

## WETLAND DELINEATION REPORT

October 17, 2018



121 Barnacle Street Ocean Shores, Washington

Prepared for

Best Brothers LLC 409 Apple Place SW Mattawa, WA 99349 (360) 770-1491

Prepared by

**Ecological Land Services** 

1157 3rd Avenue South, Suite 220A • Longview, WA 98632 (360) 578-1371 • Project Number 2782.01

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

Joanne Bartlett, PWS Senior Biologist

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### Introduction

Ecological Land Services, Inc. (ELS) was contracted by Best Brothers LLC to complete a wetland delineation for 121 Barnacle Street located in Ocean Shores, Grays Harbor County, Washington. The site is composed of Grays Harbor County Tax Parcel Number 090100500900, which is located in a portion of Section 34, Township 18 North, Range 12 West of the Willamette Meridian (Figure 1). This report summarizes the findings of the wetland delineation according to the *Ocean Shores Municipal Code (OCC): Chapter 19.0.090 Wetland delineation and protection* for delineation methodology, wetland categorization, and required buffer widths.

#### **METHODOLOGY**

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

The Routine Determination Method examines three parameters—vegetation, soils, and hydrology—to determine if wetlands exist in a given area. Hydrology is critical in determining what is wetland, but is often difficult to assess because hydrologic conditions can change periodically (hourly, daily, or seasonally). Consequently, it is necessary to determine if hydrophytic vegetation and hydric soils are present, which would indicate that water is present for long enough duration to support a wetland plant community. By definition, wetlands are those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands are regulated as "Waters of the United States" by the U.S. Army Corps of Engineers (USACE), as "Waters of the State" by the Washington Department of Ecology (Ecology), and locally by the city of Ocean Shores.

To verify the wetland boundaries on the site, ELS biologists collected data on vegetation, hydrology, and soils. The delineation site visit was conducted on August 23, 2018, during which one wetland, Wetland A, was identified on the neighboring property to the east. The western boundary of Wetland A was delineated using consecutively numbered fluorescent flags labeled "WETLAND DELINEATION." Wetland boundaries were determined through breaks in topography, changes in vegetation, and evidence of surface hydrology. Vegetation, hydrology, and soil data was collected at seven test plots to verify the wetland boundaries (Appendix A). Two of six test plots were conducted within the wetland area mapped by the National Wetlands Inventory (Figure 4). These test plots were positive for all three wetland parameters.

#### PROPERTY DESCRIPTION

This undeveloped rectangular-shaped lot is accessed at the northern property boundary from Barnacle Street in Ocean Shores, Washington (Figure 1, Photoplate 1). The property to the east is also undeveloped and dominated by scrub/shrub vegetation. The lots to the west and south of the

property are developed with houses. The topography throughout the property is flat, but lowers into a slight depression near the eastern property boundary (Photoplate 2). The entirety of the property is dominated by dense scrub/shrub vegetation and in the upland there is little to no cover by herbaceous species (Photoplate 1 and 4).

An offsite wetland, Wetland A was delineated just offsite to the east and is a depressional scrub/shrub wetland. Wetland A is seasonally flooded and has no outlet, so water leaves through evaporation and/or percolation into the soil. This wetland is a Category III system, which requires an 80-foot buffer from the delineated boundary. The wetland is isolated to the parcels east of the study area, as there is development surrounding these parcels.

### VEGETATION

#### Wetland Vegetation

Offsite Wetland A is a scrub/shrub depressional system, which is dominated by red alder (*Alnus rubra*, FAC), salmonberry (*Rubus spectabilis*, FAC), and wax myrtle (*Myrica californica*, FAC), with lower percentages of Scouler's willow (*Salix scouleriana*, FAC) and dominance in the herbaceous layer by slough sedge (*Carex obnupta*, OBL).

**Upland Vegetation** 

Upland vegetation throughout the lot is dominated by scrub/shrub vegetation including red alder, Sitka spruce (*Picea sitchensis*, FAC), western hemlock (*Tsuga heterophylla*, FACU), wax myrtle, salal (*Gaultheria shallon*, FACU), evergreen huckleberry (*Vaccinium ovatum*, FACU), salmonberry, and some smaller percentages of Pacific crab apple (*Malus fusca*, FACW). At Test Plots 2 and 4 the herbaceous layer was dominated by slough sedge. Test Plots 3 and 6 had little to no herbaceous cover.

The dominant vegetation found onsite is recorded on the attached wetland determination data forms (Appendix A). The indicator status, following the common and scientific names, indicates how likely a species is to be found in wetlands. Listed from most likely to least likely to be found in wetlands, the indicator status categories are:

- **OBL** (obligate wetland) Almost always occur in wetlands.
- FACW (facultative wetland) Usually occur in wetlands, but may occur in non-wetlands.
- FAC (facultative) Occur in wetlands and non-wetlands.
- FACU (facultative upland) Usually occur in non-wetlands, but may occur in wetlands.
- UPL (obligate upland) Almost never occur in wetlands.
- NI (no indicator) Status not yet determined.

## Soils

As referenced on the U.S.D.A. Natural Resources Conservation Service (NRCS 2017) website, Westport fine sand, 3 to 10 percent slopes (153) and dune land (35) are the primary soils mapped on the property (Figure 3). Westport soils are excessively drained and are not classified as hydric (NRCS 2015). Areas mapped as hydric soils do not necessarily mean that an area is or is not

wetland—hydrology, hydrophytic vegetation, and hydric soils must all be present to classify an area as a wetland.

#### **Wetland Soils**

The soil at Test Plots 1 and 4 within Wetland A consisted of the same profile. The soil profile was composed of a top layer of dark brown (10YR 2/2) sandy loam underlain at four inches by dark gleyed (10GY 2.5/1) sand with ten percent redoximorphic concentrations (10YR 3/6). This soil meets the hydric soil indicator S5: Sandy Redox due to the presence of redoximorphic features in the second layer.

**Upland Soils** 

The observed upland soils consisted of a top layer of dark brown (10YR 2/2) sandy loam underlain by medium brown (10YR 3/2) sandy loam or sand. The soils had no redoximorphic features present at Test Plots 2, 5, and 6. At Test Plot 3 at 18 inches depth, a layer of brown (10YR 4/2) sand with five percent redoximorphic concentrations (10YR 4/6) was present. This layer with redoximorphic features is present too low in the soil profile to qualify for any of the hydric soil indicators.

#### HYDROLOGY

Water was not observed during the site visit, but evidence of water was seen throughout the wetland. Water marks were seen along tree trunks and surface scouring was present in less vegetated areas within the wetland. The source of water for Wetland A appears to be precipitation and runoff into this depressional area. There is no surface water outlet, so no water leaves except through evapotranspiration or percolation into the soil.

Hydrology was not present in the upland areas and there was no evidence of wetland hydrology.

## NATIONAL WETLAND INVENTORY

The National Wetlands Inventory (NWI) indicates the presence of one freshwater forested/shrub wetland beginning along the eastern side of the lot running from north to south (Figure 4). During the ELS delineation, Wetland A was found roughly in the same location as the NWI mapped wetland. However, it is unlikely that Wetland A continues as far south as is mapped by the NWI because there is development throughout the southern half of the mapped wetland. The NWI maps should be used with discretion because they are used to gather general wetland information about a regional area and therefore are limited in accuracy for smaller areas because of their large scale.

#### **CONCLUSIONS**

#### WETLAND CATEGORIZATION

The wetlands were rated by functions according to the *Washington State Wetlands Rating System for Western Washington-2014 Update* (Rating System) (Hruby 2014, Appendix B). The rating for Wetland A is shown in Table 1. The habitat score for Wetland A is three because there is little accessible habitat, low interspersion of habitat and no WDFW Priority Habitats.

Table 1. Summary of Wetland Ratings

Wetland	HGM Class	Vegetation Class	Hydroperiods	Total Score	Habitat Score	Category
A	Depressional	Scrub/Shrub	Seasonally flooded	16	3	Ш

#### WETLAND BUFFER REGULATIONS

The OCC Chapter 19.02.090 regulates wetland buffers based on Department of Ecology guidelines in Wetlands in Washington State – Volume 2: Appendix 8-C, which specifies wetland buffers based on wetland category, proposed land use intensity, and scores for habitat on the rating form (Granger et al. 2018). Table 2 lists two buffer widths for Wetland A, one is the maximum buffer which would be required under high land use intensity. The second buffer is the proposed reduced buffer that will allow reasonable use of the property.

Table 2. Summary of Wetland Buffers

Wetland	Category/Type	Habitat Score	Standard Buffer	Reduced Buffer
A	III Depressional	3 (low)	80 feet	25 feet

#### **BUFFER MITIGATION**

According to the OCC Chapter 19.02.090 Wetland delineation and protection, subsection (F)(2) buffers are required based on the maximum feasible buffer width which allows for reasonable use of the property. The original buffer, which is 80 feet, would extend over the entirety of the property and would not allow room for any development. A reduction of the buffer is required for reasonable use; a 25-foot buffer (Figure 2) would allow for development on the property. As outlined by the OCC, enhancement of the reduced buffer would be required to compensate for the reduction. Enhancement could include the removal of invasive species and the installation of native shrubs to create a buffer that functions as good as or better than the buffer at the original width.

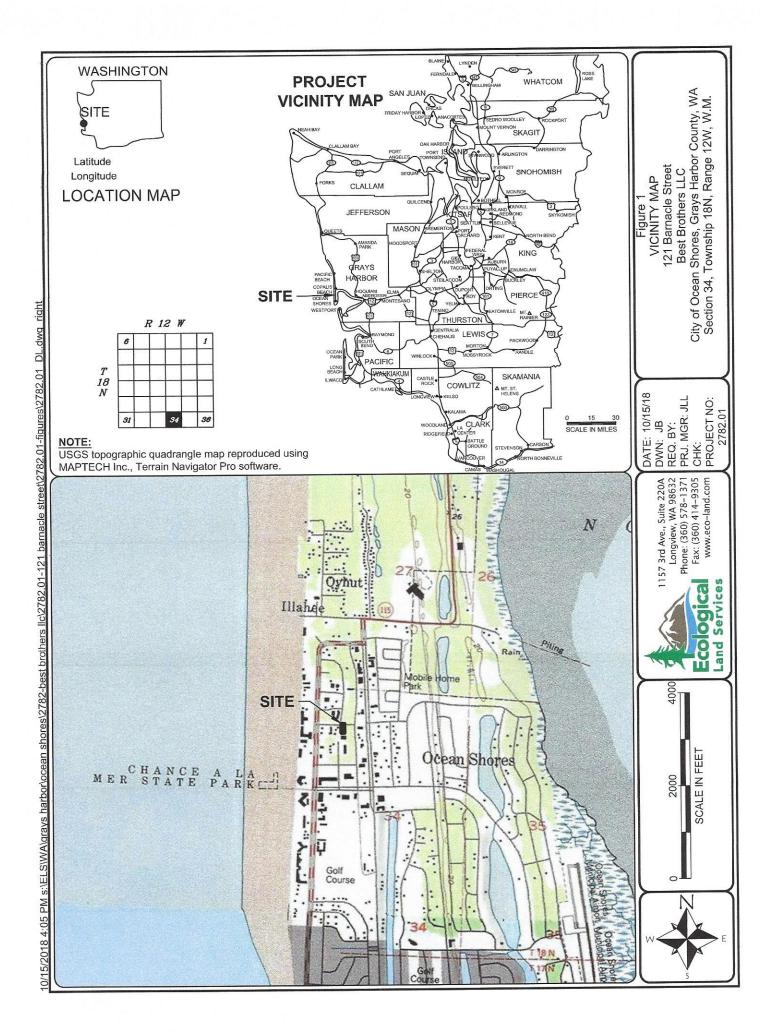
Because much of the buffer will need to be reduced to allow reasonable use of the property, mitigation at a 1:1 ratio within the remaining buffer may not be feasible considering the density of existing vegetation. Mitigation banking may also be used to compensate for unavoidable impacts to the wetland and its buffer. Mitigation banks are sites where wetlands and buffers have been created, restored, or preserved to provide better ecological function than smaller isolated mitigation sites. These sites are regulated and have been approved by an Interagency Review Team which also provides assurance that the mitigation is successful (Washington State Legislature, 2009). Credits, which are based on factors such as wetland function and acreage, can be purchased from the bank. One mitigation bank, Weatherwax Wetland and Habitat Bank, serves the area in which the Barnacle Street property is located and could be used to offset some of the impacts of the buffer reduction.

## LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. There are no other warranties, express or implied. The services preformed were consistent with our agreement with our client. This report is prepared solely for the use of our client and may not be used or relied upon by a third party for any purpose. Any such use or reliance will be at such party's risk.

The opinions and recommendations contained in this report apply to conditions existing when services were performed. ELS is not responsible for the impacts of any changes in environmental standards, practices, or regulations after the date of this report. ELS does not warrant the accuracy of supplemental information incorporated in this report that was supplied by others.

- Cowardin, L.M., C. Carter, F.C. Golet, and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. FWS/OBS-78/31. U.S. Department of the Interior, Fish and Wildlife Service, Office of Biological Services, Washington D.C.
- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1. U.S. Army Corps of Engineer Waterways Experiment Station, Vicksburg, Mississippi.
- Granger, T., Hruby, T., McMillan, A., Peters, D., Peters, D., Rubey, J., Sheldon, D., Stanley, S., and Stockdale, E. April 2005. *Wetlands in Washington State Volume 2: Appendix 8-C (July 2018 update)*. Washington State Department of Ecology Publication #05-06-008. Olympia, Washington. Effective July 2018.
- Hruby, T. August 2014. Washington State Wetland Rating System for Western Washington, 2014 Update. Washington State Department of Ecology Publication #14-06-029. Olympia, Washington. Effective January 1, 2015.
- Ocean Shores Municipal Code. 2018. Chapter 19.02.090 Wetland Delineation and Protection. Ocean Shores, Washington.
- U.S. Army Corps of Engineers (USACE). 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0), ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-13. Vicksburg, Mississippi: U.S. Army Engineer Research and Development Center.
- U.S. Fish & Wildlife Service. 2018. National Wetlands Inventory. Online document https://www.fws.gov/wetlands/Data/Mapper.html . Website accessed June 2018.
- U.S.D.A. Natural Resource Conservation Service (NRCS) Web Soil Survey. 2017. Online document. <a href="https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm">https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm</a> WA635 Ocean Shores Area. September 2018.
- U.S.D.A. Natural Resource Conservation Service (NRCS). 2016. Washington Hydric Soils List. <a href="http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/">http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/</a>.
- Washington State Legislature. 2009. *Chapter 173-700 Wetland Mitigation Banks*. Olympia, Washington







Map provided on-line by NRCS at web address: http://websoilsurvey.nrcs.usda.gov/app/



Map provided on-line by US Fish & Wildlife Service at web address: http://www.fws.gov/wetlands/data/index.html



Photo 1 was taken from the northern property boundary looking west along Barnacle Street. As seen on the left, the property was densely vegetated by shrubs including salal and wax myrtle.



Photo 2 was taken from the same location as Photo 1 looking east along Barnacle Street. The edge of the wetland can be seen on the right where it lies on the lot to the east.



Photo 3 was taken from the same location as Photos 1 and 2 looking southeast at the wetland, which was first identified by the dense slough sedge cover.



1157 3<sup>rd</sup> Ave., Suite 220A Longview, WA 98632 (360) 578-1371 Fax: (360) 414-9305 DATE:09/19/18 DWN: KL PRJ. MGR: JB PROJ.#: 2782.01 Photoplate 1
Project Name: 121 Barnacle
Street
Client: Best Brothers LLC
Ocean Shores, Washington



Photo 4 was taken from the southern property boundary looking west. The study area is on the right and the wetland continues to the east on the neighboring lot.



**Photo 5** was taken from the same location as Photo 4 looking into the eastern lot at the vegetation in the wetland.



Photo 6 was taken from the same location as Photos 5 and 6 looking northeast into the property from the south line.



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PROJ.#: 2782.01

Photoplate 2
Project Name: 121 Barnacle
Street
Client: Best Brothers LLC

Client: Best Brothers LLC Ocean Shores, Washington



Photo 7 was taken between Test Plots 1 and 2 looking into the wetland on the eastern lot. The wetland was dominated by a thick cover of slough sedge and salmonberry in this area.



