Appendix A Wetland Delineation



Cheryl Lund

From:

Li Alligood

Sent:

Thursday, August 09, 2018 9:58 AM

To:

'connellpc@comcast.net'

Cc:

Cheryl Lund (planning@ci.gearhart.or.us); 68150

Subject:

FW: WD #2018-0286 - Concurrence

Attachments:

WD2018-0286final.pdf

Importance:

High

Hello Carole,

Please find the DSL concurrence attached and an explanation of its findings below.

Note that I will be out of the office tomorrow and all next week, please let me know if you need anything before then.

Thanks,

Li Alligood, AICP, LEED Green Associate | Senior Planner Otak, Inc.

Direct: 503.415.2384 | Cell: 503.449.7709 | Main: 503.287.6825

From: Shawn Eisner <SE@pacifichabitat.com> Sent: Thursday, August 09, 2018 9:48 AM

To: Li Alligood <Li.Alligood@otak.com>; Adam Dailey <Adam.Dailey@otak.com>; beachhouse.overton@gmail.com

Subject: FW: WD #2018-0286 - Concurrence

Importance: High

Good morning

Concurrence for the wetlands at Palmberg has been issued. A nice surprise; the wetlands scattered around the interior of the site have been determined to be non-jurisdictional by DSL. They were identified as being artificially created. I still believe that the Corps will assume jurisdiction over those wetlands because they don't really have an exemption for artificially created wetlands. Having wetlands in the interior of the site that are not jurisdictional per DSL could streamline the permitting and mitigation process. If site access can be obtained with less than 50 cubic yards of total impact to the remaining jurisdictional areas then no application to DSL would be required. Additionally, under any scenario that avoids permitting through DSL, the Corps is unlikely to require mitigation for total impacts of less than 0.1 acre.

Let me know if I can clarify the concurrence letter or my observations above.

Shawn

From: HOWARD Heather [mailto:heather.howard@state.or.us]

Sent: Thursday, August 9, 2018 8:49 AM

To: undisclosed-recipients:

Subject: WD #2018-0286 - Concurrence

Importance: High

1

We have completed our review of the wetland delineation report that was prepared for the **Palmberg Property in Clatsop County**. The report was submitted to the Department for approval, given the file number **WD 2018-0286**, and assigned to Chris Stevenson for review.

The results and conclusions from that review are explained in the attached pdf document. If the attached document is illegible or difficult to open, you may contact the Department and request a paper copy. Otherwise, please review the attachment carefully and direct any questions or comments to <a href="https://creativecommons.org/lines/burges

Heather Howard

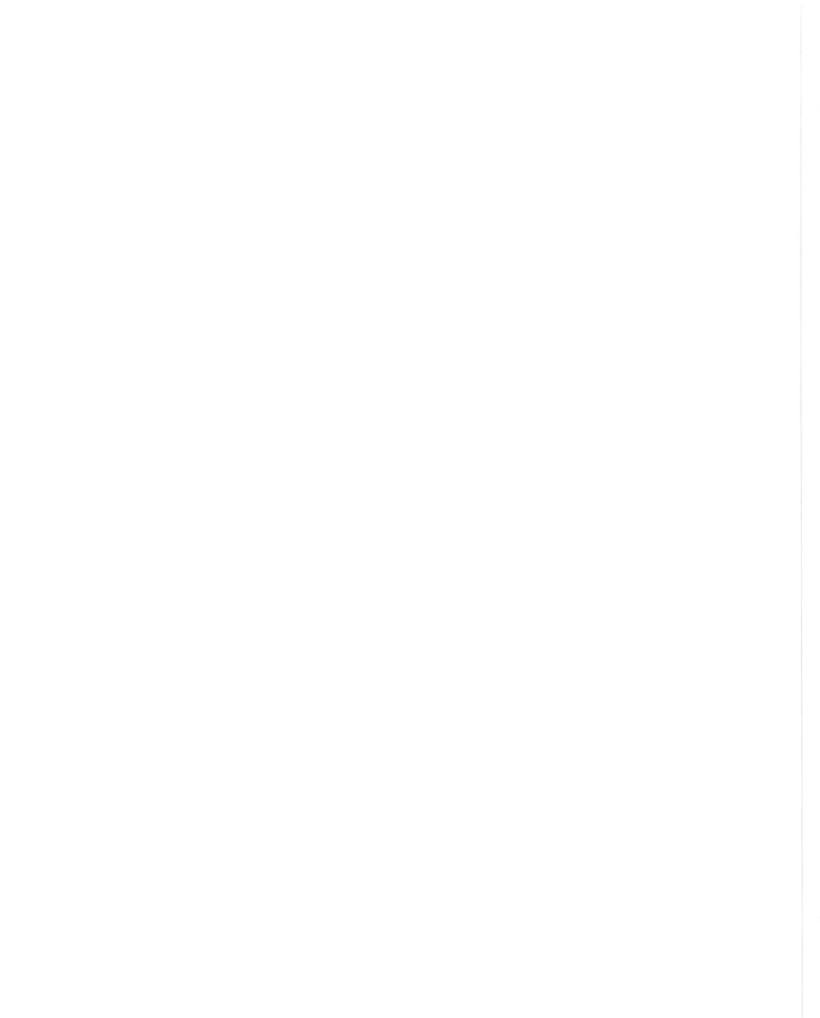
Support Services Specialist
Oregon Department of State Lands
775 Summer St. NE, Ste. 100
Salem, OR 97301
(503) 986-5235
www.oregon.gov/dsl



2 Ways to Pay: DSL Online or by mail

2







Department of State Lands

775 Summer Street NE, Suite 100 Salem, OR 97301-1279 (503) 986-5200 FAX (503) 378-4844 www.oregon.gov/dsl

July 26, 2018

Bill and Marianne Palmberg 499 Ridge Dr. Gearhart, OR 97138

Kate Brown Governor

State Land Board

e: WD # 2018-0286 Wetland Delineation Report for Palmberg Property; Clatsop County; T6N R10W Sec. 3DC, Tax Lot 600 700, 800, 900,

Clatsop County; T6N R10W Sec. 3DC, Tax Lot 600 700, 800, 900, 1000, 1100, 1200, 1300; T6N R10W Sec. 10AB, Tax Lot 1100, 1201

City of Gearhart Local Wetland Inventory W-6

Dennis Richardson Secretary of State

> Tobias Read State Treasurer

Dear Mr. and Mrs. Palmberg:

The Department of State Lands has reviewed the wetland delineation report prepared by Pacific Habitat Services, Inc. for the site referenced above. Based upon the information presented in the report, and additional information submitted upon request, we concur with the wetland and waterway boundaries as mapped in Figure 6 of the report. Please replace all copies of the preliminary wetland map with this final Department-approved map.

Within the study area, nine wetlands (Wetland A-I) and one pond were identified. Wetlands A, B, H, and I (totaling approximately 9.96 acres) and the pond are subject to the permit requirements of the state Removal-Fill Law. Under current regulations, a state permit is required for cumulative fill or annual excavation of 50 cubic yards or more in the wetlands or below the ordinary high-water line (OHWL) of the waterway (or the 2 year recurrence interval flood elevation if OHWL cannot be determined). Wetlands C-G, are exempt per OAR 141-085-0515(6) and therefore, are not subject to current state Removal-Fill requirements.

This concurrence is for purposes of the state Removal-Fill Law only. Federal or local permit requirements may apply as well. The Army Corps of Engineers will determine jurisdiction for purposes of the Clean Water Act. We recommend that you attach a copy of this concurrence letter to both copies of any subsequent joint permit application to speed application review.

Please be advised that state law establishes a preference for avoidance of wetland impacts. Because measures to avoid and minimize wetland impacts may include reconfiguring parcel layout and size or development design, we recommend that you work with Department staff on appropriate site design before completing the city or county land use approval process.

This concurrence is based on information provided to the agency. The jurisdictional determination is valid for five years from the date of this letter unless new information necessitates a revision. Circumstances under which the Department may change a determination are found in OAR 141-090-0045 (available on our web site or upon request). In addition, laws enacted by the legislature and/or rules adopted by the Department may result in a change in jurisdiction; individuals and applicants are subject to the regulations that are in effect at the time of the removal-fill activity or complete permit application. The applicant, landowner, or agent may submit a request for reconsideration of this determination in writing within six months of the date of this letter.

Thank you for having the site evaluated. Please phone me at 503-986-5246 if you have any questions.

Sincerely,

Chris Stevenson
Jurisdiction Coordinator

Approved by

Peter Ryan, PWS Aquatic Resource Specialist

Enclosures

ec: Shawn Eisner, Pacific Habitat Services, Inc.

Clatsop County Planning Department (Maps enclosed for updating LWI)

Danielle Erb, Corps of Engineers

Oregon Coastal Management Program

Dan Cary, DSL

#6338 1/10/2018 Ceneral Location and Topography Fights Palmberg Property, McCormick Garden Road - Gearhart, Oregon United States Geological Survey (USGS), Gearhart Quadrangle, Oregon-Clatsop Co., 7.5 Quadrangle, 2017 Pacific Habitat Services, Inc. 9450 SW Commerce Circle, Suite 180 Willsconville, OR 97070 (viewer/nationalmap.gov/basic)	SOCEAN AVE SOCEAN AVE SOCEAN AVE SOCEAN AVE SOCEAN AVE SOCITAGE SOCITAGE AVE SOCITAGE SOCITAGE AVE SOCITAGE SOCITAGE AVE SOCITAGE SOCITAGE AVE SOCITAGE AVE
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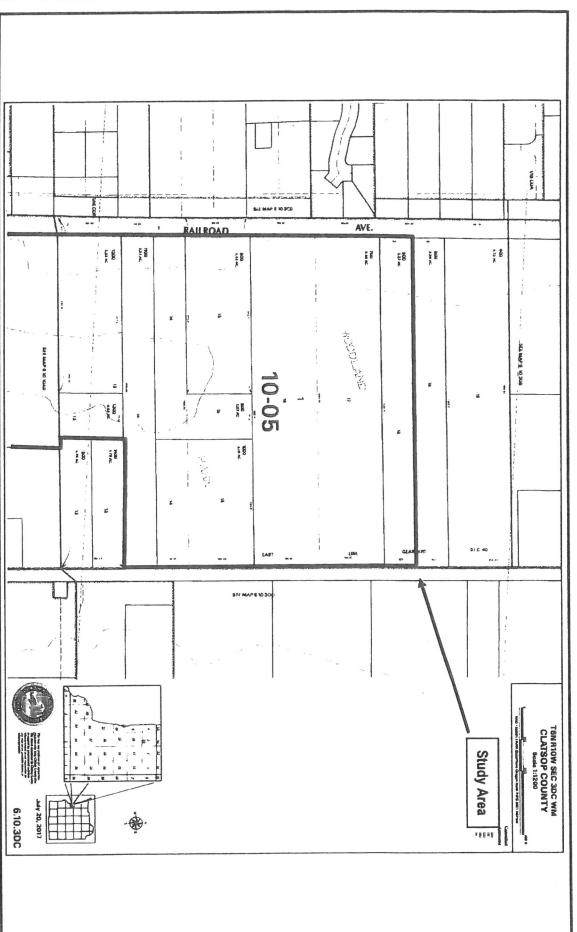
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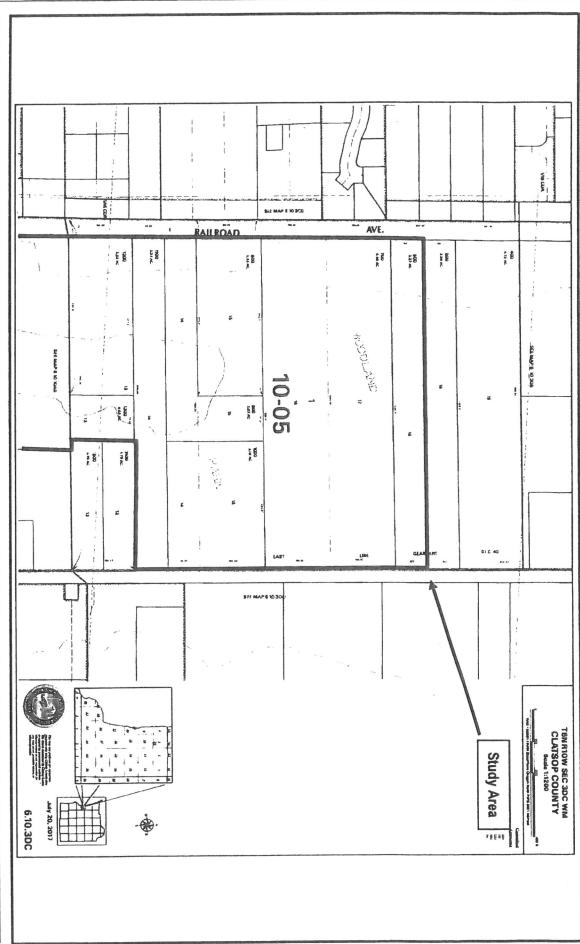
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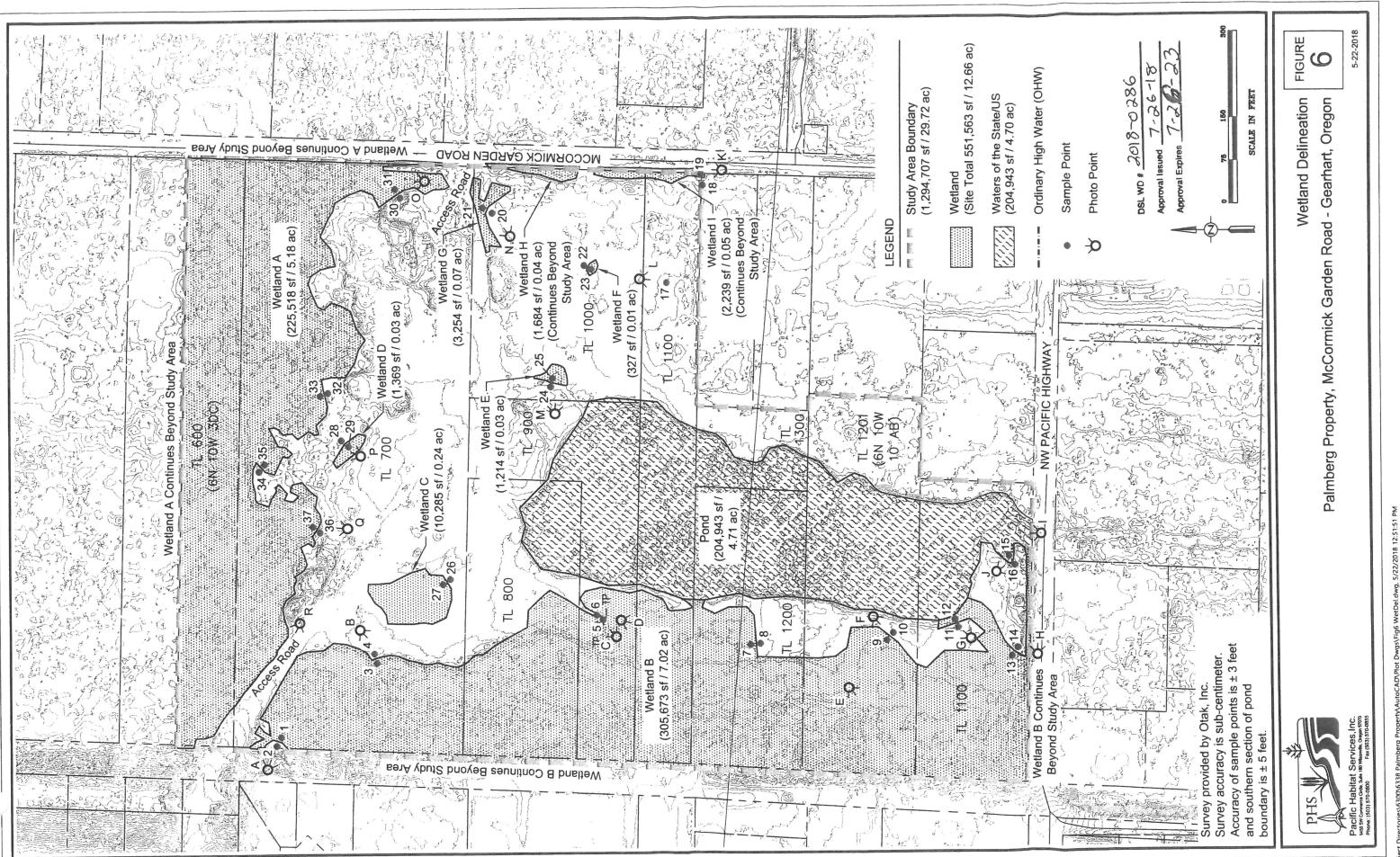
Tax Lot Map Palmberg Property, McCormick Garden Road - Gearhart, Oregon The Oregon Map (ormap.net)

FIGURE 2A





#6338 1/10/2018 PHS Study Area RAILROAD AVE. P. C. C. C. C. 1 N 28 Eg 100 200 MARCEL S MARAN SOO 200 DVOI OL BAVYS TS 10-05 100 Tax Lot Map Palmberg Property, McCormick Garden Road - Gearhart, Oregon The Oregon Map (ormap.net) 100 A DOO HAVE É 2000 20, 2017 6.10.10AB Page of Constant FIGURE 2B



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Wetland Delineation for the Palmberg Property, McCormick Gardens Road in Gearhart, Oregon

(Township 6 North, Range 10 West, Sections 3DC & 10AB)

Prepared for

Bill and Marianne Palmberg 499 Ridge Drive Gearhart, OR 97138

Prepared by

Shawn Eisner Joe Thompson

Pacific Habitat Services, Inc.

9450 SW Commerce Circle, Suite 180 Wilsonville, Oregon 97070 (503) 570-0800 (503) 570-0855 FAX PHS Project Number: 6338



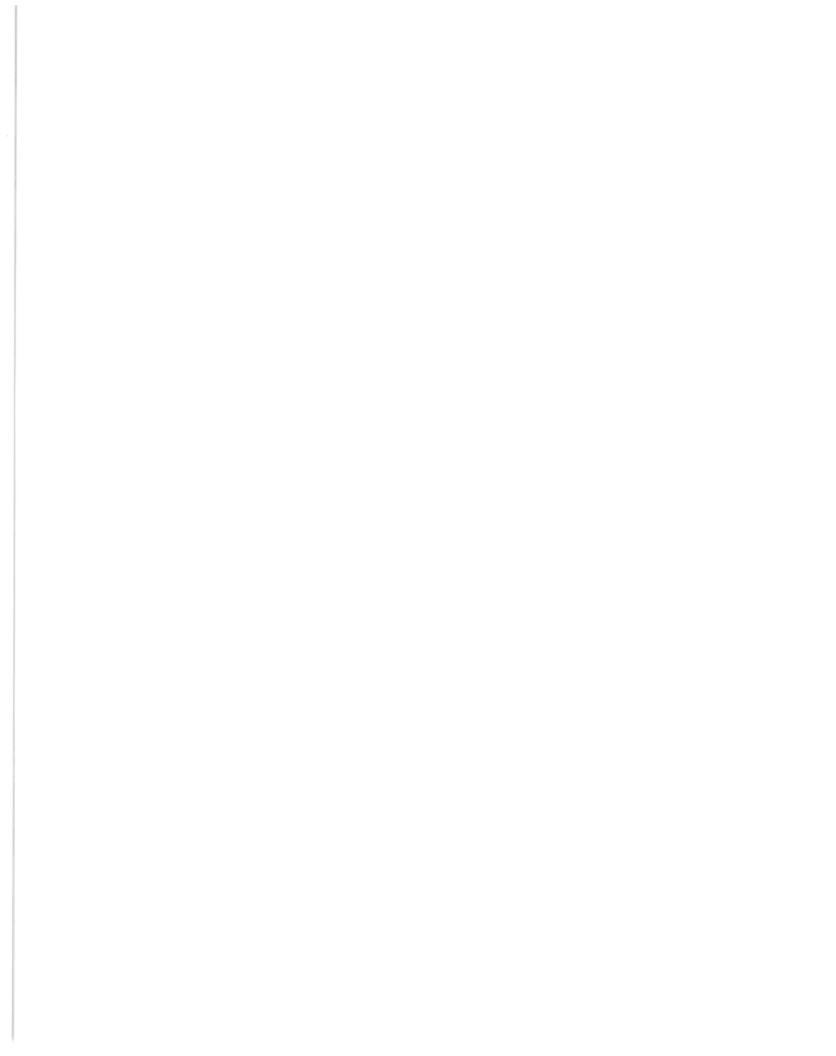


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I. INTRODUCTION

Pacific Habitat Services, Inc. (PHS) conducted a wetland delineation west of McCormick Gardens Road and north of Pacific Way in Gearhart, Oregon. The project area may include a future residential subdivision. Wetland delineation field work was initially conducted on December 11, 2017; however, a subsequent field review was conducted on March 11, 2018 to determine whether site conditions had changed appreciably during the intervening time and to collect most of the sample point data.

This report presents the results of PHS's wetland delineation. Figures, including a map depicting the location of wetlands within the study area, are located in Appendix A. Data sheets documenting on-site conditions are provided in Appendix B. Ground-level photos of the study area are in Appendix C. A discussion of the wetland delineation methodology is provided in Appendix D for the client.

II. RESULTS AND DISCUSSION

A. Landscape Setting and Land Use

The Palmberg property is the former location of Palmberg Paving Company. Utilization of the site appears to have been limited to the northern portion of the site only. Gravel and concrete pads and the asphalt or concrete access drives that can be observed on the site today were utilized by Palmberg Paving and likely date to the 1980's or early 1990's. The vicinity of the pond and areas to the south, east and west have been periodically mowed but otherwise not utilized. The west and northern extent of the property are dominated by shrub and forested wetlands located several feet in elevation lower than the remaining portions of the site. An approximately 4.7 acre pond located in the central portion of the site was excavated over time during the early to mid-60's when the property was under the management of a sand and gravel company.

The site's topography is gently rolling, with higher elevations located north and east of the pond. Though the forested and shrub wetlands appear to be located in areas with native soil, much of the rest of the site includes a mix of fine sand and sandy loam with varying percentages of gravel and cobble sized aggregate. Past mining and paving related land uses have resulted in a high degree of soil compaction, especially north of the pond to the forested portions of the site.

B. Site Alterations

As indicated above, the site has a history of intensive aggregate and paving land uses. As a result, except for the forested and shrub wetland areas in the north and west, which were presumably too wet to access easily, the site has seen extensive alterations that date back to at least the mid 1950's. There has however been no apparent activity on the site for several years. The herbaceous portions of the site appear to be mowed regularly, primarily to allow access to the pond as it is a popular fishing spot for those with permission to access the site.

C. Precipitation Data and Analysis

The study area was initially delineated on December 11, 2017; no rainfall was recorded within 7 days, with approximately 1.8 inches falling the week prior to that. No precipitation fell on March 28, 2018 when the wetland boundary was confirmed, but approximately 1.43 inches of rain fell

Pacific Habitat Services, Inc.
Wetland Delineation for the Palmberg Property in Gearhart, Oregon/PHS # 6338
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during the preceding week. Total observed precipitation for the water year through March 28 was 54.04 inches, which is 106% of normal.

Table 1 compares the average monthly precipitation to the observed monthly precipitation at Astoria, Oregon in the months prior to and including PHS' wetland delineation field work. The table also compares the observed precipitation to the normal precipitation range, as identified in the NRCS WETS table for Clatsop County. As shown in Table 1, observed precipitation was somewhat below normal for winter and early spring but well above normal for the preceding fall. Despite the variability, onsite hydrologic conditions were still considered to be typical for this time of year.

Table 1:	Comparison of average and observed monthly precipitation at the Astoria Regional
	Airport weather station (OR224), both prior to and inclusive of both field dates.

	100	30% Chance Will Have		Security (Acres Programme
Month	Average Precipitation ¹	Less Than Average ¹	More Than Average ¹	Observed Precipitation ²	Percent of Normal
September	2.61	1.00	3.16	3.15	121%
October	5.61	3.27	6.82	8.94	159%
November	10.50	7.60	12.39	14.16	135%
December	10.40	7.62	12.23	7.96	77%
January	9.62	6.41	11.52	11.36	118%
February	7.87	5.57	9.32	7.25	92%
March	7.36	5.63	8.56	4.64	63%

Notes: 1. Source: NRCS WETS Table, Clatsop County, Astoria Regional Airport (http://agacis.rcc-acis.org/41007/wets)

D. Methods

PHS delineated the limits of the jurisdictional wetlands in the study area based on the presence of wetland hydrology, hydric soils, and hydrophytic vegetation, in accordance with the Routine Onsite Determination, as described in the *Corps of Engineers Wetland Delineation Manual*, *Wetlands Research Program Technical Report Y-87-1* ("The 1987 Manual") and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region*. PHS conducted the wetland delineation on December 11, 2017 and returned for most of the data collection on March 28, 2014. The time differential between the two site visits allowed for confirmation of the wetland boundaries near the beginning and middle of the winter season. In light of subtle changes in conditions, a portion of the eastern boundary of Wetland B was modified, and three additional features (Wetlands F, H and I) were delineated on March 28.

E. Description of All Wetlands and Other Non-Wetland Waters

PHS identified the potentially jurisdictional limits of wetlands and other waters within the study area. Descriptions of the delineated resources are provided below.

^{2.} Source: National Weather Service for Astoria (http://www.weather.gov/climate/index.php?wfo=pqr)

Pond

The large pond that encompasses nearly half of the southern extent of the study area was excavated in the late 1950's by a sand and gravel operation. After excavation is was not backfilled and as a result of the regional shallow water table, it remains ponded year round, with an apparent small rise in water levels driven by seasonal precipitation. The Cowardin classification is palustrine unconsolidated bottom, permanently flooded, excavated (PUBHx). The area of the pond, which was identified to its outlet at a west flowing ditch north of Pacific Way at the south end of the site, is 204,943 square feet (4.69 acres).

The pond itself has little vegetation, though pond lily (likely yellow pond-lily; *Nuphar lutea* OBL) is present along some of the pond edge. The pond's bank includes red alder (*Alnus rubra*, FAC), along with mixed grasses, Himalayan blackberry (*Rubus armeniacus*, FAC), and slough sedge (Carex obnupta, OBL).

Wetland A

Wetland A is a large forested wetland that encompasses the north end of the site and extends offsite to the north. Given its undulating topography, its hydrology appears to be driven by regional water table fluctuations, resulting in seasonal ponding across much of its extent. The Cowardin classification is palustrine forested, seasonally flooded (PFOC). The HGM classification is Slope. The total area of Wetland A within the study area is 124,464 square feet (2.86 acres), but this total is a small part of a much larger wetland.

Sample points 31, 33, 35, and 37 all document wetland conditions within this forested area. The western-central portion of the wetland lies several feet in elevation below that of the eastern portion. As a result, the western area is dominated primarily by Hooker's willow (*Salix hookeriana*, FACW). Though other species of willow are likely present, no other individual species were documented. Primary herbaceous species includes slough sedge. This western portion appears to remain perennially, albeit shallowly, inundated. To the east the mostly closed canopy is comprised largely of red alder, with Hooker's willow common within and adjoining the lowest elevations, and Sitka spruce (*Picea sitchensis*, FAC) common in higher elevations. Shrub and herbaceous cover varies with the wettest, seasonally inundated areas dominated by Douglas spirea (*Spiraea douglasii*, FACW), slough sedge and skunk cabbage (*Lysichiton americanus*, OBL).

Wetland B

Wetland B is a mixed forested, shrub and herbaceous wetland that encompasses the western quarter of the site. Like Wetland A, its western limits are seasonally flooded. Its eastern portion however is unlikely to be inundated and is as a result only seasonally saturated. The wetland therefore has multiple Cowardin classes PFO/SSC for the western portion and PEMY for the eastern third. The HGM classification for the entirety of the wetland is Slope.

In general the forested portion comprises the westernmost 75 to 100 feet, beginning along the western lot line, transitioning to a mixed willow shrub wetland that continues eastward. At the north end of the wetland the eastern limits of the wetland are truncated by a slope break comprised of several feet of mixed aggregate material. Further south the break is less distinct and the shrub community transitions to herbaceous species; primarily slough sedge, reed canarygrass (*Phalaris arundinacea*, FACW), common velvetgrass (*Holcus lanatus*, FAC), and other grass species that

Pacific Habitat Services, Inc.
Wetland Delineation for the Palmberg Property in Gearhart, Oregon/PHS # 6338
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could not be identified due to the early season and apparent grazing. The total area of Wetland B within the study area is 305,673 square feet (7.02 acres).

Wetland C

Wetland C is located west of the areas commonly utilized for paving company activities but is nonetheless in an area that has seen ground disturbance and compaction, even if not for several decades. The soils are comprised of highly compacted sands, commonly with gravel and/or small cobble. Though not utilized for staging or other active uses, the area has been mowed for several decades. Dominant vegetation in the wetland and the adjoining herbaceous upland includes mixed grasses, bird's foot trefoil (*Lotus corniculatus*, FAC), reed canarygrass, narrowleaf plantain (*Plantago lanceolata*, FAC) and slough sedge. It is likely that water shallowly ponds in the wetland during and immediately following precipitation events but infiltration is sufficient enough that such ponding would be ephemeral and not more than a couple inches deep. The Cowardin classification is palustrine emergent, saturated/semipermanent/seasonal (PEMY). The HGM classification is flats. The total area of Wetland C is 10,285 square feet (0.24 acre).

Wetland D

Wetland D is a small herbaceous wetland located beneath the forest canopy within a larger area of upland forest south of Wetland A. Its boundaries are defined by a narrow depression. Given the site's history of disturbance is it assumed that the feature is the result of excavation that occurred decades ago. The wetland is vegetated almost entirely by slough sedge, but also includes salmonberry (*Rubus spectabilis*, FAC), water parsley (*Oenanthe sarmentosa*, OBL), and creeping buttercup (*Ranunculus repens*, FAC). Despite the presence of 3 inches of standing water in late March 2018, as well as evidence that water depths were previously even deeper, the soils lack common hydric soil indicators. Its hydrology appears to be driven by local water table fluctuations, resulting in seasonal ponding in this area of lower topography. The Cowardin classification is palustrine emergent, despite the forested overstory. The wetland appears subject to intermittent flooding. The corresponding Cowardin class is PEMJ. The HGM classification is depressional closed, non-permanent (DCNP). The total area of Wetland D is 1,369 square feet (0.03 acre).

Wetlands E and F

Wetlands E and F are located within subtle depressions in the undulating topography that defines the areas north and northeast of the pond. Soils throughout this area are comprised of sandy loam to loamy sand, with some areas including gravel or cobble. Both features intersect a groundwater elevation that is believed to be near or just above the water level elevation of the pond. Wetland E is located at a lower elevation and as a result shallow ponding appears to be common. Dominant vegetation in Wetland E includes reed canarygrass. Wetland F lies a bit higher topographically and there is no evidence of surface ponding. Rather Wetland F has a water table that extends to within 12 inches of the surface. Wetland F, like the adjoining uplands, is dominated by mixed grasses that could not be identified due to a combination of seasonality and grazing. Slough sedge is a common to locally abundant species in the vicinity of both wetlands. The Cowardin classification of each is palustrine emergent, saturated/semipermanent/seasonal (PEMY). The HGM classification of each is flat. Both wetlands are approximately 0.03 acre in size.

Wetland G

Wetland G includes an area of depressed topography located south of a gravel access drive to the interior of the site. Though likely created in part through excavation, the wetland area extends above the limits of apparent excavation and includes adjoining areas. The feature is separated from Wetland H to the east by a narrow berm. The western extent of Wetland G is dominated by slough sedge, mixed grasses and horsetail (*Equisetum sp.*, FAC to FACW). The central and eastern portions include the same herbaceous species, but also include red alder trees and shrubs, salmonberry, and Himalayan blackberry. The Cowardin classification is accordingly palustrine forested and emergent saturated/semipermanent/seasonal (PFO/EMY). The HGM classification is Slope. The total area of Wetland G is 3,254 square feet (0.07 acre).

