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functionS on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = Category II No – Go to SC 6.2 SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = Category II No – Go to SC 6.3 Cat. II Cat. IV Category of wetland based on Special Characteristics		
during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)       Cat. I         Yes - Go to SC 5.1       No = Not a wetland in a coastal lagoon         SC 5.1. Does the wetland meet all of the following three conditions?       No = Not a wetland in a coastal lagoon         - 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 % of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland.       No = Category I       No = Category II         SC 6.0. Interdunal Wetlands       Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If you answer yes you will still need to rate the wetland based on its habitat functions.       In practical terms that means the following geographic areas:         - Long Beach Peninsula: Lands west of SR 103       Cat. I       Cat I         - Grayland-Westport: Lands west of SR 105       Cat. I       No - Go to SC 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 for the three aspects of function)?       Yes = Category II       No - Go to SC 6.2         SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?       Yes = Category III       No - Go to SC 6.3       Cat. III         SC 6.3. Is the unit between 0.1 and 1		
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<ul> <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 un-mowed grassland.</li> <li>The wetland is larger than <sup>1</sup>/<sub>10</sub> ac (4350 ft<sup>2</sup>)</li> <li>Yes = Category I No = Category II</li> <li>SC 6.0. Interdunal Wetlands         <ul> <li>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.             <ul></ul></li></ul></li></ul>		
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mowed grassland. — The wetland is larger than ${}^{1}_{10}$ ac (4350 ft <sup>2</sup> ) Yes = Category I No = Category II SC 6.0. Interdunal Wetlands Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If you answer yes you will still need to rate the wetland based on its habitat functions. In practical terms that means the following