**Photo 8** was taken from the same location as Photo 7 looking west toward the upland.



**Photo 9** was taken from the same location as Photos 7 and 8 looking north from the wetland. There was dense shrub cover throughout the property.



1157 3<sup>rd</sup> Ave., Suite 220A Longview, WA 98632 (360) 578-1371 Fax: (360) 414-9305 DATE:09/19/18 DWN: KL PRJ. MGR: JB PROJ.#: 2782.01 Photoplate 3
Project Name: 121 Barnacle
Street
Client: Best Brothers LLC
Ocean Shores, Washington



**Photo 10** was taken from Test Plot 3 in the southern portion of the property. This photo shows some of the typical upland vegetation on the property.



Photo 11 was taken from the same location as Photo 10 and shows the soils at this test plot. The soils here were not hydric and there was no evidence of wetland hydrology.



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Project Name: 121 Barnacle
Street
Client: Best Brothers LLC
Ocean Shores, Washington

## WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site:	121 Barnacle St					City/Count	y: Ocean Shores/Grays Harbor	Sar	mpling [	Date:	08/2	23/18	
Applicant/Owner:	Best Brothers LLC						State: WA	Sai	mpling I	Point:	TP-	1	
Investigator(s):	J. Bartlett & K. Lacey						Section, Township, Ra	ange:	S34, T	18, R12W			
Landform (hillslope, te	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				Loca	al relief (conca	ve, convex, none): concav	<u>/e</u>		Slop	e (%):	<u>2-3</u>	
Subregion (LRR):	MLRA4A	Lat: 4	47.010	05673	706624		Long: -124.1636288197			Datum:	NAD83	3	
Soil Map Unit Name:	Westport fine sand, 3-10% slo	-				ħ	CONTRACTOR OF	lassifica	ation:	PSSC			
PERSONAL CONTRACTOR STATE OF THE PERSON AND ADMINISTRATION OF THE PERSON ADMINISTRATION OF THE PERSON AND ADMINISTRATION AND ADMINISTRATION ADMINISTRATION ADMINISTRA	gic conditions on the site typical f		e of ve	ar?	Υ	es 🛛	No   (If no, explai	n in Re	emarks.	)			
Are Vegetation					sturbed	? Are "N	Iormal Circumstances" prese	nt?		Yes	$\boxtimes$	No	
Are Vegetation	P DATE AND PERSON OF THE PERSO				ematic'		eded, explain any answers in	Remar	ks.)				
710 vogotation 🗀	,,	<b>—</b> ,		•			5000.011 - 250 - 5						
SUMMARY OF FIN	NDINGS – Attach site map :	showing	sam	pling	point	locations,	transects, important fea	tures	, etc.				
Hydrophytic Vegetation		Yes		No		•	-					all Coll	
Hydric Soil Present?		Yes	$\boxtimes$	No		Is the Samp				Yes	$\boxtimes$	No	
Wetland Hydrology P	resent?	Yes	$\boxtimes$	No		within a We	land?						
	erty consists of a small undevelo		-			barb vogeteti	on. There is development alo	ong the	north v	west and	south r	orone	rtv
boundari	erry consists of a small undeveloes, and an undeveloped property line. Test Plot 1 is located east of	to the eas	st. Th	e topo	graphy	is relatively f	at throughout but lowers sligh	ntly into	o a depr	ression ald	ing the	easte	ern
VEGETATION – U	se scientific names of plar			D		Indicator					and the second		//
Tree Stratum (Plot size	ze: 30 ft diameter)	Absolut % Cove		Domir Speci		Indicator Status	Dominance Test Workshe	et:					
1. Alnus rubra		<u>60</u>		yes		FAC	Number of Dominant Specie	es		4			(A)
2							That Are OBL, FACW, or FA	₹C:					( '/
3							Total Number of Dominant			4			(B)
4		-					Species Across All Strata:			-			(-)
50% = <u>30</u> , 20% = <u>12</u>		60		= Tota	al Cove	er	Percent of Dominant Specie			100			(A/B)
Sapling/Shrub Stratu	m (Plot size: 20 ft diameter)						That Are OBL, FACW, or FA	₹C:					
1. Rubus spectabilis	3	<u>40</u>		<u>yes</u>		FAC	Prevalence Index workshop	et:					
2. Myrica californica	1	<u>15</u>		<u>yes</u>		FAC	Total % Cover	of:		Multip	oly by:		
3. Lonicera involuci	rata	<u>5</u>		no		FAC	OBL species	-		x1 =	_		
4							FACW species			x2 =	8		
5							FAC species			x3 =	_		
50% = <u>30</u> , 20% = <u>12</u>		<u>60</u>		= Tota	al Cove	er	FACU species			x4 =	-		
Herb Stratum (Plot s	ize: 10 ft diameter)						UPL species			x5 =	17		
1. Carex obnupta		<u>80</u>		yes		OBL	Column Totals:	(A)			_	(	(B)
2							Prevaler	nce Ind	ex = B/	A =	2		
3							Hydrophytic Vegetation Ir	ndicato	ors:				
4							☐ 1 – Rapid Test for Hy	drophy	tic Vege	etation			
5							2 - Dominance Test is	s >50%					
6						10000	☐ 3 - Prevalence Index	is ≤3.0	1				
7							4 - Morphological Ada	aptatior	ns¹ (Pro	vide supp	orting		
8.						-	data in Remarks o						
9							5 - Wetland Non-Vaso	cular P	lants <sup>1</sup>				
10.							☐ Problematic Hydrophy	ytic Ve	getation	<sup>1</sup> (Explain	)		
11				***************************************		25				100			
50% = 40, 20% = 16		80		= Tot	al Cove	er	<sup>1</sup> Indicators of hydric soil and be present, unless disturbe				st		
Woody Vine Stratum							be present, unless distulbe	a or pil	Spicilla				
1	William Control												
2				TABLE :		SATELL SATEL	Hydrophytic			-			
	<b>=</b> 1			= Tot	al Cove	er	Vegetation	Yes			No	0	
50% = 70%				, 50		99905	Present?						
50% =, 20% = % Bare Ground in H	orb Stratum 20												

Project Site: 121 Barnacle St

OIL					100				Ct. diameter	- 1					
rofile Des	cription: (Describe	to the d	epth ne	eeded to	o doc	cument the indicato		rm the absen	ce of indicator	'S.)					1
Depth	Matrix					Redox Feat		. 2				Remarks			
inches)	Color (moist)	%		Color (	(mois	t) %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture			Remarks	,	-	
0-4	10YR 2/2	100	<u>D</u>	470		A 1000 A			sandy loai						
4-16	10GY 2.5/1	90	1	10YR	3/6	<u>10</u>	C	<u>M</u>	sand	Gley 1					
1				-	_	-	-			(					
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			-						Location: PL=F	Pore Lining Ma	=Matrix F	RC=Rno	t Chan	nel	
						x, CS=Covered or Co	ated Sand	J Giallis.		ators for Prob					
	I Indicators: (Appli	cable to	all LRF							2 cm Muck (A					
386 13	sol (A1)					Sandy Redox (S5)	e.			Red Parent N		TF2)			
	Epipedon (A2)					Stripped Matrix (S6) Loamy Mucky Miner		vcent MI RA 1		Very Shallow			F12)		
_	(Histic (A3)							ACCPL MILION 1	, –	Other (Expla					
	ogen Sulfide (A4)					Loamy Gleyed Matrix (E3			_	O 11101 (-1117)					
TO THE PERSON OF	eted Below Dark Sur		1)			Depleted Matrix (F3									
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	ly Mucky Mineral (S					Redox Depressions			We	etland hydrolog nless disturbed	y must b	e preser	nt,		
	dy Gleyed Matrix (S4					Redux Depressions	(10)		ui	iless disturbed	or proble	mado.			
	e Layer (if present):														
Гуре:	-							Hydric Soil	s Present?		Yes	$\boxtimes$	No		
Donth lines	haa).													and a	
	nes):  The soil profile m	neets the	criteria	a for S5:	Sand	ly Redox due to the p	presence o		norphic feature:	s.					
Depth (inch Remarks: HYDROL	The soil profile m	neets the	criteria	a for S5:	Sand	ly Redox due to the p	presence o		norphic feature	s.					
Remarks:  HYDROL Wetland H	The soil profile muse of the soil profile muse	rs:					presence o				2 (2 or mo	ore requi	(red)		
Remarks:  HYDROL Wetland H	The soil profile m	rs:				apply)			Secon	idary Indicators	A11 TO 100		red)		
Remarks:  HYDROL  Wetland H  Primary In	The soil profile muse of the soil profile muse	rs:		check al		apply) Water-Stained Lea	ves (B9)	of 10% redoxin	Secon	ndary Indicators Water-Stained	Leaves (	B9)	ired)		
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HYDROL Wetland H Primary In Surl	The soil profile modern and prof	rs:		check al	Il that	apply)  Water-Stained Lea (except MLRA 1, 2 Salt Crust (B11)	ves (B9) 2, 4A, and	of 10% redoxin	Secon	dary Indicators Water-Stained ( <b>MLRA 1, 2, 4/</b> Drainage Patte	Leaves ( A, and 4E erns (B10	B9) <b>3)</b> )	ired)		
HYDROL Wetland H Primary In	The soil profile management of	rs: of one rec		check al	II that	apply)  Water-Stained Lea (except MLRA 1, 2 Salt Crust (B11) Aquatic Invertebrat	ves (B9) 2, <b>4A</b> , and ties (B13)	of 10% redoxin	Secon	dary Indicators Water-Stained (MLRA 1, 2, 4/ Drainage Patte Dry-Season W	Leaves ( A, and 4E ems (B10 ater Tabl	B9) 3) ) e (C2)		:9)	
HYDROL Wetland H Primary In Sur Higl Satt Wa	The soil profile management of	rs: of one rec		check al	II that	apply) Water-Stained Lea (except MLRA 1, 2 Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide 0	ves (B9) 2, <b>4A</b> , <b>and</b> des (B13) Odor (C1)	of 10% redoxin	Secon	idary Indicators Water-Stained ( <b>MLRA 1, 2, 4/</b> Drainage Patte Dry-Season W Saturation Visi	Leaves ( A, and 4E This (B10 This Table This to the control of the control This term of the cont	B9) 3) ) e (C2) erial Ima		¢9)	
HYDROL Wetland H Primary In	The soil profile management of	rs: of one rec		check al	Il that	apply) Water-Stained Lea (except MLRA 1, 2 Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide ( Oxidized Rhizosph	ves (B9) 2, 4A, and ies (B13) Odor (C1) ieres along	of 10% redoxing 4B)	Secon	ndary Indicators Water-Stained (MLRA 1, 2, 4/ Drainage Patte Dry-Season W Saturation Visi Geomorphic Po	Leaves ( A, and 4E erns (B10 ater Tabl ble on Ae osition (D	B9) 3) ) e (C2) erial Ima		c9)	
HYDROL Wetland H Primary In	The soil profile management of	rs: of one rec		check al	Il that	apply) Water-Stained Lea (except MLRA 1, 2 Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide ( Oxidized Rhizosph Presence of Reduc	ves (B9) 2, 4A, and ties (B13) Odor (C1) tieres along ced Iron (C	4B) g Living Roots	Secon	ndary Indicators Water-Stained (MLRA 1, 2, 4/ Drainage Patte Dry-Season W Saturation Visi Geomorphic Po	Leaves ( A, and 4E  erns (B10 ater Tabl ble on Ae osition (D  ard (D3)	B9) 3) ) e (C2) erial Ima			
HYDROL Wetland H Primary In	The soil profile management of	rs: of one red		check al	Il that	apply) Water-Stained Lea (except MLRA 1, 2 Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide ( Oxidized Rhizosph Presence of Reduc Recent Iron Reduc	ves (B9) 2, 4A, and tes (B13) Odor (C1) teres along ted Iron (Ction in Tille	4B) g Living Roots C4) ed Soils (C6)	Secon	dary Indicators Water-Stained (MLRA 1, 2, 4/ Drainage Patte Dry-Season W Saturation Visi Geomorphic Po Shallow Aquita	Leaves (A, and 4E erns (B10 atter Table on Ae osition (Dard (D3) eest (D5)	B9) 3) ) e (C2) erial Image)	gery (C	99)	
HYDROL Wetland H Primary In	The soil profile management of	rs: of one rec	quired;	check al	Il that	apply) Water-Stained Lea (except MLRA 1, 2 Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide ( Oxidized Rhizosph Presence of Reduc Recent Iron Reduc Stunted or Stresse	ves (B9) 2, 4A, and tes (B13) Odor (C1) teres along ced Iron (C	4B) g Living Roots C4) ed Soils (C6)	Secon	dary Indicators Water-Stained (MLRA 1, 2, 4/ Drainage Patte Dry-Season W Saturation Visi Geomorphic Po Shallow Aquita FAC-Neutral T Raised Ant Mo	Leaves ( A, and 4E erns (B10 ater Tabl ble on Ae osition (D ard (D3) est (D5) bunds (D6	B9) 3) ) e (C2) erial Image) (2)	gery (C	39)	
HYDROL Wetland H Primary In Higl Sati Sec Driff Alg: Iror Inu	The soil profile management of	rs:  If one reconstruction  If one reconstruc	quired;	check al	Il that	apply) Water-Stained Lea (except MLRA 1, 2 Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide ( Oxidized Rhizosph Presence of Reduc Recent Iron Reduc	ves (B9) 2, 4A, and tes (B13) Odor (C1) teres along ced Iron (C	4B) g Living Roots C4) ed Soils (C6)	Secon	dary Indicators Water-Stained (MLRA 1, 2, 4/ Drainage Patte Dry-Season W Saturation Visi Geomorphic Po Shallow Aquita	Leaves ( A, and 4E  rms (B10  ater Tabl  ble on Ae  osition (D  ard (D3)  est (D5)  bunds (D6)	B9) 3) ) e (C2) erial Image) (2)	gery (C		
HYDROL Wetland H Primary In Higl Sur Sat Sec Drif Alg. Iror Sur	The soil profile management of	rs:  If one reconstruction  If one reconstruc	quired;	check al	Il that	apply) Water-Stained Lea (except MLRA 1, 2 Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide ( Oxidized Rhizosph Presence of Reduc Recent Iron Reduc Stunted or Stresse	ves (B9) 2, 4A, and tes (B13) Odor (C1) teres along ced Iron (C	4B) g Living Roots C4) ed Soils (C6)	Secon	dary Indicators Water-Stained (MLRA 1, 2, 4/ Drainage Patte Dry-Season W Saturation Visi Geomorphic Po Shallow Aquita FAC-Neutral T Raised Ant Mo	Leaves ( A, and 4E  rms (B10  ater Tabl  ble on Ae  osition (D  ard (D3)  est (D5)  bunds (D6)	B9) 3) ) e (C2) erial Image) (2)	gery (C	5.9)	
HYDROL Wetland H Primary In	The soil profile management of	rs:  If one reconstruction  If one reconstruc	quired;	check al	II that	apply) Water-Stained Lea (except MLRA 1, 2 Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide ( Oxidized Rhizosph Presence of Reduc Recent Iron Reduc Stunted or Stresse Other (Explain in F	ves (B9) 2, 4A, and ties (B13) Odor (C1) tieres along ced Iron (C stion in Tille ties Plants (I Remarks)	4B) g Living Roots C4) ed Soils (C6)	Secon	dary Indicators Water-Stained (MLRA 1, 2, 4/ Drainage Patte Dry-Season W Saturation Visi Geomorphic Po Shallow Aquita FAC-Neutral T Raised Ant Mo	Leaves ( A, and 4E  rms (B10  ater Tabl  ble on Ae  osition (D  ard (D3)  est (D5)  bunds (D6)	B9) 3) ) e (C2) erial Image) (2)	gery (C	(29)	
HYDROL Wetland H Primary In	The soil profile management of	rs:  If one reconstruction  If one reconstruc	quired;	check al	II that	apply) Water-Stained Lea (except MLRA 1, 2 Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide ( Oxidized Rhizosph Presence of Reduc Recent Iron Reduc Stunted or Stresse Other (Explain in F	ves (B9) 2, 4A, and tes (B13) Odor (C1) teres along ced Iron (C tion in Tille tes Plants (I Remarks)	4B) g Living Roots C4) ed Soils (C6)	Secon	dary Indicators Water-Stained (MLRA 1, 2, 4/ Drainage Patte Dry-Season W Saturation Visi Geomorphic Po Shallow Aquita FAC-Neutral T Raised Ant Mo	Leaves ( A, and 4E  rms (B10  ater Tabl  ble on Ae  osition (D  ard (D3)  est (D5)  bunds (D6)	B9) 3) ) e (C2) erial Image) (2)	gery (C	9)	
HYDROL Wetland H Primary Inc Sati Sec Driff Alga Iror Sur Inu Spa Field Obs	The soil profile management of	rs:  If one reconstructions  Signature Signatu	quired; gery (B urface (	check al	II that	apply) Water-Stained Lea (except MLRA 1, 2 Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide ( Oxidized Rhizosph Presence of Reduc Recent Iron Reduc Stunted or Stresse Other (Explain in F	ves (B9) 2, 4A, and tes (B13) Odor (C1) teres along ced Iron (C tion in Tille tes Plants (I Remarks)	4B) g Living Roots C4) ed Soils (C6)	Secon	dary Indicators Water-Stained (MLRA 1, 2, 4) Drainage Patte Dry-Season W Saturation Visi Geomorphic Po Shallow Aquita FAC-Neutral T Raised Ant Mc Frost-Heave H	Leaves ( A, and 4E cms (B10 ater Tabl ble on Ac osition (D ard (D3) est (D5) bunds (D6)	B9) 3) ) e (C2) erial Image (2) 6) (LRR s (D7)	gery (C		
HYDROL Wetland H Primary In Suri Higl Sati Sec Inor Inor Inor Spa Field Obs Surface W Water Tat Saturation (includes	The soil profile management of	of one red  fone red  fone red  fone red  Yes  Yes  Yes  Yes	quired;	check al		apply) Water-Stained Lea (except MLRA 1, 2 Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide ( Oxidized Rhizosph Presence of Reduc Recent Iron Reduc Stunted or Stresse Other (Explain in F	ves (B9)  2, 4A, and  ies (B13)  Odor (C1)  ieres along ced Iron (C  stion in Tille is Plants (I  Remarks)  ):	4B)  g Living Roots C4) ed Soils (C6) D1) (LRR A)	Secon	dary Indicators Water-Stained (MLRA 1, 2, 4/ Drainage Patte Dry-Season W Saturation Visi Geomorphic Po Shallow Aquita FAC-Neutral T Raised Ant Mo	Leaves ( A, and 4E cms (B10 ater Tabl ble on Ac osition (D ard (D3) est (D5) bunds (D6)	B9) 3) ) e (C2) erial Image) (2)	gery (C		
HYDROL Wetland H Primary In Suri High Sate Surface W Water Tat Saturation (includes	The soil profile management of	of one red  fone red  fone red  fone red  Yes  Yes  Yes  Yes	quired;	check al		apply)  Water-Stained Lea (except MLRA 1, 2 Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide ( Oxidized Rhizosph Presence of Reduc Recent Iron Reduc Stunted or Stresse Other (Explain in F	ves (B9)  2, 4A, and  ies (B13)  Odor (C1)  ieres along ced Iron (C  stion in Tille is Plants (I  Remarks)  ):	4B)  g Living Roots C4) ed Soils (C6) D1) (LRR A)	Secon	dary Indicators Water-Stained (MLRA 1, 2, 4) Drainage Patte Dry-Season W Saturation Visi Geomorphic Po Shallow Aquita FAC-Neutral T Raised Ant Mc Frost-Heave H	Leaves ( A, and 4E cms (B10 ater Tabl ble on Ac osition (D ard (D3) est (D5) bunds (D6)	B9) 3) ) e (C2) erial Image (2) 6) (LRR s (D7)	gery (C		
HYDROL Wetland H Primary In Suri Higl Sati Sec Inor Inor Inor Spa Field Obs Surface W Water Tat Saturation (includes	The soil profile management of	of one red  of one	quired; degree (Burface (Company)	check al	II that	apply)  Water-Stained Lea (except MLRA 1, 2 Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide ( Oxidized Rhizosph Presence of Reduc Recent Iron Reduc Stunted or Stresse Other (Explain in F  Depth (inches Depth (inches Depth (inches aerial photos, previous	ves (B9)  2, 4A, and  tes (B13)  Odor (C1)  teres along  ced Iron (C  tion in Till  Remarks)  ):   b:  us inspection	4B)  g Living Roots C4) ed Soils (C6) D1) (LRR A)	Secon	dary Indicators Water-Stained (MLRA 1, 2, 4) Drainage Patte Dry-Season W Saturation Visi Geomorphic Po Shallow Aquita FAC-Neutral T Raised Ant Mc Frost-Heave H	Leaves ( A, and 4E cms (B10 ater Tabl ble on Ac osition (D ard (D3) est (D5) bunds (D6)	B9) 3) ) e (C2) erial Image (2) 6) (LRR s (D7)	gery (C		
HYDROL Wetland H Primary In	The soil profile management of	of one red  of one	quired; degree (Burface (Company)	check al	II that	apply) Water-Stained Lea (except MLRA 1, 2 Salt Crust (B11) Aquatic Invertebrat Hydrogen Sulfide ( Oxidized Rhizosph Presence of Reduc Recent Iron Reduc Stunted or Stresse Other (Explain in F	ves (B9)  2, 4A, and  tes (B13)  Odor (C1)  teres along  ced Iron (C  tion in Till  Remarks)  ):   b:  us inspection	4B)  g Living Roots C4) ed Soils (C6) D1) (LRR A)	Secon	dary Indicators Water-Stained (MLRA 1, 2, 4) Drainage Patte Dry-Season W Saturation Visi Geomorphic Po Shallow Aquita FAC-Neutral T Raised Ant Mc Frost-Heave H	Leaves ( A, and 4E cms (B10 ater Tabl ble on Ac osition (D ard (D3) est (D5) bunds (D6)	B9) 3) ) e (C2) erial Image (2) 6) (LRR s (D7)	gery (C		

## WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: 1	121 Barnacle St				City/County	Ocean Shores/ Harbor	<u>Grays</u> Samp	ling Date:	08/23/18	<u>8</u>
	Best Brothers LLC						e: WA Samp	ling Point:	<u>TP-2</u>	
-						Section, Tow	nship, Range: S3	34, T18, R12W		
3 ( )	J. Bartlett & K. Lacey			Loca	al relief (conca	ve, convex, none):	convex		e (%): <u>0-2</u>	2
Landform (hillslope, terra		Lat: 47	7.0105906			Long: -124.1637	7359366	Datum:	NAD83	
Subregion (LRR):	MLRA4A Westport fine sand, 3-10% slope	1835-1007 - 22	.0103300	01012	2		NWI classification	on: none		
Soil Map Unit Name:	conditions on the site typical for t		of vear?	Υ	es 🛛	No ☐ (If r	no, explain in Rema	arks.)		
			ificantly di			Iormal Circumstance	es" present?	Yes	⊠ No	
Are Vegetation □,  Are Vegetation □,			rally probl			eded, explain any an		.)		
Are Vegetation ☐,	Soil [], or rivarology [		any proof			500 #500 II A5 A50				
CUMMARY OF FIND	DINGS – Attach site map sh	owina s	ampling	point	locations.	transects, impor	tant features, e	tc.		
			⊠ No							
Hydrophytic Vegetation	rieseitt:		☐ No	⊠	Is the Samp			Yes		o ⊠
Hydric Soil Present?	ant?		☐ No		within a Wet	land?				
Wetland Hydrology Pres		.11-4-1	in atom by	oorub/c	hrub vogotatio	on. There is develor	oment along the no	orth, west, and	south prop	erty
boundaries	rty consists of a small undevelope s, and an to the east. The topogra in the southeast corner of the lot w	aphy is re	latively fla	t throug	ghout but lowe	rs slightly into a dep	pression along the	eastern propert	y line. Te	st Plot 2
VEGETATION - Use	e scientific names of plants	5					-			
Tree Stratum (Plot size		Absolute			Indicator	Dominance Test \	Norksheet:			
	. Ob it diditions	% Cover 25	Speci yes	es?	Status FAC	Number of Domina	ent Species			(4)
1. Alnus rubra		<u>15</u>	yes		FAC	That Are OBL, FAC	CW, or FAC:	<u>4</u>		(A)
2. <u>Picea sitchensis</u>		10	100			Total Number of D	ominant			(D)
3						Species Across All		<u>4</u>		(B)
4 50% = 20, 20% = <u>8</u>		40	= Tot	al Cove	er	Percent of Domina	ant Species	100		(A/B)
The state of the s	(Plot size: 20 ft diameter)				100	That Are OBL, FA		<u>100</u>		(A/D)
Rubus spectabilis	(1 101 01201 <u>20 11 2121 1200</u> )	20	yes		FAC	Prevalence Index	worksheet:			
2					V CALLED	Total	% Cover of:	Multi	ply by:	
3		-				OBL species		x1 =		
4						FACW species	-	x2 =		
5		700 SCHOOL 120			20	FAC species		x3 =		
50% = 10, 20% = 4		20	= Tot	tal Cov	er	FACU species	(	x4 =		
Herb Stratum (Plot size	or 10 ft diameter)	1 Total				UPL species		x5 =		
000 000 000	e. 10 it diameter)	<u>75</u>	yes		OBL	Column Totals:	(A)		200	_ (B)
Carex obnupta		13	<u>yes</u>		ODL	Column Totals.	Prevalence Index	c = B/A =		
2				-	Se	Hydrophytic Veg	etation Indicators			
3		1		-	N <del>ecessors</del>		est for Hydrophytic			
4		_	-	-	<del></del>	1 St. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	nce Test is >50%			
5							nce Index is ≤3.01			
6						1		1 (Daniida ayan	ortina	
7			-	=	( <del></del> )	4 - Morphole	ogical Adaptations Remarks or on a se	(Provide supp parate sheet)	orang	
8		-		-			Non-Vascular Pla			
9			-			N MANAGEMENT				
10		-	8			☐ Problemation	: Hydrophytic Vege	itation (Explain	1)	
11		-	8	-1		<sup>1</sup> Indicators of hyd	ric soil and wetland	d hydrology mu	st	
50% = <u>37.5</u> , 20% = <u>15</u>	<u>5</u>	<u>75</u>	= To	otal Cov	ver	be present, unles	s disturbed or prob	ematic.		
Woody Vine Stratum (	(Plot size:)									
1		-		-	-	Hydrophytic				
2			-	-6	-	Vegetation	Yes		No	
50% =, 20% =	-		= To	otal Co	ver	Present?				
% Bare Ground in He					-					
Remarks:	Hydrophytic vegetation criteria is	met beca	use there	is grea	ter than 50 pe	rcent dominance by	FAC and OBL spe	cies.		
SVAZDO 0-0503Z50										

Project Site: 121 Barnacle St

SOIL										. Assista	Sampling	Point: TP-	2			
Profile Desc	cription: (Describe	to the d	lepth r	needed	to do	cument the indicate	or or confi	irm the absen	ice of i	ndicato	rs.)					
Depth	Matrix					Redox Fea										ĭ
(inches)	Color (moist)	%	- <del></del> (/)	Colo	r (mois	st) %	Type <sup>1</sup>	Loc <sup>2</sup>		exture		2015-2110-2	Remarks			_
0-4	10YR 2/2	100	0	_					S	andy loa	<u>m</u>					
4-16	10YR 3/2	100	0	-						sand	-					
		-		_		-	****	-		-	-					
	-			-												
		<u> </u>		<u> Parti</u>												
******		<del></del>	_	500		1										
				-	-						% <del></del>					
			S	-					1				DO D	01		
						x, CS=Covered or Co	pated Sand	d Grains.	<sup>2</sup> Locati		Pore Lining, I					
Hydric Soil	Indicators: (Appli	cable to	all LR	Rs, un	less o	therwise noted.)					ators for Pro		Hydric S	OIIS":		
☐ Histos	sol (A1)					Sandy Redox (S5)					2 cm Muck		TE2)			
☐ Histic	Epipedon (A2)					Stripped Matrix (S6			• • •		Red Paren			=12\		
☐ Black	Histic (A3)					Loamy Mucky Mine		xcept MLRA 1	1)		Very Shallo			-12)		
☐ Hydro	gen Sulfide (A4)					Loamy Gleyed Mate	33				Other (Exp	iain in Reii	iaiks)			
☐ Deple	ted Below Dark Su	rface (A1	11)			Depleted Matrix (F3	5000000									
☐ Thick	Dark Surface (A12	)				Redox Dark Surfac				3India	ators of hydr	onhytic ve	netation a	and		
☐ Sand	y Mucky Mineral (S	1)				Depleted Dark Surf				W	etland hydrole	ogy must b	e presen			
☐ Sand	y Gleyed Matrix (S4	1)				Redox Depressions	s (F8)	Т		ur	nless disturbe	d or proble	ematic.			_
Restrictive	Layer (if present)	:														116
Type:	-								I- D	40		Yes		No	$\boxtimes$	1
Depth (inch	es):					ic soil indicators bec		Hydric Soi			dealeted mo			TO THE REAL PROPERTY.		-
HYDROL	OGY							2000								
Wetland H	ydrology Indicator	rs:								0		(O os m	ro roquir	·od)		
Primary Inc	dicators (minimum c	of one rec	quired;	check	all that				-		dary Indicato		2000	eu)	-	
☐ Surfa	ace Water (A1)					Water-Stained Lea	55 55 55			100-0	Water-Staine					
☐ High	Water Table (A2)				12000	(except MLRA 1,	2, 4A, and	4B)			( <b>MLRA 1, 2</b> , 4 Drainage Pat					
☐ Satu	ration (A3)					Salt Crust (B11)	(540)			67	Dry-Season \					
☐ Wat	er Marks (B1)					Aquatic Invertebra				-	Saturation Vi		10 E	ery (C9)		
White Entrance	iment Deposits (B2)	)				Hydrogen Sulfide		. Listan Dooto	(C2)	Lamback .	Geomorphic			,01, (00)		
69050 RS686	Deposits (B3)					Oxidized Rhizosph			(03)		Shallow Aqui		, 2.,			
SEC. 150	al Mat or Crust (B4)					Presence of Redu		650		9.00 N	FAC-Neutral					
Married Co.	Deposits (B5)					Recent Iron Reduc		19455 - 44			Raised Ant N		S) (I RR A	4)		
0001,41	face Soil Cracks (Be					Stunted or Stresse		DT) (LKK A)			Frost-Heave			• /		
2002	idation Visible on A					Other (Explain in F	remarks)			Ц	1 10st-Heave	Turrinook	3 (51)			
☐ Spa	rsely Vegetated Co	ncave Si	urface	(B8)												
Field Obs			_			D (1 // .h.)	. Y.									
	ater Present?	Yes		No		Depth (inches		-								
	le Present?	Yes		No	$\boxtimes$	Depth (inches	.):	-				12		_	NI -	121
Saturation (includes of	Present? capillary fringe)	Yes		No	$\boxtimes$	Depth (inches	3):	_	Wetla	nd Hydi	rology Prese	nt?	Yes		No	$\boxtimes$
		eam gaug	ge, mo	nitoring	well,	aerial photos, previou	us inspecti	ons), if availab	ole:				ne - Halla			
														(4.00)		
Remarks:	Wetland hydro	logy crite	eria is r	not met	becau	ise there was no wat	er or evide	nce of water p	oresent.							

## WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site:	121 Barnacle St			City/Coun	ty: Ocean Shores/Grays Harbor Samplii	ig Date.	08/23/18	8
Applicant/Owner:	Best Brothers LLC				State: WA Samplin	ng Point:	<u>TP-3</u>	
Investigator(s):	J. Bartlett & K. Lacey				Section, Township, Range: S34	, T18, R12W		
Landform (hillslope, to	errace, etc.): terrace		Lo	cal relief (conc	ave, convex, none): convex	Slope	(%): <u>0-2</u>	2
Subregion (LRR):	MLRA4A	Lat: 47.0	1063823716	62	Long: <u>-124.16387339645</u>	Datum: N	AD83	
Soil Map Unit Name:	Westport fine sand, 3-10%	percent slopes			NWI classification	: <u>none</u>		
Are climatic / hydrolog	gic conditions on the site typica	al for this time of	year?	Yes 🛛	No	ks.)		
Are Vegetation	l, Soil □, or Hydrolog	y □, signific	cantly disturb	ed? Are "	Normal Circumstances" present?	Yes	No	
Are Vegetation	I, Soil □, or Hydrolog	y □, natura	lly problema	ic? (If ne	eded, explain any answers in Remarks.)			
SUMMARY OF FI	NDINGS – Attach site ma	p showing sa	mpling poi	nt locations,	transects, important features, etc	). 		
Hydrophytic Vegetation	on Present?	Yes [	No ⊠					
Hydric Soil Present?		Yes [	No ⊠	Is the Samp		Yes	☐ No	
Wetland Hydrology P	resent?	Yes [	No ⊠				1000000	
Remarks: The prop	perty consists of a small undev	eloped lot domin	ated by scrul	/shrub vegetat	ion. There is development along the nort	h, west, and so	uth prop	erty
boundar	ies, and an undeveloped prope line. Test Plot 3 is located no	erty to the east.	The topograp	hv is relatively	flat throughout but lowers slightly into a d	epression alon	g the eas	stern
VEGETATION – L	se scientific names of pl	ants						
Tree Stratum (Plot si	ze: 30 ft diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:			
Tsuga heterophy	illa	<u>15</u>	yes	FACU	Number of Dominant Species			(4)
2. Picea sitchensis		<u>15</u>	yes	FAC	That Are OBL, FACW, or FAC:	<u>3</u>		(A)
3. Salix lasiandra		10	yes	FACW	Total Number of Dominant	0		(B)
4			-		Species Across All Strata:	8		(D)
50% = <u>20</u> , 20% = <u>8</u>		<u>40</u>	= Total Co	ver	Percent of Dominant Species	<u>38</u>		(A/B)
Sapling/Shrub Stratu	ım (Plot size: 20 ft diameter)				That Are OBL, FACW, or FAC:	<u>50</u>		(746)
1. Vaccinium ovatu	<u>m</u>	<u>15</u>	<u>yes</u>	<u>FACU</u>	Prevalence Index worksheet:			
2. Gaultheria shallo		<u>15</u>	<u>yes</u>	<u>FACU</u>	Total % Cover of:	Multiply	y by:	
3. Malus fusca		<u>10</u>	<u>yes</u>	<u>FACW</u>	OBL species	x1 =		
4. Rubus spectabili	<u>s</u>	<u>5</u>	<u>no</u>	FAC	FACW species	x2 =		
5					FAC species	x3 =		
50% = <u>22.5</u> , 20% = 9	9	<u>45</u>	= Total Co	ver	FACU species	x4 =		
Herb Stratum (Plot s	ize: 10 ft diameter)				UPL species	x5 =		
Carex obnupta		<u>35</u>	yes	OBL	Column Totals:(A)			(B)
2. Rubus ursinus		10	yes	FACU	Prevalence Index =	B/A =		
3					Hydrophytic Vegetation Indicators:			
4.					☐ 1 — Rapid Test for Hydrophytic V	egetation		
5					☐ 2 - Dominance Test is >50%			
6					☐ 3 - Prevalence Index is ≤3.0 <sup>1</sup>			
7		-			4 - Morphological Adaptations <sup>1</sup> (	Provide sunnor	tina	
8					data in Remarks or on a sepa	rate sheet)	arig	
9		-			5 - Wetland Non-Vascular Plants	1		
10			-		☐ Problematic Hydrophytic Vegeta	tion <sup>1</sup> (Evolain)		
11		-	***************************************	(a	- Problematic Hydrophytic vegeta	uon (Explain)		
50% = 22.5, 20% =	0	45	= Total Co		<sup>1</sup> Indicators of hydric soil and wetland h	ydrology must		
Woody Vine Stratum	<del>-</del>	40	- 10tai 0t	,,,,,	be present, unless disturbed or proble	matic.		
	1 (1 101 3126)							
1		0-0-0-0			Hydrophytic			
2 50% =, 20%	_		= Total Co		Vegetation Yes		No	$\boxtimes$
711% = /11%			- rotal Ci	7 <b>4</b> 01	Present?			
% Bare Ground in H					1			

Project Site: 121 Barnacle St

Depth	Matrix					Redox Features							
nches)	Color (moist)	%	)	Color	(mois	st) % Type <sup>1</sup>	Loc²	Texture	_	Remarks	3		
0-4	10YR 2/2	10	00					sandy loa	<u> </u>				
4-18	10YR 3/2	10	00		-			sandy loa	<u> </u>				
18-20	10YR 4/2	9	5	10YF	R 4/6	<u>5</u> <u>C</u>	<u>M</u>	sand	12 <u></u>				
		101111					-		-				
	-				_		Mark 1997		-				
		-		-				-	10 to				
		-		-					Description Man	atrix BC=Boo	t Channa	ıl.	
						c, CS=Covered or Coated Sar	nd Grains.	Section of the sectio	Pore Lining, M=Materials for Problem	- Constitution of the Cons		,	-
dric Soil	Indicators: (Appli	cable to	all LR						2 cm Muck (A10		, cino		
Histos	ol (A1)					Sandy Redox (S5)			Red Parent Mat				
	Epipedon (A2)					Stripped Matrix (S6)	avent MLDA 1	<u> </u>	Very Shallow Da		F12)		
	Histic (A3)					Loamy Mucky Mineral (F1) (6	except WILKA I		Other (Explain i		/		
	gen Sulfide (A4)					Loamy Gleyed Matrix (F2)		Ц	Other (Explain)	in remarko)			
	ted Below Dark Su		11)			Depleted Matrix (F3)							
	Dark Surface (A12					Redox Dark Surface (F6)		<sup>3</sup> Indic	cators of hydrophy	tic vegetation	and		
	/ Mucky Mineral (S				_	Depleted Dark Surface (F7)		W	etland hydrology r	must be preser			
	/ Gleyed Matrix (S4				]	Redox Depressions (F8)		ur	nless disturbed or	problematic.			
actrictive	Layer (if present)												
											100		
pe: epth (inch		oes not	meet ar	ny of the	hydr	ic soil indicators because the	Hydric Soils depleted matrix			Yes 🗆	No	Σ	_
ype: epth (incho emarks:	The soil profile d		meet ar	ny of the	hydr	ic soil indicators because the				Yes 🗆	No		
ype: epth (inche emarks:  YDROLO	The soil profile d	's:						begins deep ir					_
ype: epth (inche emarks:  IYDROLO Vetland Hyrimary Ind	The soil profile d  OGY ydrology Indicator icators (minimum c	's:		check al	II that	apply)	depleted matrix	begins deep ir	n the soil profile.	? or more requi			
ype: epth (incherents:  YDROLC  Vetland Hyrimary Ind  Surfa	DGY ydrology Indicator icators (minimum of	's:		check al		apply) Water-Stained Leaves (B9)	depleted matrix	begins deep in	n the soil profile.	or more requi aves (B9)			
ype: epth (incher emarks:  YDROLC fetland Hy rimary Ind  Surfa	DGY ydrology Indicator icators (minimum of	's:		check al	II that	apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and	depleted matrix	Secon	n the soil profile.  Indary Indicators (2)  Water-Stained Lea	? or more requi aves (B9) and 4B)			
ype: epth (incher emarks:  YDROLU  Vetland Hy rimary Ind Surfa High Satu	DGY ydrology Indicator icators (minimum of ace Water (A1) Water Table (A2) ration (A3)	's:		check al	II that	apply)  Water-Stained Leaves (B9)  (except MLRA 1, 2, 4A, and Salt Crust (B11)	depleted matrix	Secon	n the soil profile.  Indary Indicators (2  Water-Stained Lea  (MLRA 1, 2, 4A, a	or more requi aves (B9) and 4B) s (B10)			
yDROLC ettland Hyrimary Ind Surface High	DGY ydrology Indicator icators (minimum cace Water (A1) Water Table (A2) ration (A3) er Marks (B1)	rs: one re		check al	II that	apply)  Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and Salt Crust (B11) Aquatic Invertebrates (B13)	depleted matrix	Secon	ndary Indicators (2 Water-Stained Lea (MLRA 1, 2, 4A, a Drainage Patterns	or more requi aves (B9) a <b>nd 4B)</b> s (B10) er Table (C2)	red)		
YDROLO Vetland Hyrimary Ind High Surfa Satu Sedi	DGY ydrology Indicator icators (minimum of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2	rs: one re		check al	II that	apply)  Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	depleted matrix d 4B)	Secon	ndary Indicators (2 Water-Stained Lea (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate	or more requi aves (B9) and 4B) s (B10) er Table (C2) on Aerial Imag	red)		
ype: epth (incher emarks:  YDROLO  //etland Hy rimary Ind	DGY ydrology Indicator icators (minimum of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3)	rs: one re		check al	II that	apply)  Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and Salt Crust (B11) Aquatic Invertebrates (B13)	depleted matrix  d 4B)  d 4B)	Secon	ndary Indicators (2 Water-Stained Lea (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate Saturation Visible	e or more requi aves (B9) and 4B) s (B10) er Table (C2) e on Aerial Imag tion (D2)	red)		
ype: epth (incherents:  YDROL( //etland Hyrimary Ind	DGY ydrology Indicator icators (minimum of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) I Mat or Crust (B4)	rs: one re		check al	II that	water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alor	depleted matrix  d 4B)  ing Living Roots ((C4)	Secon	ndary Indicators (2 Water-Stained Lea (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate Saturation Visible Geomorphic Posit	e or more requi aves (B9) and 4B) s (B10) er Table (C2) on Aerial Imag tion (D2) (D3)	red)		
ype: epth (incherents:  YDROLC  /etland Hy rimary Ind	DGY ydrology Indicator icators (minimum of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) I Mat or Crust (B4) Deposits (B5)	rs: of one re		check al	II that	water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alor Presence of Reduced Iron (	depleted matrix  d 4B)  ng Living Roots ((C4)  Illed Soils (C6)	Secon	ndary Indicators (2 Water-Stained Lea (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard	e or more requi aves (B9) and 4B) s (B10) er Table (C2) on Aerial Imag tion (D2) (D3)	red)		
ype: epth (inche emarks:  YDROLC /etland Hy rimary Ind Surfa High Satu Sedi Drift Alga Iron Surfa	DGY ydrology Indicator icators (minimum of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) I Mat or Crust (B4) Deposits (B5) ace Soil Cracks (B6	rs: of one re	quired;	check a	II that	apply)  Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and Salt Crust (B11)  Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alor Presence of Reduced Iron ( Recent Iron Reduction in Til	depleted matrix  d 4B)  ng Living Roots ( (C4)  lled Soils (C6) (D1) (LRR A)	Secon  C3)	ndary Indicators (2 Water-Stained Lea (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test	or more requi aves (B9) and 4B) s (B10) or Table (C2) on Aerial Imag tion (D2) (D3) t (D5) ds (D6) (LRR A	red)		
ype: epth (incherents:  YDROLC lettand Hyrimary Ind Surfa High Satu Sedi Drift Alga Iron Surfa	DGY ydrology Indicator icators (minimum of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) I Mat or Crust (B4) Deposits (B5)	rs:  If one re  If one re  If one re	quired;	check al	II that	apply)  Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and Salt Crust (B11)  Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alor Presence of Reduced Iron ( Recent Iron Reduction in Til Stunted or Stresses Plants	depleted matrix  d 4B)  ng Living Roots ( (C4)  lled Soils (C6) (D1) (LRR A)	Secon  C3)	ndary Indicators (2 Water-Stained Lea (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test Raised Ant Mount	or more requi aves (B9) and 4B) s (B10) or Table (C2) on Aerial Imag tion (D2) (D3) t (D5) ds (D6) (LRR A	red)		
yDROLO detland Hyrimary Ind Surfa Sedi Drift Alga Iron Surfa Inun	DGY ydrology Indicator icators (minimum of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) I Mat or Crust (B4) Deposits (B5) ace Soil Cracks (B6) dation Visible on A rsely Vegetated Co	rs:  If one re  If one re  If one re	quired;	check al	II that	apply)  Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and Salt Crust (B11)  Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alor Presence of Reduced Iron ( Recent Iron Reduction in Til Stunted or Stresses Plants	depleted matrix  d 4B)  ng Living Roots ( (C4)  lled Soils (C6) (D1) (LRR A)	Secon  C3)	ndary Indicators (2 Water-Stained Lea (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test Raised Ant Mount	or more requi aves (B9) and 4B) s (B10) or Table (C2) on Aerial Imag tion (D2) (D3) t (D5) ds (D6) (LRR A	red)		
yDROLO fetland Hy rimary Ind Surfa Sedi Drift Alga Iron Surfa Spar	DGY ydrology Indicator icators (minimum of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) I Mat or Crust (B4) Deposits (B5) ace Soil Cracks (B6) dation Visible on A rsely Vegetated Co	rs:  If one re  If one re  If one re	quired;	check al	II that	apply)  Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and Salt Crust (B11)  Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alor Presence of Reduced Iron ( Recent Iron Reduction in Til Stunted or Stresses Plants	depleted matrix  d 4B)  ng Living Roots ( (C4)  lled Soils (C6) (D1) (LRR A)	Secon  C3)	ndary Indicators (2 Water-Stained Lea (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test Raised Ant Mount	or more requi aves (B9) and 4B) s (B10) or Table (C2) on Aerial Imag tion (D2) (D3) t (D5) ds (D6) (LRR A	red)		
ype: epth (inche emarks:  YDROLO  Vetland Hy rimary Ind Surfa Sedi Sedi Iron Surfa Inun Spal Gurface Wi	DGY ydrology Indicator icators (minimum of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) I Mat or Crust (B4) Deposits (B5) ace Soil Cracks (B6 dation Visible on A rsely Vegetated Coervations:	rs:  If one re  Solution in the second in th	equired; agery (E Surface	check al	II that	water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alor Presence of Reduced Iron ( Recent Iron Reduction in Till Stunted or Stresses Plants Other (Explain in Remarks)	depleted matrix  d 4B)  ng Living Roots ( (C4)  lled Soils (C6) (D1) (LRR A)	Secon  C3)	ndary Indicators (2 Water-Stained Lea (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test Raised Ant Mount	or more requi aves (B9) and 4B) s (B10) or Table (C2) on Aerial Imag tion (D2) (D3) t (D5) ds (D6) (LRR A	red)		
ype: epth (inche emarks:  IYDROLO Vetland Hy rimary Ind Surfa High Satu Sedi Drift Alga Iron Surfa Inun Spai	DGY ydrology Indicator icators (minimum of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) I Mat or Crust (B4) Deposits (B5) ace Soil Cracks (B6) dation Visible on A rsely Vegetated Co	rs: of one re ) erial Imancave S	quired; agery (E	check al 37) (B8)	II that	water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alor Presence of Reduced Iron ( Recent Iron Reduction in Till Stunted or Stresses Plants Other (Explain in Remarks)	depleted matrix  d 4B)  ing Living Roots ( (C4) Illed Soils (C6) (D1) (LRR A)	Secon  C3)	ndary Indicators (2 Water-Stained Lea (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test Raised Ant Mount	or more requi aves (B9) and 4B) s (B10) or Table (C2) on Aerial Imag tion (D2) (D3) t (D5) ds (D6) (LRR A	red) gery (C9)		
ype: epth (inche emarks:  IYDROLU Vetland Hy rimary Ind Surfa High Satu Sedi Drift Alga Iron Surfa Inun Spar Surface Wo	DGY ydrology Indicator icators (minimum of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) I Mat or Crust (B4) Deposits (B5) ace Soil Cracks (B6) dation Visible on A rsely Vegetated Coervations: ater Present? Present? apillary fringe)	of one results of one	agery (E	check al 37) (B8) No No No	II that	water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alor Presence of Reduced Iron ( Recent Iron Reduction in Til Stunted or Stresses Plants Other (Explain in Remarks)  Depth (inches):  Depth (inches):	depleted matrix  d 4B)  ng Living Roots ( (C4)  Illed Soils (C6) (D1) (LRR A)	Secon  C3)  C3)  Wetland Hydi	ndary Indicators (2) Water-Stained Lea (MLRA 1, 2, 4A, a Drainage Patterns Dry-Season Wate Saturation Visible Geomorphic Posit Shallow Aquitard FAC-Neutral Test Raised Ant Mount	e or more requi aves (B9) and 4B) s (B10) er Table (C2) on Aerial Image tion (D2) (D3) i (D5) ds (D6) (LRR a	red) gery (C9)	)	

## WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: 121 Barnacle St			City/Count	y: Ocean Shores/Grays Harbor	Sampling Date:	08/23/	10
				State: WA	Sampling Point:	<u>TP-4</u>	
Applicant/Owner: Best Brothers LLC				Section, Township, Ra	inge: S34, T18, R12V	V	
Investigator(s): J. Bartlett & K. Lacey		Loca	al relief (conce	ive, convex, none): concav	-	pe (%): 2	<u>2-3</u>
Landform (hillslope, terrace, etc.): terrace	Lat: 47 (	108189259362	÷	Long: <u>-124.1636444093</u>		NAD83	
Subregion (LRR): MLRA4A		100103233302	_		assification: PSSC		
Soil Map Unit Name: Westport fine sand, 3-10% sld  Are climatic / hydrologic conditions on the site typical for		vear? Y	es 🛛	No 🔲 (If no, explain	n in Remarks.)		
		cantly disturbed	11 120	Normal Circumstances" preser		1 🖂 :	No 🗆
		lly problematic		eded, explain any answers in I			
Are Vegetation ☐, Soil ☐, or Hydrology	LI, Hatara	ny problemane					
SUMMARY OF FINDINGS – Attach site map s	showing sa	mplina point	locations.	transects, important feat	tures, etc.		
	Yes 🗵		,	<u> </u>			
Hydrophytic Vegetation Present?	Yes 🗵		Is the Samp	led Area	Yes	s 🛛 🗆	No 🗆
Hydric Soil Present?	Yes 🗵		within a We	tland?			
Wetland Hydrology Present?			1 1	an Thora is development alo	ng the north west and	d south pro	operty
Remarks: The property consists of a small undevelopment boundaries, and an undeveloped property property line. Test Plot 4 is located east of	to the east	The topography	v is relatively i	lat tilloudilout pat lowers sildi	itly into a depression a	long the e	astern
VEGETATION – Use scientific names of plan		Dominant	Indicator				
Tree Stratum (Plot size: 30 ft diameter)	Absolute % Cover	Species?	Status	Dominance Test Workshee	<b>Э</b> С:		
1. Alnus rubra	<u>10</u>	<u>yes</u>	FAC	Number of Dominant Specie			(A)
2		-		That Are OBL, FACW, or FA	(C:		
3	-			Total Number of Dominant	<u>3</u>		(B)
4				Species Across All Strata:			
50% = <u>5</u> , 20% = <u>2</u>	<u>10</u>	= Total Cove	er	Percent of Dominant Species That Are OBL, FACW, or FA	es <u>100</u>	<u>)</u>	(A/B)
Sapling/Shrub Stratum (Plot size: 20 ft diameter)							
1. Salix hookeriana	<u>10</u>	<u>yes</u>	<u>FACW</u>	Prevalence Index worksho		Itinly by:	
2				Total % Cover	<u>or:</u> <u>iviu</u> x1:	ltiply by:	
3		-	98 - 101 100 11	OBL species	_ x1 ·		_
4				FACW species	x3	50	_
5			-	FAC species		34	_
50% = <u>5</u> , 20% = <u>2</u>	<u>10</u>	= Total Cove	er	FACU species			_
Herb Stratum (Plot size: 10 ft diameter)				UPL species	x5		— (D)
1. Carex obnupta	80	yes	OBL	Column Totals:	(A)		(B)
2		-			nce Index = B/A =		
3				Hydrophytic Vegetation In			
4		5 <del></del>		☐ 1 – Rapid Test for Hy			
5	X	-	-		s >50%		
6				☐ 3 - Prevalence Index	is $\leq 3.0^{1}$		
7	-		-	4 - Morphological Ada data in Remarks of	aptations <sup>1</sup> (Provide sup or on a separate sheet)	oporting )	
8	-		<del>10 - 10 - 1</del> 3	☐ 5 - Wetland Non-Vas			
9	-	-		1 2 2		nin)	
10				☐ Problematic Hydroph	ytic Vegetation <sup>1</sup> (Expla	ai(1)	
11			<del></del>	<sup>1</sup> Indicators of hydric soil an	d wetland hydrology n	nust	
50% = <u>40</u> , 20% = <u>16</u>	<u>80</u>	= Total Cov	<i>r</i> er	be present, unless disturbe	d or problematic.		
Woody Vine Stratum (Plot size:)					and the second second		-
1				Hydrophytic			
2	-	-		Vegetation	Yes 🛛	No	
	7000-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-	= Total Cov	ver	Present?			
50% =, 20% =							

Project Site: 121 Barnacle St

nches)	Color (moist)	- 9	6	Color	(mois	st) %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture			Remarks	·	
<u>0-4</u>	10YR 2/2	120	00	<u></u>		( <u></u>			sandy lo					
<u>4-16</u>	10GY 2.5/1	9	00	<u>10Y</u>	'R 3/6	10	<u>C</u>	<u>M</u>	sand	Gley 1				
-	(C. ) (C. )	10		-		1-2-1-1			-					
	-	=		<u> </u>	- 2	-			-	_				
-		-		200		-				-				
-		1	-	-										
		-		-										
vpe: C= C	oncentration, D=D	epletion	 . RM=R	educed	Matri	x, CS=Covered or Coa	ated Sand	d Grains.	<sup>2</sup> Location: PL	=Pore Lining, N	Л=Matrix, F	RC=Root	Channe	el
•			-			therwise noted.)		AVAILABLE DE LA COMPANIE DE LA COMPA	Ind	icators for Pro	blematic l	Hydric S	oils³:	
Histos	- A A A A A A A A A A A A A A A A A A A				$\boxtimes$	Sandy Redox (S5)				2 cm Muck	(A10)			
Histic 1	Epipedon (A2)			[	]	Stripped Matrix (S6)				Red Parent	Material (	TF2)		
Black	Histic (A3)			[	]	Loamy Mucky Minera	al (F1) <b>(e</b> )	xcept MLRA 1	) 🗆	Very Shallo	w Dark Su	ırface (T	F12)	
Hydrog	gen Sulfide (A4)			[	コ	Loamy Gleyed Matrix	x (F2)			Other (Expl	ain in Rem	narks)		
Deplet	ed Below Dark Su	urface (A	.11)	[	]	Depleted Matrix (F3)								
Thick I	Dark Surface (A12	2)		[		Redox Dark Surface	(F6)							
Sandy	Mucky Mineral (S	61)		[		Depleted Dark Surfa	ce (F7)			licators of hydro wetland hydrolo				
Sandy	Gleyed Matrix (S	4)		[		Redox Depressions	(F8)			unless disturbe			.,	
strictive	Layer (if present	):												
oe:	E <del>sti con la</del> s													
											Yes	$\boxtimes$	No	
		neets the	e criteri	a for S5:	: Sand	dy Redox due to the pr	resence o	Hydric Soil		es.				
epth (inche emarks:	The soil profile r		e criteri	a for S5:	Sanc	dy Redox due to the pr	resence o			es.				
YDROLC etland Hy	The soil profile r	rs:					resence o		norphic featur		s (2 or mo	re requir	ed)	
YDROLO etland Hy	The soil profile r  OGY  drology Indicato cators (minimum o	rs:		check a	III that	apply)			norphic featur	ondary Indicator	100000 100000		ed)	
YDROLC etland Hy imary Indi	OGY drology Indicato cators (minimum oce Water (A1)	rs:		check a		apply) Water-Stained Leave	es (B9)	of 10% redoxin	norphic featur	ondary Indicator Water-Stained	Leaves (E	39)	ed)	
YDROLC etland Hy imary Indi Surfa High	The soil profile records of th	rs:		check a	ll that	apply) Water-Stained Leave	es (B9)	of 10% redoxin	norphic featur	ondary Indicator	Leaves (E	39)	ed)	
YDROLC etland Hy imary Indi Surfa High Satur	DGY drology Indicato cators (minimum of ce Water (A1) Water Table (A2) ation (A3)	rs:		check a	III that	apply)  Water-Stained Leave (except MLRA 1, 2, Salt Crust (B11)	es (B9) 4A, and	of 10% redoxin	Seco	ondary Indicator Water-Stained (MLRA 1, 2, 4	Leaves (E A, and 4B erns (B10)	39) <b>)</b>	ed)	
/DROLC etland Hy mary Indi Surfa High Satur Wate	DGY drology Indicato cators (minimum of ce Water (A1) Water Table (A2) ation (A3) r Marks (B1)	rs: of one re		check a	III that	apply)  Water-Stained Leave (except MLRA 1, 2, Salt Crust (B11) Aquatic Invertebrate	es (B9) <b>4A</b> , <b>and</b> s (B13)	of 10% redoxin	Seco	ondary Indicator Water-Stained (MLRA 1, 2, 4 Drainage Patte	I Leaves (E A, and 4B erns (B10) /ater Table	39) 3) ⇒ (C2)		
YDROLO etland Hy imary Indi Surfa High Satur Wate Sedin	DGY drology Indicato cators (minimum of ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2)	rs: of one re		check a	Ill that	apply)  Water-Stained Leave (except MLRA 1, 2, Salt Crust (B11)	es (B9) 4A, and s (B13) dor (C1)	of 10% redoxin	Seco	ondary Indicator Water-Stained (MLRA 1, 2, 4 Drainage Patt Dry-Season W	Leaves (EA, and 4B) ems (B10) ater Table	39) s) e (C2) rial Imag		
YDROLC etland Hy imary Indi   Surfa   High     Satur     Wate     Sedir     Drift [	DGY drology Indicato cators (minimum of ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3)	rs: of one re		check a	III that	apply) Water-Stained Leave (except MLRA 1, 2, Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Or	es (B9) <b>4A, and</b> s (B13)  dor (C1)  res along	4B) Living Roots	Seco	ondary Indicator Water-Stained (MLRA 1, 2, 4 Drainage Patte Dry-Season W Saturation Vis	Leaves (EA, and 4B) A, and 4B) Perms (B10) Adder Table Table on Aei	39) s) e (C2) rial Imag		
YDROLC etland Hy imary Indi   Surfa   High     Satur     Wate     Sedir     Drift [   Algal	DGY Idrology Indicato cators (minimum of ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)	rs: of one re		check a	Ill that	apply)  Water-Stained Leave (except MLRA 1, 2, Salt Crust (B11)  Aquatic Invertebrate Hydrogen Sulfide Oc Oxidized Rhizosphe	es (B9) 4A, and s (B13) dor (C1) res along ed Iron (C-	4B)  Living Roots (44)	Seco	ondary Indicator Water-Stained (MLRA 1, 2, 4 Drainage Patte Dry-Season W Saturation Vis Geomorphic F	A, and 4B erns (B10) /ater Table ible on Aer Position (D2) ard (D3)	39) s) e (C2) rial Imag		
YDROLC etland Hy imary Indi   Surfa   High   Satur   Wate   Sedir   Drift [   Algal   Iron [	DGY drology Indicato cators (minimum of ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3)	rs: of one re		check a	Ill that	apply)  Water-Stained Leave (except MLRA 1, 2, Salt Crust (B11)  Aquatic Invertebrate Hydrogen Sulfide Oc Oxidized Rhizosphe Presence of Reduce	es (B9)  4A, and s (B13) dor (C1) res along ed Iron (Co	4B) Using Roots (44) Ed Soils (C6)	Seco	ondary Indicator Water-Stained (MLRA 1, 2, 4 Drainage Patte Dry-Season W Saturation Vis Geomorphic F Shallow Aquite	A, and 4B ems (B10) /ater Table ible on Aei Position (D2) ard (D3) Fest (D5)	39) (i) (i) (ii) (iii) (	ery (C9)	
YDROLC etland Hy imary Indi Surfa High Satur Wate Sedir Drift [ Algal Iron [ Surfa	DGY drology Indicato cators (minimum of ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	of one re	equired;	check a	Ill that	apply)  Water-Stained Leave (except MLRA 1, 2, Salt Crust (B11)  Aquatic Invertebrate Hydrogen Sulfide Oc Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti	es (B9)  4A, and s (B13) dor (C1) res along ed Iron (Coon in Tille	4B) Using Roots (44) Ed Soils (C6)	Second Calculation	ondary Indicator Water-Stained (MLRA 1, 2, 4 Drainage Patte Dry-Season W Saturation Vis Geomorphic F Shallow Aquite FAC-Neutral 1	Leaves (EA, and 4B) A, and 4B) A arms (B10) A ater Table B ible on Ae B osition (D2) B ard (D3) C est (D5) B ounds (D6)	39) e) (C2) rial Imag 2)	ery (C9)	
YDROLC etland Hy imary Indi   Surfa   High   Satur   Wate   Sedir   Drift [   Algal   Iron [   Surfa	The soil profile report of the soil profile repo	rs: of one re	equired;	check a	Ill that	apply)  Water-Stained Leave (except MLRA 1, 2, Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Oc Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti Stunted or Stresses	es (B9)  4A, and s (B13) dor (C1) res along ed Iron (Coon in Tille	4B) Using Roots (44) Ed Soils (C6)	Second Control (C3)	ondary Indicator Water-Stained (MLRA 1, 2, 4 Drainage Patte Dry-Season W Saturation Vis Geomorphic F Shallow Aquite FAC-Neutral T Raised Ant Me	Leaves (EA, and 4B) A, and 4B) A arms (B10) A ater Table B ible on Ae B osition (D2) B ard (D3) C est (D5) B ounds (D6)	39) e) (C2) rial Imag 2)	ery (C9)	
YDROLC etland Hy imary Indi   Surfa   High     Satur   Wate   Sedir   Drift [   Algal   Iron [   Surfa   Inunc   Spars	DGY drology Indicato cators (minimum of ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ice Soil Cracks (Bildation Visible on Assely Vegetated Co	rs: of one re	equired;	check a	Ill that	apply)  Water-Stained Leave (except MLRA 1, 2, Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Oc Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti Stunted or Stresses	es (B9)  4A, and s (B13) dor (C1) res along ed Iron (Coon in Tille	4B) Using Roots (44) Ed Soils (C6)	Second Control (C3)	ondary Indicator Water-Stained (MLRA 1, 2, 4 Drainage Patte Dry-Season W Saturation Vis Geomorphic F Shallow Aquite FAC-Neutral T Raised Ant Me	Leaves (EA, and 4B) A, and 4B) A arms (B10) A ater Table B ible on Ae B osition (D2) B ard (D3) C est (D5) B ounds (D6)	39) e) (C2) rial Imag 2)	ery (C9)	
YDROLO etland Hy imary Indi   Surfa   High '   Satur   Wate   Sedir   Iron [   Surfa   Iron [   Surfa   Inunc   Spars	DGY drology Indicato cators (minimum of ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ice Soil Cracks (Bildation Visible on Assely Vegetated Co	rs: of one re	equired;	check a	Ill that	apply)  Water-Stained Leave (except MLRA 1, 2, Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Oc Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti Stunted or Stresses	es (B9)  4A, and s (B13) dor (C1) res along d Iron (Con in Tille Plants (Demarks)	4B) Using Roots (44) Ed Soils (C6)	Second Control (C3)	ondary Indicator Water-Stained (MLRA 1, 2, 4 Drainage Patte Dry-Season W Saturation Vis Geomorphic F Shallow Aquite FAC-Neutral T Raised Ant Me	Leaves (EA, and 4B) A, and 4B) A arms (B10) A ater Table B ible on Ae B osition (D2) B ard (D3) C est (D5) B ounds (D6)	39) e) (C2) rial Imag 2)	ery (C9)	
YDROLC etland Hy imary Indi   Surfa   High     Satur   Wate   Sedir   Drift [   Algal   Iron [   Surfa   Inunc   Spars eld Observations	DGY drology Indicato cators (minimum of ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ace Soil Cracks (B) dation Visible on A sely Vegetated Corvations:	rs: of one re c) 6) erial Ima	equired; agery (E surface	check a	Ill that	apply)  Water-Stained Leave (except MLRA 1, 2, Salt Crust (B11)  Aquatic Invertebrate Hydrogen Sulfide Or Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti Stunted or Stresses Other (Explain in Re	es (B9)  4A, and s (B13) dor (C1) res along d Iron (Con in Tille Plants (Demarks)	4B) Using Roots (44) Ed Soils (C6)	Second Control (C3)	ondary Indicator Water-Stained (MLRA 1, 2, 4 Drainage Patte Dry-Season W Saturation Vis Geomorphic F Shallow Aquite FAC-Neutral T Raised Ant Me	Leaves (EA, and 4B) A, and 4B) A arms (B10) A ater Table B ible on Ae B osition (D2) B ard (D3) C est (D5) B ounds (D6)	39) e) (C2) rial Imag 2)	ery (C9)	
YDROLO etland Hy imary Indi Surfa High Satur Sedir Sedir Sedir Surfa Inno Sur	The soil profile represent?	of one reconstruction	equired;	check a 377) (B8)	Ill that	apply)  Water-Stained Leave (except MLRA 1, 2, Salt Crust (B11)  Aquatic Invertebrate Hydrogen Sulfide Oc Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti Stunted or Stresses Other (Explain in Re	es (B9)  4A, and s (B13) dor (C1) res along ed Iron (Con in Tille Plants (Demarks)	4B) Using Roots (44) Ed Soils (C6)	Second Control (C3)	ondary Indicator Water-Stained (MLRA 1, 2, 4 Drainage Patte Dry-Season W Saturation Vis Geomorphic F Shallow Aquite FAC-Neutral T Raised Ant Me	Leaves (EA, and 4B ems (B10) /ater Table ible on Aei Position (D2 ard (D3) Fest (D5) bounds (D6 Hummocks	39) e) (C2) rial Imag 2)	ery (C9)	No
YDROLC etland Hy imary Indi Surfa High Satur Sedir Sedir Surfa Indi Spars eld Obser urface Wa fater Table aturation F	The soil profile report of the soil profile repo	of one reconstruction of one reconstruction one reconstruction of	equired;	check a  37) (B8)  No No No	Ill that	apply)  Water-Stained Leave (except MLRA 1, 2, Salt Crust (B11)  Aquatic Invertebrate Hydrogen Sulfide Or Oxidized Rhizosphe Presence of Reducet Recent Iron Reducti Stunted or Stresses Other (Explain in Re	es (B9)  4A, and s (B13) dor (C1) res along ed Iron (Con in Tille Plants (Demarks)	4B)  Univing Roots (24)  Ed Soils (C6)  D1) (LRR A)	Second Control (Control (Contr	ondary Indicator Water-Stained (MLRA 1, 2, 4 Drainage Patte Dry-Season W Saturation Vis Geomorphic F Shallow Aquita FAC-Neutral 1 Raised Ant Me Frost-Heave H	Leaves (EA, and 4B ems (B10) /ater Table ible on Aei Position (D2 ard (D3) Fest (D5) bounds (D6 Hummocks	39)  (C2)  (C2)  (A)  (C2)  (A)  (LRR A)  (C7)	ery (C9)	No

## WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Landionn (missippe, terrade, etc.).	<u>TP-5</u>	
Investigator(s): J. Bartlett & K. Lacey  Landform (hillslope, terrace, etc.): terrace  Local relief (concave, convex, none): convex Slope		
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope		
A No-real section of the section of	(%): <u>0-2</u>	2
Subregion (LRR): <u>MLRA4A</u> Lat: <u>47.0107682956781</u> Long: <u>-124.1637648082</u> Datum: <u>N</u>	AD83	
Soil Map Unit Name: Westport fine sand, 3-10% slopes NWI classification: none		
Are climatic / hydrologic conditions on the site typical for this time of year? Yes 🛛 No 🗋 (If no, explain in Remarks.)		
Are Vegetation □, Soil □, or Hydrology □, significantly disturbed? Are "Normal Circumstances" present?	⊠ No	
Are Vegetation  , Soil  , or Hydrology  , naturally problematic? (If needed, explain any answers in Remarks.)		
, 10 to ago and a large and a		
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.		
Hydrophytic Vegetation Present? Yes ⊠ No □		
Is the Sampled Area Yes	☐ No	o 🛛
Hydric Soil Present? Yes ☐ No ☑ within a Wetland?		
The industry and the part went and or	outh proc	ertv
Remarks: The property consists of a small undeveloped lot dominated by scrub/shrub vegetation. There is development along the horit, west, and so boundaries, and an undeveloped property to the east. The topography is relatively flat throughout but lowers slightly into a depression alon property line. Test Plot 5 is located southwest of Test Plot 4 midway through the lot in the upland.	g the eas	stern
VEGETATION – Use scientific names of plants		
The Statute (Plet size: 20 ft diameter) Absolute Dominant Indicator Dominance Test Worksheet:		
"Mee Status (1 tot 3/26. Status Species? Status Species? Status		
1. Alnus rubra 15 yes FAC Number of Dominant Species 4 2. Picea sitchensis 10 yes FAC That Are OBL, FACW, or FAC:		(A)
2. Picea sitchensis 10 yes FAC		
3 Total Number of Dominant Species Across All Strata:		(B)
4 Species Across Air State.  50% = 12.5, 20% = 5		
That Are OBL EACW or EAC		(A/B)
Sapling/Shrub Stratum (Plot size: 20 ft diameter)  1 Gaultheria shallon  25 yes FACU Prevalence Index worksheet:		
1. Gauteria stration	v bv:	
Z. Vaccinian Statem	(2).	
3. <u>Rubus specialnis</u>		
4.		
5.		
30% - <u>22.0</u> , 20% - <u>9</u>		
retu stratum (Flot size. To it diameter)		(B)
1. <u>Carex obnupta</u> 50 <u>yes</u> OBL Column Totals:(A)	0.	
2 Prevalence Index = B/A =		
3 Hydrophytic Vegetation Indicators:		
4		
5		
6		
7 4 - Morphological Adaptations <sup>1</sup> (Provide suppor	ting	
8 data in Retitation of a separate sheet)		
9 5 - Wetland Non-Vascular Plants <sup>1</sup>		
10		
11 1Indicators of hydric soil and wetland hydrology must		
$50\% = 25$ , $20\% = 10$ = Total Cover $\frac{50}{25}$ = Total Cover $\frac{50}$		
Woody Vine Stratum (Plot size:)		
1		
Hydrophytic	No	
Vegetation Yes ⊠		
= Total Cover		
50% =, 20% = = Total Cover Present?  % Bare Ground in Herb Stratum 50  Hydrophytic varieties is met because there is greater than 50 percent dominance by FAC and OBL species.		410
50% =, 20% = = Total Cover Present?		

Project Site: 121 Barnacle St Sampling Point: TP-5 SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Redox Features Matrix Loc<sup>2</sup> Remarks Texture Color (moist) Type<sup>1</sup> (inches) Color (moist) % sandy loam 0-4 10YR 2/2 100 sand 4-16 10YR 3/2 100 <sup>2</sup>Location: PL=Pore Lining, M=Matrix, RC=Root Channel <sup>1</sup>Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Indicators for Problematic Hydric Soils3: Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) 2 cm Muck (A10) Sandy Redox (S5) Histosol (A1) Red Parent Material (TF2) Stripped Matrix (S6) Histic Epipedon (A2) Very Shallow Dark Surface (TF12) Loamy Mucky Mineral (F1) (except MLRA 1) Black Histic (A3) Other (Explain in Remarks) Loamy Gleyed Matrix (F2) Hydrogen Sulfide (A4) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Redox Dark Surface (F6) <sup>3</sup>Indicators of hydrophytic vegetation and Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) wetland hydrology must be present, Redox Depressions (F8) unless disturbed or problematic. Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type:  $\boxtimes$ Yes No **Hydric Soils Present?** Depth (inches): The soil profile does not meet any of the hydric soil indicators because it does not meet the definition of a depleted matrix and there are no redoximorphic Remarks: features present.

HYD	ROLOGY													
Wetla	and Hydrology Indicat	ors:												
Prima	ary Indicators (minimum	of one re	equired;	check	all that	t apply)			Sec	ondary Indicators (2 or m	ore require	ed)		
	Surface Water (A1)	Di				Water-Stained Leaves	s (B9)			Water-Stained Leaves	(B9)			
	High Water Table (A2	!)				(except MLRA 1, 2, 4	A, and 4B)			(MLRA 1, 2, 4A, and 4	lB)			
	Saturation (A3)					Salt Crust (B11)				Drainage Patterns (B1	0)			
	Water Marks (B1)					Aquatic Invertebrates	(B13)			Dry-Season Water Tab	ole (C2)			
	Sediment Deposits (E	32)				Hydrogen Sulfide Odd	or (C1)			Saturation Visible on A	erial Imag	ery (C	9)	
	Drift Deposits (B3)					Oxidized Rhizosphere	es along Living Roots	(C3)		Geomorphic Position (	D2)			,
	Algal Mat or Crust (B	4)				Presence of Reduced	I Iron (C4)			Shallow Aquitard (D3)				
	Iron Deposits (B5)					Recent Iron Reduction	n in Tilled Soils (C6)			FAC-Neutral Test (D5)	)			
	Surface Soil Cracks (	B6)				Stunted or Stresses F	Plants (D1) (LRR A)			Raised Ant Mounds (D	6) (LRR A	.)		
	Inundation Visible on	Aerial Im	agery (E	B7)		Other (Explain in Ren	narks)			Frost-Heave Hummoc	ks (D7)			
	Sparsely Vegetated (	Concave S	Surface	(B8)						The second secon				
Field	Observations:													
Surfa	ace Water Present?	Yes		No	$\boxtimes$	Depth (inches):								
Wate	er Table Present?	Yes		No	$\boxtimes$	Depth (inches):								18
1	ration Present? udes capillary fringe)	Yes		No	$\boxtimes$	Depth (inches):		Wetla	nd Hy	drology Present?	Yes		No	
Desc	cribe Recorded Data (st	tream gau	ige, mo	nitoring	well, a	aerial photos, previous i	nspections), if availab	ole:						
Rem	arks: Wetland hyd	rology crit	eria is r	not met	becau	se there was no water o	or evidence of water p	oresent.						
	5.	30050												
										Company of the Compan				

## WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: 121 Barnacle St			City/County	y: Ocean Shores/Grays Harbor Sampling Date:	08/23/18
			•	Haibbi	TP-6
Applicant/Owner: Best Brothers LLC				Section, Township, Range: S34, T18, R12W	
Investigator(s): J. Bartlett & K. Lacey					(%): <u>0-2</u>
Landform (hillslope, terrace, etc.): terrace			- C - C - C - C - C - C - C - C - C - C	ve, convex, none): <u>convex</u> Slope ( Long: <u>-124.16387631345</u> Datum: <u>NA</u>	A CANADA CANADA
Subregion (LRR): MLRA4A	ARTON COMM	108993466766		NWI classification: none	
Soil Map Unit Name: Westport fine sand, 3-10% slop			<b>5</b> 7		
Are climatic / hydrologic conditions on the site typical for				Visited States	⊠ No □
Are Vegetation ☐, Soil ☐, or Hydrology	TOTAL CONTRACTOR	antly disturbed		offiai Gircamstances procent.	A 110 L
Are Vegetation ☐, Soil ☐, or Hydrology	☐, natural	y problematic?	(If nee	eded, explain any answers in Remarks.)	
		ATA 55 USA		to the territory of	
SUMMARY OF FINDINGS – Attach site map si	howing san	npling point	locations,	transects, important features, etc.	
Hydrophytic Vegetation Present?	Yes	No 🛛	In the Comp	led Area	
Hydric Soil Present?	Yes	No 🛛	Is the Samp within a Wet		□ No ⊠
Wetland Hydrology Present?	Yes 🗆	CONTROL STATE			
Remarks: The property consists of a small undevelop	ed lot domina	ited by scrub/s	hrub vegetation	on. There is development along the north, west, and so	uth property
houndaries and an undeveloped property	to the east 1	ne topograpny	is relatively i	lat till oughout but lowers ongras and a september	the eastern
property line. Test Plot 6 is located in the r	northwest cori	ner of the prop	erty within the	s upland.	
VEGETATION – Use scientific names of plant	re .				
	Absolute	Dominant	Indicator	Dominance Test Worksheet:	
Tree Stratum (Plot size: 30 ft diameter)	% Cover	Species?	Status	A SA	WANTED TO
Tsuga heterophylla	<u>5</u>	<u>yes</u>	FACU	Number of Dominant Species That Are OBL, FACW, or FAC:	(A)
2	-	-			
3	****	-		Total Number of Dominant Species Across All Strata:	(B)
4					
50% = <u>2.5</u> , 20% = <u>1</u>	<u>5</u>	= Total Cove	r	Percent of Dominant Species 33 That Are OBL, FACW, or FAC:	(A/B)
Sapling/Shrub Stratum (Plot size: 20 ft diameter)			100		
1. Myrica californica	<u>35</u>	<u>yes</u>	FAC	Prevalence Index worksheet:	
2. Gaultheria shallon	<u>25</u>	<u>yes</u>	FACU	Total % Cover of: Multiply	<u>/ by:</u>
3. Vaccinium ovatum	<u>10</u>	<u>no</u>	<u>FACU</u>	OBL species x1 =	
4. Rubus spectabilis	<u>10</u>	<u>no</u>	FAC	FACW species x2 =	
5			<del></del>	FAC species x3 =	-
50% = 40, 20% = <u>16</u>	80	= Total Cove	er	FACU species x4 =	
Herb Stratum (Plot size:)				UPL species x5 =	=
				Column Totals:(A)	(B)
1			Report Services	Prevalence Index = B/A =	
2		-	electrical plan	Hydrophytic Vegetation Indicators:	
3	-	(a		☐ 1 – Rapid Test for Hydrophytic Vegetation	
4	7	-		☐ 2 - Dominance Test is >50%	
5		-	0.000	☐ 3 - Prevalence Index is ≤3.0 <sup>1</sup>	
6					tina
7		-		4 - Morphological Adaptations <sup>1</sup> (Provide suppor data in Remarks or on a separate sheet)	ung
8	-		<del></del>		
9		-	-		
10	-	( <del>)</del>		☐ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
11		-		<sup>1</sup> Indicators of hydric soil and wetland hydrology must	
50% =, 20% =		= Total Cov	er	be present, unless disturbed or problematic.	
Woody Vine Stratum (Plot size:)					
1					
2	-			Hydrophytic Vegetation Yes	No 🖾
50% =, 20% =	9 <u>20 - 12</u> 000	= Total Cov	er	Vegetation Yes ☐ Present?	
ACTIVITY OF THE PROPERTY AND ACTIVITY OF THE					
% Bare Ground in Herb Stratum 100	s not met hec	ause there is la	ess than 50 ne	ercent dominance by FAC species.	
Remarks: Hydrophytic vegetation criteria	a HOLHIEL DEC	uuse 111616 13 16	Joo alan oo pi		