Wetlands H and I

Wetlands H and I are located west of McCormick Gardens Road. They are certain to convey stormwater runoff from the road but are much wider than other ditches in the area and at the time of data collection the ditches were ponding water; there was little evidence of directional flow. Culverts connect these wetlands to each other as well as to other ditches to the north and south. Primarily herbaceous in character, these wetlands are vegetated with a mix of bulrush (*Scirpus microcarpus*, OBL), slough sedge, reed canarygrass, and other sedges. The Cowardin classification of each is palustrine emergent, seasonally flooded (PEMC). The HGM classification of each is slope. Together the wetlands total approximately 0.09 acre in size.

F. Deviation from LWI or NWI

The City of Gearhart Local Wetlands Inventory (LWI) identifies several large areas of wetland (W6), as well as the pond. Though generally comparable to the results of the PHS delineation, wetlands are in actuality more or less extensive than mapped. The forest and shrub wetlands west of the site extend much closer to the pond than indicated by the LWI. The opposite is true to the south, where there is an island of upland between the pond and its outlet; a west flowing ditch that parallels Pacific Way. Similarly there are fewer forested wetlands to the north and the delineated boundary is much more convoluted than the LWI boundary would suggest. There is not a large wetland connected to the northeast portion of the pond as suggested by the LWI, though PHS did delineate several smaller wetlands in the same landscape position.

LWI maps are generated primarily through the interpretation of aerial photographs (scale of 1:58,000), with field verification largely dependent on site accessibility. It appears that site access was not allowed for the inventory, as there are no sample points within the project area. The site's subtle but somewhat undulating topography does not lend itself to the accurate determination of wetland boundaries from offsite observation only.

G. Mapping Method

PHS flagged the wetland boundaries with blue flagging. Data points were flagged with lime green surveyor's tape. The wetland boundary flagging was survey-located by OTAK, Inc. The estimated accuracy of the survey is sub-centimeter, with most of the sample points having an accuracy of +/-3 feet. Due to the density of blackberries along the southern portion of the eastern pond edge, in combination with the steepness of the pond edge and proximity to private property owned by an adjoining land owner, the last 250 feet of the southern edge of the pond were not flagged. As a result of the steepness of the slope, the pond edge is readily identifiable on LIDAR. As the LIDAR pond edge was comparable to the flagged boundary where PHS had access, the

Pacific Habitat Services, Inc.
Wetland Delineation for the Palmberg Property in Gearhart, Oregon/PHS # 6338
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LIDAR information was deemed to be an accurate representation of the pond edge. The accuracy of the pond edge were LIDAR was utilized is estimated at +/-5 feet.

H. Additional Information

None

I. Results and Conclusions

PHS delineated all or a portion of nine wetlands and an excavated pond within the study area. The total area of wetlands and other waters within the project area is approximately 15.05 acres, as shown in Table 2.

Table 2: Summary of Wetlands and Other Waters within the Project Site

Feature	Area Sq. ft. / Acre	Cowardin Class	HGM Class
Pond	204,943 / 4.69	PUBHx	DO
Wetland A	124,434 / 2.86	PFOC	Slope
Wetland B	305,673 / 7.02	PFO/SSC & PEMY	Slope
Wetland C	10,285 / 0.24	PEMY	Flat
Wetland D	1,369 / 0.03	PEMJ	DCNP
Wetland E	1,214 / 0.03	PEMY	Flat
Wetland F	327 / 0.007	PEMY	Flat
Wetland G	3,254 / 0.07	PFO/EMY	Slope
Wetland H	1,684 / 0.04	PEMC	Slope
Wetland I	2,239 / 0.05	PEMC	Slope
Total Wetlands:	450,509 sq. ft. (10.34 acres)		
Total Other Waters:	204,943 sq. ft. (4.69 acres)		

J. Required Disclaimer

This report documents the investigation, best professional judgment and conclusions of the investigators. It is correct and complete to the best of our knowledge. It should be considered a Preliminary Jurisdictional Determination of wetlands and other waters and used at your own risk unless it has been reviewed and approved in writing by the Oregon Department of State Lands in accordance with OAR 141-090-0005 through 141-090-0055.

III. REFERENCES

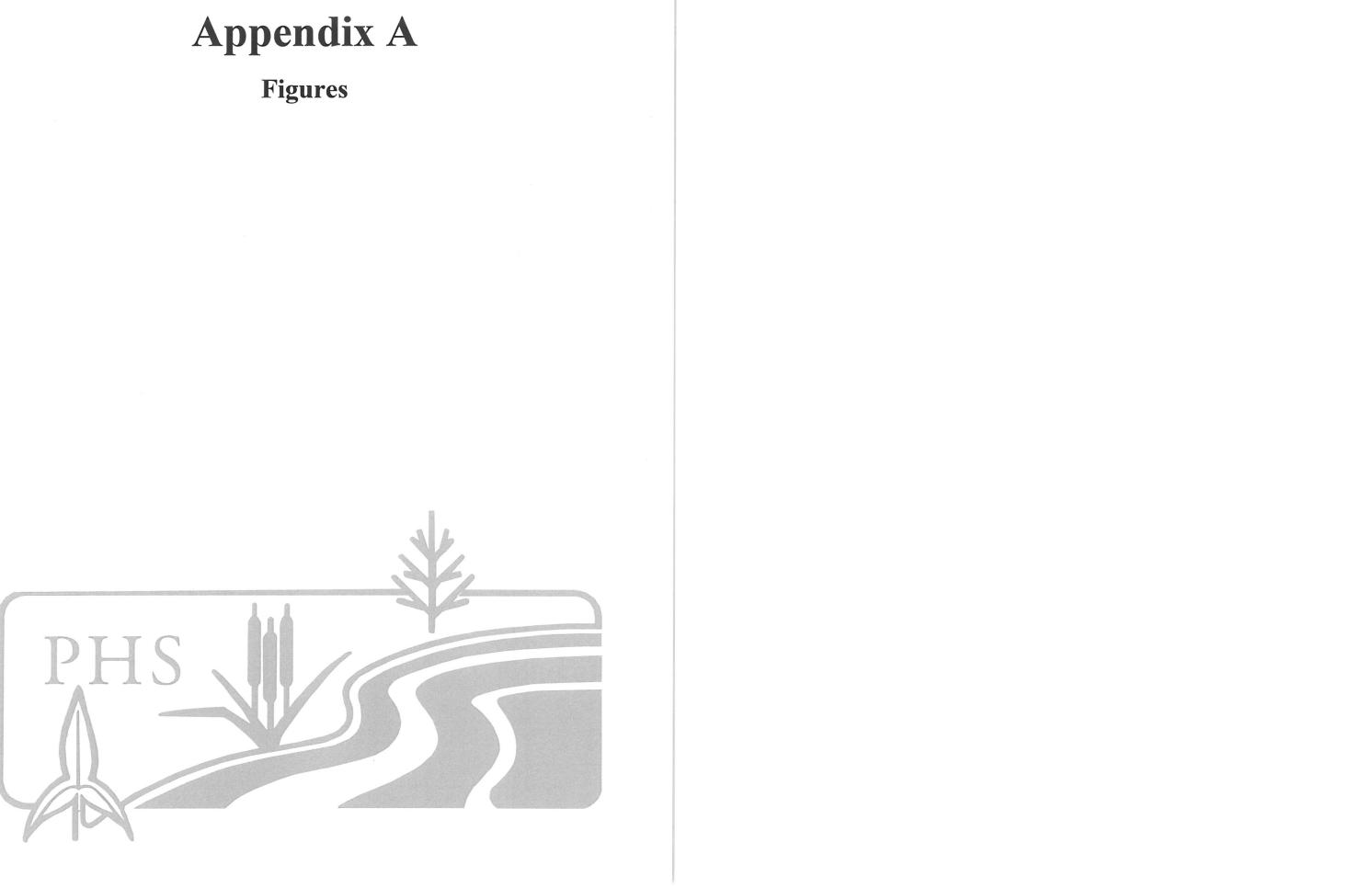
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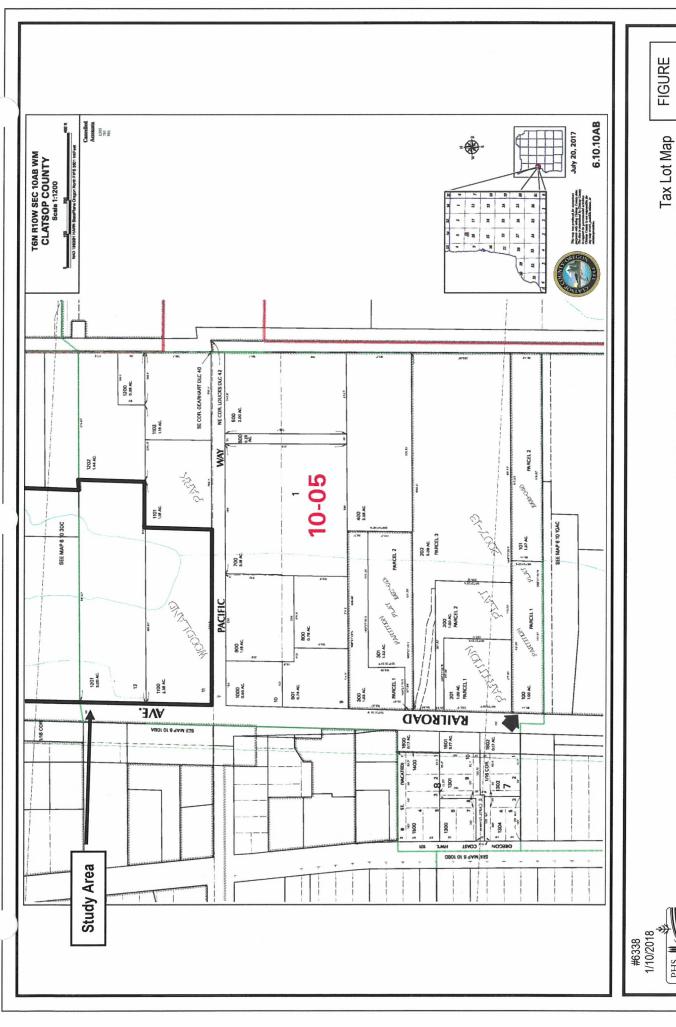
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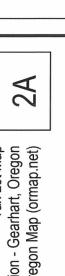


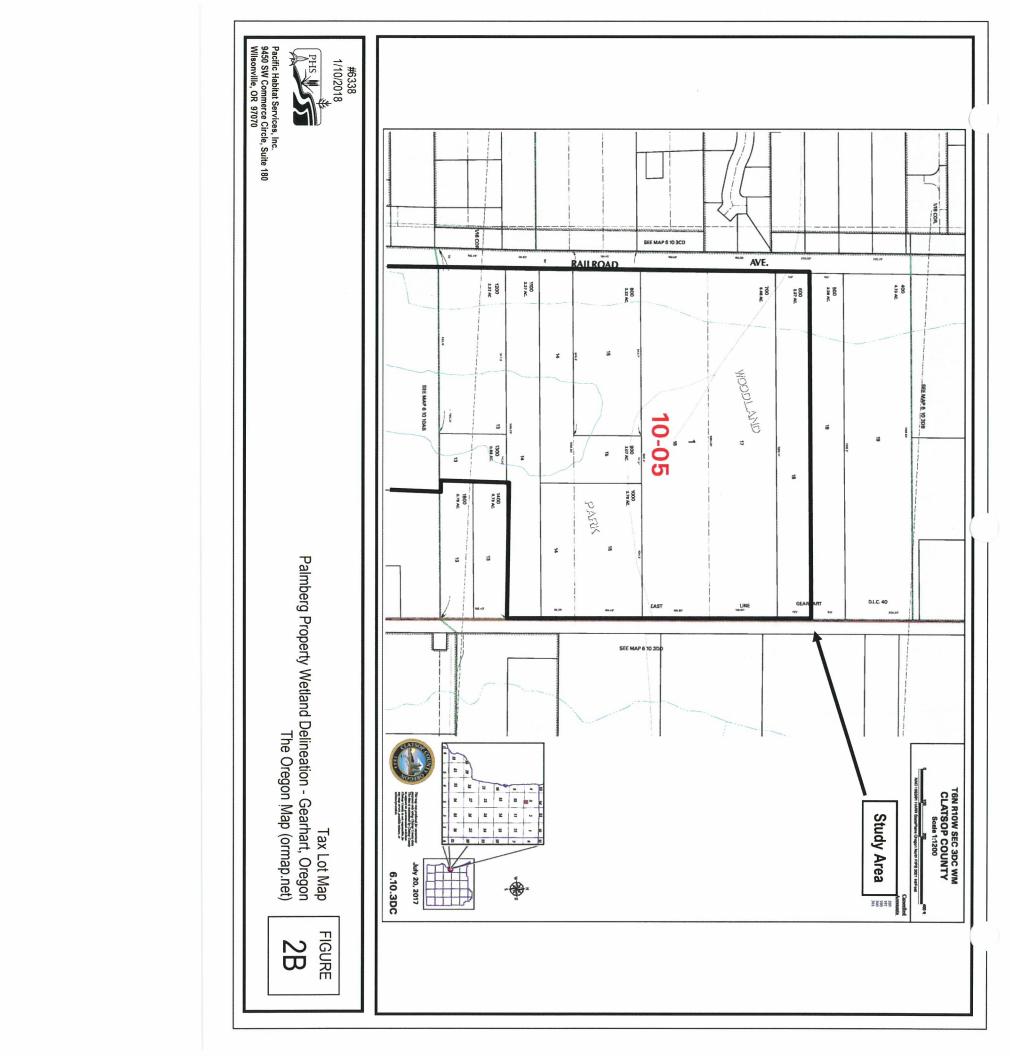
#6338 1/10/2018 PHS Pacific Habitat Services, Inc. 9450 SW Commerce Circle, Suite 180 Wilsonville, OR 97070	ODLAND AVE.
General Location and Topography Palmberg Property Wetland Delineation - Gearhart, Oregon United States Geological Survey (USGS), Gearhart Quadrangle, Oregon-Clatsop Co., 7.5 Quadrangle, 2017 (viewer/nationalmap.gov/basic)	OAD AVE PACIFIC MAI: Study Area Study Area

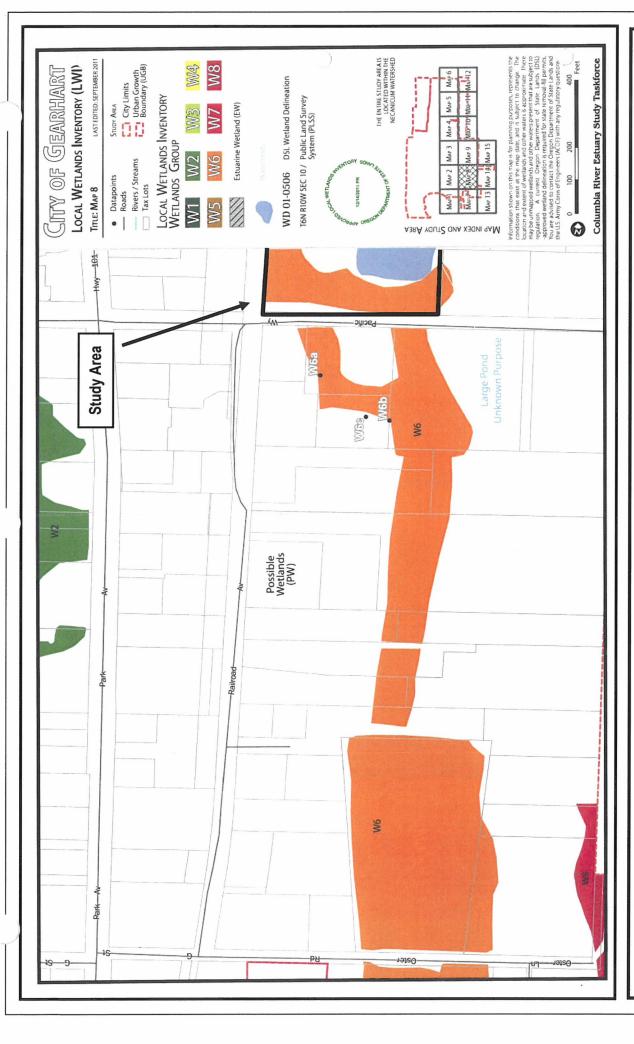




Tax Lot Map Palmberg Property Wetland Delineation - Gearhart, Oregon The Oregon Map (ormap.net)





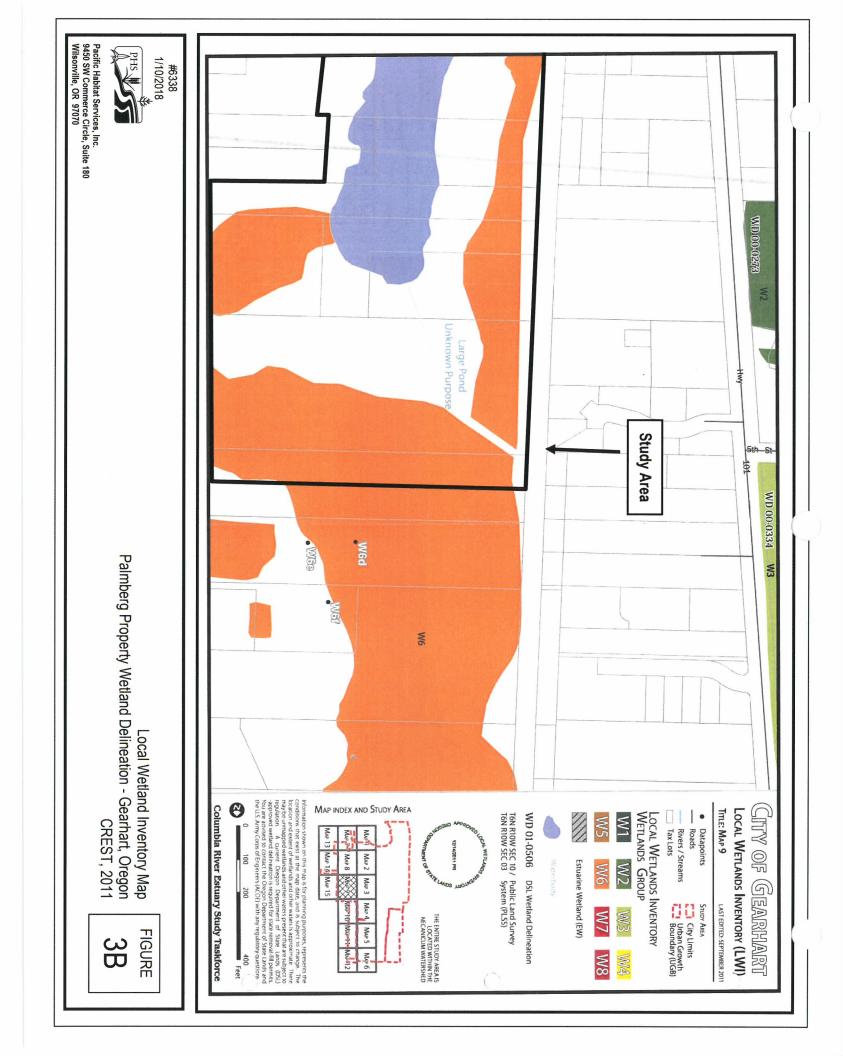


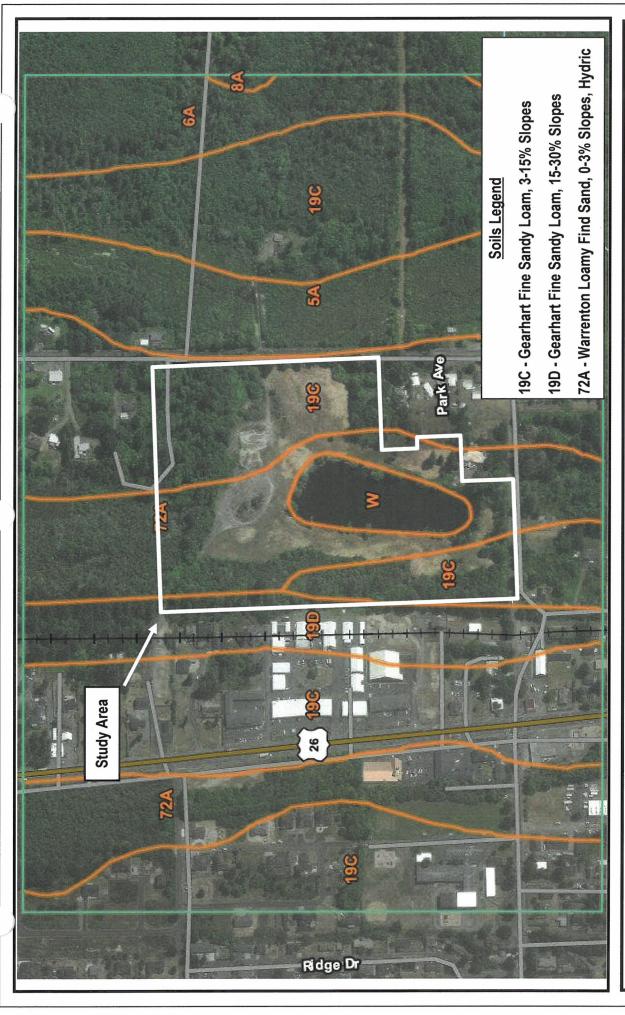


Pacific Habitat Services, Inc. 9450 SW Commerce Circle, Suite 180 Wilsonville, OR 97070

Local Wetland Inventory Map Palmberg Property Wetland Delineation - Gearhart, Oregon CREST, 2011

FIGURE 3A







Soils
Palmberg Property Wetland Delineation - Gearhart, Oregon
Natural Resources Conservation Services, Web Soil Survey, 2017
(websoilsurvey.sc.egov.usda.gov)

FIGURE

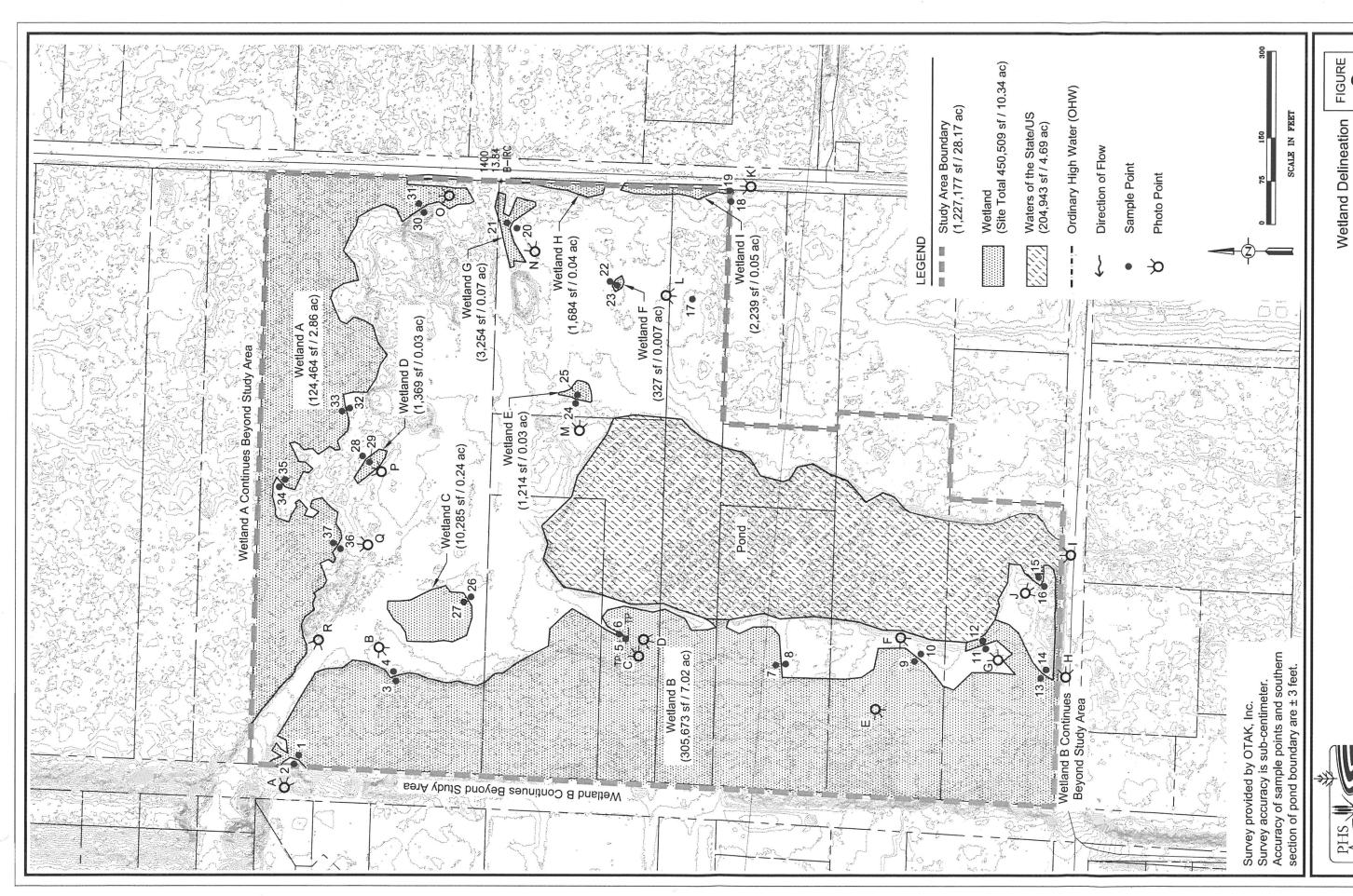
4





Aerial Photo Palmberg Property Wetland Delineation - Gearhart, Oregon GoogleEarth, 2017

FIGURE 5



Palmberg Property, McCormick Road - Gearhart, Oregon

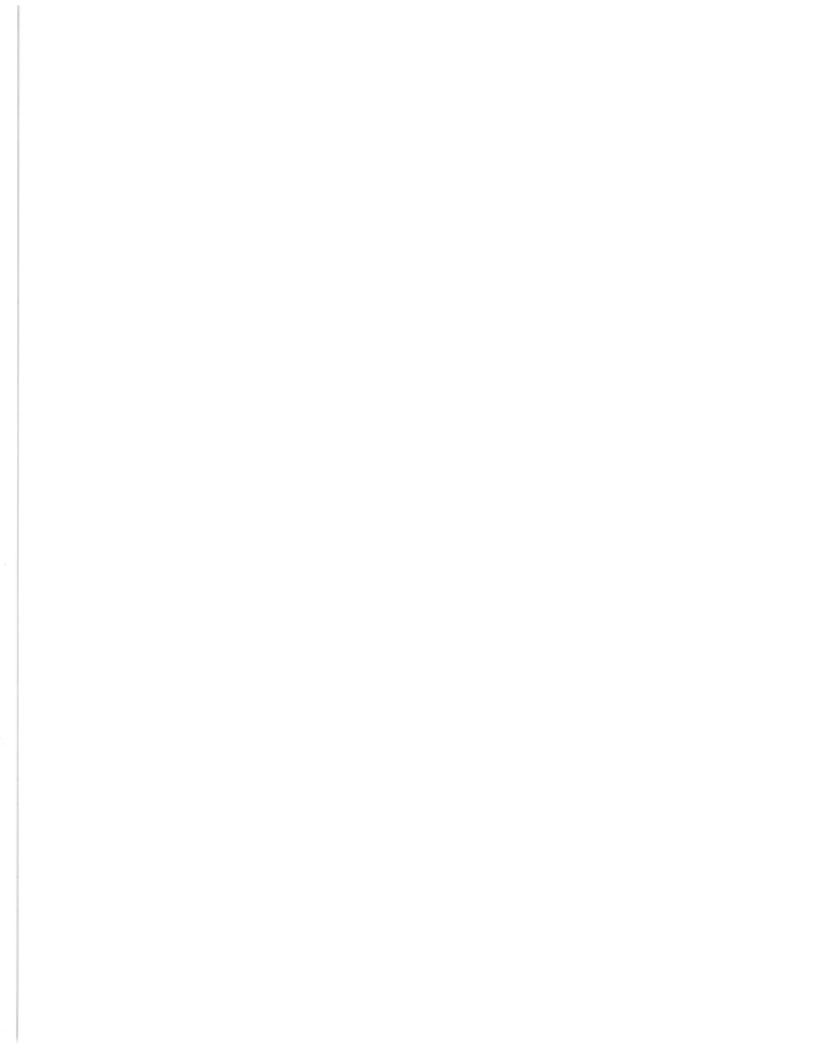
FIGURE 6

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Appendix B

Wetland Determination Data Sheets





	PHS#	6338
WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast R	egion	

roject/Site: Palmb	erg Propert	ty	City/County:	Gea	rhart/Clatsop	Sampli	ing Date:	3/28	8/2018
pplicant/Owner: Bill Palm	iberg				State:	OR	Sa	mpling Point:	1
vestigator(s):	E/JT/CM/CI	R	Section, To	ownship, Range:	Sectio	n 10, Towr	nship 6N, R	ange 10W	
andform (hillslope, terrace, etc.:)	Depression	on	Local relief (co	ncave, convex, none):			Slope (%):	
ubregion (LRR):	LRR A	2	Lat:	46.02	Long:	-123	.9095	Datum:	WGS84
oil Map Unit Name:		Gearhart Fi	ine Sandy Loar	m	NWI Cla	assification:		None	
re climatic/hydrologic conditions	on the site ty	pical for this tin	ne of year?	Yes	X No		(if no, explain	in Remarks)	
re vegetation Soil	or Hyd	drology	significantly dist	turbed?	Are "Normal Circumstan	ces" present	? (Y/N)	Υ	
re vegetation Soil	ог Нус	drology	naturally proble	matic? If needed	l, explain any answers in Re	emarks.)			•
			_						
UMMARY OF FINDING				npling point	locations, transects	s, importa	ant feature	es, etc.	
ydrophytic Vegetation Present?	_			Is Sampled A	rea within				
ydric Soil Present?	Yes _	X No		a Wetla		X	No		
/etland Hydrology Present?	Yes _	X No	-						
lemarks:									
ECETATION Line seis	ntific non	and of plan	40						
EGETATION - Use scie	пинс пап	absolute	Dominant	Indicator	Dominance Test wo	rksheet.			
		% cover	Species?	Status	2 Similarioe Test Wol	oncet.			
ree Stratum (plot size:	30)				Number of Dominant Spe	ecies			
Thuja plicata		50	X	FAC	That are OBL, FACW, or	FAC:	4		(A)
Alnus rubra			X	FAC					
Tsuga sp.		10		(FACU)	Total Number of Dominar				(D)
+		80	= Total Cover		Species Across All Strata	·· -	4	1	(B)
1'- (Ol - 1- Ol - 1			- Total Cover						
	ze: 15	- 1	v .	FAC	Percent of Dominant Spe		400	207	(A/D)
Rubus spectabilis Gaultheria shallon		40 5	X	FACU	That are OBL, FACW, or	r FAC:	100	J%	(A/B)
3				FACU	Prevalence Index Wo	orksheet.	×		
1					Total % Cover of		Multiply by:		
5			*****		OBL Species	_	x 1 =	0	
×		45	= Total Cover		FACW species		x 2 =	0	
	_				FAC Species		x 3 =	0	
erb Stratum (plot size:)	100	v	0.01	FACU Species		x 4 =	0	
Carex obnupta		100	X	OBL	UPL Species	0	x 5 =	0	(D)
					Column Totals	((A)	0	(B)
4					Prevalence Index =	B/A =	#DI\	//0!	
5						_			
					Hydrophytic Vegetat	ion Indicat	tors:		
7						1- Rapid Tes	st for Hydroph	ytic Vegetatio	n
3							ce Test is >50		
		100	= Total Cover				e Index is ≤ 3.		unno-ti
oody Vine Stratum (plot size:	,)					ical Adaptation		
Oddy vine Stratum (plot size.		-′			1		arks or on a s Non-Vascular		4)
							Hydrophytic \		xplain)
		0	= Total Cover		¹ Indicators of hydric soil a				
					disturbed or problematic.			,	
		0			Hydrophytic Vegetation	Vac	X	No	
6 Bare Ground in Herb Stratum					regetation	169	^	INO	