geographic areas: — Long Beach Peninšula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 Yes - Go to SC 6.1 No mot an interdunal wetland for rating SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = Category II No - Go to SC 6.2 SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = Category II No - Go to SC 6.3 SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? Yes = Category III No = Category IV Cat. IV Category of wetland based on Special Characteristics		
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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       Value       Value       Value		
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		Listing ID: 729	9	-11-		
		Main Listing Inform				
		Listing ID: 7299	2014 Category: 5			
		Waterbody Name: QUILCEDA CREEK, W.F.	2012 Category: 2			
		Medium: Water	2008 Category: 2			
		Parameter: Dissolved Oxygen	2004 Category: 2			
		WQI Project: Snohomish River Estuary Multiparameter TMDL	On 1998 303(d) List?: Y			
		Designated Use: None Assigned	On 1996 303(d) List?: Y			
		Assessment Ur	lit			
		Assessment Unit ID: 17110011000521				
		Location Identifica	ation			
		Counties: Snohomish	WRIA: 7 - Snohomish			
		Waterbody ID (WBID): None Assigned Waterbody	Class: RA			
		Town/Range/Section (Legacy): 31N-5E-29				
		Basis				
		Location ID [WFQUICEDA25] In 2001, 10 of 10 sample criteria for this waterbody, (criterion = 9.5 mg/L).	es (100.0%) showed an excurs	sion of the		
		Location ID [WFQUICEDA25] In 2000, 1 of 1 sample ( criteria for this waterbody, (criterion = 9.5 mg/L).	100.0%) showed an excursion	of the		
		Thornburgh, et al. 1991. 13 excursions beyond the criter and 11/90.	ion at West Fork RM 4.0 betwe	een 8/87		
		Remarks				
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		Combined Listing: Listing ID 47983 was rolled into this listing	Chad Brown 9/24/2015	Public		
		Changed from Category 2 to Category 5 due to the inclusion of data from Listing ID 47983 during the conversion to NHD	f Ken Koch 8/7/2013	Public		
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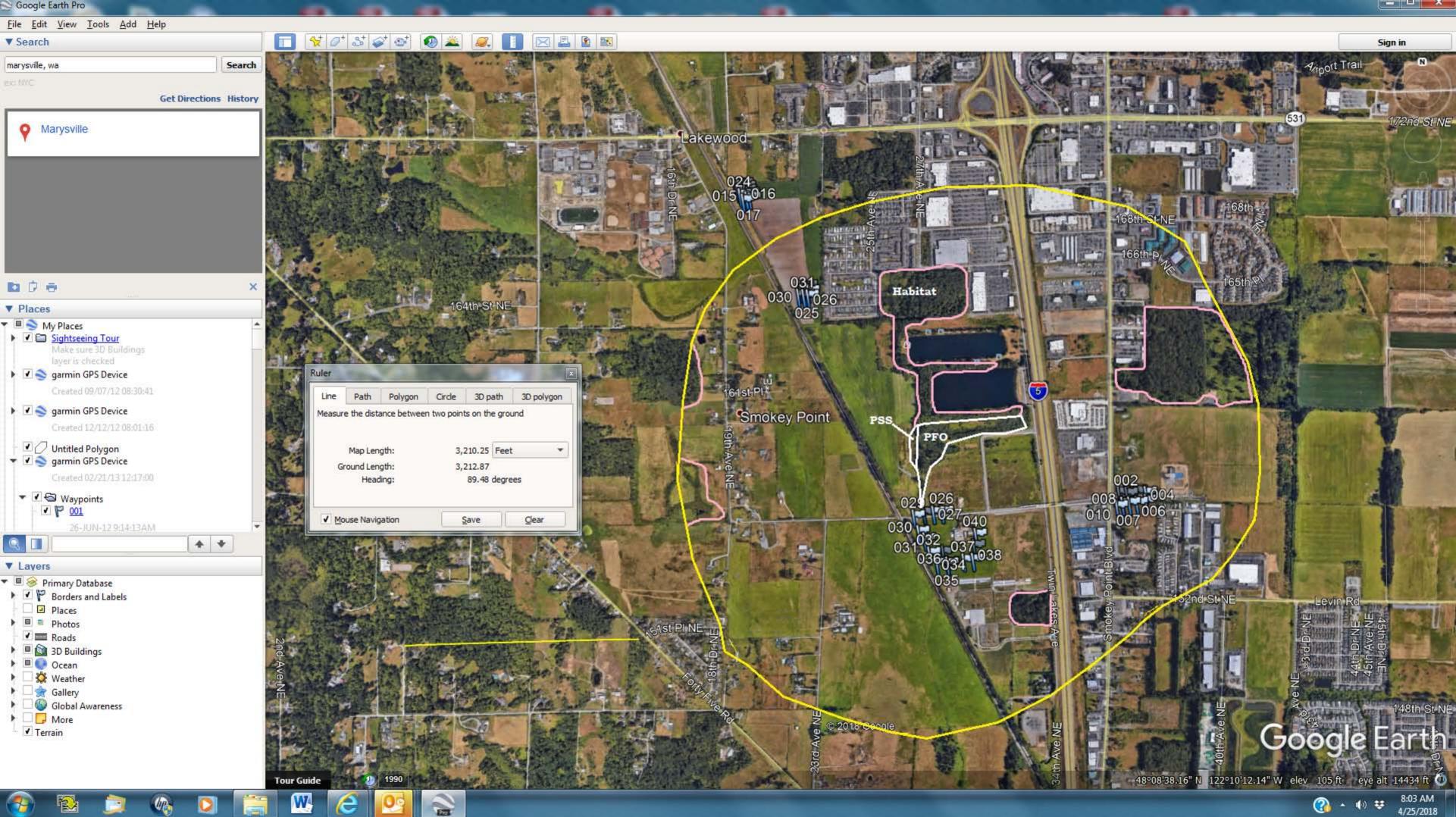
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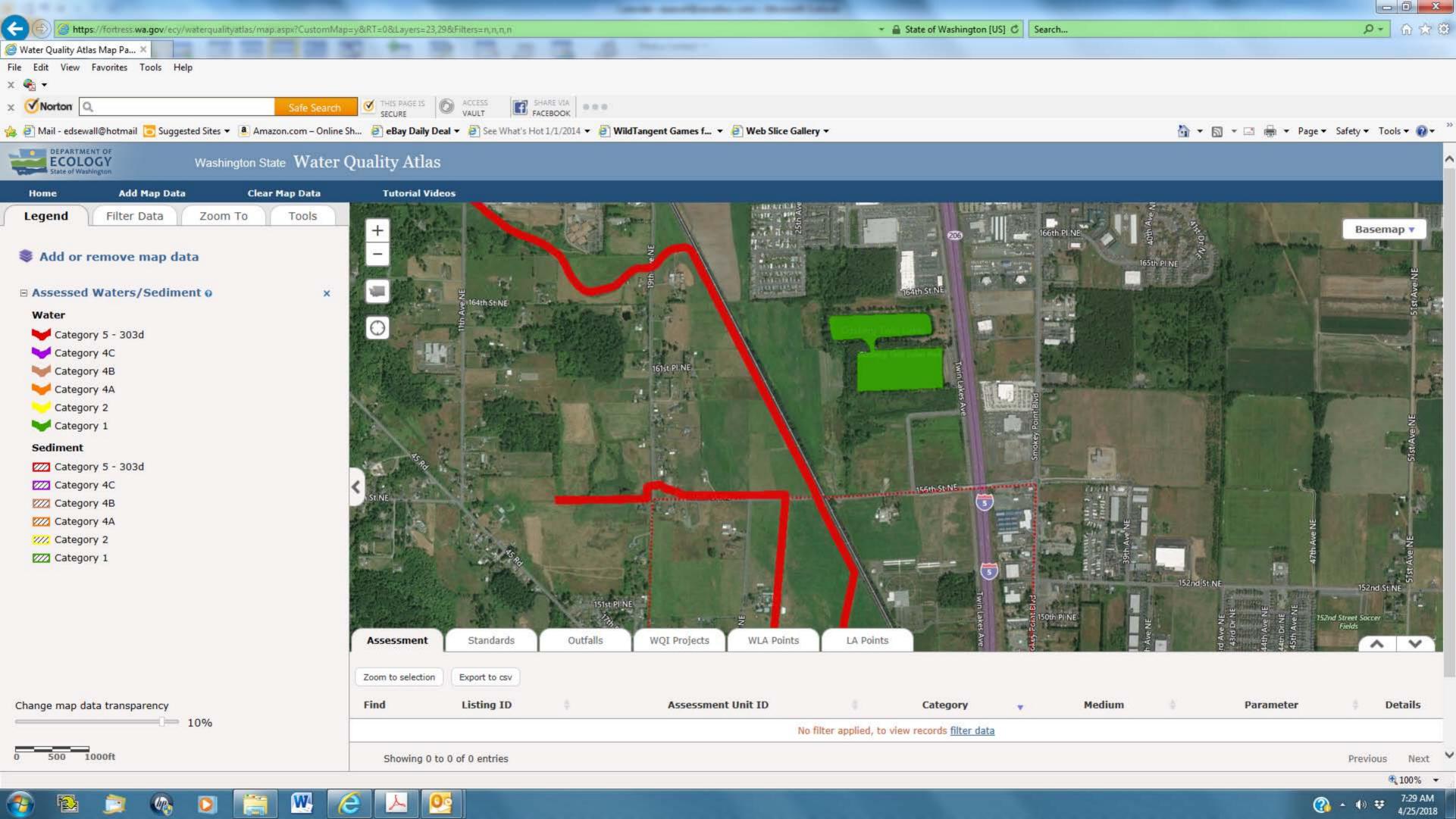




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