Project Site: <u>121 Barnacle St</u>

Water Marks (B1)       □ Aquatic Invertebrates (B13)       □ Dry-Season Water Table (C2)         □ Sediment Deposits (B2)       □ Hydrogen Sulfide Odor (C1)       □ Saturation Visible on Aerial Imagery (C9)         □ Drift Deposits (B3)       □ Oxidized Rhizospheres along Living Roots (C3)       □ Geomorphic Position (D2)         □ Algal Mat or Crust (B4)       □ Presence of Reduced Iron (C4)       □ Shallow Aquitard (D3)         □ Iron Deposits (B5)       □ Recent Iron Reduction in Tilled Soils (C6)       □ FAC-Neutral Test (D5)         □ Surface Soil Cracks (B6)       □ Stunted or Stresses Plants (D1) (LRR A)       □ Raised Ant Mounds (D6) (LRR A)         □ Inundation Visible on Aerial Imagery (B7)       □ Other (Explain in Remarks)       □ Frost-Heave Hummocks (D7)         □ Sparsely Vegetated Concave Surface (B8)         Field Observations:         Surface Water Present?       Yes       No       ☑ Depth (inches):       □         Water Table Present?       Yes       No       ☑ Depth (inches):       □	rofile Description: (Des	1000 FOR 100	-		200		Andreas and the second		
Color (moist)		cribe to the	depth r	needed	to do		n the absence	ce of indicators	s.)
Section   Sect	Depth	√atrix							
ype: C= Cencentration, D-Depletion, RM=Reduced Matrix, CS=Covered or Coatad Sand Grains.  ype: C= Cencentration, D-Depletion, RM=Reduced Matrix, CS=Covered or Coatad Sand Grains.  ype: C= Cencentration, D-Depletion, RM=Reduced Matrix, CS=Covered or Coatad Sand Grains.    Variety Self Indicators: (Applicable to all LRRs, unless otherwise noted.)   Indicators for Problematic Hydric Soils*	nches) Color (mo	ist) %	%	Colo	r (mois	st) % Type <sup>1</sup>	Loc <sup>2</sup>		
yoe. C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  **Location: PL=Pore Lining, M=Matrix, RC=Root Channel Indicators (Applicable to all LRRs, unless otherwise noted.)    Histore (A1)	<u>0-4</u> <u>10YR 2</u>	1/2 1	00					1971 19	
Reference   Refe	<u>4-18</u> <u>10YR 3</u>	<u>//2</u> <u>1</u>	00	_				sandy loar	<u>m</u>
Reference   Refe				-		<u> </u>		0	
Reference   Refe				_				-	
Reference   Refe	The state of the s	_				6 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	-		1
Reference   Refe				3 <del></del>			N 10 13		
Reference   Carl   Ca		_		· ·				-	
Reference   Refe				_		——————————————————————————————————————	Groins 2	I ocation: PI =P	Pore Lining M=Matrix RC=Root Channel
Histosol (A1)   Sandy Redox (S5)   2 cm Muck (A10)   Histosol (A2)   Closmy Mucky Mineral (F1) (except MLRA 1)   Very Shallow Dark Surface (TF12)   Hydrogen Sulfide (A4)   Closmy Mucky Mineral (F1) (except MLRA 1)   Very Shallow Dark Surface (TF12)   Hydrogen Sulfide (A4)   Closmy Mucky Mineral (F1) (except MLRA 1)   Very Shallow Dark Surface (TF12)   Hydrogen Sulfide (A4)   Closmy Mucky Mineral (F1) (except MLRA 1)   Very Shallow Dark Surface (TF12)   Hydrogen Sulfide (A4)   Closmy Mucky Mineral (F1)   Closmy Mucky Mineral (F1)							Jiams.		
Histic Epipedon (A2)		Applicable t	o all LR					100000000000000000000000000000000000000	
Black Histic (A3)   Loamy Mucky Mineral (F1) (except MLRA 1)   Very Shallow Dark Surface (TF12)   Hydrogen Sulfide (A4)   Loamy Gleyed Matrix (F2)   Other (Explain in Remarks)   Depleted Below Dark Surface (A11)   Depleted Matrix (F3)   Redox Dark Surface (F6)   Sandy Mucky Mineral (S1)   Depleted Dark Surface (F7)   Prosents (F8)		N.				VE.) 15 12			
Hydrogen Sulfide (A4)	11 Waste off the state of the state of	)				2.5	ent MLRA 1	_	
Depleted Below Dark Surface (A11)	1 0001 NOT 1000 1000 100 NOT 100	(4)					opt merot ty	12:10:11	200 200 00 00 00 00 00
Thick Dark Surface (A12)			111			6000 24 10 0000000 00 1000000000000000000		_	
Sandy Mucky Mineral (S1)			,			and the street of the street o			
Sandy Gleyed Matrix (S4)									
Strictive Layer (if present):    pper	M1 (8.50) 35								
PPROLOGY    Page   Page		Mariana and a second	- West State of the State of th				- I American		
Pythology indicators:  The soil profile does not meet any of the hydric soil indicators because it does not meet the definition of a depleted matrix and there are no redoximorphic features present.  **Page 1. **Apacha *									
The soil profile does not meet any of the hydric soil indicators because it does not meet the definition of a depleted matrix and there are no redoximorphing features present.    YPROLOGY	500 ML 1600 M					1	Hydric Soils	s Present?	Yes 🗌 No 🛭
Surface Water (A1)	YDROLOGY	E CONTRACTOR OF THE PROPERTY O							
Surface Water (A1)	etland Hydrology Indi	cators:							
High Water Table (A2)	rimary Indicators (minin	ium of one re	equired;	check a	all that				
Saturation (A3)	Surface Water (A1	)			all that	apply)	The same of the sa		
Water Marks (B1)	High Water Table	(A2)					<u></u>	w	Vater-Stained Leaves (B9)
Sediment Deposits (B2)						Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	3)	□ v	Vater-Stained Leaves (B9)  WLRA 1, 2, 4A, and 4B)
Drift Deposits (B3)	Saturation (A3)					Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4E Salt Crust (B11)	3)	W	Vater-Stained Leaves (B9)  WLRA 1, 2, 4A, and 4B)  Varainage Patterns (B10)
Algal Mat or Crust (B4)	w v v v v v v v v v v v v v v v v v v v					Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebrates (B13)	3)	W  (1)   D	Vater-Stained Leaves (B9)  VALRA 1, 2, 4A, and 4B)  Varainage Pattems (B10)  Vary-Season Water Table (C2)
Iron Deposits (B5)	Water Marks (B1)	; (B2)				Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)		W   (N   D   D   S	Vater-Stained Leaves (B9)  VALRA 1, 2, 4A, and 4B)  Varianage Patterns (B10)  Vary-Season Water Table (C2)  Vaturation Visible on Aerial Imagery (C9)
Surface Soil Cracks (B6)	Water Marks (B1) Sediment Deposits Drift Deposits (B3)					Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L	iving Roots (	W (N	Water-Stained Leaves (B9)  WLRA 1, 2, 4A, and 4B)  Irrainage Patterns (B10)  Irry-Season Water Table (C2)  Irraitation Visible on Aerial Imagery (C9)  Seomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust	(B4)				Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4E) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4)	.iving Roots ((	W (f) (f)   C (f)	Vater-Stained Leaves (B9)  VILRA 1, 2, 4A, and 4B)  Varianage Patterns (B10)  Vary-Season Water Table (C2)  Vaturation Visible on Aerial Imagery (C9)  Value Comorphic Position (D2)  Value Comorphic Position (D3)
Sparsely Vegetated Concave Surface (B8)    Sparsely Vegetated Concave Surface (B8)    Surface Water Present?	Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5)	(B4)				Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled	iving Roots (( ) Soils (C6)	W (f) (f)   D   D   S   C3)   G   S   G   F	Vater-Stained Leaves (B9)  VILRA 1, 2, 4A, and 4B)  Varianage Pattems (B10)  Vary-Season Water Table (C2)  Vaturation Visible on Aerial Imagery (C9)  Value of Complete (C2)  Value of Calcal Imagery (C9)
ield Observations:  surface Water Present? Yes  No  Depth (inches):  Vater Table Present? Yes  No  Depth (inches):  saturation Present? Yes  No  Depth (inches):  surface Water Present? Yes  No  Depth (inches):  saturation Present? Yes  No  Depth (inches):  surface Water Present? Yes  No  Depth (inches):	Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Crack	(B4) xs (B6)	-			Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stunted or Stresses Plants (D1)	iving Roots (( ) Soils (C6)	W (N) (N)   D   D   S   C3)   G   S   G   F	Water-Stained Leaves (B9)  WLRA 1, 2, 4A, and 4B)  Irrainage Patterns (B10)  Irry-Season Water Table (C2)  Istaturation Visible on Aerial Imagery (C9)  Istaturation (D2)  Istallow Aquitard (D3)  IAC-Neutral Test (D5)  Italised Ant Mounds (D6) (LRR A)
urface Water Present? Yes No Depth (inches):  Vater Table Present? Yes No Depth (inches):  saturation Present? Yes No Depth (inches):  No Depth (inches):  Depth (inches):  Wetland Hydrology Present? Yes No	Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Crack Inundation Visible	(B4) ks (B6) on Aerial Ima		37)		Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stunted or Stresses Plants (D1)	iving Roots (( ) Soils (C6)	W (N) (N)   D   D   S   C3)   G   S   G   F	Water-Stained Leaves (B9)  WLRA 1, 2, 4A, and 4B)  Irrainage Patterns (B10)  Irry-Season Water Table (C2)  Istaturation Visible on Aerial Imagery (C9)  Istaturation (D2)  Istallow Aquitard (D3)  IAC-Neutral Test (D5)  Italised Ant Mounds (D6) (LRR A)
Vater Table Present?       Yes       No       ☑       Depth (inches):          Saturation Present? ncludes capillary fringe)       Yes       ☐       No       ☑       Depth (inches):        Wetland Hydrology Present?       Yes       ☐       No	Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Cract Inundation Visible Sparsely Vegetate	(B4) ks (B6) on Aerial Ima		37)		Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stunted or Stresses Plants (D1)	iving Roots (( ) Soils (C6)	W (N) (N)   D   D   S   C3)   G   S   G   F	Water-Stained Leaves (B9)  WLRA 1, 2, 4A, and 4B)  Irrainage Patterns (B10)  Irry-Season Water Table (C2)  Istaturation Visible on Aerial Imagery (C9)  Istaturation (D2)  Istallow Aquitard (D3)  IAC-Neutral Test (D5)  Italised Ant Mounds (D6) (LRR A)
saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No	Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Cract Inundation Visible Sparsely Vegetate	(B4) (S (B6) on Aerial Imaged Concave S	Surface	37) (B8)		Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stunted or Stresses Plants (D1) Other (Explain in Remarks)	iving Roots (( ) Soils (C6)	W (N) (N)   D   D   S   C3)   G   S   G   F	Water-Stained Leaves (B9)  WLRA 1, 2, 4A, and 4B)  Irrainage Patterns (B10)  Irry-Season Water Table (C2)  Istaturation Visible on Aerial Imagery (C9)  Istaturation (D2)  Istallow Aquitard (D3)  IAC-Neutral Test (D5)  Italised Ant Mounds (D6) (LRR A)
includes capillary fringe) Yes Li No Li Deptit (inclies).	Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Cract Inundation Visible Sparsely Vegetate Gield Observations:	(B4) (S (B6) on Aerial Imaded Concave S	Surface	37) (B8) No		Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stunted or Stresses Plants (D1) Other (Explain in Remarks)	iving Roots (( ) Soils (C6)	W (N) (N)   D   D   S   C3)   G   S   G   F	Water-Stained Leaves (B9)  WLRA 1, 2, 4A, and 4B)  Irrainage Patterns (B10)  Irry-Season Water Table (C2)  Istaturation Visible on Aerial Imagery (C9)  Istaturation (D2)  Istallow Aquitard (D3)  IAC-Neutral Test (D5)  Italised Ant Mounds (D6) (LRR A)
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	Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Cract Inundation Visible Sparsely Vegetate Field Observations: Surface Water Present? Water Table Present?	(B4) (S (B6) On Aerial Imaged Concave S  Yes  Yes	Surface	37) (B8) No No		Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stunted or Stresses Plants (D1) Other (Explain in Remarks)  Depth (inches):	iving Roots (i ) Soils (C6) ) (LRR A)	W (N	Water-Stained Leaves (B9)  WLRA 1, 2, 4A, and 4B)  Irrainage Patterns (B10)  Irry-Season Water Table (C2)  Irrainage Patterns (D2)  Irrainage Patterns (D2)  Irrainagery (C9)  Irrainagery (C9)
	Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Cract Inundation Visible Sparsely Vegetate Field Observations: Surface Water Present? Vater Table Present? Saturation Present? Sincludes capillary fringe	(B4) (S (B6) on Aerial Imaged Concave S Yes Yes Yes	Surface	37) (B8) No No No		Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stunted or Stresses Plants (D1) Other (Explain in Remarks)  Depth (inches):  Depth (inches):	Living Roots (i ) Soils (C6) ) (LRR A)	C3) C G F C F	Water-Stained Leaves (B9)  WLRA 1, 2, 4A, and 4B)  Irrainage Patterns (B10)  Irry-Season Water Table (C2)  Irrainage Patterns (D2)  Irrainage Patterns (D2)  Irrainagery (C9)  Irrainagery (C9)
	Water Marks (B1)     Sediment Deposits     Drift Deposits (B3)     Algal Mat or Crust     Iron Deposits (B5)     Surface Soil Cracl     Inundation Visible     Sparsely Vegetate     Field Observations: Surface Water Present?  Water Table Present?  Saturation Present?  Gincludes capillary fringe Describe Recorded Data	(B4)  As (B6)  On Aerial Image of Concave Solution  Yes  Yes  Yes  (stream gau	Surface	37) (B8) No No No nitoring	O O O O O O O O O O O O O O O O O O O	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stunted or Stresses Plants (D1) Other (Explain in Remarks)  Depth (inches):  Depth (inches):	iving Roots (( ) Soils (C6) ) (LRR A)	(I)	Water-Stained Leaves (B9)  WLRA 1, 2, 4A, and 4B)  Irrainage Patterns (B10)  Irry-Season Water Table (C2)  Irrainage Position (D2)  Irrainage Position (D2)  Irrainagery (C9)  Irrainagery (C9)

## **RATING SUMMARY – Western Washington**

Name of wetland (or ID #): _	Wetland A	Date of site visit: August 23, 2018
Rated by: Joanne Bartlett	Trained by E	cology?_X_YesNo Date of training:11/2014
HGM Class used for rating:_	Depressional	Wetland has multiple HGM classes?YXN
	mplete without the	figures requested (figures can be combined).  ogle Earth

## **OVERALL WETLAND CATEGORY** \_\_\_III\_\_ (based on functions X or special characteristics X)

## 1. Category of wetland based on FUNCTIONS

FUNCTION	Improving Water Quality		Н	ydrolo	gic		Habita	at		
					Circle t	the ap	propr	iate ra	tings	
Site Potential	Н	M	L	Н	M	L	Н	M	<u>L</u>	
Landscape Potential	Н	M	L	Н	M	L	Н	М	L	
Value	<u>H</u>	M	L	Н	M	L	Н	M	L	TOTAL
Score Based on Ratings		7			6	ellos—		3		16

## Score for each function based on three ratings (order of ratings is not important) 9 = H,H,H8 = H, H, M7 = H,H,L7 = H,M,M6 = H,M,L6 = M,M,M5 = H,L,L5 = M,M,L4 = M,L,L3 = L,L,L

## 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATI	EGORY
Estuarine	I	II
Wetland of High Conservation Value		I
Bog		I
Mature Forest		I
Old Growth Forest		I
Coastal Lagoon	I	II
Interdunal	I II	(II)
None of the above		

# Maps and figures required to answer questions correctly for Western Washington

## **Depressional Wetlands**

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	2
Hydroperiods	D 1.4, H 1.2	2
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	5
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	5
Map of the contributing basin	D 4.3, D 5.3	6
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	6
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	7
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	7

## **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	L1.1, L4.1, H1.1, H1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

## Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to figure above)		F10 102
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

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

For questions 1-7, the criteria described must apply to the entire unit being rated. If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8. 1. Are the water levels in the entire unit usually controlled by tides except during floods? YES - the wetland class is Tidal Fringe - go to 1.1 **NO** – go to 2 1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? **YES - Freshwater Tidal Fringe** NO - Saltwater Tidal Fringe (Estuarine) If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands. 2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. YES - The wetland class is Flats **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 water leaves the wetland without being impounded. YES - The wetland class is Slope NO - go to 5 NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep). 5. Does the entire wetland unit **meet all** of the following criteria? \_\_\_The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river, \_\_\_The overbank flooding occurs at least once every 2 years.