SOIL			PHS#	633	88			Sampling Point: 1
Profile Descr	iption: (Describe to	the depth	needed to docume	ent the indic	ator or con	firm the absen	ce of indicators.)	
Depth	Matrix			Redox	Features			
(Inches)	Color (moist)	%	Color (moist)	%	Type'	Loc ²	Texture	Remarks
0-4	10YR 2/1	96	5YR 3/4	4	С	PL_	Loamy Sand	
4-12	10YR 2/1	100					Loamy Sand	
,								
Type: C=Con	centration, D=Deplet	ion, RM=Re	educed Matrix, CS=	Covered or C	Coated Sand	d Grains.		² Location: PL=Pore Lining, M=Matrix.
lydric Soil	Indicators: (Appl	licable to	all LRRs, unles	s otherwis	e noted.)		Indica	ators for Problematic Hydric Soils ³ :
	Histosol (A1)			S	andy Redox	(S5)		2 cm Muck (A10)
	Histic Epipedon (A2)			s	tripped Mati	rix (S6)		Red Parent Material (TF2)
	Black Histic (A3)				oamy Muck	y Mineral (F1) (e	except MLRA 1)	Very Shallow Dark Surface (TF12)
Х	Hydrogen Sulfide (A	4)		L	oamy Gleye	d Matrix (F2)		Other (explain in Remarks)
	Depleted Below Dark		(11)		epleted Mat			
	Thick Dark Surface (Surface (F6)		-
-	Sandy Mucky Minera					k Surface (F7)		³ Indicators of hydrophytic vegetation and wetland
	Sandy Gleyed Matrix				edox Depre			hydrology must be present, unless disturbed or problematic.
estrictive	Layer (if present)						I	
	Layer (ii present)							
ype:								
epth (inches	s):						Hydric Soil Pres	sent? Yes X No No
YDROLO	GY drology Indicator	rs:			WF-6			
rimary Indi	cators (minimum c	of one requ	uired; check all th	hat apply)				Secondary Indicators (2 or more required)
Х	Surface Water (A1)			V	/ater stained	d Leaves (B9) (Except MLRA	Water stained Leaves (B9)
	High Water Table (A	2)		1,	2, 4A, and	4B)		(MLRA1, 2, 4A, and 4B)
	Saturation (A3)			S	alt Crust (B	11)		Drainage Patterns (B10)
	Water Marks (B1)			A	quatic Inver	tebrates (B13)		Dry-Season Water Table (C2)
	Sediment Deposits (I	B2)		Н	ydrogen Sul	lfide Odor (C1)		Saturation Visible on Aerial Imagery (C9
	Drift Deposits (B3)			o	xidized Rhiz	zospheres along	g Living Roots (C3)	X Geomorphic Position (D2)
	Algal Mat or Crust (B	4)		P	resence of F	Reduced Iron (C	24)	Shallow Aquitard (D3)
	ron Deposits (B5)			R	ecent Iron R	Reduction in Plo	wed Soils (C6)	Fac-Neutral Test (D5)
	Surface Soil Cracks	(B6)		S	tunted or St	ressed Plants (I	D1) (LRR A)	Raised Ant Mounds (D6) (LRR A)
	nundation Visible on	Aerial Imag	gery (B7)	0	ther (Explain	n in Remarks)		Frost-Heave Hummocks (D7)
	Sparsely Vegetated (Concave Su	rface (B8)					
ield Obser	vations:					*		
urface Water	Present? Yes	X	No	Depth (ir	nches):	2		
/ater Table P	resent? Yes	X	No	Depth (ir	nches):	0	Wetland Hydi	rology Present?
aturation Pre		X	No	Depth (ir	nches):	0		Yes X No
ncludes capillar								
Jescribe Reco	rded Data (stream ga	auge, monit	oring well, aerial ph	notos, previou	us inspection	ns), if available:		
emarks:								

PHS # 6338 WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Palmberg	Propert	y	City/County:	Gea	rhart/Clatsop	Samp	ling Date:	3/28	8/2018
pplicant/Owner: Bill Palmber	rg				State	e: OR	Sa	mpling Point:	1
vestigator(s): SE/J	T/CM/CF	₹	Section, To	wnship, Range:	Secti	ion 10, Tow	nship 6N, R	ange 10W	
andform (hillslope, terrace, etc.:)		Terrace		Local relief (co	ncave, convex, none):	Co	nvex	Slope (%):	
ubregion (LRR):	LRR A		Lat:	46.02	Lon	g: -12 :	3.9095	Datum:	WGS84
oil Map Unit Name:		Gearhart Fir	ne Sandy Loai	n	NWI	Classification:	-	None	
re climatic/hydrologic conditions on t	the site ty	pical for this time	e of year?	Yes	XN	lo	(if no, explain	n Remarks)	
re vegetation Soil	or Hyd	drology	significantly dist	urbed?	Are "Normal Circumsta	ances" presen	t? (Y/N)	Y	
are vegetation Soil	or Hyd	drology	naturally probler	natic? If needed	l, explain any answers in	Remarks.)			
SUMMARY OF FINDINGS -				npling point	locations, transec	ts, import	ant feature	s, etc.	
.,	Yes —	No	X	Is Sampled A					
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Yes _	No.	X	a Wetla	nd? Y€	es	No.	X	•
Wetland Hydrology Present?	Yes _	No.	X						
Remarks:									
/EGETATION - Use scienti	fic nam	ac of plant	e						
FEDERATION - USE SCIENTI	no man	absolute	Dominant	Indicator	Dominance Test w	orksheet:			
		% cover	Species?	Status					
ree Stratum (plot size: 30)				Number of Dominant S				
1 Tsuga sp.		80	X	(FACU)	That are OBL, FACW,	or FAC:	1		(A)
2 Alnus rubra		20	X	FAC	Total Number of Damin				
3		-		1	Total Number of Domir Species Across All Stra		3		(B)
-		100	= Total Cover		Species Across Air Stre	ata.			· (D)
) (O - O -			- Total Gover						
Sapling/Shrub Stratum (plot size: _ 1 Gaultheria shallon	15	_) 	x	FACU	Percent of Dominant S	•	33	D/	(A/B)
2 Gauitheria Shahon				- FACO	That are OBL, FACW,	OF FAC.		70	- (٨٠٥)
3					Prevalence Index \	Norksheet:			
4					Total % Cover of		Multiply by:		
5					OBL Species	_	x 1 =	0	_
		60	= Total Cover		FACW species		x 2 =	0	
/alataina					FAC Species		x 3 =	0	
Herb Stratum (plot size: 5	·	1		OBL	FACU Species		. x4=	0	-
1 Carex obnupta 2				OBL	UPL Species Column Totals	0	. x5= .(A)	0	(B)
3					Column rotals		.(^)		-(5)
4					Prevalence Index	c=B/A =	#DI\	//0!	
5									•
6					Hydrophytic Veget	ation Indica	ators:		
7						_ 1- Rapid Te	est for Hydroph	ytic Vegetatio	on
8							nce Test is >50		
		1	= Total Cover			The second secon	ce Index is ≤ 3. gical Adaptatio		supporting
Voody Vine Stratum (plot size:)					narks or on a s		
1		•					Non-Vascular		•/
2						_	c Hydrophytic \		Explain)
		0	= Total Cover		¹ Indicators of hydric so	-			
					disturbed or problemati	ic.			
					Hydrophytic				
% Bare Ground in Herb Stratum	1	0			Vegetation	Ype		Nο	

Profile Descript Depth								Sampling Point: 1
Deput	tion: (Describe to the Matrix	e depth r	needed to docur		icator or co x Features	onfirm the absen	ce of indicators.)	
		%	Color (moist)	%	Type ¹	Loc ²	Texture	Demorks
(Inches)	Color (moist)		Coloi (moist)	70	Туре			Remarks
0-16	10YR 2/1	100		_			Loamy Sand	
				_				
¹ Type: C=Conce	ntration, D=Depletion	n RM=Re	duced Matrix CS	S=Covered o	Coated Sa	nd Grains		² Location: PL=Pore Lining, M=Matrix.
	dicators: (Applic						Indic	eators for Problematic Hydric Soils ³ :
			a., _, ., ., ., ., ., ., ., ., ., ., ., ., .,					2 cm Muck (A10)
Control of the Contro	stosol (A1)			-	Sandy Red			
Hi	stic Epipedon (A2)				Stripped Ma			Red Parent Material (TF2)
BI	ack Histic (A3)				Loamy Muc	cky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
H)	ydrogen Sulfide (A4)				Loamy Gley	yed Matrix (F2)		Other (explain in Remarks)
D	epleted Below Dark S	Surface (A	(11)		Depleted M	latrix (F3)		
Th	nick Dark Surface (A1	12)			Redox Dark	k Surface (F6)		
	andy Mucky Mineral (S					ark Surface (F7)		³ Indicators of hydrophytic vegetation and wetland
	andy Gleyed Matrix (S				•	ressions (F8)		hydrology must be present, unless disturbed or problematic.
		J-1)			Tredox Dep			problematio.
Restrictive La	yer (if present):						İ	
Туре:								
					-			
Depth (inches):					_		Hydric Soil Pres	sent? Yes No X
	urface.							
HYDROLOG	Υ							
HYDROLOG Wetland Hydr	iY rology Indicators:		in all all all	I About a male d				Considerate diseases (Considerate and Considerate and Consider
HYDROLOG Wetland Hydr Primary Indica	sY rology Indicators: ttors (minimum of c		uired; check all					Secondary Indicators (2 or more required)
HYDROLOG Wetland Hydr Primary Indica	ology Indicators: tors (minimum of ourface Water (A1)	one requ	uired; check all		Water stain	ned Leaves (B9) (Except MLRA	Water stained Leaves (B9)
HYDROLOG Wetland Hydr Primary Indica	sY rology Indicators: ttors (minimum of c	one requ	uired; check all				Except MLRA	
HYDROLOG Wetland Hydr Primary Indica	ology Indicators: tors (minimum of ourface Water (A1)	one requ	uired; check all		Water stain	nd 4B)	Except MLRA	Water stained Leaves (B9)
HYDROLOG Wetland Hydr Primary Indica St Hit	rology Indicators: tors (minimum of ourface Water (A1) gh Water Table (A2)	one requ	uired; check all		Water stain 1, 2, 4A, an Salt Crust (nd 4B)	Except MLRA	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
HYDROLOG Wetland Hydr Primary Indica St Hit	rology Indicators: ators (minimum of ourface Water (A1) gh Water Table (A2) aturation (A3)	one requ	uired; check all		Water stain 1, 2, 4A, an Salt Crust (Aquatic Invented	n d 4B) B11)	Except MLRA	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10)
HYDROLOG Wetland Hydr Primary Indica St Hit Sa W Se	rology Indicators: tors (minimum of ourface Water (A1) gh Water Table (A2) aturation (A3) ater Marks (B1)	one requ	uired; check all		Water stain 1, 2, 4A, an Salt Crust (Aquatic Invented Hydrogen S	nd 4B) B11) ertebrates (B13) Sulfide Odor (C1)	Except MLRA g Living Roots (C3)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
HYDROLOG Wetland Hydr Primary Indica St Hit Sa W Se Dr	tors (minimum of our face Water (A1) gh Water Table (A2) atteration (A3) atter Marks (B1) ediment Deposits (B2)	one requ	uired; check all		Water stain 1, 2, 4A, an Salt Crust (Aquatic Invented to the state of the state	nd 4B) B11) ertebrates (B13) Sulfide Odor (C1)	g Living Roots (C3)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (
HYDROLOG Wetland Hydr Primary Indica St Hit Sa W Se Dr	tors (minimum of our face Water (A1) gh Water Table (A2) aturation (A3) ater Marks (B1) ediment Deposits (B2) iff Deposits (B3)	one requ	uired; check all		Water stain 1, 2, 4A, an Salt Crust (Aquatic Invelopment Hydrogen S Oxidized RI Presence o	nd 4B) B11) ertebrates (B13) Sulfide Odor (C1) hizospheres alon	g Living Roots (C3) C4)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Geomorphic Position (D2)
HYDROLOG Wetland Hydr Primary Indica St. Hit Sa WW Se Dr Ale	rology Indicators: ators (minimum of ourface Water (A1) gh Water Table (A2) aturation (A3) ater Marks (B1) ediment Deposits (B2) ift Deposits (B3) gal Mat or Crust (B4)	one requ	uired; check all		Water stain 1, 2, 4A, an Salt Crust (Aquatic Invelopment Hydrogen S Oxidized RI Presence o Recent Iron	nd 4B) B11) ertebrates (B13) Sulfide Odor (C1) hizospheres along if Reduced Iron (G	g Living Roots (C3) C4) owed Soils (C6)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) Shallow Aquitard (D3)
HYDROLOG Wetland Hydr Primary Indica St Hit St W St Dr Alt Iro	rology Indicators: tors (minimum of ourface Water (A1) gh Water Table (A2) atturation (A3) ater Marks (B1) ediment Deposits (B2) iff Deposits (B3) gal Mat or Crust (B4) on Deposits (B5)	one requ			Water stain 1, 2, 4A, an Salt Crust (Aquatic Inv. Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S	nd 4B) B11) ertebrates (B13) Sulfide Odor (C1) hizospheres along if Reduced Iron (C) a Reduction in Plo	g Living Roots (C3) C4) owed Soils (C6)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5)
HYDROLOG Wetland Hydr Primary Indica St. Hit Sa W Se Dr Alt Iro	rology Indicators: ators (minimum of ourface Water (A1) gh Water Table (A2) ater Marks (B1) addiment Deposits (B2) gal Mat or Crust (B4) on Deposits (B5) urface Soil Cracks (B6)	one requ	gery (B7)		Water stain 1, 2, 4A, an Salt Crust (Aquatic Inv. Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S	nd 4B) B11) ertebrates (B13) Sulfide Odor (C1) hizospheres along if Reduced Iron (C) in Reduction in Plo Stressed Plants (g Living Roots (C3) C4) owed Soils (C6)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLOG Wetland Hydr Primary Indica Sta Hii Sa WW Se Dr Alg	rology Indicators: tors (minimum of ourface Water (A1) gh Water Table (A2) sturation (A3) ater Marks (B1) ediment Deposits (B2) iff Deposits (B3) gal Mat or Crust (B4) on Deposits (B5) urface Soil Cracks (B6 undation Visible on Accoursely Vegetated Co	one requ	gery (B7)		Water stain 1, 2, 4A, an Salt Crust (Aquatic Inv. Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S	nd 4B) B11) ertebrates (B13) Sulfide Odor (C1) hizospheres along if Reduced Iron (C) in Reduction in Plo Stressed Plants (g Living Roots (C3) C4) owed Soils (C6)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLOG Wetland Hydr Primary Indica St. Hit Sa W Se Dr Alt Iro	tors (minimum of our face Water (A1) gh Water Table (A2) aturation (A3) ater Marks (B1) adiment Deposits (B2) gal Mat or Crust (B4) on Deposits (B5) urface Soil Cracks (B6 undation Visible on An barsely Vegetated Con	one requ	gery (B7) Irface (B8)		Water stain 1, 2, 4A, an Salt Crust (Aquatic Invi- Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S Other (Expl	nd 4B) B11) ertebrates (B13) Sulfide Odor (C1) hizospheres along if Reduced Iron (C) in Reduction in Plo Stressed Plants (g Living Roots (C3) C4) owed Soils (C6)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLOG Wetland Hydr Primary Indica St Hit Sa W Se Dr Alt Iro St Int Sp Field Observa Surface Water P	tors (minimum of our face Water (A1) gh Water Table (A2) aturation (A3) ater Marks (B1) ediment Deposits (B2) gal Mat or Crust (B4) on Deposits (B5) urface Soil Cracks (B6 undation Visible on Avarsely Vegetated Colations: resent? Yes	one requ	gery (B7) Irface (B8) No X	Depth	Water stain 1, 2, 4A, an Salt Crust (Aquatic Inventor Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S Other (Expl	nd 4B) B11) ertebrates (B13) Sulfide Odor (C1) hizospheres along if Reduced Iron (Ci) n Reduction in Plo Stressed Plants (ain in Remarks)	g Living Roots (C3) C4) owed Soils (C6) D1) (LRR A)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOG Wetland Hydr Primary Indica St. Hit Sa W Se Dr Alt Iro	tors (minimum of our face Water (A1) gh Water Table (A2) aturation (A3) ater Marks (B1) ediment Deposits (B2) gal Mat or Crust (B4) on Deposits (B5) urface Soil Cracks (B6 undation Visible on Avarsely Vegetated Colations: resent? Yes	one requ	gery (B7) Irface (B8)	Depth	Water stain 1, 2, 4A, an Salt Crust (Aquatic Invi- Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S Other (Expl	nd 4B) B11) ertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced Iron (C) n Reduction in Plo Stressed Plants (I) ain in Remarks)	g Living Roots (C3) C4) owed Soils (C6) D1) (LRR A)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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	PHS#	6338
FTI AND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast R	egion	

WETLAND DETE	RMINATION	DATA FO	RM - Weste	rn Mounta	ins, Valle	ys, and Coa	ast Region		
Project/Site: Palmberg Property		City/County:	City/County: Gearhart/Clatso		p Sampling Date: 3/28/			8/2018	
Applicant/Owner: Bill Palmberg		,			State:	OR	Sampling Point:	3	
Investigator(s): SE/JT/CM/CR		Section, To	Section, Township, Range:		Section 1	0, Township (SN, Range 10W		
Landform (hillslope, terrace, etc.:)			Local relief (cor	ncave, convex, r	none):		Slope (%):		
Subregion (LRR): LRR A		Lat:	Lat: 46.028		Long:	46.0274	Datum:	-123.9091	
Soil Map Unit Name: Warrenton Lo		oamy Fine Sa	Sand		NWI Classi	ification:	None		
Are climatic/hydrologic conditions on the site t	ypical for this tim	e of year?	Yes	Х	No	(if no, ex	plain in Remarks)		
Are vegetation Soil or Hy	ydrology	significantly dist	urbed?	Are "Normal (Circumstances	" present? (Y/N)	Y		
Are vegetation Soil or Hy	drology	naturally proble	matic? If needed	, explain any ans	swers in Rema	arks.)			
SUMMARY OF FINDINGS – Attac	ch site map	showing san	nplina point	locations, t	ransects. i	mportant fe	atures. etc.	8	
Hydrophytic Vegetation Present? Yes						•	,		_
Hydric Soil Present? Yes X No			Is Sampled Area within a Wetland?		Yes X		No		
Wetland Hydrology Present? Yes	etland Hydrology Present? Yes X No							•	
Remarks:			<u> </u>		~~~			***	_
VEGETATION - Use scientific na	mes of plant	s.							
	absolute % cover	Dominant Species?	Indicator	Dominance	Test works	heet:			
Tree Stratum_ (plot size: 30)	70 COVE	Species?	Status	Number of Do	minant Specie	s			
1 Salix hookeriana	30	Х	FACW	That are OBL,			5	(A)	
2 Alnus rubra	20	X	FAC		,	_			
3				Total Number	of Dominant				
4				Species Acros	ss All Strata:		5	(B)	
	50	= Total Cover							
Sapling/Shrub Stratum (plot size: 10)			Percent of Dor	minant Specie	s			
1 Lonicera involucrata	50	X	FAC	That are OBL,	FACW, or FA	AC:	100%	(A/B)	
2 Rubus armeniacus	7		FAC						
3 Rubus ursinus	1		FACU	Prevalence	Index Work	sheet:			
4 Spiraea douglasii	1		FACW	Total % Cover	of	Multiply	by:		
5				OBL Spe		x 1			
	59	= Total Cover		FACW sp		x2 x3		•	
Herb Stratum (plot size: 5				FACU Sp		x 4		•	
1 Carex obnupta	70	X	OBL	UPL Spe	ecies	x 5	= 0		
2 Phalaris arundinacea	25	X	FACW	Column T	Totals	0 (A)	0	(B)	
3									
4				Prevaler	nce Index =B/A	(=	#DIV/0!		
5				11 1 1 1		1 1' 1			_
6				Hydropnytic	-	Indicators:	rdranhytia Vagatatia		
8				_		Dominance Test	drophytic Vegetatio	11	
	95	= Total Cover				Prevalence Index			
		, , , , , , , , , , , , , , , , , , , ,			4-N	Norphological Ada	aptations ¹ (provide	supporting	
Woody Vine Stratum (plot size:	_)				dat	a in Remarks or	on a separate shee	t)	
1						Wetland Non-Vas			
2							hytic Vegetation ¹ (E		
	0	= Total Cover		¹ Indicators of h disturbed or pr		wetland hydrolog	y must be present,	unless	
				Hydrophytic					
% Bare Ground in Herb Stratum	5			Vegetation		Yes X	No		
Remarks:				Present?					_
nomans.									

	A 190/6 1900	100 to				2021 200		Sampling Point: 3
	ption: (Describe to Matrix	the depth i	needed to docume		cator or cor x Features	nfirm the abse	nce of indicators.)	
Depth (Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-5	10YR 3/3	95	7.5YR 3/4	5	C	M	Loamy Sand	Fine
5-13	2.5YR 3/1	97	5YR 3/4	3		M		
5-13	2.51K 3/1	97	51K 3/4			W	Loamy Sand	Fine
		-						
¹ Type: C=Cond	centration, D=Depleti	on, RM=Re	educed Matrix, CS=	Covered or	Coated San	d Grains.		² Location: PL=Pore Lining, M=Matrix.
	ndicators: (Appl						Indica	ators for Problematic Hydric Soils ³ :
	Histosol (A1)				Sandy Redo			2 cm Muck (A10)
	Histic Epipedon (A2)				Stripped Mat			Red Parent Material (TF2)
	Black Histic (A3)						(except MLRA 1)	Very Shallow Dark Surface (TF12)
		1)						Other (explain in Remarks)
	Hydrogen Sulfide (A4		44)			ed Matrix (F2)		Outer (explain in Remarks)
	Depleted Below Dark		(11)		Depleted Ma			
	Thick Dark Surface (Surface (F6)		³ Indicators of hydrophytic vegetation and wetland
	Sandy Mucky Mineral	I (S1)			Depleted Da	rk Surface (F7		hydrology must be present, unless disturbed or
	Sandy Gleyed Matrix	(S4)			Redox Depre	essions (F8)		problematic.
Depth (inches):				-		Hydric Soil Pres	sent? Yes X No
Remarks:	GY	s:			-		Hydric Soil Pres	sent? Yes X No
HYDROLO Wetland Hyd	GY drology Indicator		iirad: abasi: =!! Al				Hydric Soil Pres	
HYDROLO Wetland Hyd Primary Indic	GY Irology Indicator ators (minimum o		uired; check all th			od Leaves /DO		Secondary Indicators (2 or more required)
HYDROLOG Wetland Hyd Primary Indic	GY drology Indicator ators (minimum o Surface Water (A1)	of one requ	uired; check all th		Water staine	, ,	Hydric Soil Pres	Secondary Indicators (2 or more required) Water stained Leaves (B9)
HYDROLOG Wetland Hyd Primary Indic	GY drology Indicator eators (minimum o Surface Water (A1) digh Water Table (A2	of one requ	uired; check all th		Water staine	d 4B)		Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
HYDROLOG Wetland Hyd Primary Indic	GY drology Indicator sators (minimum o Surface Water (A1) High Water Table (A2 Saturation (A3)	of one requ	uired; check all th		Water staine 1, 2, 4A, and Salt Crust (B	d 4B) 311)	(Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10)
HYDROLOG Wetland Hyd Primary Indic	GY Irology Indicator Lators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	of one requ	uired; check all th		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve	1 4B) 311) rtebrates (B13)	(Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
HYDROLOG Wetland Hyd Primary Indic	GY Arology Indicator Lators (minimum of Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (E	of one requ	uired; check all th		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Invel Hydrogen Su	d 4B) 311) rtebrates (B13) ulfide Odor (C1	(Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (
HYDROLOG Wetland Hyd Primary Indic	GY drology Indicator eators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3)	of one request	uired; check all th		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Invel Hydrogen Su Oxidized Rhi	d 4B) 111) rtebrates (B13) ulfide Odor (C1) izospheres alor	(Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Geomorphic Position (D2)
HYDROLOG Wetland Hyd Primary Indic	GY drology Indicator eators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Orift Deposits (B3) Algal Mat or Crust (B4)	of one request	uired; check all th		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inveitydrogen State Oxidized Rhi Presence of	d 4B) state (B13) ulfide Odor (C1 izospheres alor Reduced Iron ((Except MLRA) ng Living Roots (C3) C4)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) Shallow Aquitard (D3)
HYDROLO Wetland Hyd Primary Indic	GY drology Indicator sators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 ron Deposits (B5)	of one requests on the second	uired; check all th		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inveity Hydrogen Su Oxidized Rhi Presence of Recent Iron I	d 4B) 311) rtebrates (B13) ulfide Odor (C1) izospheres alor Reduced Iron ((Except MLRA) ng Living Roots (C3) C4) owed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5)
HYDROLOG Wetland Hyd Primary Indio X X S X I X S S S S S S S S S S S S S S	GY Irology Indicator Lators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (one requests (2) (32) (4) (B6)			Water staine 1, 2, 4A, and Salt Crust (B Aquatic Invertigation Hydrogen Su Oxidized Rhi Presence of Recent Iron I Stunted or Si	d 4B) In the state (B13) Reduced Iron (B13) Reduction in Plates (B13)	(Except MLRA) ng Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLOO Wetland Hyo Primary Indic	GY drology Indicator eators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Fron Deposits (B5) Surface Soil Cracks (Inducation Visible on	one requests 32) 4) B6) Aerial Imag	gery (B7)		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Invertigation Hydrogen Su Oxidized Rhi Presence of Recent Iron I Stunted or Si	d 4B) 311) rtebrates (B13) ulfide Odor (C1) izospheres alor Reduced Iron ((Except MLRA) ng Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5)
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HYDROLO Wetland Hyd Primary Indio X X S X S S S S S S S S S S S S S S S	GY Irology Indicator Lators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Fron Deposits (B5) Surface Soil Cracks (Indicator Visible on Sparsely Vegetated Covations:	one requests 32) 4) B6) Aerial Imag	gery (B7) Irface (B8)		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Invertigation Oxidized Rhi Presence of Recent Iron I Stunted or St Other (Expla	d 4B) In the state (B13) Reduced Iron (B13) Reduction in Plates (B13)	(Except MLRA) ng Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLO Wetland Hyd Primary Indic	GY Irology Indicator Lators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Fron Deposits (B5) Surface Soil Cracks (Indicator Visible on Sparsely Vegetated Covations:	one requests 32) 4) B6) Aerial Imag	gery (B7)	Depth (Water staine 1, 2, 4A, and Salt Crust (B Aquatic Invertigation Oxidized Rhi Presence of Recent Iron I Stunted or S Other (Expla	d 4B) at 1) rtebrates (B13) ulfide Odor (C1 izospheres alor Reduced Iron (Reduction in Pl tressed Plants in in Remarks)	(Except MLRA) ng Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLO Wetland Hyd Primary Indio X X S X S S S S S S S S S S S S S S S	GY drology Indicator cators (minimum of Surface Water (A1) digh Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Fron Deposits (B5) Surface Soil Cracks (Indicator Visible on Sparsely Vegetated Covations: Present? Yes	one requests 32) 4) B6) Aerial Imag	gery (B7) Irface (B8)	Depth (Water staine 1, 2, 4A, and Salt Crust (B Aquatic Invertigation Oxidized Rhi Presence of Recent Iron I Stunted or St Other (Expla	d 4B) In the state (B13) Reduced Iron (B13) Reduction in Plates (B13)	(Except MLRA) ng Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLOG Wetland Hyd Primary Indic X X X S S S Field Observ Surface Water	GY drology Indicator eators (minimum of Surface Water (A1) digh Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Fron Deposits (B5) Surface Soil Cracks (Indicator Visible on Sparsely Vegetated Covations: Present? Yes esent? Yes eators (Minimum of Surface) Present? Yes	of one requests 32) 4) B6) Aerial Image Concave Su	gery (B7) inface (B8) No <u>X</u>	Depth (Water staine 1, 2, 4A, and Salt Crust (B Aquatic Invertigation Oxidized Rhi Presence of Recent Iron I Stunted or S Other (Expla	d 4B) at 1) rtebrates (B13) ulfide Odor (C1 izospheres alor Reduced Iron (Reduction in Pl tressed Plants in in Remarks)	(Except MLRA) ng Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOG Wetland Hyd Primary Indic X X S X I I I I S S Field Observ Surface Water Table Pr Saturation Pres (includes capillary	GY drology Indicator eators (minimum of Surface Water (A1) digh Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) For Deposits (B5) Surface Soil Cracks (Indicator Visible on Sparsely Vegetated Covations: Present? Yes esent? Yes eators (Minimum of Surface) Present? Yes	of one requests 32) 4) B6) Aerial Image Concave Su	pery (B7) Inface (B8) No No No	Depth (Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inveit Hydrogen Staine Oxidized Rhi Presence of Recent Iron I Stunted or Si Other (Explain (inches): (inches): (inches):	d 4B) Intebrates (B13) Interpretation (C1) In	(Except MLRA) ng Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOG Wetland Hyd Primary Indic X X S X I I I I S S Field Observ Surface Water Table Pr Saturation Pres (includes capillary	GY Irology Indicator ators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B3) Algal Mat or Crust (B3) Surface Soil Cracks (Indicator Visible on Sparsely Vegetated Covations: Present? Yes seent? Yes seent? Yes seent? Yes	of one requests 32) 4) B6) Aerial Image Concave Su	pery (B7) Inface (B8) No No No	Depth (Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inveit Hydrogen Staine Oxidized Rhi Presence of Recent Iron I Stunted or Si Other (Explain (inches): (inches): (inches):	d 4B) Intebrates (B13) Interpretation (C1) In	(Except MLRA) ng Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOG Wetland Hyd Primary Indic X X S X I I I I S S Field Observ Surface Water Table Pr Saturation Pres (includes capillary	GY Irology Indicator ators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B3) Algal Mat or Crust (B3) Surface Soil Cracks (Indicator Visible on Sparsely Vegetated Covations: Present? Yes seent? Yes seent? Yes seent? Yes	of one requests 32) 4) B6) Aerial Image Concave Su	pery (B7) Inface (B8) No No No	Depth (Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inveit Hydrogen Staine Oxidized Rhi Presence of Recent Iron I Stunted or Si Other (Explain (inches): (inches): (inches):	d 4B) Intebrates (B13) Interpretation (C1) In	(Except MLRA) ng Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

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=Matrix.
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rk Surface (TF12)
Remarks)
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or more required)
eaves (B9)
and 4B)
ns (B10)
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e on Aerial Imagery (C9)
ition (D2)
(D3)
(D5)
nds (D6) (LRR A)
nmocks (D7)
No

PHS #	6338
WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region	

Project/Site: Palmberg	Prope	rty	City/County:	Gea	rhart/Clatsop	Samp	ling Date:	3/2	8/2018
Applicant/Owner: Bill Palmbe	rg				State	: OR	S	ampling Point:	4
	T/CM/C	R	Section, To	wnship, Range:	Section	on 10, Tow	nship 6N, F	Range 10W	
Landform (hillslope, terrace, etc.:)		Slope/Ber	m	Local relief (cor	ncave, convex, none):		nvex	Slope (%):	
Subregion (LRR):	LRR A		Lat:	46.02	8 Long		0274		-123.9091
Soil Map Unit Name:			- oamy Fine Sa			lassification:		- None	
Are climatic/hydrologic conditions on				Yes				in Remarks)	
Are vegetation Soil			significantly dis		Are "Normal Circumsta			Y	
Are vegetation Soil		/drology	-		, explain any answers in R				
			•		,				
SUMMARY OF FINDINGS -	- Attac	h site map	showing sar	npling point	locations, transec	ts, import	ant featur	es, etc.	
Hydrophytic Vegetation Present?	Yes _	X No		is Sampled Ar	on within				
Hydric Soil Present?	Yes _	No	X	a Wetlar		s	No	X	-
Wetland Hydrology Present?	Yes _	No.	X						
Remarks:									
Sample point is approximately	y 3 feet	higher in elev	vation than ac	ljoining SP-3.					
				1.					
VEGETATION - Use scienti	fic nar				I				
		absolute % cover	Dominant Species?	Indicator Status	Dominance Test wo	orksheet:			
Tree Stratum (plot size: 3	0)				Number of Dominant Sp	ecies			
1 Alnus rubra		40	X	FAC	That are OBL, FACW, o	or FAC:		5	(A)
2									
3					Total Number of Domina	ant			
4					Species Across All Strat	ta:		5	·(B)
		40	= Total Cover						
Sapling/Shrub Stratum (plot size:	15	_)			Percent of Dominant Sp	ecies			
1 Alnus rubra		25	X	FAC	That are OBL, FACW, of	or FAC:	10	0%	(A/B)
2 Rubus armeniacus		5	X	FAC					
3					Prevalence Index W		N.E. (4° 1)		
5					Total % Cover of OBL Species	-	Multiply by: x 1 =	- 0	
		30	= Total Cover		FACW species		x 2 =	0	•
					FAC Species		x 3 =	0	
Herb Stratum (plot size:)				FACU Species		x 4 =	0	•
1 Phalaris arundinacea		10	X	FACW	UPL Species		x 5 =	0	
2 Unidentified grass		10	X	(FAC)	Column Totals	0	(A)	0	(B)
3 Hedera helix		2		FACU	1				
5					Prevalence Index	=B/A =	#DI	IV/0!	
6					Hydrophytic Vegeta	tion Indica	tors:		
7					, in a printing vegeta			hytic Vegetatio	on.
8					X	_	ce Test is >5		
		22	= Total Cover			3-Prevalend	ce Index is ≤ 3	3.0 ¹	
						4-Morpholo	gical Adaptati	ons ¹ (provide	supporting
Woody Vine Stratum (plot size:		_)			-			separate shee	t)
1						-	Non-Vascula		-
2					Indicators of budgin call	-		Vegetation ¹ (E	
2 2		0	= Total Cover		¹ Indicators of hydric soil disturbed or problematic		nyarology mu	st be present,	unless
					Hydrophytic				
% Bare Ground in Herb Stratum		0			Vegetation	Yes	X	- No	
Remarks:					Present?				
Ground covered in leaf litter									

Profile Description: (Describe to the depth needed Depth Matrix (Inches) Color (moist) % Color 0-12 10YR 3/1 100 Type: C=Concentration, D=Depletion, RM=Reduced Hydric Soil Indicators: (Applicable to all LR Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Restrictive Layer (if present):	Red or (moist) %	ox Features Type ¹ Loc ² or Coated Sand Grains.	Texture Loamy Sand Indicate Cept MLRA 1)	Remarks CLocation: PL=Pore Lining, M=Matrix. Ors for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (explain in Remarks)
(Inches) Color (moist) % Color (moist) 0-12 10YR 3/1 100 Type: C=Concentration, D=Depletion, RM=Reduced (moist) ydric Soil Indicators: (Applicable to all LR (moist) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) estrictive Layer (if present):	or (moist) % Matrix, CS=Covered	or Coated Sand Grains. vise noted.) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (ex. Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7)	Loamy Sand Indicat	Cocation: PL=Pore Lining, M=Matrix. Ors for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12)
ype: C=Concentration, D=Depletion, RM=Reduced ydric Soil Indicators: (Applicable to all LR Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) estrictive Layer (if present):	Matrix, CS=Covered	or Coated Sand Grains. vise noted.) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (excluding Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7)	Loamy Sand Indicat	Cocation: PL=Pore Lining, M=Matrix. Ors for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12)
Fype: C=Concentration, D=Depletion, RM=Reduced Iydric Soil Indicators: (Applicable to all LR Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Itestrictive Layer (if present):		Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (excluding Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7)	Indicat	ors for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12)
ydric Soil Indicators: (Applicable to all LR Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) estrictive Layer (if present):		Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (excluding Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7)	Indicat	ors for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12)
Histosol (A1) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)		Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (excluding Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7)	Indicat	ors for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12)
Histosol (A1) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)		Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (excluding Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7)	Indicat	ors for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12)
Histosol (A1) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) estrictive Layer (if present):		Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (excluding Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7)	Indicat	ors for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12)
Histosol (A1) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) estrictive Layer (if present):		Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (excluding Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7)	Indicat	ors for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12)
ydric Soil Indicators: (Applicable to all LR Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) estrictive Layer (if present):		Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (excluding Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7)	Indicat	ors for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12)
Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) estrictive Layer (if present):	RRs, unless others	Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (excluding Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7)	cept MLRA 1)	2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12)
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) estrictive Layer (if present):		Stripped Matrix (S6) Loamy Mucky Mineral (F1) (exilonary Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7)		Red Parent Material (TF2) Very Shallow Dark Surface (TF12)
Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)		Loamy Mucky Mineral (F1) (ex- Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7)		Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) estrictive Layer (if present):		Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7)		
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) estrictive Layer (if present):		Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7)		Other (explain in Remarks)
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) estrictive Layer (if present):		Redox Dark Surface (F6) Depleted Dark Surface (F7)		
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) estrictive Layer (if present):		Depleted Dark Surface (F7)		
Sandy Gleyed Matrix (S4) estrictive Layer (if present):				
estrictive Layer (if present):		Paday Depressions (E8)		Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or
		- Nedox Depressions (1 0)		problematic.
/pe:				
		_		
epth (inches):			Hydric Soil Prese	nt? Yes No X
YDROLOGY /etland Hydrology Indicators:				
rimary Indicators (minimum of one required;	check all that apply	<i>(</i>)		Secondary Indicators (2 or more required)
Surface Water (A1)		Water stained Leaves (B9) (Ex	ccept MLRA	Water stained Leaves (B9)
High Water Table (A2)		1, 2, 4A, and 4B)		(MLRA1, 2, 4A, and 4B)
Saturation (A3)		Salt Crust (B11)		Drainage Patterns (B10)
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 I	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 Plow	ed Soils (C6)	Fac-Neutral Test (D5)
Surface Soil Cracks (B6)		Stunted or Stressed Plants (D'	1) (LRR A)	Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery (B	7)	Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface (I	B8)			
eld Observations:				
rface Water Present? Yes No	X Depti	n (inches):		
ater Table Present? YesNo	X Depti	n (inches): >12	Wetland Hydro	ology Present?
turation Present? Yes No _	X Depti	n (inches): >12		Yes NoX
		views increations), if available:		
		vious inspections), il available.		
	vell, aerial photos, pre			
	vell, aerial photos, pre			
Describe Recorded Data (stream gauge, monitoring w	vell, aerial photos, pre			

PHS # 6338 WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Palmberg Pr	operty	City/County:	Gea	arhart/Clatsop	Samp	oling Date:	3/2	8/2018
pplicant/Owner: Bill Palmberg				S1	ate: OR	s	ampling Point:	5
vestigator(s): SE/JT/C	M/CR	Section, To	ownship, Range:	Se	ction 10, Tow	nship 6N, I	Range 10W	
andform (hillslope, terrace, etc.:)			Local relief (co	oncave, convex, none):			Slope (%):	
	RR A	Lat:	46.02	.67 Le	ong: -12		_	WGS84
oil Map Unit Name:	Warrentor	Loamy Fine Sa	nd		/I Classification:		- None	
e climatic/hydrologic conditions on the			Yes		No		n in Remarks)	
		significantly dist	turbed?	Are "Normal Circum			Υ	
	or Hydrology	_		d, explain any answers		()		•
				-,,	,			
UMMARY OF FINDINGS - A	ttach site ma	p showing sar	npling point	locations, trans	ects, impor	tant featur	es, etc.	
drophytic Vegetation Present? Yes	<u> </u>	No	Is Sampled A	roa within				
dric Soil Present? Yes	X 1	4o	a Wetla		Yes X	No		
etland Hydrology Present? Yes	<u> </u>	٠٠						
emarks:								
		520				74 (
EGETATION - Use scientific								
	absolute % cover	Dominant Species?	Indicator Status	Dominance Test	worksheet:			
ee Stratum (plot size:)			Number of Dominant	Species			(*)
	_			That are OBL, FACV	•		4	(A)
								•
				Total Number of Don	ninant			
				Species Across All S	trata:		5	(B)
	0	= Total Cover						
apling/Shrub Stratum (plot size:	15)			Percent of Dominant	Species			
Spiraea douglasii	20	X	FACW	That are OBL, FACV	, or FAC:	8	0%	(A/B)
Schedonorus arundinaceus	5	х	FAC					•
				Prevalence Index	Worksheet:			
				Total % Cover of		Multiply by:	_	
				OBL Species		x 1 =	0	
	25	= Total Cover		FACW species		x 2 =	0	
erb Stratum (plot size: 5	,			FACUS Species		x 3 = x 4 =	0	
Phalaris arundinacea	′ 	X	FACW	FACU Species UPL Species		x5=	0	•
Juncus effusus	40		FACW	Column Totals	0	(A)	0	(B)
Hypochaeris radicata			FACU			• ()		•(0)
			-	Prevalence Ind	ex =B/A =	#D	IV/0!	
								•
				Hydrophytic Veg	etation Indica	ators:		
					1- Rapid Te	est for Hydrop	hytic Vegetatio	n
				X		nce Test is >5		
	105	= Total Cover			100 0 101-00-00-00	ce Index is ≤ 3		
pody Vine Stratum (plot size:	15)						ions ¹ (provide	
	5	x	FACU			narks or on a Non-Vascula	separate shee r Plants ¹	ι)
	<u> </u>		1 400				Vegetation ¹ (E	xplain)
Rubus ursinus				L —			-	
Rubus ursinus		= Total Cover		¹ Indicators of hydric s	soil and wetland	Hydrolody IIII		
Rubus ursinus	5	= Total Cover		¹ Indicators of hydric s disturbed or problem		nydrology mu	μ,	
Rubus ursinus Plat size: Plat size:		= Total Cover					No	

Fiorne Deseri	ption: (Describe to th	e depth	needed to docum			nfirm the abser	nce of indicators.)	
Depth	Matrix				ox Features	1 . 2		
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 2/2	85	7.5YR 2.5/2	- 25		M	Sandy Loam	Cobble 10%
¹ Type: C=Cond	centration, D=Depletion	n, RM=R	educed Matrix, CS	=Covered o	r Coated San	d Grains.		² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applic	able to	all LRRs, unle	ss otherw	vise noted.))	India	eators for Problematic Hydric Soils ³ :
	Histosol (A1)				Sandy Redo	x (S5)		2 cm Muck (A10)
	Histic Epipedon (A2)				Stripped Mai	trix (S6)	,	Red Parent Material (TF2)
	Black Histic (A3)				Loamy Muck	ky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
	Hydrogen Sulfide (A4)				Loamy Gleye	ed Matrix (F2)		Other (explain in Remarks)
	Depleted Below Dark S	Surface (/	A11)		Depleted Ma	atrix (F3)		
	Thick Dark Surface (A			X	-	Surface (F6)		
	Sandy Mucky Mineral (S1)			Depleted Da	ark Surface (F7)		³ Indicators of hydrophytic vegetation and wetland
	Sandy Gleyed Matrix (-	essions (F8)		hydrology must be present, unless disturbed or problematic.
Pastriotive !	ayer (if present):						T	
Type: Depth (inches Remarks:					<u>-</u>	,	Hydric Soil Pre	sent? Yes X No
Depth (inches					<u>-</u> 		Hydric Soil Pre	sent? Yes X No
Depth (inches):				_	`	Hydric Soil Pre	sent? Yes X No
Depth (inches Remarks: HYDROLO):					,	Hydric Soil Pre	sent? Yes X No
Depth (inches Remarks: HYDROLO Wetland Hyd	GY	:			· · · · · · · · · · · · · · · · · · ·	`	Hydric Soil Pre	sent? Yes X No
Depth (inches Remarks: HYDROLO Wetland Hyd Primary India	GY drology Indicators	:			Water staine	ed Leaves (B9) (Secondary Indicators (2 or more required Water stained Leaves (B9)
Depth (inches Remarks: HYDROLO Wetland Hyd Primary India	GY drology Indicators eators (minimum of	: one req			Water staine	ed Leaves (B9) (Secondary Indicators (2 or more required
Depth (inches Remarks: HYDROLO Wetland Hyd Primary India	GY drology Indicators cators (minimum of Surface Water (A1)	: one req			Water staine 1, 2, 4A, and Salt Crust (B	d 4B) 311)	Except MLRA	Secondary Indicators (2 or more required Water stained Leaves (B9)
Depth (inches Remarks: HYDROLO Wetland Hyd Primary India	GY drology Indicators eators (minimum of Surface Water (A1) High Water Table (A2)	: one req			Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve	d 4B) 311) artebrates (B13)	(Except MLRA	Secondary Indicators (2 or more required Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
Depth (inches Remarks: HYDROLO Wetland Hyd Primary India	GY drology Indicators eators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3)	; one req			Water staine 1, 2, 4A, and Salt Crust (B Aquatic Invel Hydrogen St	d 4B) 311) rtebrates (B13) ulfide Odor (C1)	(Except MLRA	Secondary Indicators (2 or more required Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imager
Depth (inches Remarks: HYDROLO Wetland Hyd Primary India	GY drology Indicators cators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	: one req			Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rhi	d 4B) 311) rtebrates (B13) ulfide Odor (C1) izospheres alon	(Except MLRA	Secondary Indicators (2 or more required Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Depth (inches Remarks: HYDROLO Wetland Hyd Primary India	GY drology Indicators eators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	: one req			Water staine 1, 2, 4A, and Salt Crust (B Aquatic Invertigation Hydrogen St Oxidized Rhi Presence of	d 4B) 311) Intebrates (B13) Intebrates (C1) It is observed and the control of the	(Except MLRA g Living Roots (C3) C4)	Secondary Indicators (2 or more required Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imager X Geomorphic Position (D2) Shallow Aquitard (D3)
Depth (inches Remarks: HYDROLO Wetland Hyd Primary India	GY drology Indicators cators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5)	one req			Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rhi Presence of Recent Iron	d 4B) 311) rtebrates (B13) ulfide Odor (C1) izospheres alon Reduced Iron (G	(Except MLRA g Living Roots (C3) C4) owed Soils (C6)	Secondary Indicators (2 or more required Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imager X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5)
Depth (inches Remarks: HYDROLO Wetland Hyd Primary India	GY drology Indicators cators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) Surface Soil Cracks (B	one req	uired; check all		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron I Stunted or S	d 4B) state (B13) ulfide Odor (C1) izospheres alon Reduced Iron (C1) Reduction in Plateressed Plants (C1)	(Except MLRA g Living Roots (C3) C4) owed Soils (C6)	Secondary Indicators (2 or more required Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imager X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Depth (inches Remarks: HYDROLO Wetland Hyd Primary India	GY drology Indicators cators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) Surface Soil Cracks (B nundation Visible on A	: one req	uired; check all		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron I Stunted or S	d 4B) 311) rtebrates (B13) ulfide Odor (C1) izospheres alon Reduced Iron (G	(Except MLRA g Living Roots (C3) C4) owed Soils (C6)	Secondary Indicators (2 or more required Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imager X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5)
Depth (inches Remarks: HYDROLO Wetland Hyd Primary India	GY drology Indicators cators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) Surface Soil Cracks (B	: one req	uired; check all		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron I Stunted or S	d 4B) state (B13) ulfide Odor (C1) izospheres alon Reduced Iron (C1) Reduction in Plateressed Plants (C1)	(Except MLRA g Living Roots (C3) C4) owed Soils (C6)	Secondary Indicators (2 or more required Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imager X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Depth (inches Remarks: HYDROLO Wetland Hyd Primary India	GY drology Indicators eators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Orift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) Surface Soil Cracks (B nundation Visible on A Sparsely Vegetated Co	: one req	uired; check all		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron I Stunted or S	d 4B) state (B13) ulfide Odor (C1) izospheres alon Reduced Iron (C1) Reduction in Plateressed Plants (C1)	(Except MLRA g Living Roots (C3) C4) owed Soils (C6)	Secondary Indicators (2 or more required Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imager X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Depth (inches Remarks: HYDROLO Wetland Hyd Primary India	GY drology Indicators cators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Orift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) Surface Soil Cracks (B nundation Visible on A Sparsely Vegetated Covations:	: one req	uired; check all	that apply	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron I Stunted or S	d 4B) state (B13) ulfide Odor (C1) izospheres alon Reduced Iron (C1) Reduction in Plateressed Plants (C1)	(Except MLRA g Living Roots (C3) C4) owed Soils (C6)	Secondary Indicators (2 or more required Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imager X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Depth (inches Remarks: HYDROLO Wetland Hyd Primary India	GY drology Indicators cators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Orift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) Surface Soil Cracks (B nundation Visible on A Sparsely Vegetated Covations: Present? Yes	: one req	uired; check all gery (B7) urface (B8)	that apply	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron I Stunted or S Other (Explain	d 4B) state (B13) ulfide Odor (C1) izospheres alon Reduced Iron (C1) Reduction in Plateressed Plants (C1)	g Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A)	Secondary Indicators (2 or more required Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imager X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary India	GY drology Indicators eators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) Surface Soil Cracks (B nundation Visible on A Sparsely Vegetated Co vations: Present? Yes resent? Yes sent? Yes	: one req	uired; check all gery (B7) urface (B8)	that apply Depth Depth	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rhi Presence of Recent Iron I Stunted or S Other (Expla	d 4B) 311) Intebrates (B13) Ilfide Odor (C1) Izospheres alon Reduced Iron (I Reduction in Plateressed Plants (I Interessed Plants)	g Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A)	Secondary Indicators (2 or more required Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imager X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Primary India Primary India Field Obsers Surface Water Table Presaturation Press (Includes capillar	GY drology Indicators eators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) Surface Soil Cracks (B nundation Visible on A Sparsely Vegetated Co vations: Present? Yes resent? Yes sent? Yes	cone req	gery (B7) urface (B8) No X No X No X	Depth	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rhi Presence of Recent Iron I Stunted or S Other (Expla	d 4B) 311) Intebrates (B13) Intebrates (B13) Intebrates (B13) Intebrates (B13) Intebrates (B13) Intebrates (B13) Interpretable	g Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or more required Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imager X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Primary India Primary India Field Obsers Surface Water Table Presaturation Press (Includes capillar	GY drology Indicators cators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) Surface Soil Cracks (B nundation Visible on A Sparsely Vegetated Co vations: Present? Yes resent? Yes gent? Yes gringe)	cone req	gery (B7) urface (B8) No X No X No X	Depth	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rhi Presence of Recent Iron I Stunted or S Other (Expla	d 4B) 311) Intebrates (B13) Intebrates (B13) Intebrates (B13) Intebrates (B13) Intebrates (B13) Intebrates (B13) Interpretable	g Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or more required Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imager X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Primary India Primary India Field Obsers Surface Water Table Presaturation Press (Includes capillar	GY drology Indicators cators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) Surface Soil Cracks (B nundation Visible on A Sparsely Vegetated Co vations: Present? Yes resent? Yes gent? Yes gringe)	cone req	gery (B7) urface (B8) No X No X No X	Depth	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rhi Presence of Recent Iron I Stunted or S Other (Expla	d 4B) 311) Intebrates (B13) Intebrates (B13) Intebrates (B13) Intebrates (B13) Intebrates (B13) Intebrates (B13) Interpretable	g Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or more required Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imager X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)



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

6338

	berg Property	City	/County:	Gea	rhart/Clatsop		ling Date:		/2018
	lmberg					te: OR		ampling Point:	
	SE/JT/CM/CR		Section, Town	nship, Range:	Sec	tion 10, Tow	nship 6N, F	Range 10W	
dform (hillslope, terrace, et	c.:)	Berm		Local relief (cor	ncave, convex, none):			Slope (%):	
region (LRR):	LRR A		Lat:	46.026	5 7 Lor	ng:	3.9087	Datum:	WGS84
Map Unit Name:	Warr	enton Loamy	Fine Sand	d	NWI	Classification:		None	
climatic/hydrologic condition				Yes	X	No	(if no, explain	in Remarks)	
vegetation Soil				bed?	Are "Normal Circums				
	or Hydrolog				, explain any answers in		, , ,		
vegetation					,				
MMARY OF FINDIN	GS – Attach sit	e map show	ving samp	oling point	locations, transe	cts, import	ant featur	es, etc.	
ophytic Vegetation Preser	t? Yes	No	x .						
ic Soil Present?	Yes	No	X	Is Sampled Ar a Wetlar	ea within id?	es	No	X	
land Hydrology Present?	Yes	No No	X						
narks:									
idi KS.									
							2		,
GETATION - Use so	ientific names	of plants.			***				
		solute Do	minant	Indicator	Dominance Test v	worksheet:			
	%	cover Sp	ecies?	Status					
Stratum (plot size:	,				Number of Dominant	•		•	(4)
					That are OBL, FACW,	, or FAC:		2	(A)
					Tatal Number of Danis	·			
					Total Number of Domi				(B)
		0 - 7	-10		Species Across All Str	rata:		4	(B)
	-	0 = To	tal Cover						
ling/Shrub Stratum (plo	t size:)				Percent of Dominant S	Species			
Rubus armeniacus		20	<u>x</u> _	FAC	That are OBL, FACW	, or FAC:	5	0%	(A/B)
Rubus laciniatus		5	<u>x</u> _	FACU					
					Prevalence Index	Worksheet:			
					Total % Cover of		Multiply by:		
		25			OBL Species	<u>5</u>	x1=	5	
	-	25 = To	tal Cover		FACW species FAC Species	60	x 2 = x 3 =	180	
Stratum (plot size:	5)				FACU Species	55	x 4 =	220	
Plantago lanceolata		35	х	FACU	UPL Species		x 5 =	0	
Unidentified Grass		30	X	(FAC)	Column Totals	125	(A)	415	(B) .
Hypochaeris radicata		15		FACU					
Juncus effusus		5		FACW	Prevalence Inde	ex =B/A =	3	.32	
Carex obnupta		5		OBL					
Lotus corniculatus		5		FAC	Hydrophytic Vege	tation Indica	ators:		
Vicia sp.		5		(FAC)		1- Rapid Te	est for Hydrop	hytic Vegetatio	n
						2- Dominar	nce Test is >5	0%	
		100 = To	tal Cover				ce Index is ≤ 3		
						4-Morpholo	gical Adaptat	ions ¹ (provide s	supporting
ody Vine Stratum (plot si	ze:)							separate sheet	t)
							Non-Vascula		
								Vegetation ¹ (E	
		0 = To	tal Cover		¹ Indicators of hydric so		hydrology mu	st be present,	unless
					disturbed or problema Hydrophytic	nuG.			
Bare Ground in Herb Stratu	m 0				Vegetation	Yes		No	X
are Ground in meth attaill									

0-10 10YR 2/2 100	7.5YR 3/4 red Matrix, CS=C LRRs, unless	Redox Features % Type¹ 1 C covered or Coated Sand otherwise noted.) Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyed	Loc² Texture Loamy Sand M Loamy Sand Grains. Indic (S5)	Remarks Fine Fine 2Location: PL=Pore Lining, M=Matrix. cators for Problematic Hydric Soils³: 2 cm Muck (A10) Red Parent Material (TF2)
(Inches) Color (moist) % Color (moist) 100 10-10	7.5YR 3/4 red Matrix, CS=C LRRs, unless	% Type¹ 1 C covered or Coated Sand otherwise noted.) Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyec	Loamy Sand M Loamy Sand Grains. Indic (S5) × (S6)	Fine Fine 2Location: PL=Pore Lining, M=Matrix. Cators for Problematic Hydric Soils ³ : 2 cm Muck (A10)
1-10 10YR 2/2 100 10-13 10YR 2/2 99 1-Type: C=Concentration, D=Depletion, RM=Reduce Hydric Soil Indicators: (Applicable to all Indicators: (Applicable to	7.5YR 3/4 red Matrix, CS=C LRRs, unless	1 C Tovered or Coated Sand otherwise noted.) Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyed	Loamy Sand M Loamy Sand Grains. Indic (S5) × (S6)	Fine Fine 2Location: PL=Pore Lining, M=Matrix. Cators for Problematic Hydric Soils ³ : 2 cm Muck (A10)
10-13 10YR 2/2 99 1Type: C=Concentration, D=Depletion, RM=Reduc Hydric Soil Indicators: (Applicable to all I Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	ed Matrix, CS=C LRRs, unless	overed or Coated Sand otherwise noted.) Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyed	M Loamy Sand Grains. Indic (S5) × (S6)	Fine 2Location: PL=Pore Lining, M=Matrix. cators for Problematic Hydric Soils3: 2 cm Muck (A10)
¹ Type: C=Concentration, D=Depletion, RM=Reduce Hydric Soil Indicators: (Applicable to all Indicators: (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	ed Matrix, CS=C LRRs, unless	overed or Coated Sand otherwise noted.) Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyed	Grains. Indic (S5) × (S6)	² Location: PL=Pore Lining, M=Matrix. cators for Problematic Hydric Soils ³ :2 cm Muck (A10)
Hydric Soil Indicators: (Applicable to all Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	LRRs, unless	Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyed	(S5) × (S6)	cators for Problematic Hydric Soils ³ :2 cm Muck (A10)
Hydric Soil Indicators: (Applicable to all Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	LRRs, unless	Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyed	(S5) × (S6)	cators for Problematic Hydric Soils ³ :2 cm Muck (A10)
Hydric Soil Indicators: (Applicable to all Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	LRRs, unless	Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyed	(S5) × (S6)	cators for Problematic Hydric Soils ³ :2 cm Muck (A10)
Hydric Soil Indicators: (Applicable to all Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	LRRs, unless	Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyed	(S5) × (S6)	cators for Problematic Hydric Soils ³ :2 cm Muck (A10)
Hydric Soil Indicators: (Applicable to all Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	LRRs, unless	Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyed	(S5) × (S6)	cators for Problematic Hydric Soils ³ :2 cm Muck (A10)
Hydric Soil Indicators: (Applicable to all Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	LRRs, unless	Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyed	(S5) × (S6)	cators for Problematic Hydric Soils ³ :2 cm Muck (A10)
Hydric Soil Indicators: (Applicable to all Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	LRRs, unless	Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyed	(S5) × (S6)	cators for Problematic Hydric Soils ³ :2 cm Muck (A10)
Hydric Soil Indicators: (Applicable to all Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	LRRs, unless	Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyed	(S5) × (S6)	cators for Problematic Hydric Soils ³ :2 cm Muck (A10)
Histosol (A1) Histic Epípedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)		Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyec	(S5) × (S6)	2 cm Muck (A10)
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)		Stripped Matri Loamy Mucky Loamy Gleyed	x (S6)	
Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	,	Loamy Mucky		Red Parent Material (1F2)
Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	,	Loamy Gleyec	Willieral (F1) (except WLRA 1)	
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)				Very Shallow Dark Surface (TF12)
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)		Page 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Other (explain in Remarks)
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)		Depleted Matr		
Sandy Gleyed Matrix (S4)		Redox Dark S	urface (F6)	³ Indicators of hydrophytic vegetation and wetland
		Depleted Dark	Surface (F7)	hydrology must be present, unless disturbed or
Restrictive Layer (if present):		Redox Depres	sions (F8)	problematic.
Гуре:				
Depth (inches):			Hydric Soil Pres	sent? Yes No X
HYDROLOGY Wetland Hydrology Indicators:				
Primary Indicators (minimum of one require	d; check all the	at apply)		Secondary Indicators (2 or more required)
Surface Water (A1)			Leaves (B9) (Except MLRA	Water stained Leaves (B9)
High Water Table (A2)		1, 2, 4A, and	IB)	(MLRA1, 2, 4A, and 4B)
Saturation (A3)		Salt Crust (B1	1)	Drainage Patterns (B10)
Water Marks (B1)		Aquatic Inverte	ebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2)		Hydrogen Sulf	ide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	-	Oxidized Rhize	ospheres along Living Roots (C3)	Geomorphic Position (D2)
Algal Mat or Crust (B4)		Presence of R	educed Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)		Recent Iron R	eduction in Plowed Soils (C6)	Fac-Neutral Test (D5)
Surface Soil Cracks (B6)		Stunted or Str	essed 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 Surfac	e (B8)			
ield Observations:				
Surface Water Present? Yes N	loX	Depth (inches):		
	lo X	Depth (inches):	>13 Wetland Hyd	drology Present?
Vater Table Present? Yes N	lo X	Depth (inches):	>13	Yes No X
Saturation Present? YesN				
Saturation Present? Yes Nincludes capillary fringe)		tos, previous inspection	c) if available:	
Saturation Present? Yes Nincludes capillary fringe)	g well, aerial pho	, p	o), ii avallable.	
Saturation Present? Yes Nincludes capillary fringe)	g well, aerial pho	, , , , , , , , , , , , , , , , , , , ,	oj, ii avaliavie.	
	g well, aerial pho	, , , , , , , , , , , , , , , , , , , ,	o), II avaliable.	. :

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uired)_			
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nagery (C9)			
R A)			
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<u>l</u> .,			

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

icant/Owner: Bill Palmberg	city	City/County.		State	_	Sampling	Point: 7
05/17/01/	/CD	Castian Ta				nship 6N, Range	
3(,		_					
Iform (hillslope, terrace, etc.:)				ncave, convex, none):			pe (%):
egion (LRR): LRF		_ Lat:	46.025		:123		Datum: WGS84
Map Unit Name:				,	lassification:		one
limatic/hydrologic conditions on the site						(if no, explain in Rer	
egetation Soil or	-					? (Y/N)	<u>Y</u>
egetation Soil or	Hydrology	naturally probler	matic? If needed	, explain any answers in F	Remarks.)		
MARY OF FINDINGS - Atta	ach eite man	chowing can	nnling noint	locations transec	ts imports	ant features e	to
				, courtons, transco	to, miporte	ant leatures, e	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			is Sampled Al			No	
00111000111			a Wetlan	nd?	<u> </u>	No	
and Hydrology Present? Yes	X No						
arks:							
SETATION - Use scientific n	ames of plan	te					
LIATION - 03e Scientific II	absolute	Dominant	Indicator	Dominance Test wo	orksheet:		
	% cover	Species?	Status				
Stratum (plot size:)			Number of Dominant Sp			
				That are OBL, FACW, o	r FAC:	3	(A)
				Total Number of Domina		•	(5)
				Species Across All Stra	ta:	3	(B)
	0	= Total Cover					
ng/Shrub Stratum (plot size:)			Percent of Dominant Sp	ecies		
				That are OBL, FACW,	or FAC:	100%	(A/B)
				Prevalence Index W	orksheet:		
				Total % Cover of		Multiply by:	
				OBL Species		x 1 =	0
	0	= Total Cover		FACW species			0
	,			FAC Species			0
Stratum (plot size: 5	_)	v	FACIAL	FACU Species			0
uncus effusus	45	X	FACW (FAC)	UPL Species Column Totals	0		0 (B)
Inidentified grass Holcus lanatus	25	X	FAC	Column rotals		(A)	0 (B)
otus corniculatus	10		FAC	Prevalence Index	=B/A =	#DIV/0!	
				T ROYGIGING MIGGA	-	1121070.	
	-			Hydrophytic Vegeta	tion Indica	tors:	
					1- Rapid Te	st for Hydrophytic V	egetation
				X		ce Test is >50%	
·	100	= Total Cover			_	e Index is ≤ 3.0 ¹	
					_	gical Adaptations ¹ (p	
ly Vine Stratum (plot size:)					arks or on a separa	
					_	Non-Vascular Plants	
				1 adiabate of 1 1 1 11	_	Hydrophytic Vegeta	
	0	= Total Cover		¹ Indicators of hydric soil disturbed or problematic		nydrology must be p	resent, unless
				Hydrophytic		@ W	
				Vegetation	Yes	<u>x</u>	No
are Ground in Herb Stratum				Present?			