#### Wetland name or number A

**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.

Water Quality Functions - Indicators that the site functions to improve water quality	
D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland:  Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet).  points = 3  Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet.  points = 2  Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1  Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch.  points = 1	3
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes):  Wetland has persistent, ungrazed, plants > 95% of area  Wetland has persistent, ungrazed, plants > $\frac{1}{10}$ of area  Wetland has persistent, ungrazed plants > $\frac{1}{10}$ of area  Wetland has persistent, ungrazed plants < $\frac{1}{10}$ of area  points = 0	3
D 1.4. Characteristics of seasonal ponding or inundation:  This is the area that is ponded for at least 2 months. See description in manual.  Area seasonally ponded is > ½ total area of wetland  Area seasonally ponded is > ½ total area of wetland  Area seasonally ponded is < ½ total area of wetland  points = 2  points = 0	4
Total for D 1 Add the points in the boxes above	10
Rating of Site Potential If score is: 12-16 = H X 6-11 = M 0-5 = L Record the rating on the first	page
D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges?  Yes = 1 No = 0	0
D 2.2. Is $> 10\%$ of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?  Yes = 1 No = 0	0
The state of the s	

Rating of Landscape Potential If score is: 3 or 4 = H X 1 or 2 = M0 = L Record the	ating on the first page
Total for D 2 Add the points in the box	es above 1
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D Source	2.3? <b>0</b> . No = 0
D 2.3. Are there septic systems within 250 ft of the wetland?	No = 0 0

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	0
303(d) list? Yes = 1 No = 0	
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	0
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in which the unit is found)?  Yes = 2 No = 0	2
Total for D 3  Add the points in the boxes above	2

Rating of Value If score is: X 2-4 = H 1 = M 0 = L Record the rating on the first page

DEPRESSIONAL AND FLATS WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation	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 (no outlet)  Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet points = 2  Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch  Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing  points = 0	4
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.  Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7  Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5  Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3  The wetland is a "headwater" wetland points = 3  Wetland is flat but has small depressions on the surface that trap water points = 1  Marks of ponding less than 0.5 ft (6 in)	3
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.  The area of the basin is less than 10 times the area of the unit points = 5  The area of the basin is 10 to 100 times the area of the unit points = 3  The area of the basin is more than 100 times the area of the unit points = 0  Entire wetland is in the Flats class	3
Total for D 4  Add the points in the boxes above  Pating of Site Potential If score is: 12-16 = H X 6-11 = M 0-5 = L  Record the rating on the	
Rating of Site Potential II Score is. 12 20 - II 20 -	e jiist page
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?  D 5.1. Does the wetland receive stormwater discharges?  Yes = 1 No = 0	0
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	1
D 5.2. Is >10% of the area within 130 ft of the wetland in land does that generate excess remaining the basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)?  Yes = 1 No = 0	0
Total for D 5 Add the points in the boxes above	1
Rating of Landscape Potential If score is:3 = HX _1 or 2 = M0 = L	e first pag
D 6.0. Are the hydrologic functions provided by the site valuable to society?	
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.  The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):  • Flooding occurs in a sub-basin that is immediately down-gradient of unit.  points = 2	1
<ul> <li>Surface flooding problems are in a sub-basin farther down-gradient.</li> <li>Flooding from groundwater is an issue in the sub-basin.</li> </ul>	
The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why points = 0	
There are no problems with flooding downstream of the wetland. points = 0	
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = $2 \text{ No} = 0$	0
Total for D 6 Add the points in the boxes above	1
Rating of Value If score is:2-4 = HX _1 = M0 = L Record the rating on the	he first pag

#### 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 0 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. 4 structures or more: points = 4 Aquatic bed 3 structures: points = 2 Emergent X Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 1 structure: points = 0 Forested (areas where trees have > 30% cover) If the unit has a Forested class, check if: The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon 0 H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). Permanently flooded or inundated 4 or more types present: points = 3 3 types present: points = 2 X Seasonally flooded or inundated 2 types present: points = 1 Occasionally flooded or inundated 1 type present: points = 0 Saturated only \_Permanently flowing stream or river in, or adjacent to, the wetland Seasonally flowing stream in, or adjacent to, the wetland 2 points Lake Fringe wetland 2 points Freshwater tidal wetland 1 H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 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 points = 2 If you counted: > 19 species points = 1 5 - 19 species points = 0 < 5 species 0 H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. Moderate = 2 points None = 0 points Low = 1 point All three diagrams in this row are HIGH = 3points

1.5. Special habitat features:	2
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).	
carge, downed, woody debris within the wetland 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)	
X 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)	
X Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of	
strata)	
otal for H 1 Add the points in the boxes above	3
ating of Site Potential If score is:15-18 = H7-14 = MX_0-6 = L Record the rating of	n the first po
2.0. Does the landscape have the potential to support the habitat functions of the site?	
2.1. Accessible habitat (include only habitat that directly abuts wetland unit).	0
Calculate: % undisturbed habitat 00.2 + [(% moderate and low intensity land uses)/2] 0.00 = 00.2 %	
If total accessible habitat is:	
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3	
20-33% of 1 km Polygon points = 2	
10-19% of 1 km Polygon points = 1	
< 10% of 1 km Polygon points = 0	
2.2. Undisturbed habitat in 1 km Polygon around the wetland.	1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
offullstatived fluiditate. Solve of Folipson	
Official and the control of the cont	
Offalstarbea habitat 10 5070 and 10 patenter	
Ondistance indicate 120% of 2 km in 5760.	-2
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	1
otal for H 2 Add the points in the boxes above	-1
ating of Landscape Potential If score is: 4-6 = H 1-3 = M X < 1 = L Record the rating on	the jirst pag
3.0. Is the habitat provided by the site valuable to society?	
The state of the s	
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.	
that applies to the wetland being rated.  Site meets ANY of the following criteria: points = 2  — It has 3 or more priority habitats within 100 m (see next page)	
that applies to the wetland being rated.  Site meets ANY of the following criteria: points = 2	
that applies to the wetland being rated.  Site meets ANY of the following criteria: points = 2  — It has 3 or more priority habitats within 100 m (see next page)  — It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)  — It is mapped as a location for an individual WDFW priority species	
that applies to the wetland being rated.  Site meets ANY of the following criteria: points = 2  — It has 3 or more priority habitats within 100 m (see next page)  — It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)  — It is mapped as a location for an individual WDFW priority species  — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources	
that applies to the wetland being rated.  Site meets ANY of the following criteria: points = 2  — It has 3 or more priority habitats within 100 m (see next page)  — It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)  — It is mapped as a location for an individual WDFW priority species  — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources  — It has been categorized as an important habitat site in a local or regional comprehensive plan, in a	
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	
that applies to the wetland being rated.  Site meets ANY of the following criteria: points = 2  — It has 3 or more priority habitats within 100 m (see next page)  — It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)  — It is mapped as a location for an individual WDFW priority species  — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources  — It has been categorized as an important habitat site in a local or regional comprehensive plan, in a	
<ul> <li>that applies to the wetland being rated.</li> <li>Site meets ANY of the following criteria: points = 2</li> <li>It has 3 or more priority habitats within 100 m (see next page)</li> <li>It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</li> <li>It is mapped as a location for an individual WDFW priority species</li> <li>It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</li> <li>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</li> </ul>	

## **WDFW Priority Habitats**

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

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

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

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

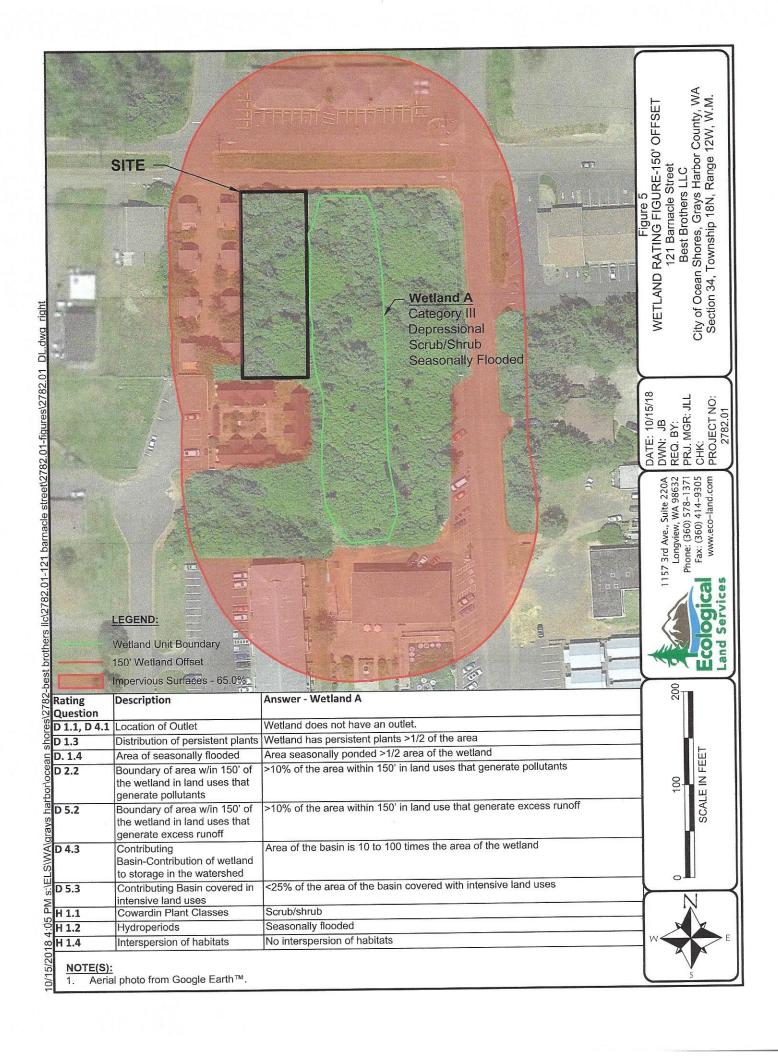
## **CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

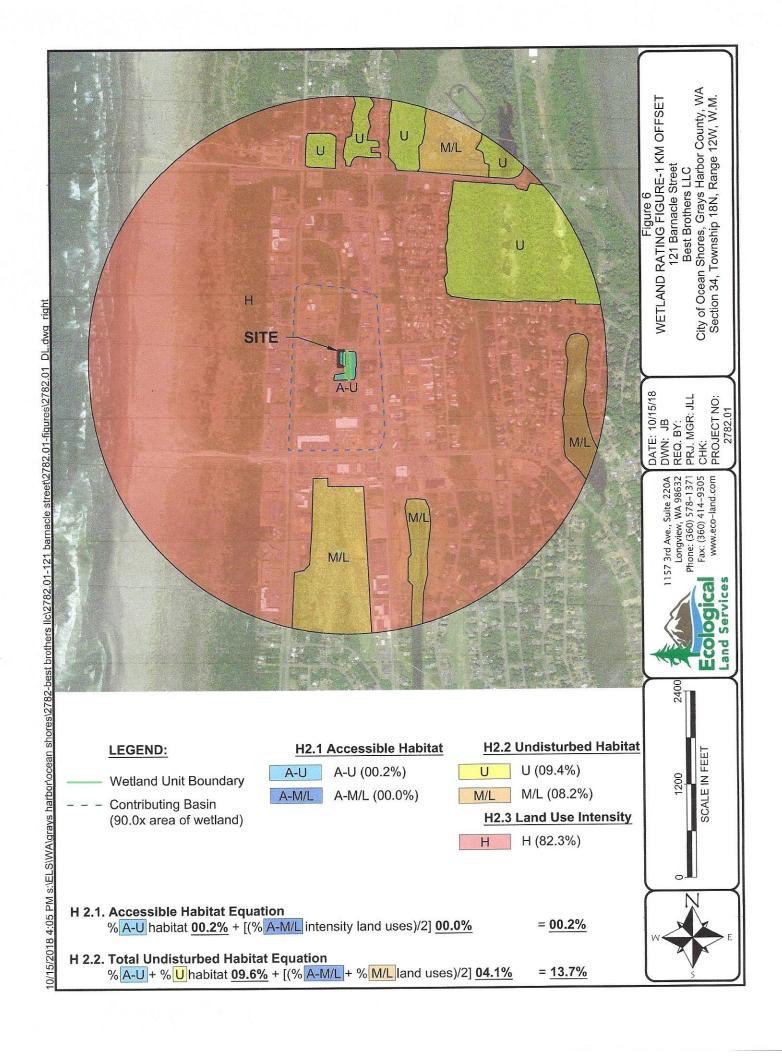
Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	
SC 1.0. Estuarine wetlands	
Does the wetland meet the following criteria for Estuarine wetlands?	er en
— The dominant water regime is tidal,	
— Vegetated, and	
— With a salinity greater than 0.5 ppt Yes –Go to SC 1.1 No= Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?  Yes = Category I No - Go to SC 1.2	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
<ul> <li>The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are Spartina, see page 25)</li> <li>At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-</li> </ul>	Cat. I
mowed grassland.	Cot II
— The wetland has at least two of the following features: tidal channels, depressions with open water, or	Cat. II
contiguous freshwater wetlands. Yes = Category I No = Category II	
SC 2.0. Wetlands of High Conservation Value (WHCV)	
SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High	
Conservation Value? Yes Go to SC 2.2 No – Go to SC 2.3	Cat. I
SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?  Yes = Category I  No = Not a WHCV	
SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
Yes – Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV	
SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on	
their website? Yes = Category I No = Not a WHCV	
SC 3.0. Bogs	
Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key	
below. If you answer YES you will still need to rate the wetland based on its functions.	
SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or	
more of the first 32 in of the soil profile? Yes – Go to SC 3.3 No Go to SC 3.2	
SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or	
pond? Yes – Go to SC 3.3 No $\frac{1}{2}$ Is not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30%	
cover of plant species listed in Table 4? Yes = Is a Category I bog No - Go to SC 3.4	
<b>NOTE:</b> If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by	
measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the	
plant species in Table 4 are present, the wetland is a bog.	Cat. I
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar,	
western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the	
species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	
Yes = Is a Category I bog No = Is not a bog	

SC 4.0. Forested Wetlands	
Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? If you answer YES you will still need to rate the wetland based on its functions.  — Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.  — Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).	
Yes = Category I No = Not a forested wetland for this section	Cat. I
SC 5.0. Wetlands in Coastal Lagoons  Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?  — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks  — The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)  Yes – Go to SC 5.1  No = Not a wetland in a coastal lagoon	Cat. I
<ul> <li>SC 5.1. Does the wetland meet all of the following three conditions?         <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 ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland.</li> <li>The wetland is larger than ¹/₁₀ ac (4350 ft²)</li> </ul> </li> <li>Yes = Category   No = Category   N</li></ul>	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 habitat functions.  In practical terms that means the following geographic areas:  — Long Beach Peninsula: Lands west of SR 103  — Grayland-Westport: Lands west of SR 105	Cat I
<ul> <li>Ocean Shores-Copalis: Lands west of SR 115 and SR 109</li> <li>Yes – Go to SC 6.1</li> <li>No = not an interdunal wetland for rating</li> </ul>	
SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates 11.4, H or H, H, M for the three aspects of function)?  Yes = Category I  No Go to SC 6.2	Cat. II
SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?  Yes = Category II  No Go to SC 6.3  SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?  Yes = Category III  No = Category IV	Cat. III
Tes - Category III No - Category II	Cat. IV
Category of wetland based on Special Characteristics	
If you answered No for all types, enter "Not Applicable" on Summary Form	

Wetland name or number A\_\_\_

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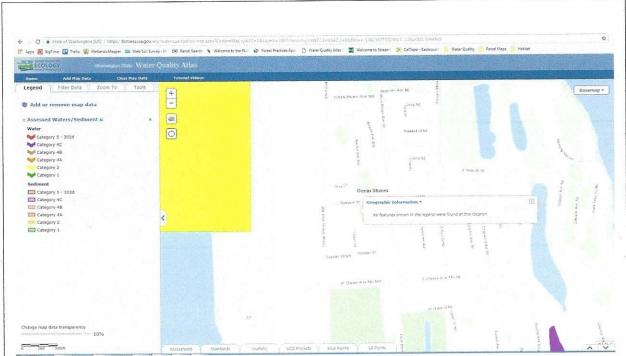


Figure 9a-303(d) Map: There are no 303(d) listed waterways in the project vicinity.

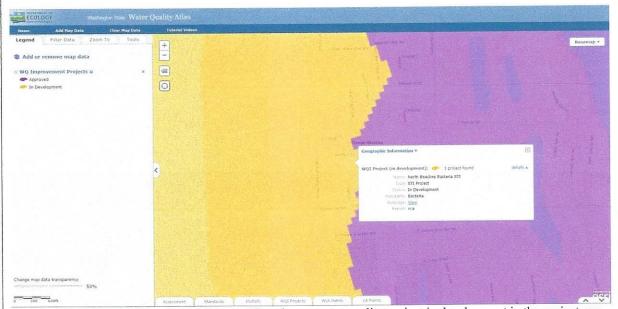


Figure 9b: TMDL List for Ocean Shores. There is one water quality project in development in the project area.



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DATE: 10/10/2018 DWN: KL PRJ. MGR: JB

PROJ.#: 2782.01

Figure 7-Wetland Rating Figure-303(d)/TMDL

121 Barnacle Street Best Brothers LLC Ocean Shores, Washington