SOIL			PHS#.	63	38			Sampling Point: 7
Profile Descrip	tion: (Describe to	the depth	ngeded to docume	nt the indi	cator or con	firm the abser	nce of indicators.)	
Depth	Matrix			-	Features			
(Inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-8	10YR 3/3	100					Sandy Loam	;
8-15	7.5YR 2/2	90	7.5YR 3/4	10	C	M	Loamy Sand	Medium
vne: C=Conce	entration, D=Depletion	on RM=Re	duced Matrix CS=0	Covered or	Coated Sand	Grains		² Location: PL=Pore Lining, M=Matrix.
	ndicators: (Appli					Cramo.	Indica	ators for Problematic Hydric Soils ³ :
	istosol (A1)	¥	,		Sandy Redox	(S5)		2 cm Muck (A10)
	istic Epipedon (A2)				Stripped Matr			Red Parent Material (TF2)
	lack Histic (A3)						except MLRA 1)	Very Shallow Dark Surface (TF12)
-	ydrogen Sulfide (A4)			_oamy Gleye		,	
	epleted Below Dark		11)		Depleted Mat			Other (explain in Remarks)
	hick Dark Surface (A				Redox Dark S			
	andy Mucky Mineral	•				k Surface (F7)		³ Indicators of hydrophytic vegetation and wetland
	andy Gleyed Matrix				Redox Depres		*	hydrology must be present, unless disturbed or problematic.
					Tedox Depres	3310113 (1 0)	1	problemand.
	ayer (if present):							
ype:					-			8
epth (inches):							Hydric Soil Pres	ent? Yes X No
YDROLOG	Y rology Indicators	s:						
_	ators (minimum of		ired check all th	at annly)				Secondary Indicators (2 or more required)
	urface Water (A1)	Toric requ	med, check all th		Vater stained	Leaves (B9) (Except MLRA	Water stained Leaves (B9)
	igh Water Table (A2)			, 2, 4A, and		and permanent	(MLRA1, 2, 4A, and 4B)
	aturation (A3)	,			Salt Crust (B1			Drainage Patterns (B10)
	ater Marks (B1)		,		•	ebrates (B13)		Dry-Season Water Table (C2)
	ediment Deposits (B	2)			,	fide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
	rift Deposits (B3)				-		g Living Roots (C3)	Geomorphic Position (D2)
	gal Mat or Crust (B4	.)				Reduced Iron (C		Shallow Aquitard (D3)
	on Deposits (B5)			7			wed Soils (C6)	X Fac-Neutral Test (D5)
St	urface Soil Cracks (F	36)		s	Stunted or Str	essed Plants (D1) (LRR A)	Raised Ant Mounds (D6) (LRR A)
In	undation Visible on	Aerial Imag	ery (B7)		Other (Explain	in Remarks)		Frost-Heave Hummocks (D7)
Sp	parsely Vegetated C	oncave Su	rface (B8)					
eld Observa	ations:							
rface Water P	resent? Yes		No X	Depth (i	inches):			
ater Table Pre	sent? Yes	Х	No	Depth (i	inches):	12	Wetland Hydr	ology Present?
turation Prese		Х	No	Depth (i	inches):	. 9		Yes X No
cludes capillary f								
escribe Record	ed Data (stream ga	uge, monito	oring well, aerial pho	otos, previo	us inspection	s), if available:		
								1
narks:						,		
								5 4'

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

ect/Site: F	Site: Palmberg Property		City/County:	City/County: Gearhart/Clatsop			3/28/2018	
licant/Owner: Bil	l Palmberg				State:	OR	Sampling Point:	8
stigator(s):	SE/JT/CM/	CR	Section, To	wnship, Range:	Section	10, Township 6N	I, Range 10W	
dform (hillslope, terrac	e, etc.:)	Flats	_	Local relief (con	icave, convex, none):	Convex	Slope (%):	2
region (LRR):	LRR	A	Lat:	46.025	6 Long:	-123.9089	Datum:	WGS84
Map Unit Name:			– .oamv Fine Sai	nd	NWI Cla	ssification:	None	
climatic/hydrologic cor				Yes		(if no, expl	lain in Remarks)	
					Are "Normal Circumstance			
					explain any answers in Re			
egetation S	OII	Tydrology	_ naturally probler	natio: ir needed,	copially allowers in the	marks.)		
MMARY OF FINI	DINGS - Atta	ch site map	showing san	npling point	locations, transects	, important feat	ures, etc.	
ophytic Vegetation Pr	esent? Yes	X No						
c Soil Present?	Yes	No	X	Is Sampled Are			No X	
and Hydrology Preser	nt? Yes	No	X		-			
arks:								
diks.								
				,				
SETATION - Use	scientific na	mes of plan	ts.					
		absolute	Dominant	Indicator	Dominance Test wor	ksheet:		
Otombian (mlatinima)		% cover	Species?	Status	Number of Deminent See	níaa		
Stratum (plot size:		,			Number of Dominant Spec That are OBL, FACW, or		3	(A)
	-				That are OBL, FACW, or			(^)
					Total Number of Dominan	t		
					Species Across All Strata:		3	(B)
		0	= Total Cover					(-)
		,	70.00		5			
ing/Shrub Stratum	(plot size:)			Percent of Dominant Spec		100%	(A/B)
					That are OBL, FACW, or		100%	(AVD)
					Prevalence Index Wo	orksheet:		
					Total % Cover of	Multiply by	r;	
					OBL Species	x 1 =		
		0	= Total Cover		FACW species	x 2 =	0	
					FAC Species	x 3 =	0	
Stratum (plot size:	5)			FACU Species	x 4 =	0	
Unidentified grass	s	50	X	(FAC)	UPL Species	x 5 =	0	
Juncus effusus		20	X	FACW	Column Totals	0 (A)	0	(B)
Phalaris arundina		20	X	FACW				
otus corniculatu	s	. 10		FAC	Prevalence Index =	B/A = #	#DIV/0!	
					I hadron budio Manadadi	I dit		
			•		Hydrophytic Vegetati		b. tis \ /s astatis	_
				-		 Rapid Test for Hydi Dominance Test is 		П
		100	= Total Cover			2-Dominance rest is 3-Prevalence Index is		
	1	100	- Total Cover			4-Morphological Adap		upporting
dy Vine Stratum (P	lot size:)				data in Remarks or or		
						5- Wetland Non-Vasc	ular Plants ¹	
1/						Problematic Hydrophy	tic Vegetation ¹ (E	xplain)
		0	= Total Cover		¹ Indicators of hydric soil a	nd wetland hydrology	must be present,	unless
			,		disturbed or problematic.			
					Hydrophytic			
are Ground in Herb Si	tratum	0			Vegetation	Yes X	No	

OIL	PHS#	6338			Sampling Point: 8
rofile Description: (Describe to the depth	needed to docume	nt the indicator or con	nfirm the absen	ce of indicators.)	
Depth Matrix		Redox Features	. 3		
(Inches) Color (moist) %	Color (moist)	% Type¹	Loc ²	Texture	Remarks
0-12 10YR 3/1 100				Loamy Sand	
12-18 10YR 3/1 99	7.5YR 5/8	1 C	M	Loamy Sand	Fine
				, .	
ype: C=Concentration, D=Depletion, RM=R	educed Matrix, CS=0	Covered or Coated San	d Grains.		² Location: PL=Pore Lining, M=Matrix.
ydric Soil Indicators: (Applicable to	all LRRs, unless	s otherwise noted.)		Indica	ators for Problematic Hydric Soils ³ :
Histosol (A1)		Sandy Redox	x (S5)		2 cm Muck (A10)
Histic Epipedon (A2)		Stripped Mat			Red Parent Material (TF2)
Black Histic (A3)		Loamy Muck	ky Mineral (F1) (e	except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)		Loamy Gleye	ed Matrix (F2)	*	Other (explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Ma	trix (F3)		
Thick Dark Surface (A12)		Redox Dark	Surface (F6)	*	Stadtone of bodon to the state of the state
Sandy Mucky Mineral (S1)		Depleted Da	rk Surface (F7)		³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or
Sandy Gleyed Matrix (S4)		Redox Depre	essions (F8)		problematic.
estrictive Layer (if present):					
ype:					
ype: epth (inches): emarks:			3	Hydric Soil Pres	sent? YesNoX
epth (inches):emarks:				Hydric Soil Pres	sent? YesNoX
epth (inches): emarks: YDROLOGY /etland Hydrology Indicators:	uired: check all th	nat apply)		Hydric Soil Pres	
epth (inches): emarks: YDROLOGY retland Hydrology Indicators: rimary Indicators (minimum of one red	uired; check all th		d Leaves (B9) (I		Secondary Indicators (2 or more required) Water stained Leaves (B9)
epth (inches): PMARKS: YDROLOGY etland Hydrology Indicators:	uired; check all th				Secondary Indicators (2 or more required)
epth (inches): marks: YDROLOGY etland Hydrology Indicators: imary Indicators (minimum of one reco	uired; check all th	Water staine	I 4B)		Secondary Indicators (2 or more required) Water stained Leaves (B9)
POROLOGY Tetland Hydrology Indicators: Imary Indicators (minimum of one recommany Indicators (A1) High Water Table (A2)	uired; check all th	Water staine 1, 2, 4A, and Salt Crust (B	I 4B)		Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
POROLOGY Petland Hydrology Indicators: Imary Indicators (minimum of one recommend of the period of	uired; check all th	Water staine 1, 2, 4A, and Salt Crust (B	1 4B) :11)		Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10)
Perpth (inches): Permarks: YDROLOGY Petland Hydrology Indicators: rimary Indicators (minimum of one red Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	uired; check all th	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver	1 4B) 111) rtebrates (B13) ulfide Odor (C1)		Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Property (inches): YDROLOGY Tetland Hydrology Indicators: Firmary Indicators (minimum of one red Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	uired; check all th	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi	1 4B) 111) rtebrates (B13) ulfide Odor (C1)	Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
POROLOGY Tetland Hydrology Indicators: Timary Indicators (minimum of one red Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	uired; check all th	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi: Presence of I Recent Iron F	(14B) Intebrates (B13) Iffide Odor (C1) It zospheres along Reduced Iron (C) Reduction in Plo	Except MLRA g Living Roots (C3) (4) wed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5)
Property (inches): Proper		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi: Presence of I Recent Iron F	I 4B) rtebrates (B13) ulfide Odor (C1) zospheres along Reduced Iron (C Reduction in Plo tressed Plants (I	Except MLRA g Living Roots (C3) (4) wed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one red Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima	gery (B7)	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi: Presence of I Recent Iron F	(14B) Intebrates (B13) Iffide Odor (C1) It zospheres along Reduced Iron (C) Reduction in Plo	Except MLRA g Living Roots (C3) (4) wed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5)
Property (inches): Proper	gery (B7)	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi: Presence of I Recent Iron F	I 4B) rtebrates (B13) ulfide Odor (C1) zospheres along Reduced Iron (C Reduction in Plo tressed Plants (I	Except MLRA g Living Roots (C3) (4) wed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one red Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Sparsely Vegetated Concave S	gery (B7)	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi: Presence of I Recent Iron F	I 4B) rtebrates (B13) ulfide Odor (C1) zospheres along Reduced Iron (C Reduction in Plo tressed Plants (I	Except MLRA g Living Roots (C3) (4) wed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Property (inches): Permarks: Pe	gery (B7)	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi: Presence of I Recent Iron F	I 4B) rtebrates (B13) ulfide Odor (C1) zospheres along Reduced Iron (C Reduction in Plo tressed Plants (I	g Living Roots (C3) (A4) wed Soils (C6) (C1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
POROLOGY Tetland Hydrology Indicators: Timary Indicators (minimum of one reconstruction of the property of t	gery (B7) urface (B8)	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi: Presence of I Recent Iron F Stunted or St Other (Explai	I 4B) rtebrates (B13) ulfide Odor (C1) zospheres along Reduced Iron (C Reduction in Plo tressed Plants (I	g Living Roots (C3) (A4) wed Soils (C6) (C1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one red Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Sparsely Vegetated Concave S eld Observations: urface Water Present? Yes	gery (B7) urface (B8) No <u>X</u>	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi: Presence of I Recent Iron F Stunted or St Other (Explai	rtebrates (B13) ulfide Odor (C1) zospheres along Reduced Iron (C Reduction in Plo tressed Plants (I in in Remarks)	g Living Roots (C3) (A4) wed Soils (C6) (C1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one reconstruction of the property of t	gery (B7) urface (B8) NoX NoX NoX	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhit Presence of Recent Iron F Stunted or St Other (Explai	tatab) Intebrates (B13) Intebrates (B13) Intebrates (B13) Interpretation (C1) Interpretation (C2) Interpreta	Except MLRA g Living Roots (C3) (4) wed Soils (C6) (C1) (LRR A) Wetland Hydi	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
PDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one red Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Sparsely Vegetated Concave S eld Observations: urface Water Present? Yes atter Table Present? Yes atturation Present? Yes cludes capillary fringe)	gery (B7) urface (B8) NoX NoX NoX	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhit Presence of Recent Iron F Stunted or St Other (Explai	tatab) Intebrates (B13) Intebrates (B13) Intebrates (B13) Interpretation (C1) Interpretation (C2) Interpreta	Except MLRA g Living Roots (C3) (4) wed Soils (C6) (C1) (LRR A) Wetland Hydi	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
PDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one red Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Sparsely Vegetated Concave S eld Observations: urface Water Present? Yes atter Table Present? Yes atturation Present? Yes cludes capillary fringe)	gery (B7) urface (B8) NoX NoX NoX	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhit Presence of Recent Iron F Stunted or St Other (Explai	tatab) Intebrates (B13) Intebrates (B13) Intebrates (B13) Interpretation (C1) Interpretation (C2) Interpreta	Except MLRA g Living Roots (C3) (4) wed Soils (C6) (C1) (LRR A) Wetland Hydi	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
PDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one red Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Sparsely Vegetated Concave S eld Observations: urface Water Present? Yes atter Table Present? Yes atturation Present? Yes cludes capillary fringe)	gery (B7) urface (B8) NoX NoX NoX	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhit Presence of Recent Iron F Stunted or St Other (Explai	tatab) Intebrates (B13) Intebrates (B13) Intebrates (B13) Interpretation (C1) Interpretation (C2) Interpreta	Except MLRA g Living Roots (C3) (4) wed Soils (C6) (C1) (LRR A) Wetland Hydi	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site:	Palmberg	g Prope	rty		City/County:	Gea	rhart/Clatsop		Sampl	ing Date:	3/2	28/2018
Applicant/Owner:	Bill Palmbe	erg						State:	OR		Sampling Point	t: 9
Investigator(s):	SE/	JT/CM/C	CR		Section, To	wnship, Range:		Section	10, Towi	nship 6N	, Range 10W	
Landform (hillslope, t	terrace, etc.:)		F	lats		Local relief (cor	ncave, convex, no	ne):			Slope (%)):
Subregion (LRR):		LRR	Α .		Lat:	46.025	52	Long:	-123	.9087	— Datum	WGS84
Soil Map Unit Name:					oamy Fine Sa	nd		NWI Class			None	
Are climatic/hydrolog						Yes	X		-		ain in Remarks)	
Are vegetation						urbed?	Are "Normal Cir	_				
Are vegetation Are vegetation	_	_					, explain any answ			. (1714)	<u> </u>	_
		-	yarology			matio: ii nocaca	, explain any anon		urks.)			
SUMMARY OF	FINDINGS -	– Attac	ch site n	nap s	showing sar	npling point	locations, tra	nsects,	importa	ant feat	ıres, etc.	
Hydrophytic Vegetation	on Present?	Yes	Х	No								
Hydric Soil Present?		Yes	X	No	41	Is Sampled Ar		Yes	X		No	
Wetland Hydrology P	Present?	Yes	Х									
Remarks:												
												100
VEGETATION -	Use scient	tific na	mes of p	olants	s.		1.					
			absolu		Dominant	Indicator	Dominance T	est works	sheet:			
Tree Stratum (plot	t size.		% cov	er	Species?	Status	Number of Domi	inant Specie	ae .			
1 (plot			,				That are OBL, F.	•			1	(À)
2							mat are obe, i	A0W, 0117	-		•	- (A)
3							Total Number of	Dominant				
4							Species Across				1	(B)
			0		= Total Cover				-			- ` ′
Sapling/Shrub Stratu	m (plot size:		`				Percent of Domi	nant Specie	ne.			
1	(plot size.		_′				That are OBL, F.				100%	(A/B)
2								,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	_		10070	_(,,,,,
3							Prevalence Ir	ndex Wor	ksheet:			
4							Total % Cover o	f	1	Multiply by:		
5							OBL Speci	ies	-	x 1 =	0	
			0		= Total Cover		FACW spec	cies		x 2 =	0	_
						ic j	FAC Speci	100		x 3 =	0	- -
lerb Stratum (plot		5)			*	FACU Spec			x 4 =	0	_
1 Juncus effusi			90		X	FACW	UPL Speci			x 5 =	0	- :
2 Phalaris arun			5			FACW	Column To	tals	0	(A)	0	- ^(B)
3 Unidentified g			<u>5</u> <1			FAC	Draveler	e Index =B//	۸ –	щ	DIV/0!	
	natus					FAC	Prevalence	e index =B//	_	#	DIV/U!	
5 6							Hydrophytic '	Vegetatio	n Indica	tors:		
7							,				phytic Vegetati	on
8										ce Test is		
			100		= Total Cover					e Index is :		
				-				4-1	Morpholog	ical Adapt	ations ¹ (provide	supporting
Voody Vine Stratum	(plot size:		_) ,					da	ta in Rem	arks or on	a separate she	et)
1								5-	Wetland I	Non-Vascu	lar Plants ¹	
2								Pr	oblematic	Hydrophyt	ic Vegetation ¹ (Explain)
			0		= Total Cover		¹ Indicators of hyd		wetland h	nydrology r	nust be present	, unless
							disturbed or prot	olematic.				
							priyaropriyac					
% Bare Ground in He	erb Stratum		0				Vegetation		Yes	Х	No.)

			PHS#	6338				Sampling Point: 9
	ription: (Describe to	the depth r	needed to docume	nt the indicat		firm the abse	nce of indicators.)	
Depth (Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
		97	5YR 3/4	3	C	PL		Normano
0-6	10YR 3/1		51K 3/4			PL	Loamy Sand	
6-12	10YR 3/1	100					Loamy Sand	
	-							
1								24
	Indicators: (Appl						Indic	² Location: PL=Pore Lining, M=Matrix. eators for Problematic Hydric Soils ³ :
nyunc 3011		icable to	all LNNS, utiles				muic	
	Histosol (A1)				ndy Redox			2 cm Muck (A10)
	Histic Epipedon (A2)				ipped Mati			Red Parent Material (TF2)
	Black Histic (A3)			Loa	amy Mucky	y Mineral (F1)	(except MLRA 1)	Very Shallow Dark Surface (TF12)
	Hydrogen Sulfide (A4	1)		Loa	amy Gleye	ed Matrix (F2)		Other (explain in Remarks)
	Depleted Below Dark	Surface (A	(11)	De	pleted Mat	trix (F3)		
	Thick Dark Surface (A12)		X Re	dox Dark S	Surface (F6)		
	Sandy Mucky Minera					rk Surface (F7)	³ Indicators of hydrophytic vegetation and wetland
	Sandy Gleyed Matrix			-		essions (F8)		hydrology must be present, unless disturbed or problematic.
					uox Depie	23310113 (1 0)		prodictitatio.
Restrictive	Layer (if present)	:						
Type:							1	
Danish Cart	-\-						Undrin Sail Broa	sent? Yes X No
Remarks: Cobble beg	ginning around 6 i		es not appear t	o be native	but part	t of historic		Sent: Tes NU
Remarks: Cobble beg	ginning around 6 i	inches do	es not appear t	o be native	but part	t of historic		Sent: Tes NU
Remarks: Cobble beg	ginning around 6 i	inches do			but part	t of historic		Secondary Indicators (2 or more required)
Remarks: Cobble beg	ginning around 6 i	inches do		nat apply)				
Remarks: Cobble beg HYDROLO Wetland Hy Primary Ind X	OGY /drology Indicator icators (minimum c	rs:		nat apply) Wa		d Leaves (B9)	fill.	Secondary Indicators (2 or more required)
Remarks: Cobble beg HYDROLO Wetland Hy Primary Ind	pinning around 6 in property of the property o	rs:		nat apply) Wa 1, 2	ater stained	d Leaves (B9)	fill.	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
HYDROLO Wetland Hy Primary Ind X	pinning around 6 in property of the property o	rs:		nat apply) Wa 1, 2	ater stained 2, 4A, and It Crust (B	d Leaves (B9) I 4B) 11)	fill.	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10)
HYDROLO Wetland Hy Primary Ind X	pinning around 6 in property of the control of the	inches do		nat apply) Wa 1, 2 Sal	ater stained 2, 4A, and It Crust (B uatic Inver	d Leaves (B9) I 4B) 11) rtebrates (B13)	fill.	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
HYDROLO Wetland Hy Primary Ind X	pinning around 6 in DGY Adrology Indicator icators (minimum of Surface Water (A1) High Water Table (A) Saturation (A3) Water Marks (B1) Sediment Deposits (B)	inches do		nat apply) Wa 1, 2 Sal Aqı	ater stained 2, 4A, and It Crust (B uatic Inver drogen Su	d Leaves (B9) I 4B) 11) rtebrates (B13)	fill. (Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C
HYDROLO Wetland Hy Primary Ind X	pinning around 6 in DGY Adrology Indicator icators (minimum of Surface Water (A1) High Water Table (A) Saturation (A3) Water Marks (B1) Sediment Deposits (B3)	rs: of one request		nat apply) Wa 1, 2 Sai Aqi Hyo Ox	ater stained 2, 4A, and It Crust (B' uatic Inver drogen Su idized Rhiz	d Leaves (B9) I 4B) 11) rtebrates (B13) Ilfide Odor (C1 zospheres alor	fill. (Except MLRA) ng Living Roots (C3)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C
HYDROLO Wetland Hy Primary Ind X	pinning around 6 in property of the property o	rs: of one request		nat apply) Wa 1, 2 Sal Aqı Hyu Oxi	ater stained 2, 4A, and It Crust (B uatic Inver drogen Su idized Rhiz esence of I	d Leaves (B9) I 4B) 11) rtebrates (B13) Iffide Odor (C1 zospheres alor	fill. (Except MLRA) ng Living Roots (C3) (C4)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3)
HYDROLO Wetland Hy Primary Ind X	pinning around 6 in proposits (B3) Algal Mat or Crust (B1) Incomplete (B2) Incomplete (B3) Algal Mat or Crust (B1) Incomplete (B3) Incomplete (B4) Incomplete (B4) Incomplete (B4) Incomplete (B5) Incomplete	rs: of one requ		nat apply) Wa 1, 2 Sal Aqı Hyu Ox Pre	ater stained 2, 4A, and It Crust (B uatic Inver drogen Su idized Rhiz esence of I cent Iron F	d Leaves (B9) I 4B) 11) rtebrates (B13) Iffide Odor (C1 zospheres aloi Reduced Iron i	fill. (Except MLRA) ng Living Roots (C3) (C4) lowed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5)
HYDROLO Wetland Hy Primary Ind X	Jinning around 6 in Company of the C	inches do	uired; check all th	nat apply) Wa 1, 2 Sal Aqı Hyu Oxi Pre Re Stu	ater stained 2, 4A, and It Crust (Bruatic Inver drogen Su idized Rhiz esence of I cent Iron F	d Leaves (B9) I 4B) 11) rtebrates (B13) Iffide Odor (C1 zospheres alor Reduced Iron of Reduction in Patressed Plants	fill. (Except MLRA) ng Living Roots (C3) (C4) lowed Soils (C6) (D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C2) X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLO Wetland Hy Primary Ind X	pinning around 6 in pinnin	inches do rs: of one requ 2) 32) 4) (B6) Aerial Imag	uired; check all th	nat apply) Wa 1, 2 Sal Aqı Hyu Oxi Pre Re Stu	ater stained 2, 4A, and It Crust (Bruatic Inver drogen Su idized Rhiz esence of I cent Iron F	d Leaves (B9) I 4B) 11) rtebrates (B13) Iffide Odor (C1 zospheres aloi Reduced Iron i	fill. (Except MLRA) ng Living Roots (C3) (C4) lowed Soils (C6) (D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5)
HYDROLO Wetland Hy Primary Ind X	Jinning around 6 in Company of the C	inches do rs: of one requ 2) 32) 4) (B6) Aerial Imag	uired; check all th	nat apply) Wa 1, 2 Sal Aqı Hyu Oxi Pre Re Stu	ater stained 2, 4A, and It Crust (Bruatic Inver drogen Su idized Rhiz esence of I cent Iron F	d Leaves (B9) I 4B) 11) rtebrates (B13) Iffide Odor (C1 zospheres alor Reduced Iron of Reduction in Patressed Plants	fill. (Except MLRA) ng Living Roots (C3) (C4) lowed Soils (C6) (D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C2) X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLO Wetland Hy Primary Ind X	pinning around 6 in property of the property o	inches do rs: of one requ 2) 32) 4) (B6) Aerial Imag	uired; check all th	nat apply) Wa 1, 2 Sal Aqı Hyu Oxi Pre Re Stu	ater stained 2, 4A, and It Crust (Bruatic Inver drogen Su idized Rhiz esence of I cent Iron F	d Leaves (B9) I 4B) 11) rtebrates (B13) Iffide Odor (C1 zospheres alor Reduced Iron of Reduction in Patressed Plants	fill. (Except MLRA) ng Living Roots (C3) (C4) lowed Soils (C6) (D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C2) X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLO Wetland Hy Primary Ind X X	ginning around 6 in DGY Adrology Indicator icators (minimum of Surface Water (A1) High Water Table (A) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B) Iron Deposits (B5) Surface Soil Cracks (Inundation Visible on Sparsely Vegetated (Invations:	inches do rs: of one requ 2) 32) 4) (B6) Aerial Imag	uired; check all th	nat apply) Wa 1, 2 Sal Aqı Hyu Oxi Pre Re Stu	ater stained 2, 4A, and It Crust (B uatic Inver drogen Su idized Rhiz esence of I cent Iron F unted or St ner (Explai	d Leaves (B9) I 4B) 11) rtebrates (B13) Iffide Odor (C1 zospheres alor Reduced Iron of Reduction in Patressed Plants	fill. (Except MLRA) ng Living Roots (C3) (C4) lowed Soils (C6) (D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C2) X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLO Wetland Hy Primary Ind X X X	Jinning around 6 in DGY Adrology Indicator Cators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks (Inundation Visible on Sparsely Vegetated (Corvations: Teresent? Yes	inches do rs: of one requ 2) 32) 4) (B6) Aerial Imag	uired; check all th gery (B7) urface (B8)	nat apply) Wa 1, 2 Sal Aqı Hyu Ox Pre Re Stu	ater stained 2, 4A, and It Crust (B uatic Inver drogen Su idized Rhizesence of I cent Iron F unted or St ner (Explain	d Leaves (B9) 14B) 11) rtebrates (B13) ilfide Odor (C1 zospheres aloi Reduced Iron in Reduction in P tressed Plants in in Remarks)	fill. (Except MLRA) ng Living Roots (C3) (C4) lowed Soils (C6) (D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C2) X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLO Wetland Hy Primary Ind X X X Field Obse	ginning around 6 in present? Yes	inches do rs: of one requ 2) 32) 4) (B6) Aerial Imag Concave Su	gery (B7) urface (B8)	nat apply) Wa 1, 2 Sal Aql Hyu Ox Pre Re Stu Depth (inc	ater stained 2, 4A, and It Crust (B uatic Inver drogen Su idized Rhiz esence of I cent Iron F unted or St ner (Explained)	d Leaves (B9) I 4B) 11) Intebrates (B13) Iffide Odor (C1 zospheres alor Reduced Iron (Reduced Iron (Reduction in Petressed Plants in in Remarks)	fill. (Except MLRA) ng Living Roots (C3) (C4) lowed Soils (C6) (D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLO Wetland Hy Primary Ind X X X Field Obse Surface Water Water Table I	ginning around 6 in present? Yes esent? Yes	inches do rs: of one requ 2) 32) 4) (B6) Aerial Imag Concave Su X	gery (B7) urface (B8)	nat apply) Wa 1, 2 Sal Aqı Hyu Ox Pre Stu Depth (inc	ater stained 2, 4A, and It Crust (B uatic Inver drogen Su idized Rhiz esence of I cent Iron F unted or St ner (Explained)	d Leaves (B9) I 4B) 11) rtebrates (B13) Ilfide Odor (C1 zospheres alor Reduced Iron (Reduced Iron (Reduction in Ptressed Plants in in Remarks)	fill. (Except MLRA) ng Living Roots (C3) (C4) lowed Soils (C6) (D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLO Wetland Hy Primary Ind X X X Selection of the se	ginning around 6 in present? Yes esent? Yes	inches do rs: of one requ 2) 32) 4) (B6) Aerial Imag Concave Su X X	gery (B7) urface (B8) No No No No	nat apply) Wa 1, 2 Sal Aqı Hyu Ox Pre Stu Oth Depth (inc	ater stained 2, 4A, and It Crust (B uatic Inver drogen Su idized Rhiz esence of I cent Iron F unted or St ner (Explain ches):	d Leaves (B9) I 4B) 11) rtebrates (B13) Iffide Odor (C1 zospheres alor Reduced Iron of Reduced Plants in in Remarks) 1 0 0	fill. (Except MLRA) ng Living Roots (C3) (C4) lowed Soils (C6) (D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLO Wetland Hy Primary Ind X X X Selection of the se	ginning around 6 in properties of the control of th	inches do rs: of one requ 2) 32) 4) (B6) Aerial Imag Concave Su X X	gery (B7) urface (B8) No No No No	nat apply) Wa 1, 2 Sal Aqı Hyu Ox Pre Stu Oth Depth (inc	ater stained 2, 4A, and It Crust (B uatic Inver drogen Su idized Rhiz esence of I cent Iron F unted or St ner (Explain ches):	d Leaves (B9) I 4B) 11) rtebrates (B13) Iffide Odor (C1 zospheres alor Reduced Iron of Reduced Plants in in Remarks) 1 0 0	fill. (Except MLRA) ng Living Roots (C3) (C4) lowed Soils (C6) (D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLO Wetland Hy Primary Ind X X X Selection of the se	ginning around 6 in properties of the control of th	inches do rs: of one requ 2) 32) 4) (B6) Aerial Imag Concave Su X X	gery (B7) urface (B8) No No No No	nat apply) Wa 1, 2 Sal Aqı Hyu Ox Pre Stu Oth Depth (inc	ater stained 2, 4A, and It Crust (B uatic Inver drogen Su idized Rhiz esence of I cent Iron F unted or St ner (Explain ches):	d Leaves (B9) I 4B) 11) rtebrates (B13) Iffide Odor (C1 zospheres alor Reduced Iron of Reduced Plants in in Remarks) 1 0 0	fill. (Except MLRA) ng Living Roots (C3) (C4) lowed Soils (C6) (D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Field Obse Surface Water Table If Saturation Pre (includes capilla)	ginning around 6 in properties of the control of th	inches do rs: of one requ 2) 32) 4) (B6) Aerial Imag Concave Su X X	gery (B7) urface (B8) No No No No	nat apply) Wa 1, 2 Sal Aqı Hyu Ox Pre Stu Oth Depth (inc	ater stained 2, 4A, and It Crust (B uatic Inver drogen Su idized Rhiz esence of I cent Iron F unted or St ner (Explain ches):	d Leaves (B9) I 4B) 11) rtebrates (B13) Iffide Odor (C1 zospheres alor Reduced Iron of Reduced Plants in in Remarks) 1 0 0	fill. (Except MLRA) ng Living Roots (C3) (C4) lowed Soils (C6) (D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLO Wetland Hy Primary Ind X X X Selection of the se	ginning around 6 in properties of the control of th	inches do rs: of one requ 2) 32) 4) (B6) Aerial Imag Concave Su X X	gery (B7) urface (B8) No No No No	nat apply) Wa 1, 2 Sal Aqı Hyu Ox Pre Stu Oth Depth (inc	ater stained 2, 4A, and It Crust (B uatic Inver drogen Su idized Rhiz esence of I cent Iron F unted or St ner (Explain ches):	d Leaves (B9) I 4B) 11) rtebrates (B13) Iffide Odor (C1 zospheres alor Reduced Iron of Reduced Plants in in Remarks) 1 0 0	fill. (Except MLRA) ng Living Roots (C3) (C4) lowed Soils (C6) (D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

	PHS#	6338
WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Re	gion	1

Project/Site:	Palmber	g Prope	rty		City/County:	Gea	rhart/Clatsop		Sampling Date:	3/28	2/2018
Applicant/Owner:	Bill Palmb	erg						State: O	R	Sampling Point:	10
nvestigator(s):	SE	JT/CM/C	CR		Section, To	wnship, Range:		Section 10,	Township 6N	l, Range 10W	
andform (hillslope,	terrace, etc.:)					Local relief (cor	ncave, convex, no	ne):		Slope (%):	
Subregion (LRR):		LRR /	Α		Lat:	46.02	52	Long:	-123.9087	Datum:	WGS84
Soil Map Unit Name:			Warrent	on Lo	oamy Fine Sa	nd		NWI Classific	ation:	None	
Are climatic/hydrolog	ic conditions o	n the site t	typical for th	nis time	e of year?	Yes	Х	No	(if no, exp	lain in Remarks)	
Are vegetation	Soil	or H	ydrology		significantly dist	urbed?	Are "Normal Ci	rcumstances" p	resent? (Y/N)	Υ	
Are vegetation	Soil	or Hy	ydrology		naturally problei	matic? If needed	l, explain any ansv	vers in Remarks	s.)		
SUMMARY OF	FINDINGS					npling point	locations, tra	ansects, im	portant feat	tures, etc.	
Hydrophytic Vegetati	on Present?	Yes -	X			Is Sampled Ar	rea within				
Hydric Soil Present?		Yes -	X	No		a Wetlar		Yes		No	
Wetland Hydrology F	Present?	Yes -		No	X						
Remarks:								0			
		.1.01									
/EGETATION -	Use scien	tific na				Indicator	Daminanas 7	Foot works be			
			absolu % cove		Dominant Species?	Indicator Status	Dominance 1	est worksne	et.		
ree Stratum (plo	t size:))				Number of Dom	inant Species			
1				_			That are OBL, F	ACW, or FAC:		2	(A)
2											
3				_			Total Number of	f Dominant			
4							Species Across	All Strata:		2	(B)
			0	_	= Total Cover						
apling/Shrub Stratu	m (plot size	10	_)				Percent of Dom	inant Species			
1 Rubus armen	iacus		15		X	FAC	That are OBL, F	ACW, or FAC:		100%	(A/B)
2				_							
				_			Prevalence II				
4			-	_			Total % Cover of		Multiply by		
5			15	_	= Total Cover		OBL Spec		x 1 =		
				_	= Total Cover		FACW spe		x 2 = x 3 =		
lerb Stratum (plo	t size:	5)				FACU Spe		x 4 =	0	
1 Unidentified	grass		75		X	(FAC)	UPL Spec	eies	x 5 =	0	
2 Carex obnup	ta		10			OBL	Column To	otals ((A)	0	(B)
3 Plantago land	eolata		6			FACU					
Lotus cornice			5	_		FAC	Prevalenc	e Index =B/A =		#DIV/0!	
Hypochaeris			2	_		FACU					
Fragaria veso	a		1	_		FACU	Hydrophytic	-			
7				_			-			rophytic Vegetatio	n
			99	_	= Total Cover				minance Test is valence Index is		
				_	- Total Covel		v 100			tations ¹ (provide s	supporting
oody Vine Stratum	(plot size:		_)					data i	n Remarks or or	n a separate sheet)
				_			, ,	5- We	etland Non-Vasc	ular Plants ¹	
2								Proble	ematic Hydrophy	tic Vegetation ¹ (E	xplain)
			0		= Total Cover				etland hydrology	must be present,	unless
							disturbed or pro	blematic.			
4 Pare Ground in H	erb Stratum						Vegetation		Yes X	No	
o bare Ground in no							Present?				

SOIL			PHS#	633	8			Sampling Point: 10
Profile Descri	iption: (Describe to t	the depth r	needed to docume	nt the indic	ator or con	firm the absen	ce of indicators.)	· · · · · · · · · · · · · · · · · · ·
Depth	Matrix			Redox	Features			
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-7	7.5YR 2.5/2	100					Loamy Sand	
7-15	7.5YR 2.5/2	95	5YR 3/4	4	С	M	Loamy Sand	
7-15			5YR 3/4	1	С	PL		OR's
15-18	7.5YR 3/3	100					Sand	
191								
Type: C=Cond	centration, D=Depletion	on RM=Re	duced Matrix CS=0	Covered or C	Coated Sand	d Grains		² Location: PL=Pore Lining, M=Matrix.
	Indicators: (Appli						Indica	ators for Problematic Hydric Soils ³ :
-	Histosol (A1)		•		andy Redox			2 cm Muck (A10)
	Histic Epipedon (A2)				tripped Matr			Red Parent Material (TF2)
	Black Histic (A3)					y Mineral (F1) (e	except MI RA 1)	
		`					eps meisrs ()	Very Shallow Dark Surface (TF12)
	Hydrogen Sulfide (A4		44)			d Matrix (F2)		Other (explain in Remarks)
	Depleted Below Dark		(11)		epleted Mat			
	Thick Dark Surface (A					Surface (F6)		³ Indicators of hydrophytic vegetation and wetland
	Sandy Mucky Mineral					k Surface (F7)		hydrology must be present, unless disturbed or
	Sandy Gleyed Matrix	(S4)		R	edox Depre	ssions (F8)		problematic.
Restrictive L	Layer (if present):							
Гуре:			-0					
Depth (inches	s):						Hydric Soil Pres	ent? Yes X No No
HYDROLO	GY					•		
Vetland Hyd	drology Indicators	s:					(4)	
Primary Indic	cators (minimum of	f one requ	uired; check all th	nat apply)				Secondary Indicators (2 or more required)
	Surface Water (A1)			V	ater stained	Leaves (B9) (Except MLRA	Water stained Leaves (B9)
	High Water Table (A2)		1,	2, 4A, and	4B)		(MLRA1, 2, 4A, and 4B)
	Saturation (A3)			S	alt Crust (B1	11)		Drainage Patterns (B10)
	Water Marks (B1)			A	quatic Invert	tebrates (B13)		Dry-Season Water Table (C2)
	Sediment Deposits (B	2)				fide Odor (C1)		Saturation Visible on Aerial Imagery (C
	Drift Deposits (B3)						Living Roots (C3)	Geomorphic Position (D2)
	Algal Mat or Crust (B4	1)				Reduced Iron (C		Shallow Aquitard (D3)
	ron Deposits (B5)						wed Soils (C6)	Fac-Neutral Test (D5)
	Surface Soil Cracks (E	36)				ressed Plants (I	,	Raised Ant Mounds (D6) (LRR A)
	nundation Visible on		gery (B7)			n in Remarks)	2 222	Frost-Heave Hummocks (D7)
	Sparsely Vegetated C					,		
ield Obsen	vations:		×					
Surface Water			No X	Depth (ir	nches):			
/ater Table Pr			No X	Depth (ir	_	>18	Wetland Hydi	rology Present?
Saturation Pres			No X	Depth (ir		>18		
ncludes capillary				Debru (II	. —	- 10	8	Yes NoX
Describe Recor	rded Data (stream ga	uge, monite	oring well, aerial ph	otos, previou	is inspection	ns), if available:		
, , , , , , ,	,	J /		, ,	-,	,,		
emarks:								

		PHS#	6338
TI AND DETERMINATION DATA EODM	Mostorn Mountains Valleys	and Coast Bogian	

ect/Site:	Palmber	g Proper	ty	City/County:	Gea	rhart/Clatsop	Sa	ampling Date:	3/2	8/2018
licant/Owner:	Bill Palmbe	erg					State: OR		Sampling Point	: 11
estigator(s):	SE/	JT/CM/CI	R	Section, To	wnship, Range:		Section 10, T	ownship 6N	, Range 10W	
dform (hillslope, te	еггасе, etc.:)				Local relief (co	ncave, convex, nor	ne):		Slope (%)	:
region (LRR):		LRR A		Lat:	46.02	46	Long:	123.9087	Datum	WGS84
Map Unit Name:			Warrenton L	oamy Fine Sa	nd		NWI Classificat	ion:	PEMIC	
climatic/hydrologic	ic conditions or	n the site ty	pical for this tim	ne of year?	Yes	X	No	(if no, expla	ain in Remarks)	
vegetation	Soil	or Hyd	drology	significantly dist	turbed?	Are "Normal Cir	cumstances" pre	esent? (Y/N)	Υ	
vegetation	Soil	or Hyd	drology	naturally proble	matic? If needed	I, explain any answ	ers in Remarks.))		_
MMARY OF F	EINDINGS	Attac	h sito man	- chowing car	nnling noint	locations, tra	ncoets imn	ortant foats	iros oto	
ophytic Vegetatio		Yes	X No				nsects, imp	ortant leat	1163, 616.	
ric Soil Present?		Yes	No.	x	Is Sampled Ar		Yes		No X	
and Hydrology Pr	resent?	Yes —	No.	x			-			-
SETATION -	Use scient	tific nan								
			absolute % cover	Dominant Species?	Indicator Status	Dominance T	est workshee	t:		
Stratum (plot	size:)				Number of Domi	nant Species			
	0 .000					That are OBL, F	ACW, or FAC:		1	(A)
										_
						Total Number of	Dominant			
						Species Across	All Strata:		1	(B)
ng/Chrub Stratum	m (1)		0	= Total Cover						_ ` `
ng/Shrub Stratun	m (plot size			= Total Cover		Percent of Domin	nant Species		100%	_(A/B)
ing/Shrub Stratun	m (plot size		<u> </u>	= Total Cover			nant Species ACW, or FAC:		100%	_(A/B)
ing/Shrub Stratun	m (plot size			= Total Cover		Prevalence In Total % Cover of	nant Species ACW, or FAC: dex Workshe	eet: Multiply by		_(A/B)
ing/Shrub Stratun	m (plot size		_)			Prevalence In Total % Cover of OBL Specie	nant Species ACW, or FAC: dex Workshees	Multiply by:	0	_(A/B)
ng/Shrub Stratun	m (plot size		0	= Total Cover		Prevalence In Total % Cover of OBL Speci	nant Species ACW, or FAC: dex Workshees es	Multiply by. x 1 = x 2 =	0	_(A/B)
		5)	_)			Prevalence In Total % Cover of OBL Specie	dex Workshe	Multiply by:	0	_(A/B)
Stratum (plot :	size:		_)		(FAC)	Prevalence In Total % Cover of OBL Speci	nant Species ACW, or FAC: dex Workshe es es es es es	Multiply by: x 1 = x 2 = x 3 =	0 0	_(A/B) _ _ _ _
Stratum (plot :	size:			= Total Cover	(FAC)	Prevalence In Total % Cover of OBL Speci FACW Speci FAC Speci	dex Worksheeses	Multiply by: x 1 = x 2 = x 3 = x 4 =	0 0 0	_(A/B)
Stratum (plot : Jnidentified g. Plantago lance	size: ırass eolata			= Total Cover		Prevalence In Total % Cover of OBL Speci FACW speci FAC Speci FACU Speci	dex Worksheeses	Multiply by: x 1 = x 2 = x 3 = x 4 = x 5 =	0 0 0 0	- - - -
Stratum (plot : Unidentified g Plantago lance Rubus armeni Juncus effusu	size: rass eolata iacus			= Total Cover	FACU FAC FACW	Prevalence In Total % Cover of OBL Speci FACW speci FAC Speci FACU Speci FACU Speci Column Total	dex Worksheeses	Multiply by: x 1 = x 2 = x 3 = x 4 = x 5 = (A)	0 0 0 0	- - - -
Stratum (plot : Unidentified g Plantago lance Rubus armeni Uuncus effusu Carex obnupta	size: 		90 3 3 2 2	= Total Cover	FACU FAC FACW OBL	Prevalence In Total % Cover of OBL Speci FACW Speci FAC Speci FACU Speci UPL Speci Column Total	dex Workshe es es es es als 0	Multiply by: x 1 = x 2 = x 3 = x 4 = x 5 = (A)	0 0 0 0	- - - -
<u>Stratum</u> (plot : Unidentified g Plantago lance Rubus armeni Juncus effusu Carex obnupta	size: 			= Total Cover	FACU FAC FACW	Prevalence In Total % Cover of OBL Speci FACW speci FAC Speci FACU Speci FACU Speci Column Total	dex Worksheeseseses als 0	Multiply by: x 1 = x 2 = x 3 = x 4 = x 5 = (A) # dicators:	0 0 0 0 0 0	- - - - (B)
<u>Stratum</u> (plot : Unidentified g Plantago lance Rubus armeni Juncus effusu Carex obnupta	size: 		90 3 3 2 2	= Total Cover	FACU FAC FACW OBL	Prevalence In Total % Cover of OBL Speci FACW speci FACU Speci FACU Speci Column Total Prevalence Hydrophytic N	dex Workshe es es es es es es es es als 0 Index =B/A =	Multiply by: x 1 = x 2 = x 3 = x 4 = x 5 = (A) # dicators: d Test for Hydro	0 0 0 0 0 0	- - - - (B)
Stratum (plot : Unidentified g Plantago lance Rubus armeni Uuncus effusu Carex obnupta	size: 		90 3 3 2 2	= Total Cover	FACU FAC FACW OBL	Prevalence In Total % Cover of OBL Speci FACW speci FACU Speci FACU Speci Column Total Prevalence Hydrophytic N	dex Workshe es es es als 0 Index =B/A = //egetation Index = 2- Dom	Multiply by: x 1 = x 2 = x 3 = x 4 = x 5 = (A) # dicators: d Test for Hydro inance Test is a	0 0 0 0 0 0 0	- - - - (B)
Stratum (plot: Jnidentified g Plantago lance Rubus armeni Juncus effusu Carex obnupta	size: 		90 3 3 2 2	= Total Cover	FACU FAC FACW OBL	Prevalence In Total % Cover of OBL Speci FACW speci FACU Speci FACU Speci Column Total Prevalence Hydrophytic N	dex Workshe des Workshe des Workshe des	Multiply by: x 1 = x 2 = x 3 = x 4 = x 5 = (A) # dicators: d Test for Hydro	0 0 0 0 0 0 0 DIV/0!	(B)
Stratum (plot : Unidentified g Plantago lance Rubus armeni Juncus effusu Carex obnupta Rumex crispus	size: Irass eolata iacus Is a		90 3 3 2 2	= Total Cover	FACU FAC FACW OBL	Prevalence In Total % Cover of OBL Speci FACW speci FACU Speci FACU Speci Column Total Prevalence Hydrophytic N	dex Workshe es es icies es als 1- Rapi (Multiply by x 1 = x 2 = x 3 = x 4 = x 5 = (A) # dicators: d Test for Hydro inance Test is alence Index is statement.	0 0 0 0 0 0 0 DIV/0!	(B)
Stratum (plot : Unidentified g. Plantago lance Rubus armeni Juncus effusu Carex obnupta Rumex crispus	size: Irass eolata iacus Is a		90 3 3 2 2	= Total Cover	FACU FAC FACW OBL	Prevalence In Total % Cover of OBL Speci FACW speci FACU Speci FACU Speci Column Total Prevalence Hydrophytic N	dex Workshe dex Workshe des Workshe des Bores des B	Multiply by x 1 = x 2 = x 3 = x 4 = x 5 = (A) # dicators: d Test for Hydre inance Test is a shological Adapt	0 0 0 0 0 0 0 DIV/0!	(B)
o Stratum (plot : Unidentified g Plantago lance Rubus armeni Juncus effusu Carex obnupta Rumex crispus	size: Irass eolata iacus Is a		90 3 3 2 2	= Total Cover	FACU FAC FACW OBL	Prevalence In Total % Cover of OBL Speci FACW speci FACU Speci FACU Speci Column Total Prevalence Hydrophytic N	dex Workshe es es es es es als 0 1- Rapi 2- Dom 3-Preva 4-Morph data in 5- Weth	Multiply by x 1 = x 2 = x 3 = x 4 = x 5 = (A) # dicators: d Test for Hydro inance Test is: allence Index is: hological Adapt Remarks or on	0 0 0 0 0 0 0 DIV/0!	(B) on supporting
o Stratum (plot : Unidentified g Plantago lance Rubus armeni Juncus effusu Carex obnupta Rumex crispus	size: Irass eolata iacus Is a		90 3 3 2 2	= Total Cover	FACU FAC FACW OBL	Prevalence In Total % Cover of OBL Speci FACW speci FACU Speci Column Total Prevalence Hydrophytic N	dex Workshe dex Workshe des des des des des des des	Multiply by x 1 = x 2 = x 3 = x 4 = x 5 = (A) # dicators: d Test for Hydro inance Test is a lence Index is a lence In	O O O O O O O O O O O O O O O O O O O	on supporting et) Explain)
o Stratum (plot : Unidentified g. Plantago lance Rubus armeni Juncus effusu Carex obnupta Rumex crispus	size: Irass eolata iacus Is a		90 3 3 2 2 1	= Total Cover X = Total Cover	FACU FAC FACW OBL	Prevalence In Total % Cover of OBL Speci FACW speci FACU Speci FACU Speci Column Total Prevalence Hydrophytic N Indicators of hyddisturbed or prob	dex Workshe dex Workshe des des des des des des des	Multiply by x 1 = x 2 = x 3 = x 4 = x 5 = (A) # dicators: d Test for Hydro inance Test is a lence Index is a lence In	O O O O O O O O O O O O O O O O O O O	on supporting et) Explain)
Stratum (plot : Unidentified g. Plantago lance Rubus armeni Juncus effusu Carex obnupta Rumex crispus	size: Irass eolata iacus Is a Is (plot size:	5)	90 3 3 2 2 1	= Total Cover X = Total Cover	FACU FAC FACW OBL	Prevalence In Total % Cover of OBL Speci FACW speci FACU Speci Column Total Prevalence Hydrophytic N	dex Workshe dex Workshe des des des des des des des	Multiply by x 1 = x 2 = x 3 = x 4 = x 5 = (A) # dicators: d Test for Hydro inance Test is a lence Index is a lence In	O O O O O O O O O O O O O O O O O O O	on supporting et) Explain)

AV 10-00-0000 MINO	6338		Sampling Point: 11
needed to docum	ent the indicator or confirm	n the absence of indicators.)	
	Redox Features		
Color (moist)	% Type ¹	Loc ² Texture	Remarks
5YR 3/4		PL Sandy Loam	OR's
			Gravel
		Loamy Sand	
			Gravel & Cobble
educed Matrix, CS	=Covered or Coated Sand G	rains.	² Location: PL=Pore Lining, M=Matrix.
			ators for Problematic Hydric Soils ³ :
		5)	2 cm Muck (A10)
			Red Parent Material (TF2)
			Very Shallow Dark Surface (TF12)
			Other (explain in Remarks)
A 11\			Outer (explain in Remarks)
411)		. ,	
			³ Indicators of hydrophytic vegetation and wetland
			hydrology must be present, unless disturbed or
	Redox Depressi	ons (F8)	problematic.
		Hydric Soil Pres	sent? Yes NoX
uired; check all	that apply)		Secondary Indicators (2 or more required)
uired; check all		eaves (B9) (Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9)
uired; check all			
uired; check all	Water stained Le	9)	Water stained Leaves (B9)
uired; check all	Water stained Le	()	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
uired; check all	Water stained Le	rates (B13)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
uired; check all	Water stained Le 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide	rates (B13)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
uired; check all	Water stained Le 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide	rates (B13) e Odor (C1) pheres along Living Roots (C3)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
uired; check all	Water stained Le 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec	rates (B13) e Odor (C1) pheres along Living Roots (C3)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
uired; check all	Water stained Le 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red	rates (B13) e Odor (C1) pheres along Living Roots (C3) duced Iron (C4)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
uired; check all	Water stained Le 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red	rates (B13) e Odor (C1) pheres along Living Roots (C3) duced Iron (C4) uction in Plowed Soils (C6) sed Plants (D1) (LRR A)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5)
	Water stained Le 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres	rates (B13) e Odor (C1) pheres along Living Roots (C3) duced Iron (C4) uction in Plowed Soils (C6) sed Plants (D1) (LRR A)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
gery (B7)	Water stained Le 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres	rates (B13) e Odor (C1) pheres along Living Roots (C3) duced Iron (C4) uction in Plowed Soils (C6) sed Plants (D1) (LRR A)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
gery (B7)	Water stained Le 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres	rates (B13) e Odor (C1) pheres along Living Roots (C3) duced Iron (C4) uction in Plowed Soils (C6) sed Plants (D1) (LRR A)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
gery (B7) urface (B8)	Water stained Le 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain in	rates (B13) e Odor (C1) pheres along Living Roots (C3) duced Iron (C4) uction in Plowed Soils (C6) sed Plants (D1) (LRR A) in Remarks)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
igery (B7) urface (B8) No <u>X</u>	Water stained Le 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain in	rates (B13) e Odor (C1) pheres along Living Roots (C3) duced Iron (C4) uction in Plowed Soils (C6) sed Plants (D1) (LRR A) in Remarks)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
gery (B7) urface (B8) No X	Water stained Le 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain in	rates (B13) e Odor (C1) pheres along Living Roots (C3) duced Iron (C4) uction in Plowed Soils (C6) sed Plants (D1) (LRR A) n Remarks) >16 Wetland Hyd	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
No X No X	Water stained Le 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain in	rates (B13) e Odor (C1) pheres along Living Roots (C3) duced Iron (C4) uction in Plowed Soils (C6) sed Plants (D1) (LRR A) n Remarks) >16	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
No X No X	Water stained Le 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain in Depth (inches): Depth (inches):	rates (B13) e Odor (C1) pheres along Living Roots (C3) duced Iron (C4) uction in Plowed Soils (C6) sed Plants (D1) (LRR A) n Remarks) >16	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
No X No X	Water stained Le 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain in Depth (inches): Depth (inches):	rates (B13) e Odor (C1) pheres along Living Roots (C3) duced Iron (C4) uction in Plowed Soils (C6) sed Plants (D1) (LRR A) n Remarks) >16	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
gery (B7) urface (B8) No X No X No X toring well, aerial p	Water stained Le 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain in Depth (inches): Depth (inches): Depth (inches):	rates (B13) e Odor (C1) pheres along Living Roots (C3) duced Iron (C4) uction in Plowed Soils (C6) sed Plants (D1) (LRR A) n Remarks) >16	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
gery (B7) urface (B8) No X No X No X toring well, aerial p	Water stained Le 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain in Depth (inches): Depth (inches):	rates (B13) e Odor (C1) pheres along Living Roots (C3) duced Iron (C4) uction in Plowed Soils (C6) sed Plants (D1) (LRR A) n Remarks) >16	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
	Color (moist) 5YR 3/4	Redox Features	Redox Features Color (moist) % Type¹ Loc² Texture 5YR 3/4 1 C PL Sandy Loam Loamy Sand Indic Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except MLRA 1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)

PHS#	6338
WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region	

ect/Site:	Palmberg Prop	erty	City/County:	Gea	rhart/Clatsop	Sampling Date:	3/28	3/2018
licant/Owner:	Bill Palmberg			7	State:	OR	Sampling Point:	12
stigator(s):	SE/JT/CM	/CR	Section, To	wnship, Range:	Section	10, Township 6N,	Range 10W	
dform (hillslope, te	rrace, etc.:)	Slope of P	ond	Local relief (cor	ncave, convex, none):		Slope (%):	5-Mar
region (LRR):	LRR	A	Lat:	46.024	46 Long:	-123.9087	Datum:	WGS84
Map Unit Name:		Warrenton	— Loamy Fine Sa	nd	NWI Cla	ssification:	PEMIC	
climatic/hydrologic	conditions on the site	typical for this ti	ne of year?	Yes	X No	(if no, expla	in in Remarks)	
regetation	Soil or	Hydrology	significantly dist	urbed?	Are "Normal Circumstand			
egetation			_		l, explain any answers in Re			ă ă
			_					
MMARY OF F	INDINGS – Atta	ach site map	showing sar	npling point	locations, transects	, important featu	res, etc.	
ophytic Vegetatio	n Present? Yes	X No		Is Sampled Ar	rea within			
ic Soil Present?	Yes	X No		a Wetlar		X	10	
and Hydrology Pr	esent? Yes	X No						
arks:				•				
ETATION -	Use scientific n							
		absolute % cover	Dominant Species?	Indicator Status	Dominance Test wor	ksheet:		
Stratum (plot s	size: 30)			Number of Dominant Spe	cies		
Alnus rubra	-	-´ 30	X	FAC	That are OBL, FACW, or		4	(A)
					, , , , , ,	1		,
					Total Number of Dominan	t		
					Species Across All Strata:		4	(B)
		30	= Total Cover			,		
ng/Shrub Stratum	1 (plot size: 15)			Percent of Dominant Spec	cies		
Rubus armenia		—´ 5	x	FAC	That are OBL, FACW, or		00%	(A/B)
		,				-		
					Prevalence Index Wo	rksheet:		
					Total % Cover of	Multiply by:	_	
					OBL Species	x 1 =	0	
		5	= Total Cover		FACW species	x 2 =	0	
Otata (plot	niza: E	,			FAC Species	x 3 =	0	i
Stratum (plot s		- ['] 75	~	(EAC)	FACU Species	x 4 =	0	
Inidentified gr otus cornicul		20	x	FAC	UPL Species Column Totals	0 (A)	0	(D)
Plantago lance		5		FACU	Columnitionals	0 (A)		(B)
rantago ranoc	·orata			-1700	Prevalence Index =	B/A = #[DIV/0!	
					Hydrophytic Vegetati	on Indicators:		
						1- Rapid Test for Hydro	phytic Vegetatio	n
					X	2- Dominance Test is >	50%	
		100	= Total Cover			3-Prevalence Index is ≤		
	(wlot si	,				4-Morphological Adapta		
ly Vine Stratum	(plot size:)				data in Remarks or on a		.)
						5- Wetland Non-Vascul Problematic Hydrophytic		vnlain\
			= Total Cover					
5.2			= Lotal Cover		Indicators of hydric soil a	iu weliana nyarology m	ust be present, i	uness
- ,		0			disturbed or problematic.			
		0	,		disturbed or problematic. Hydrophytic			

SOIL	PHS#	6338	_		Sampling Point: 12	!
Profile Description: (Describe to the depth	needed to docume	nt the indicator or co	nfirm the abser	ice of indicators.)		
Depth Matrix		Redox Features				
(Inches) Color (moist) %	Color (moist)	% Type ¹	Loc ²	Texture	Remarks	
0-4 10YR 3/1 95	5YR 3/4		PL	Loamy Sand	OR's	
4-16 10YR 3/1 90	5YR 3/3		PL	Loamy Sand	OR's	
4-16	5YR 3/3	8 C	M	Loamy Sand	Large	
					Washing to the second s	
¹ Type: C=Concentration, D=Depletion, RM=Re	educed Matrix, CS=0	Covered or Coated Sai	nd Grains.		² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil Indicators: (Applicable to	all LRRs, unless	otherwise noted.	.)	Indica	ators for Problematic Hydric Soils ³ :	
Histosol (A1)		Sandy Redo	ox (S5)		2 cm Muck (A10)	
Histic Epipedon (A2)		Stripped Ma	atrix (S6)		Red Parent Material (TF2)	
Black Histic (A3)		Loamy Muc	ky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF	12)
Hydrogen Sulfide (A4)		Loamy Gley	ed Matrix (F2)		Other (explain in Remarks)	
Depleted Below Dark Surface (A	A11)	Depleted M	atrix (F3)			
Thick Dark Surface (A12)		X Redox Dark	Surface (F6)			
Sandy Mucky Mineral (S1)		Depleted Da	ark Surface (F7)		³ Indicators of hydrophytic vegetation and wet	
Sandy Gleyed Matrix (S4)		Redox Depi	ressions (F8)		hydrology must be present, unless disturbed problematic.	or
Restrictive Layer (if present):				Τ		
•						
Type:						
				Undria Cail Drea	ant? Van V Na	
				Hydric Soil Pres	ent? Yes X No	
Remarks: HYDROLOGY				Hydric Soil Pres	ent? Yes X No	
Remarks: HYDROLOGY Wetland Hydrology Indicators:	uired; check all th	nat apply)		Hydric Soil Pres	Secondary Indicators (2 or more requi	red)
HYDROLOGY Netland Hydrology Indicators:	uired; check all th		ed Leaves (B9) (red)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one req	uired; check all th		, ,		Secondary Indicators (2 or more requi	red)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1)	uired; check all th	Water stain	d 4B)		Secondary Indicators (2 or more requi	red)
HYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2)	uired; check all th	Water stain 1, 2, 4A, an Salt Crust (I	d 4B)		Secondary Indicators (2 or more requi Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)	red)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3)	uired; check all th	Water stain 1, 2, 4A, an Salt Crust (I Aquatic Inve	d 4B) B11)	Except MLRA	Secondary Indicators (2 or more requi Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10)	
AYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	uired; check all th	Water stain 1, 2, 4A, an Salt Crust (I Aquatic Inve	d 4B) B11) ertebrates (B13) ulfide Odor (C1)	Except MLRA	Secondary Indicators (2 or more requi Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)	
AYDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	uired; check all th	Water stain 1, 2, 4A, an Salt Crust (I Aquatic Inve Hydrogen S X Oxidized Rh	d 4B) B11) ertebrates (B13) ulfide Odor (C1)	Except MLRA g Living Roots (C3)	Secondary Indicators (2 or more requi Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Ima	
HYDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	uired; check all th	Water stain 1, 2, 4A, an Salt Crust (I Aquatic Inve Hydrogen S X Oxidized Rh Presence of	d 4B) B11) ertebrates (B13) ulfide Odor (C1) nizospheres alon	Except MLRA g Living Roots (C3) C4)	Secondary Indicators (2 or more requi Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Ima Geomorphic Position (D2)	
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PHS#	6338
WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region	

Project/Site:	Palmber	g Prope	erty	City/County:	Gea	rhart/Clatsop		Sampling	g Date:	3/2	8/2018
Applicant/Owner:	Bill Palmbe	erg					State:	OR	S	ampling Point:	13
Investigator(s):	SE/	JT/CM/0	CR	Section, To	wnship, Range:		Section	10, Towns	hip 6N, F	Range 10W	
Landform (hillslope, ter	race, etc.:)				Local relief (cor	ncave, convex, no				Slope (%):	
Subregion (LRR):		LRR	Α	Lat:	46.024		Long:	-123.9	087	_	WGS84
Soil Map Unit Name:				 t Fine Sandy Loai	m		_	sification:		PFOC	
Are climatic/hydrologic					Yes	X				in Remarks)	
Are vegetation				significantly dist			_				
Are vegetation		-		naturally proble					(1714)		•
Are vegetation	3011	- 0111	ydrology .	naturally problem	nauc: n needed	i, explain any answ	reis iii iveiii	ains.)			
SUMMARY OF F	INDINGS	– Atta	ch site m	ap showing san	npling point	locations, tra	nsects,	importar	nt featur	es, etc.	
Hydrophytic Vegetation	Present?	Yes	Х	No							
Hydric Soil Present?		Yes	X	No	Is Sampled Ar		Yes	X	No		
Wetland Hydrology Pre	esent?	Yes	X	No							
Remarks:											
remano.											
VEGETATION - U	Jse scient	tific na	mes of p	lants.					-		
			absolut		Indicator	Dominance T	est work	sheet:			
Trop Objections (al.)	izo	20	% cove	Species?	Status						
Tree Stratum (plot s		30	70	v	FAC	Number of Dom				•	(A)
1 Alnus rubra	-10 - 10 - 10 - 10 - 10 - 10 - 10 - 10			x	FAC_	That are OBL, F	ACW, or FA	AC:		3	·(A)
3						Takal Niverbas at	Di4				
1						Total Number of Species Across				3	(B)
+			70	= Total Cover		Species Across	All Strata.	_		3	· (B)
		No second		Total Cover							
Sapling/Shrub Stratum	(plot size:		—′			Percent of Domi					
1 Alnus rubra			50	X	FAC	That are OBL, F.	ACW, or F	AC:	10	0%	(A/B)
2					· ·	Prevalence Ir	dox Mor	kahaati			
<i>A</i>						Total % Cover o			iltiply by:		
5						OBL Spec		IVIC	ultiply by: x 1 =	- 0	
			50	= Total Cover		FACW spec			x 2 =	0	•
						FAC Spec			x 3 =	0	•
Herb Stratum (plot s	ize:	5)			FACU Spec	cies		x 4 =	0	
1 Carex obnupta			100	X	OBL	UPL Spec	ies		x 5 =	0	
2 Hedera helix			1		FACU	Column To	tals	0 (A)	0	(B)
3						1					
4						Prevalence	e Index =B/	A =	#D	IV/0!	- 2
5											
6				_		Hydrophytic '					
7										hytic Vegetatio	n
8			404					Dominance Prevalence			
			101	= Total Cover						ons ¹ (provide :	supporting
Woody Vine Stratum	(plot size:)			-				separate shee	
1	·		- ′					Wetland No			-,
2			-							Vegetation ¹ (E	Explain)
			0	= Total Cover		¹ Indicators of hyd					
						disturbed or prob					
9/ Para Craum din 11-d	Ctrotur		0			Hydrophytic		Vac	v	A1	
% Bare Ground in Hert	oualum		0			Vegetation		Yes _	X	_ No	

SOIL	PHS#	6338	_		Sampling Point: 13
Profile Description: (Describe to the dep	h needed to docume	ent the indicator or co	onfirm the absen	ce of indicators.)	
Depth Matrix	_	Redox Features			
(Inches) Color (moist) %	Color (moist)	% Type ¹	Loc ²	Texture	Remarks
0-4 10YR 2/1 100				Sandy Loam	V
4-9 10YR 2/2 88	7.5YR 3/3		M	Sandy Loam	Fine
4-9 Gravel 10					Gravel
9-12 10YR 2/2 95	5YR 3/3		M	Sandy Loam	Fine
Type: C=Concentration, D=Depletion, RM=	Reduced Matrix, CS=	Covered or Coated Sa	nd Grains.		² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable	o all LRRs, unles	s otherwise noted	.)	Indica	ators for Problematic Hydric Soils ³ :
Histosol (A1)		Sandy Red	ox (S5)		2 cm Muck (A10)
Histic Epipedon (A2)		Stripped M	atrix (S6)		Red Parent Material (TF2)
Black Histic (A3)			cky Mineral (F1) (e	except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)		Loamy Gle	yed Matrix (F2)		X Other (explain in Remarks)
Depleted Below Dark Surface	(A11)	Depleted M			,
Thick Dark Surface (A12)	a a		k Surface (F6)		
Sandy Mucky Mineral (S1)			ark Surface (F7)		³ Indicators of hydrophytic vegetation and wetland
Sandy Gleyed Matrix (S4)		Redox Dep	ressions (F8)		hydrology must be present, unless disturbed or problematic.
Restrictive Layer (if present):				<u> </u>	
				Hydric Soil Pros	ont? Vos. Y No.
Depth (inches):				Hydric Soil Pres	ent? Yes X No
Depth (inches):	ughout winter into	o early spring. Gra	ivel at depth is	L	
Depth (inches): Remarks: Area clearly remains saturated thro	_			s evidence of mod	ent? Yes X No dified conditions; likely from decades and 4 to 9 mottles are 1 chroma below
Depth (inches): Remarks: Area clearly remains saturated thro prior. Soils have a high organic cor	tent but are not q	uite mucky enoug	h to be consid	s evidence of mod dered histic. Fron	dified conditions; likely from decades
Depth (inches): Remarks: Area clearly remains saturated thro prior. Soils have a high organic cor listinct, and below 9 inches the so	tent but are not q	uite mucky enoug	h to be consid	s evidence of mod dered histic. Fron	dified conditions; likely from decades
Depth (inches): Remarks: Area clearly remains saturated thro prior. Soils have a high organic cor listinct, and below 9 inches the soil	tent but are not q	uite mucky enoug	h to be consid	s evidence of mod dered histic. Fron	dified conditions; likely from decades
Depth (inches): Remarks: Area clearly remains saturated throprior. Soils have a high organic condistinct, and below 9 inches the soil HYDROLOGY Wetland Hydrology Indicators:	itent but are not o	juite mucky enoug deep to meet the c	h to be consid	s evidence of mod dered histic. Fron	dified conditions; likely from decades n 4 to 9 mottles are 1 chroma below
Depth (inches): Remarks: Area clearly remains saturated thro prior. Soils have a high organic cor listinct, and below 9 inches the soil HYDROLOGY Vetland Hydrology Indicators:	itent but are not o	uite mucky enoug deep to meet the c	h to be consid	s evidence of moo dered histic. Fron ox dark surface.	dified conditions; likely from decades
Depth (inches): Itemarks: Itema	itent but are not o	uite mucky enoug deep to meet the c	th to be consideriteria for Red	s evidence of moo dered histic. Fron ox dark surface.	dified conditions; likely from decades n 4 to 9 mottles are 1 chroma below Secondary Indicators (2 or more required)
emarks: urea clearly remains saturated thro urior. Soils have a high organic cor listinct, and below 9 inches the soi HYDROLOGY Wetland Hydrology Indicators: urimary Indicators (minimum of one re- Surface Water (A1)	itent but are not q	deep to meet the control of the cont	th to be consideriteria for Red	s evidence of moo dered histic. Fron ox dark surface.	Secondary Indicators (2 or more required) Water stained Leaves (B9)
emarks: urea clearly remains saturated thro rior. Soils have a high organic cor istinct, and below 9 inches the soil HYDROLOGY Vetland Hydrology Indicators: Trimary Indicators (minimum of one re Surface Water (A1) X High Water Table (A2)	itent but are not q	nat apply) Water stain 1, 2, 4A, ar Salt Crust (th to be consideriteria for Red	s evidence of moo dered histic. Fron ox dark surface.	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
Depth (inches): Itemarks: Area clearly remains saturated thro orior. Soils have a high organic cor listinct, and below 9 inches the soil HYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one re Surface Water (A1) X High Water Table (A2) X Saturation (A3)	itent but are not q	nat apply) Water stain 1, 2, 4A, ar Salt Crust (th to be consideriteria for Red seed Leaves (B9) (Ind 4B)	s evidence of moo dered histic. Fron ox dark surface.	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Depth (inches): Remarks: Area clearly remains saturated throprior. Soils have a high organic condistinct, and below 9 inches the soil HYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one results) Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1)	itent but are not q	nat apply) Water stain 1, 2, 4A, ar Salt Crust (Aquatic Inv.	nt to be consideriteria for Red led Leaves (B9) (Ind 4B) B11) ertebrates (B13) Sulfide Odor (C1)	s evidence of moo dered histic. Fron ox dark surface.	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Depth (inches): Remarks: Area clearly remains saturated throportor. Soils have a high organic condistinct, and below 9 inches the soil of	itent but are not q	nat apply) Water stain 1, 2, 4A, ar Salt Crust (Aquatic Inv. Hydrogen S Oxidized RI	nt to be consideriteria for Red led Leaves (B9) (Ind 4B) B11) ertebrates (B13) Sulfide Odor (C1)	s evidence of modered histic. Fron ox dark surface. Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Depth (inches): Remarks: Area clearly remains saturated thro prior. Soils have a high organic cor listinct, and below 9 inches the soil HYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one re Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	itent but are not q	mat apply) Water stain 1, 2, 4A, ar Salt Crust (Aquatic Inv. Hydrogen S Oxidized Ri Presence o	the to be consideriteria for Red seed Leaves (B9) (Ind 4B) B11) ertebrates (B13) Sulfide Odor (C1) hizospheres along	s evidence of modered histic. From ox dark surface. Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Depth (inches): Remarks: Area clearly remains saturated thro prior. Soils have a high organic cor distinct, and below 9 inches the soil HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one re Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	itent but are not q	mat apply) Water stain 1, 2, 4A, ar Salt Crust (Aquatic Inv. Hydrogen S Oxidized RI Presence o	ned Leaves (B9) (Ind 4B) B11) ertebrates (B13) Sulfide Odor (C1) hizospheres along f Reduced Iron (C	s evidence of modered histic. From ox dark surface. Except MLRA g Living Roots (C3) (24) wed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Remarks: Area clearly remains saturated thro prior. Soils have a high organic cor distinct, and below 9 inches the soil HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one re Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	equired; check all the	mat apply) Water stain 1, 2, 4A, ar Salt Crust (Aquatic Inv. Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S	ned Leaves (B9) (Ind 4B) B11) ertebrates (B13) Sulfide Odor (C1) hizospheres along if Reduced Iron (C) in Reduction in Plo	s evidence of modered histic. From ox dark surface. Except MLRA g Living Roots (C3) (24) wed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5)
Remarks: Area clearly remains saturated thro prior. Soils have a high organic cor distinct, and below 9 inches the soil HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one re Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	equired; check all the	mat apply) Water stain 1, 2, 4A, ar Salt Crust (Aquatic Inv. Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S	ned Leaves (B9) (Ind 4B) B11) ertebrates (B13) Sulfide Odor (C1) hizospheres along if Reduced Iron (C) in Reduction in Plo Stressed Plants (I	s evidence of modered histic. From ox dark surface. Except MLRA g Living Roots (C3) (24) wed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Depth (inches): Remarks: Area clearly remains saturated thro prior. Soils have a high organic cor distinct, and below 9 inches the soil HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one re Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial In Sparsely Vegetated Concave	equired; check all the	mat apply) Water stain 1, 2, 4A, ar Salt Crust (Aquatic Inv. Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S	ned Leaves (B9) (Ind 4B) B11) ertebrates (B13) Sulfide Odor (C1) hizospheres along if Reduced Iron (C) in Reduction in Plo Stressed Plants (I	s evidence of modered histic. From ox dark surface. Except MLRA g Living Roots (C3) (24) wed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Remarks: Area clearly remains saturated thro prior. Soils have a high organic cor distinct, and below 9 inches the soil HYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one re Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial In Sparsely Vegetated Concave	equired; check all the	mat apply) Water stain 1, 2, 4A, ar Salt Crust (Aquatic Inv. Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S	ned Leaves (B9) (Ind 4B) B11) ertebrates (B13) Sulfide Odor (C1) hizospheres along if Reduced Iron (C) in Reduction in Plo Stressed Plants (I	s evidence of modered histic. From ox dark surface. Except MLRA g Living Roots (C3) (24) wed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Depth (inches): Remarks: Area clearly remains saturated throprior. Soils have a high organic condistinct, and below 9 inches the soil HYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one results of the soil surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial In Sparsely Vegetated Concave (Bield Observations: Surface Water Present? Yes	equired; check all the	mat apply) Water stain 1, 2, 4A, ar Salt Crust (Aquatic Inv. Hydrogen S Oxidized RI Presence o Recent Iron Stunted or 3 Other (Expl	ned Leaves (B9) (Ind 4B) B11) ertebrates (B13) Sulfide Odor (C1) hizospheres along if Reduced Iron (C) in Reduction in Plo Stressed Plants (I	s evidence of modered histic. From ox dark surface. Except MLRA g Living Roots (C3) (24) wed Soils (C6) D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Depth (inches): Remarks: Area clearly remains saturated throprior. Soils have a high organic condistinct, and below 9 inches the soil HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one results) Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial In Sparsely Vegetated Concave Field Observations: Surface Water Present? Yes Water Table Present? Yes	equired; check all the sagery (B7) Surface (B8)	mat apply) Water stain 1, 2, 4A, ar Salt Crust (Aquatic Inv. Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S Other (Expl	the to be consideriteria for Redirection (B9) (Ind 4B) B11) B11) B11) B11) B110 B110 B110 B1	s evidence of modered histic. From ox dark surface. Except MLRA g Living Roots (C3) (24) wed Soils (C6) D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Remarks: Area clearly remains saturated throprior. Soils have a high organic cordistinct, and below 9 inches the soil HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one results) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Insparsely Vegetated Concave Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes X	equired; check all the sagery (B7) Surface (B8)	mat apply) Water stain 1, 2, 4A, ar Salt Crust (Aquatic Inv. Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S Other (Expl	th to be consideriteria for Redirect Leaves (B9) (Ind 4B) B11) B11) B11) B11) B11) B11) B11) B11) B11	s evidence of modered histic. From ox dark surface. Except MLRA g Living Roots (C3) (24) wed Soils (C6) D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Remarks: Area clearly remains saturated throprior. Soils have a high organic cordistinct, and below 9 inches the soil HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one results of the soil of the so	equired; check all the sagery (B7) Surface (B8) No No	mat apply) Water stain 1, 2, 4A, ar Salt Crust (Aquatic Inv. Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S Other (Expl	th to be consideriteria for Reduction (C1) Beta Leaves (B9) (Ind 4B) B11) B	s evidence of modered histic. From ox dark surface. Except MLRA g Living Roots (C3) (24) wed Soils (C6) D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Depth (inches): Remarks: Area clearly remains saturated thro prior. Soils have a high organic cordistinct, and below 9 inches the soil HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one results of the soil of	equired; check all the sagery (B7) Surface (B8) No No	mat apply) Water stain 1, 2, 4A, ar Salt Crust (Aquatic Inv. Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S Other (Expl	th to be consideriteria for Reduction (C1) Beta Leaves (B9) (Ind 4B) B11) B	s evidence of modered histic. From ox dark surface. Except MLRA g Living Roots (C3) (24) wed Soils (C6) D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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Remarks: Area clearly remains saturated throprior. Soils have a high organic cordistinct, and below 9 inches the soil HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one results) Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial In Sparsely Vegetated Concave Field Observations: Surface Water Present? Yes Water Table Present? Yes Water Table Present? Yes Water Table Present? Yes Water Table Recorded Data (stream gauge, model) Describe Recorded Data (stream gauge, model)	equired; check all the sagery (B7) Surface (B8) No No	mat apply) Water stain 1, 2, 4A, ar Salt Crust (Aquatic Inv. Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S Other (Expl	th to be consideriteria for Reduction (C1) Beta Leaves (B9) (Ind 4B) B11) B	s evidence of modered histic. From ox dark surface. Except MLRA g Living Roots (C3) (24) wed Soils (C6) D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

PHS #	6338
WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region	

region (LRR): LRR A	NWI Classification: X
dform (hillslope, terrace, etc.:) Mound	Cave, convex, none): Slope (%):
region (LRR): LRR A Lat: 46.0246 Map Unit Name: Gearhart Fine Sandy Loam climatic/hydrologic conditions on the site typical for this time of year? Yes vegetation Soil or Hydrology significantly disturbed? vegetation Soil or Hydrology naturally problematic? If needed, or hydrology naturally problematic? If needed, or hydrology rophytic Vegetation Present? Yes X No ric Soil Present? Yes No X Is Sampled Are a Wetland Hydrology Present? Yes No X GETATION - Use scientific names of plants. GETATION - Use scientific names of plants. Absolute Dominant Indicator Species? Status Status	NWI Classification: PFOC X No (if no, explain in Remarks) Are "Normal Circumstances" present? (Y/N) Y explain any answers in Remarks.) locations, transects, important features, etc. ea within d? Yes No X Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: 3 (A) Total Number of Dominant
Map Unit Name: Gearhart Fine Sandy Loam climatic/hydrologic conditions on the site typical for this time of year? Yes vegetation Soil or Hydrology significantly disturbed? vegetation Soil or Hydrology naturally problematic? If needed, or MMARY OF FINDINGS – Attach site map showing sampling point to rophytic Vegetation Present? Yes X No Is Sampled Area a Wetland Hydrology Present? Yes No X Pland Hydrology Present? Indicator Species? Status	NWI Classification: PFOC X
climatic/hydrologic conditions on the site typical for this time of year? Yes vegetation Soil or Hydrology significantly disturbed? vegetation Soil or Hydrology naturally problematic? If needed, or hydrology naturally problematic? If needed, or hydrology prophytic? MMARY OF FINDINGS — Attach site map showing sampling point to rophytic Vegetation Present? Yes X No Tric Soil Present? Yes No X Is Sampled Are a Wetland and Hydrology Present? Yes No X Darks: GETATION - Use scientific names of plants. absolute Dominant Indicator Species? Status Estratum (plot size:)	X No (if no, explain in Remarks) Are "Normal Circumstances" present? (Y/N) Y explain any answers in Remarks.) Cocations, transects, important features, etc. Ea within d? Yes NoX Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: 3 (A) Total Number of Dominant
wegetation Soil or Hydrology significantly disturbed? wegetation Soil or Hydrology naturally problematic? If needed, or Hydrology naturally problematic? If needed, or Hydrology Present? Yes X No X Is Sampled Are; a Wetland Hydrology Present? Yes No X awetland Hydrology Present? Yes No X Is Sampled Are; a Wetland Hydr	Are "Normal Circumstances" present? (Y/N) Y explain any answers in Remarks.) locations, transects, important features, etc. ea within d? Yes No X Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: 3 (A) Total Number of Dominant
MMARY OF FINDINGS — Attach site map showing sampling point to pophytic Vegetation Present? Yes X No Is Sampled Area a Wetland and Hydrology Present? Yes No X Is Sampled Area a Wetland arks: CETATION - Use scientific names of plants. Absolute Species? Status	explain any answers in Remarks.) locations, transects, important features, etc. ea within d? Yes No X Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: 3 (A) Total Number of Dominant
MMARY OF FINDINGS — Attach site map showing sampling point learn prophytic Vegetation Present? Yes X No X Is Sampled Are a Wetland land Hydrology Present? Yes No X Wetland Hydrology Present? Yes No X Is Sampled Are a Wetland land Hydrology Present?	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: Total Number of Dominant
rophytic Vegetation Present? Yes X No Is Sampled Are; a Wetland Hydrology Present? Yes No X Is Sampled Are; a Wetland Hydrology Present? Yes No X Is Sampled Are; a Wetland Hydrology Present? Yes No X Is Sampled Are; a Wetland Hydrology Present? Yes No X Is Sampled Are; a Wetland Hydrology Present? Yes No X Is Sampled Are; a Wetland Hydrology Present? Is Sampled Are; a Wetland Hydrology Present? Yes No X Is Sampled Are; a Wetland Hydrology Present? Is Sampled Are; a Wetland Hydrology Present Hydrology Present? Is Sampled Are; a Wetland Hydrology Present Hy	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: 3 (A) Total Number of Dominant
rophytic Vegetation Present? Yes X No Is Sampled Are; a Wetland Are; and Hydrology Present? Yes No X Is Sampled Are; a Wetland with the same in the sa	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: 3 (A) Total Number of Dominant
Is Sampled Are a Wetland Are a	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: 3 (A) Total Number of Dominant
and Hydrology Present? Yes No X a Wetland Hydrology Present? Yes No X SETATION - Use scientific names of plants. absolute Dominant Indicator Species? Status Stratum (plot size:)	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: 3 (A) Total Number of Dominant
GETATION - Use scientific names of plants. absolute Dominant Indicator Species? Status Stratum (plot size:)	Number of Dominant Species That are OBL, FACW, or FAC: Total Number of Dominant
GETATION - Use scientific names of plants. absolute Dominant Indicator Species? Status e Stratum (plot size:)	Number of Dominant Species That are OBL, FACW, or FAC: Total Number of Dominant
Stratum (plot size:)	That are OBL, FACW, or FAC: Total Number of Dominant
	That are OBL, FACW, or FAC: Total Number of Dominant
	Total Number of Dominant
0 = Total Cover	
ing/Shrub Stratum (plot size: 15)	Percent of Dominant Species
	That are OBL, FACW, or FAC: 60% (A/B)
Laurel sp. 30 X (FAC)	
Crataegus sp. 20 X (FAC)	Prevalence Index Worksheet:
Vaccinium parvifolium 10 FACU	Total % Cover of Multiply by:
	OBL Species x 1 = 0
100 = Total Cover	FACW species x 2 = 0
o <u>Stratum</u> (plot size: 5)	FAC Species
Carex obnupta 60 X OBL	UPL Species x5 = 0
Polystichum munitum 10 FACU	Column Totals 0 (A) 0 (B)
	Prevalence Index =B/A = #DIV/0!
	Undergraphidis Vanatation Indicators
	Hydrophytic Vegetation Indicators: 1- Rapid Test for Hydrophytic Vegetation
	X 2- Dominance Test is >50%
70 = Total Cover	3-Prevalence Index is ≤ 3.0 ¹
	4-Morphological Adaptations ¹ (provide supporting
dy Vine Stratum (plot size: 5)	data in Remarks or on a separate sheet)
Hedera helix 10 X FACU	5- Wetland Non-Vascular Plants ¹
	Problematic Hydrophytic Vegetation ¹ (Explain)
	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic
	Vegetation Yes X No

SOIL			PHS#	63	38			Sampling Point:	14
Profile Descri	ption: (Describe to	the depth ne	eeded to docume	nt the indi	cator or conf	firm the absen	ce of indicators.)		4. 0.0.0
Depth	Matrix			Redox	Features				
(Inches)	Color (moist)	_ %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-2	7.5YR 3/1	100					Loamy Sand		
2-10	7.5YR 2.5/3	100					Loamy Sand		
10-12	10YR 3/3	100					Sand		
	centration, D=Depleti					Grains.		² Location: PL=Pore Lining, M=	
-	ndicators: (Appl	icable to a	II LRRs, unles	s otherwi	se noted.)		Indica	ators for Problematic Hydr	
	Histosol (A1)				Sandy Redox	(S5)		2 cm Muck (A10)	į.
t	Histic Epipedon (A2)				Stripped Matr			Red Parent Mate	rial (TF2)
	Black Histic (A3)					Mineral (F1) (except MLRA 1)	Very Shallow Dar	
H	Hydrogen Sulfide (A4	1)			Loamy Gleyed	d Matrix (F2)		Other (explain in	Remarks)
	Depleted Below Dark	Surface (A1	1)		Depleted Mat	rix (F3)			
7	Thick Dark Surface (A12)			Redox Dark S	Surface (F6)		3Indicators of hydrophytic	tation and watland
	Sandy Mucky Minera	I (S1)			Depleted Darl	k Surface (F7)		Indicators of hydrophytic veget hydrology must be present, un	
	Sandy Gleyed Matrix	(S4)			Redox Depres	ssions (F8)		problematic.	
Restrictive L	ayer (if present)	:						2	
Гуре:									
epth (inches):						Hydric Soil Pres	ent? Yes	No X
HYDROLOG Vetland Hyd	GY Irology Indicator	s:							
Primary Indic	ators (minimum o	f one requi	red; check all th	nat apply)				Secondary Indicators (2 o	r more required)
	Surface Water (A1)				Nater stained	Leaves (B9) (Except MLRA	Water stained Le	
	High Water Table (A2	2)			1, 2, 4A, and	4B)		(MLRA1, 2, 4A,	and 4B)
	Saturation (A3)				Salt Crust (B1	1)		Drainage Patterns	s (B10)
v	Vater Marks (B1)				Aquatic Invert	ebrates (B13)		Dry-Season Water	er Table (C2)
8	Sediment Deposits (E	32)			Hydrogen Sul	fide Odor (C1)		Saturation Visible	on Aerial Imagery (C9)
	Orift Deposits (B3)				Oxidized Rhiz	ospheres along	g Living Roots (C3)	Geomorphic Posi	tion (D2)
	Algal Mat or Crust (B	4)			Presence of F	Reduced Iron (C	24)	Shallow Aquitard	(D3)
lı	ron Deposits (B5)			F	Recent Iron R	eduction in Plo	wed Soils (C6)	Fac-Neutral Test	(D5)
	Surface Soil Cracks (B6)			Stunted or Str	ressed Plants (I	D1) (LRR A)	Raised Ant Moun	ds (D6) (LRR A)
lı	nundation Visible on	Aerial Image	ery (B7)	(Other (Explain	n in Remarks)		Frost-Heave Hum	mocks (D7)
	Sparsely Vegetated C	Concave Surf	face (B8)						
ield Observ	/ations:								
Surface Water	Present? Yes		No X	Depth (inches):				
Vater Table Pr	esent? Yes		No X	Depth (inches):	>12	Wetland Hydi	rology Present?	
aturation Pres			No X	Depth (inches):	>12		Yes	No X
	rded Data (stream ga	uide monito	ring well serial ph	otos previo	nus inspection	ns) if available			
Seamle Verol	aca Data (Siledili ga	iage, monito	ing wen, aenai pri	owa, pievil	ras maperiiol	io), ii avallabile.			
emarks:			,						
					-	i.i			

		PHS#	6338
TI AND DETERMINATION DATA FORM	Western Manufaine Vellana	and Caset Basiss	

ect/Site:	Palmber	g Proper	ty	City/County:	Gea	rhart/Clatsop		Sampl	ing Date:	3/28	3/2018
icant/Owner:	Bill Palmb	erg					State:	OR		Sampling Point:	15
stigator(s):	SE	JT/CM/CI	R	Section, To	ownship, Range:		Section	10, Tow	nship 6N	I, Range 10W	
lform (hillslope, te	rrace, etc.:)		Swale	_	Local relief (co	ncave, convex, no	one):			Slope (%):	
egion (LRR):		LRR A		Lat:	46.02	46	Long:	-123	.9082	Datum:	WGS84
Map Unit Name:			Warrenton	— Loamy Fine Sa	ind		NWI Class	sification:		PFOC	
climatic/hydrologic	conditions o				Yes	X		-		ain in Remarks)	
egetation /			•	significantly dis		Are "Normal C	_			Υ	
egetation		_		naturally proble					. (,,,,,		
		_			mano: minecaco	i, explain any and	wero in recin	idiko.j			
MMARY OF F	INDINGS	Attac	h site map	showing sar	mpling point	locations, tr	ansects,	import	ant feat	ures, etc.	
ophytic Vegetation	n Present?	Yes _	X No		Is Sampled A	roa within					
ic Soil Present?		Yes _	X No		a Wetlan		Yes _	X		No	
and Hydrology Pro	esent?	Yes	X No	·							
arks:											
SETATION -	Use scien	tific nan	nes of plan	its.							
			absolute	Dominant Species?	Indicator	Dominance	Test work	sheet:			
Stratum (plot s	size.	30)	% cover	Species?	Status	Number of De-	ninant Spaci	96			
Alnus rubra			30	х	FAC	Number of Don That are OBL,				3	(A)
illus rubra					170	That are OBL,	I ACVV, DI 17	-			.(^)
						Total Number of	of Dominant				
						Species Across				4	(B)
			30	= Total Cover		.,		-			.(-/
ing/Shrub Stratum) (plot size	: 15	`			Doroomt of Dom	ninant Chasi				
Physocarpus o			_ ⁾ 20	χ	FACW	Percent of Don That are OBL,				75%	(A/B)
nysocarpus c	apitatus				TACTI	That are OBL,	FACVV, OFF	AC		1376	(~0)
						Prevalence	Index Wor	ksheet:			
-						Total % Cover			Multiply by:	r	
						OBL Spe		-	x 1 =		
			20	= Total Cover		FACW spe	_		x 2 =	0	
						FAC Spe			x 3 =	0	
Stratum (plot s	size:	5)				FACU Spe	ecies		x 4 =	0	
Carex obnupta			40 -	X	OBL	UPL Spe	cies		x 5 =	0	
ledera helix			10	X	FACU	Column T	otals	0	(A)	0	(B)
						Prevalen	ce Index =B/	A =	#	DIV/0!	
						Deat 1 in	V- ::		4		
						Hydrophytic					_
							-			ophytic Vegetatio	4.5
			50	= Total Cover				- Dominano -Prevalenc			
				- Total Cover						≤ 3.0 tations¹ (provide s	supporting
dy Vine Stratum	(plot size:)			,,-				a separate sheet	
			-							ular Plants ¹	150
							Pı	roblematic	Hydrophyl	tic Vegetation ¹ (E	xplain)
			0	= Total Cover		¹ Indicators of h	ydric soil and	d wetland I	nydrology r	must be present,	unless
						disturbed or pro					
						Hydrophytic					
are Ground in Her	h Ctratum	_	50			Vegetation		Yes	X	No	

Profile Description: (Describe to the Depth Matrix (Inches) Color (moist) 0-12 10YR 2/1 0-12 Cobble 1 Type: C=Concentration, D=Depletion Hydric Soil Indicators: (Application Histosol (A1) Histic Epipedon (A2) Black Histic (A3) X Hydrogen Sulfide (A4) Depleted Below Dark Surface (A Sandy Mucky Mineral (A Sandy Mucky	% 60 40	Color (moist)		ator or confirmentation of confi	Loc ²	Texture Loamy Sand	Mucky	Remark Fine	s
(Inches) O-12 10YR 2/1 O-12 Cobble 1-Type: C=Concentration, D=Depletion Hydric Soil Indicators: (Application (A2)) Black Histic Epipedon (A2) Black Histic (A3) X Hydrogen Sulfide (A4) Depleted Below Dark Sandy Mucky Mineral (A2) Sandy Gleyed Matrix (A3) Restrictive Layer (if present): Type: Depth (inches): Remarks: Mucky soil, greasy HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of X Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B1) Iron Deposits (B5) Surface Soil Cracks (B1) Sparsely Vegetated Co	60	Color (moist)			Loc ²				is
0-12 Cobble 1-Type: C=Concentration, D=Depletion Hydric Soil Indicators: (Application (A2)) Black Histic Epipedon (A2) Black Histic (A3) X Hydrogen Sulfide (A4) Depleted Below Dark Sandy Mucky Mineral (Sandy Mucky Mine	60	Color (moist)	70	Туре					.5
O-12 Cobble 1 Type: C=Concentration, D=Depletion Hydric Soil Indicators: (Application (A1) Histic Epipedon (A2) Black Histic (A3) X Hydrogen Sulfide (A4) Depleted Below Dark Surface (A Sandy Mucky Mineral (Sandy Gleyed Matrix (Sandy Gleyed						Loamy Sand		Fine	
1 Type: C=Concentration, D=Depletion Hydric Soil Indicators: (Application (A2)) Histic Epipedon (A2) Black Histic (A3) X Hydrogen Sulfide (A4) Depleted Below Dark Surface (A) Sandy Mucky Mineral (A) Sandy Gleyed Matrix (Surface (A) Surface (A) Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B) Inundation Visible on A Sparsely Vegetated Co	40								
Hydric Soil Indicators: (Applications) Histosol (A1) Histo Epipedon (A2) Black Histic (A3) X Hydrogen Sulfide (A4) Depleted Below Dark Surface (A Sandy Mucky Mineral (Sandy Gleyed Matrix (Sandy Gle							Cobble		
Hydric Soil Indicators: (Applications) Histosol (A1) Histo Epipedon (A2) Black Histic (A3) X Hydrogen Sulfide (A4) Depleted Below Dark Surface (A Sandy Mucky Mineral (Sandy Gleyed Matrix (Sandy Gle			-						
Hydric Soil Indicators: (Applications) Histosol (A1) Histo Epipedon (A2) Black Histic (A3) X Hydrogen Sulfide (A4) Depleted Below Dark Surface (A Sandy Mucky Mineral (Sandy Gleyed Matrix (Sandy Gle									
Histosol (A1) Histic Epipedon (A2) Black Histic (A3) X Hydrogen Sulfide (A4) Depleted Below Dark S Thick Dark Surface (A: Sandy Mucky Mineral (Sandy Gleyed Matrix (S: Restrictive Layer (if present): Type: Depth (inches): Remarks: Mucky soil, greasy HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of X Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Yes Water Table Present? Yes					Grains.			PL=Pore Lining, M	
Histic Epipedon (A2) Black Histic (A3) X Hydrogen Sulfide (A4) Depleted Below Dark S Thick Dark Surface (A Sandy Mucky Mineral (Sandy Gleyed Matrix (S Restrictive Layer (if present): Type: Depth (inches): Remarks: Mucky soil, greasy HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of X Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Yes Water Table Present? Yes	cable to a	all LRRs, unles	s otherwise	e noted.)		Indica	tors for I	Problematic Hyd	dric Soils ³ :
Black Histic (A3) X Hydrogen Sulfide (A4) Depleted Below Dark S Thick Dark Surface (A' Sandy Mucky Mineral (Sandy Gleyed Matrix (S' Restrictive Layer (if present): Type: Depth (inches): Remarks: Mucky soil, greasy HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of X Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Yes Water Table Present? Yes			Sa	andy Redox (S	35)			2 cm Muck (A1))
X Hydrogen Sulfide (A4) Depleted Below Dark S Thick Dark Surface (A Sandy Mucky Mineral (Sandy Gleyed Matrix (S Restrictive Layer (if present): Type: Depth (inches): Remarks: Mucky soil, greasy HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of X Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Yes Water Table Present? Yes			St	ripped Matrix	(S6)			Red Parent Mar	terial (TF2)
X Hydrogen Sulfide (A4) Depleted Below Dark S Thick Dark Surface (A Sandy Mucky Mineral (Sandy Gleyed Matrix (S Restrictive Layer (if present): Type: Depth (inches): Remarks: Mucky soil, greasy HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of X Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Yes Water Table Present? Yes			Lc	amy Mucky N	fineral (F1) (e	except MLRA 1)		Verv Shallow D	ark Surface (TF12)
Depleted Below Dark S Thick Dark Surface (A Sandy Mucky Mineral (Sandy Gleyed Matrix (S Restrictive Layer (if present): Type: Depth (inches): Remarks: Mucky soil, greasy HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of X Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Yes Water Table Present? Yes)			amy Gleyed N		• • • • • • • • • • • • • • • • • • • •		Other (explain i	
Thick Dark Surface (A Sandy Mucky Mineral (Sandy Gleyed Matrix (Sandy Gl		11)						Caller (explain)	
Sandy Mucky Mineral (Sandy Gleyed Matrix (S Restrictive Layer (if present): Type: Depth (inches): Remarks: Mucky soil, greasy HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of X Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Yes Water Table Present? Yes		11)		epleted Matrix					
Sandy Gleyed Matrix (State Layer (if present): Type: Depth (inches): Remarks: Mucky soil, greasy HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of X Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Yes Water Table Present? Yes				edox Dark Sur			3Indicators	of hydronhytic ven	etation and wetland
Restrictive Layer (if present): Type: Depth (inches): Remarks: Mucky soil, greasy HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of X Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Yes Water Table Present? Yes	(S1)		De	epleted Dark S	Surface (F7)				unless disturbed or
Type: Depth (inches): Remarks: Mucky soil, greasy HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of X Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Yes Water Table Present? Yes	(S4)		Re	edox Depressi	ions (F8)			problemation	3 .
HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of X Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Yes Water Table Present? Yes						Hydric Soil Pres	ent? Ye	sX	No
X Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Yes Water Table Present? Yes							Caranda		
X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Yes Water Table Present? Yes	one requ	ired; check all ti		-11	(DO) (I		Seconda		or more required)
Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Yes Water Table Present? Yes	2)			2, 4A, and 4E		Except MLRA		Water stained L (MLRA1, 2, 4A	
Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B Inundation Visible on A Sparsely Vegetated Cc Field Observations: Surface Water Present? Yes Water Table Present? Yes			Sa	alt Crust (B11))		X	Drainage Patter	ns (B10)
Sediment Deposits (B2 Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Yes Water Table Present? Yes			Ac	quatic Inverteb	orates (B13)			Dry-Season Wa	iter Table (C2)
Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Yes Water Table Present? Yes	.2)			ydrogen Sulfid					le on Aerial Imagery (C
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Yes Water Table Present? Yes					, ,	Living Roots (C3)	X	Geomorphic Po	
Iron Deposits (B5) Surface Soil Cracks (B Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Yes Water Table Present? Yes	1)			esence of Rec				Shallow Aquitar	
Surface Soil Cracks (B Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Yes Water Table Present? Yes	,					wed Soils (C6)	x	Fac-Neutral Tes	
Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Yes Water Table Present? Yes	36)			unted or Stres		,			inds (D6) (LRR A)
Sparsely Vegetated Co Field Observations: Surface Water Present? Yes Water Table Present? Yes		ien/(87)		ther (Explain in		, (=)		Frost-Heave Hu	
Field Observations: Surface Water Present? Yes Water Table Present? Yes				(Explain II	. remarks)				looks (D1)
Surface Water Present? Yes Water Table Present? Yes	oncave Sur	ласе (Вв)			1				
Water Table Present? Yes									
	X	No	Depth (in	ches):	2				
Caturatian Danasato Van	X	No	Depth (in	ches):	2	Wetland Hydi	ology Pr	esent?	
Saturation Present? Yes (includes capillary fringe)	X	No	Depth (in	ches):	0		Ye	es X	No
Describe Recorded Data (stream gau	uge, monito	oring well, aerial ph	notos, previou	s inspections), if available:				
Remarks:									

-	
- Contract Commercial Contract	
CONTRACTOR DE LA CONTRA	
THE REAL PROPERTY.	
Andrewson and American	
-	

PHS#	6338
WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region	

ect/Site: Palmberg Prop	erty	City/County:	Gea	rhart/Clatsop		Sampling Date:	3/28/2018
licant/Owner: Bill Palmberg					State:	OR S	Sampling Point: 16
stigator(s): SE/JT/CM/	CR	Section, To	wnship, Range:		Section 1	0, Township 6N,	Range 10W
dform (hillslope, terrace, etc.:)	Berm	_	Local relief (cor	ncave, convex, nor	ne):		Slope (%):
region (LRR): LRR	Α	Lat:	46.024	46	Long:	-123.9082	Datum: WGS8
Map Unit Name:		– ₋oamy Fine Sa	nd		_	ification:	PFOC
slimatic/hydrologic conditions on the site				X		(if no, explai	
		significantly dist				" present? (Y/N)	
regetation Soil or H				, explain any answ			<u> </u>
egetation on or r		_ naturally problem	natio! il fieeded	, explain any answ	ers in Nemi	irks.)	
MARY OF FINDINGS - Atta	ach site map	showing san	npling point	locations, tra	nsects,	important featu	res, etc.
ophytic Vegetation Present? Yes	No.	X					
ic Soil Present? Yes	No	X	Is Sampled Ar a Wetlar		Yes	. N	o X
and Hydrology Present? Yes	—— No	X					
arks:							
SETATION - Use scientific na	ames of plan absolute % cover	Dominant Species?	Indicator Status	Dominance T			
Picea sitchensis	10	Х	FAC	That are OBL, F			3 (A)
Tsuga heterophylla	10	x	FACU				``
Alnus rubra	5	Х	FAC	Total Number of	Dominant		
				Species Across	All Strata:		9 (B)
	25	= Total Cover					
ng/Shrub Stratum (plot size: 15)			Percent of Domi	nant Specie	s	
Rubus ursinus	—' 30	X	FACU	That are OBL, F			3% (A/B)
Saultheria shallon	30	X	FACU				(12)
Cytisus scoparius	20	X	UPL	Prevalence In	dex Worl	sheet:	
Symphoricarpos albus	10		FACU	Total % Cover of	f	Multiply by:	
Physocarpus capitatus	10		FACW	OBL Speci	es	x 1 =	0
	100	= Total Cover		FACW spec	cies	x 2 =	0
				FAC Speci		x 3 =	0
Stratum (plot size: 5	.)			FACU Spec		x 4 =	
Polystichum munitum		X	FACU	UPL Speci		x 5 =	
Carex obnupta	10	X	OBL	Column Tol	tals	0 (A)	0 (B)
Pteridium aquilinum	10	X	FACU	Dravalanas	e Index =B/A	#D	IV/0!
				Prevalence	e muex -b/F		11470:
				Hydrophytic \	/egetatio	n Indicators:	
				,,,,	_	Rapid Test for Hydrop	phytic Vegetation
						Dominance Test is >5	-
	40	= Total Cover				Prevalence Index is ≤	
					4-1	Morphological Adaptat	tions ¹ (provide supporting
)					ta in Remarks or on a	
dy Vine Stratum (plot size:			,			Wetland Non-Vascula	
dy Vine Stratum (plot size:				1	Pro	oblematic Hydrophytic	Vegetation ¹ (Explain)
dy Vine Stratum (plot size:							
dy Vine Stratum (plot size:	0	= Total Cover		¹ Indicators of hyd disturbed or prob Hydrophytic	dric soil and	wetland hydrology mu	ust be present, unless

	Remarks Organic/roots Fine Cobbles Cobbles Cobbles Cobbles Cobbles Cobbles Cors for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (explain in Remarks)
Color (moist) % Color (moist) % Type Loc Texture	Organic/roots Fine Cobbles Cobbles Cobbles Cobbles Cocation: PL=Pore Lining, M=Matrix. Cors for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12)
0-3 10YR 2/1 100 Loamy Sand 3-12 10YR 3/4 70 Loamy Sand 3-12 10YR 3/4 70 Loamy Sand 3-12 Cobble 30 *Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicated Sand Grains. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicated Sand Grains. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicated Sand Grains. Hydrogen Sulfide (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Restrictive Layer (if present): Type: Depth (inches): Hydric Soil Prese Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Plowed Soils (C6) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetaled Concave Surface (B8)	Organic/roots Fine Cobbles Cobbles Cobbles Cobbles Cocation: PL=Pore Lining, M=Matrix. Cors for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12)
3-12 10YR 3/4 70 3-12 Cobble 30 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indical Histosol (A1) Histo Epipedon (A2) Black Histio (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Depleted Matrix (F2) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Micky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Restrictive Layer (if present): Type: Depleted Dark Surface (F7) Redox Depressions (F8) Restrictive Layer (if present): Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Salt Crust (B11) Water Marks (B1) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent iron Reduction in Plowed Soits (C6) Surface Soil Crooks (B6) Sturface Flain in Remarks) Other (Explain in Remarks)	Cobbles Cobbles Cobbles Cocation: PL=Pore Lining, M=Matrix. Cors for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12)
3-12 Cobble 30 1-Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indications: (Applicable to all LRRs, unless otherwise noted.) Indications: (Applicable to all LRRs, unless otherwise noted.) Sandy Redox (S5) Histosol (A1) Sandy Redox (S5) Black Histic (A3) Loarny Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Loarny Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Dark Surface (F8) Restrictive Layer (if present): Type: Deplt (inches): Hydric Soil Presentaris: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Drift Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Algal Mat or Crust (B4) Presence of Reduced Inon (C4) Iron Deposits (B5) Recent fron Reduction in Plowed Soils (C6) Surface Soil Crocks (B6) Sturted or Stressed Plants (D1) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Cobbles Cobbles Cocation: PL=Pore Lining, M=Matrix. Cors for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12)
**Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Black Histos (A2) Stripped Matrix (S6) Black Histos (A3) Loarny Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Restrictive Layer (if present): Type: Depth (inches): Hydric Soil Press Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water stained Leaves (B9) (Except MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Algal Mat or Crust (B4) Pressence of Reduced fron (C4) Iron Deposits (B5) Recent fron Reducton in Plowed Soils (C6) Surface Soil Croaks (B6) Sturface of Indicators (Dther (Explain in Remarks) Sparsely Vegetated Concave Surface (B8)	Cocation: PL=Pore Lining, M=Matrix. Stors for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12)
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Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Fype: Depth (inches): Hydric Soil Present Remarks: HYDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Salt Crust (B11) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	
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Restrictive Layer (if present): Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Recent Iron Reduction in Plowed Soils (C6) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8)	Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or
Type: Depth (inches): Hydric Soil Preserved Hydrology Indicators:	problematic.
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	
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Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Salt Crust (B11) Aquatic Invertebrates (B13) Aquatic Invertebrates (B13) Aquatic Invertebrates (B13) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Water stained Leaves (B9)
Water Marks (B1) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Aquatic Invertebrates (B13) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	(MLRA1, 2, 4A, and 4B)
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Drainage Patterns (B10)
Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Dry-Season Water Table (C2)
Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Geomorphic Position (D2)
Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Recent Iron Reduction in Plowed Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Shallow Aquitard (D3)
Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Fac-Neutral Test (D5)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8)	Raised Ant Mounds (D6) (LRR A)
Sparsely Vegetated Concave Surface (B8)	Frost-Heave Hummocks (D7)
iona epoci, idilotto.	
Surface Water Present? Yes No X Depth (inches):	
	ology Present?
Saturation Present? Yes NoX Depth (inches): >12 includes capillary fringe)	Voc No V
	Yes NoX
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Yes NoX
	Yes NoX
	Yes NoX
lemarks:	Yes NoX
	Yes NoX
	Yes NoX



P	HS#	6338
WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Reg	ion	

ject/Site: Palmberg Prop	erty	City/County:	Gea	rhart/Clatsop	Samplin	ng Date:	3/28/2	018
licant/Owner: Bill Palmberg				Sta	te: OR	Sar	mpling Point:	17
estigator(s): SE/JT/CM	/CR	Section, To	wnship, Range:	Sect	tion 10, Towns	ship 6N, Ra	ange 10W	
dform (hillslope, terrace, etc.:)	Pit	_	Local relief (cor	ncave, convex, none):	Cond	ave	Slope (%):	0
region (LRR): LRF		Lat:	46.02	6 Lor	ng: -123.9	9065	Datum:	WGS84
Map Unit Name:	Gearhart F	– ine Sandy Loai	m	- 000000	Classification:		None	
climatic/hydrologic conditions on the sit				(2)	No (if			
	Hydrology	significantly dist		Are "Normal Circums			Y	
	Hydrology	_		, explain any answers in	•	,		
				, explain any anemore in	r torriamo.)			
MMARY OF FINDINGS - Att	ach site map	showing san	npling point	locations, transe	cts, importa	nt feature	s, etc.	
rophytic Vegetation Present? Yes	X No		Is Sampled Ar	oo within				
ric Soil Present? Yes	X No		a Wetlar	nd?	es	No	X	
and Hydrology Present? Yes	No	X						
arks:								
SETATION - Use scientific n	ames of plan	ts.		_				
	absolute % cover	Dominant Species?	Indicator Status	Dominance Test v	vorksheet:			
Stratum (plot size: 30)	Opecies!	Jiaius	Number of Dominant S	Species			
Alnus rubra	-′ 60	Х	FAC	That are OBL, FACW,	1	3	(A)
					_			,
				Total Number of Domi	nant			
	4			Species Across All Str	ata:	3	(B)
	60	= Total Cover					0.0000	
ing/Shrub Stratum (plot size: 15)			Percent of Dominant S	Species			
Rubus armeniacus	60	Х	FAC	That are OBL, FACW,		100	% (A	/B)
Cytisus scoparius	5		(UPL)				,	,
				Prevalence Index	Worksheet:			
				Total % Cover of	M	lultiply by:		
				OBL Species		x 1 =	0	
	65	= Total Cover		FACW species		x 2 =	0	
Stratum (plot size: 5	\			FAC Species		x 3 =	0	
Unidentified grass	- [/] 20	X	(FAC)	FACU Species UPL Species		x 4 = x 5 =	0	
Polystichum munitum	10		FACU	Column Totals	0 (A	-	0 (B)	
ory out or an in a				Column Foldis		-	(8)	
				Prevalence Inde	x =B/A =	#DIV	//0!	
					_			
				Hydrophytic Vege	tation Indicate	ors:		
					1- Rapid Test	for Hydrophy	tic Vegetation	
				X	2- Dominance			
	30	= Total Cover			3-Prevalence			4.
)			-	_		ns ¹ (provide sup	porting
ty Vine Stratum (nlot size:					5- Wetland No		eparate sheet)	
dy Vine Stratum (plot size:				-			egetation ¹ (Expl	ain)
dy Vine Stratum (plot size:					Joicinatio I	., an opiny ato V	-gordaon (Expli	,
dy Vine Stratum (plot size:		= Total Cover		1 Indicators of hydric so	il and wetland hu	drology must	be present unle	225
dy Vine Stratum (plot size:		= Total Cover		¹ Indicators of hydric so disturbed or problemat		drology must	t be present, unle	ess
are Ground in Herb Stratum	0	= Total Cover		The second secon			t be present, unle	ess

SOIL			PHS#	63	38			Sampling Point:	17
Profile Descri	ption: (Describe to	the depth	needed to docume	nt the indi	cator or conf	firm the absen	ce of indicators.)		
Depth	Matrix			Redox	Features				
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-4	10YR 2/1	100					Loamy Sand		_
4-12	10YR 2/1	95	5YR 3/4	5	C	M	Loamy Sand	Diffuse - Large	
12-20	10YR 2/1	5	5YR 3/4	95	C	M	Loamy Sand	Large	
							P		
Type: C=Cond	centration, D=Depletion	on RM=Re	aduced Matrix CS=	Covered or	Coated Sand	Grains		² Location: PL=Pore Lining, M=Ma	atrix
	Indicators: (Appli					Ciuno.	Indica	ators for Problematic Hydric	
	Histosol (A1)				Sandy Redox	(S5)		2 cm Muck (A10)	
A - A - A	Histic Epipedon (A2)				Stripped Matr			Red Parent Materia	I /TF2)
						Mineral (F1) (e	except MI RA 1)		, ,
	Black Histic (A3)	\					Acopt meron ()	Very Shallow Dark S	
	Hydrogen Sulfide (A4				Loamy Gleye			Other (explain in Re	marks)
	Depleted Below Dark		A11)		Depleted Mat				
	Thick Dark Surface (A				Redox Dark S			³ Indicators of hydrophytic vegetati	on and wetland
	Sandy Mucky Mineral	(S1)				k Surface (F7)		hydrology must be present, unles	
	Sandy Gleyed Matrix	(S4)			Redox Depre	ssions (F8)		problematic.	
Restrictive L	Layer (if present):	;							
Туре:									
Depth (inches	s):				•		Hydric Soil Pres	ent? Yes X N	o
YDROLO	GY drology Indicator	s:							
Primary Indic	cators (minimum o	f one req	uired; check all th	nat apply)	7			Secondary Indicators (2 or n	nore required)
	Surface Water (A1)				Water stained	d Leaves (B9) (I	Except MLRA	Water stained Leav	es (B9)
	High Water Table (A2	2)			1, 2, 4A, and	4B)		(MLRA1, 2, 4A, an	d 4B)
	Saturation (A3)				Salt Crust (B	11)		Drainage Patterns (B10)
/	Water Marks (B1)				Aquatic Inver	tebrates (B13)		Dry-Season Water	Γable (C2)
	Sediment Deposits (E	32)			Hydrogen Sul	ffide Odor (C1)		Saturation Visible of	n Aerial Imagery (C9)
	Drift Deposits (B3)				Oxidized Rhiz	zospheres alonç	Living Roots (C3)	X Geomorphic Positio	n (D2)
/	Algal Mat or Crust (B	4)			Presence of F	Reduced Iron (C	24)	Shallow Aquitard (D	3)
	Iron Deposits (B5)				Recent Iron F	Reduction in Plo	wed Soils (C6)	Fac-Neutral Test (D	5)
	Surface Soil Cracks (B6)			Stunted or St	ressed Plants (I	D1) (LRR A)	Raised Ant Mounds	(D6) (LRR A)
	Inundation Visible on	Aerial Ima	gery (B7)		Other (Explain	n in Remarks)		Frost-Heave Humm	ocks (D7)
	Sparsely Vegetated C	Concave Si	urface (B8)						
ield Obser	vations:				1.00				
Surface Water	Present? Yes		No X	Depth	(inches):				
Vater Table Pi	resent? Yes		No X	Depth	(inches):	>20	Wetland Hyd	rology Present?	
Saturation Pres			No X	Depth	(inches):	>20		Yes N	oX
			4				L		
escribe Reco	rded Data (stream ga	luge, moni	toring well, aerial ph	iotos, previ	ous inspection	ns), if available:			
omarka:									
emarks:									

PHS #	6338
WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region	

ect/Site:	Palmber	g Prope	rty	City/County:	Gea	rhart/Clatsop	Sam	pling Date:	3/28	/2018
cant/Owner:	Bill Palmb	erg				St	ate: OR	_ s	ampling Point:	18
tigator(s):	SE	JT/CM/C	R	Section, To	wnship, Range:	Sec	tion 10, To	wnship 6N, I	Range 10W	
form (hillslope, t	errace, etc.:)		Flats		Local relief (co	ncave, convex, none):			Slope (%):	
egion (LRR):		LRR A	4	Lat:	46.02	27 Lo	ong: -12	23.9059	Datum:	WGS84
lap Unit Name:			Gearhart Fi	– ne Sandy Loar	m	NW	I Classification	n:	None	
imatic/hydrolog	ic conditions o	n the site t	ypical for this tin	ne of year?	Yes			(if no, explain		
egetation				significantly dist		Are "Normal Circum:				
	_	_		_		I, explain any answers i		()		
		_ 01119		- naturally problem	nauc? ii needed	i, explain any answers i	i i i i i i i i i i i i i i i i i i i			
MARY OF	FINDINGS	– Attac	h site map	showing san	npling point	locations, transe	ects, impo	rtant featur	es, etc.	
phytic Vegetation	on Present?	Yes	X No							
c Soil Present?		Yes	No	х	Is Sampled Ar	rea within nd?	Yes	No	X	
and Hydrology P	resent?	Yes	No	X					9	
arks:										
ETATION -	Use scien	tific nar	nes of plan	ts.						
			absolute	Dominant	Indicator	Dominance Test	worksheet:			
			% cover	Species?	Status					
Stratum (plot		30)		v	540	Number of Dominant				(4)
icea sitchen			20	<u>X</u>	FAC	That are OBL, FACW	, or FAC:		6	(A)
Inidentified L Inus rubra	.aurei		10	<u>x</u>	FAC	Total Number of Dem	ninant			
ilius rubra					FAC	Total Number of Dom Species Across All S			8	(B)
			50	= Total Cover		Species Across Air S	II ala.		<u> </u>	(6)
				- Total Cover						
ng/Shrub Stratu	_	15	- ′		=	Percent of Dominant		_		
Saultheria sh			30	x	FACU	That are OBL, FACW	, or FAC:		5%	(A/B)
Rubus specta Rubus armen			15		FAC	Prevalence Index	Workshoot			
Prunus sp. (L			10		(FAC)	Total % Cover of	Worksheet	Multiply by:		
lex aquifolium			5		FACU	OBL Species		x 1 =	- 0	
,			90	= Total Cover		FACW species		x 2 =	0	
						FAC Species		x 3 =	0	
Stratum (plot	size:	5)				FACU Species		x 4 =	0	
teridium aqu	ilinum		10	X	FACU	UPL Species		x 5 =	0	
lechnum spi	icant		10	X	FAC	Column Totals	0	_(A)	0	(B)
						Prevalence Ind	ex =B/A =	#DI	IV/0!	
						Lludranhutia Van	atation India			
						Hydrophytic Vege			hytic Vegetation	
						X		ance Test is >5		
			20	= Total Cover				nce Index is ≤ 3		
				10101 00101					ions ¹ (provide s	upporting
y Vine Stratum	(plot size:		_)				data in Re	marks or on a	separate sheet)
							5- Wetlan	d Non-Vascular	Plants ¹	
T							Problema	tic Hydrophytic	Vegetation ¹ (Ex	xplain)
			0	= Total Cover	· · · · ·	¹ Indicators of hydric s		d hydrology mu	st be present, ι	ınless
						disturbed or problems	atic.			
						Hydrophytic	. V.		Ma	
re Ground in He	erb Stratum	,	10			Vegetation	Yes	s X	No	

	PHS#	6338		Sampling Point: 18
Profile Description: (Describe to the depth	needed to docume	nt the indicator or confirm the a	bsence of indicators.)	
Depth Matrix		Redox Features		
(Inches) Color (moist) %	Color (moist)	% Type ¹ Loc ²	Texture	Remarks
0-18 10YR 2/1 100			Sandy Loam	
Type: C=Concentration, D=Depletion, RM=R	educed Matrix, CS=C	Covered or Coated Sand Grains.		² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to	all LRRs, unless	otherwise noted.)	Indica	ators for Problematic Hydric Soils ³ :
Histosol (A1)	,	Sandy Redox (S5)		2 cm Muck (A10)
Histic Epipedon (A2)	,	Stripped Matrix (S6)		Red Parent Material (TF2)
Black Histic (A3)		Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F	(2)	Other (explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)		
Thick Dark Surface (A12)	-	Redox Dark Surface (F	5)	3
Sandy Mucky Mineral (S1)		Depleted Dark Surface	(F7)	Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or
Sandy Gleyed Matrix (S4)		Redox Depressions (F8)	problematic.
Restrictive Layer (if present):				
Гуре:				
Depth (inches):			Hydric Soil Pres	sent? Yes No X
Remarks:			Trydric Con 1 1cc	165 165
Vetland Hydrology Indicators:	uired; check all th	at apply)		Secondary Indicators (2 or more required)
Vetland Hydrology Indicators:	uired; check all th	Water stained Leaves (B9) (Except MLRA	Water stained Leaves (B9)
Vetland Hydrology Indicators: rimary Indicators (minimum of one req	uired; check all th		B9) (Except MLRA	
rimary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3)	uired; check all th	Water stained Leaves (B9) (Except MLRA	Water stained Leaves (B9)
Vetland Hydrology Indicators: rimary Indicators (minimum of one require Surface Water (A1) High Water Table (A2)	uired; check all th	Water stained Leaves (Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
Vetland Hydrology Indicators: Irimary Indicators (minimum of one red Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	uired; check all th	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (I Hydrogen Sulfide Odor	313) (C1)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10)
rimary Indicators (minimum of one requirement) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	uired; check all th	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (I Hydrogen Sulfide Odor Oxidized Rhizospheres	813) (C1) along Living Roots (C3)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
/etland Hydrology Indicators: rimary Indicators (minimum of one requestry and provided in the content of the co	juired; check all th	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (I Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced II	813) (C1) along Living Roots (C3) on (C4)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Vetland Hydrology Indicators: rimary Indicators (minimum of one requestry Indicators (minimum of one requestry Indicators (Management Page 1974) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	uired; check all th	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (I Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced In Recent Iron Reduction	(C1) along Living Roots (C3) on (C4) n Plowed Soils (C6)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5)
Vetland Hydrology Indicators: Primary Indicators (minimum of one requirement of surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)		Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (I Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced II Recent Iron Reduction Stunted or Stressed Pla	(C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) ints (D1) (LRR A)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one requirement of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima		Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (I Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced In Recent Iron Reduction	(C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) ints (D1) (LRR A)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5)
Vetland Hydrology Indicators: Primary Indicators (minimum of one requirement of surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)		Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (I Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced II Recent Iron Reduction Stunted or Stressed Pla	(C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) ints (D1) (LRR A)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one requirement of surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima		Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (I Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced II Recent Iron Reduction Stunted or Stressed Pla	(C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) ints (D1) (LRR A)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Vetland Hydrology Indicators: Verimary Indicators (minimum of one requirement of surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imales Sparsely Vegetated Concave Sileld Observations:		Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (I Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced II Recent Iron Reduction Stunted or Stressed Pla	(C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) ints (D1) (LRR A)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Perimary Indicators (minimum of one requirement of surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imales Sparsely Vegetated Concave Strield Observations: urface Water Present? Yes	igery (B7) urface (B8)	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (I Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced II Recent Iron Reduction Stunted or Stressed Pla Other (Explain in Rema	a13) (C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) ints (D1) (LRR A) rks)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Perimary Indicators (minimum of one requirement of surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Sparsely Vegetated Concave Sieurface Water Present? Ves Saturation Present? Yes Saturation Present? Yes	igery (B7) urface (B8)	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (I Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced II Recent Iron Reduction Stunted or Stressed Pla Other (Explain in Rema	a13) (C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) ints (D1) (LRR A) rks)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requestry and primary Indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imales Sparsely Vegetated Concave Serield Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes Includes capillary fringe)	No X No X No X	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (I Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced II Recent Iron Reduction Stunted or Stressed Pla Other (Explain in Rema	(C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) ints (D1) (LRR A) rks) Wetland Hydi	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requestry and primary Indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imales Sparsely Vegetated Concave Serield Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes Includes capillary fringe)	No X No X No X	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (I Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced II Recent Iron Reduction Stunted or Stressed Pla Other (Explain in Rema	(C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) ints (D1) (LRR A) rks) Wetland Hydi	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requestry and content of the property of the	No X No X No X	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (I Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced II Recent Iron Reduction Stunted or Stressed Pla Other (Explain in Rema	(C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) ints (D1) (LRR A) rks) Wetland Hydi	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Sparsely Vegetated Concave S Field Observations: Surface Water Present? Yes Water Table Present? Yes	No X No X No X	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (I Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced II Recent Iron Reduction Stunted or Stressed Pla Other (Explain in Rema	(C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) ints (D1) (LRR A) rks) Wetland Hydi	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requestriance Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imales Sparsely Vegetated Concave Serial	No X No X No X	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (I Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced II Recent Iron Reduction Stunted or Stressed Pla Other (Explain in Rema	(C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) ints (D1) (LRR A) rks) Wetland Hydi	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requestriance Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Sparsely Vegetated Concave S Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes includes capillary fringe) Describe Recorded Data (stream gauge, monitored)	No X No X No X	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (I Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced II Recent Iron Reduction Stunted or Stressed Pla Other (Explain in Rema	(C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) ints (D1) (LRR A) rks) Wetland Hydi	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

	PHS#	63
WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast	Region	

Project/Site:	Palmberg Property		City/County:	Gea	hart/Clatsop Sampling Date:		3/28/2018			
Applicant/Owner:	Bill Palmb	erg					State: C	DR	Sampling Point:	19
Investigator(s):	SE	JT/CM/C	R	Section, To	ownship, Range:		Section 10	, Township 6N	I, Range 10W	
Landform (hillslope, t	terrace, etc.:)		Ditch	1	Local relief (cor	ncave, convex, nor	ne):		Slope (%):	
Subregion (LRR):		LRR A	A	Lat:	46.02	7	Long:	-123.9059	Datum:	WGS84
Soil Map Unit Name:			Gearhart F	Fine Sandy Loa	m		NWI Classific	cation:	None	
Are climatic/hydrolog	ic conditions o	n the site t	ypical for this t	ime of year?	Yes	X	No	(if no, exp	lain in Remarks)	21
Are vegetation	Soil	or Hy	drology	significantly dist	turbed?	Are "Normal Cir		present? (Y/N)		
Are vegetation	Soil	or Hy	/drology	naturally proble	matic? If needed	, explain any answ	ers in Remark	(S.)		
		_		_						
SUMMARY OF	FINDINGS	– Attac	h site map	showing san	npling point	locations, tra	insects, in	nportant feat	ures, etc.	
Hydrophytic Vegetati	on Present?	Yes	X N	lo	Is Sampled Ar	es within				
Hydric Soil Present?		Yes _	X N	lo	a Wetlar		Yes	Χ	No	
Wetland Hydrology P	resent?	Yes	X N	lo						
Remarks:										
								,		
VEGETATION -	Use scien	tific nar	nes of plai	nts.						
			absolute	Dominant	Indicator	Dominance T	est worksh	eet:		
Tree Stratum (plot	size.		% cover	Species?	Status	Number of Domi	nant Chasian			
1						That are OBL, F	•		1	(A)
						Triat are OBL, 17	ACW, OIT AC			(^)
•				-		Total Number of	Dominant			
4						Species Across			1	(B)
			0	= Total Cover		Ι΄.		-		. ,
Sapling/Shrub Stratu	m (plot size) :	`			Percent of Domin	nant Species			
1	<u></u> (plot 3/20		-'			That are OBL, FA	• • • • • • • • • • • • • • • • • • • •	·	100%	(A/B)
2				-		, marare obe, 17	novi, orinc		100 70	(,,,,
3						Prevalence In	dex Works	heet:		
4						Total % Cover of	f	Multiply by	r.	
5						OBL Speci	es	x 1 =	0	
			0	= Total Cover		FACW spec	cies	x 2 =	0	
		_				FAC Speci		x 3 =	0	
Herb Stratum (plot	size:	5)				FACU Spec		x 4 =	0	
1 Carex sp.				<u> </u>	(FAC)	UPL Speci		x 5 =	0	(5)
2 Carex obnupt 3	a				OBL	Column Tot	tais	0 (A)	0	(B)
4						Prevalence	e Index =B/A =	- +	DIV/0!	
5						1 Te Valence	IIIdex -b/A -		DIVIO:	
6						Hydrophytic \	/egetation	Indicators:		
7							_	apid Test for Hydr	ophytic Vegetatio	n
8					-		X 2- Do	ominance Test is	>50%	
			.75	= Total Cover				evalence Index is		
								orphological Adap		
Woody Vine Stratum	(plot size:		_)					in Remarks or on)
1								etland Non-Vascu		
2		-				landia - 4		lematic Hydrophy		
			0	= Total Cover		'Indicators of hyd disturbed or prob		etland hydrology	must be present,	unless
						Hydrophytic				
% Bare Ground in He	erb Stratum					Vegetation		Yes X	No	
						Present?				

Profile Descrip Depth (Inches) 0-12			PHS#_	6338			Sampling Point:	19
(Inches)	ption: (Describe to the	depth ne	eded to docume	nt the indicator or conf	irm the absence of indi	cators.)		
	Matrix			Redox Features				
0-12	Color (moist)	%	Color (moist)	% Type ¹	Loc ² Tex	ture	Remarks	
	10YR 2/1	100			Loamy	/ Sand		
							×	
				Covered or Coated Sand	Grains.		n: PL=Pore Lining, M=Matr	
lydric Soil Ir	ndicators: (Applica	ble to al	I LRRs, unless	otherwise noted.)		Indicators for	Problematic Hydric S	oils':
Н	Histosol (A1)			Sandy Redox	(S5)		2 cm Muck (A10)	
Н	Histic Epipedon (A2)			Stripped Matri	x (S6)		Red Parent Material (TF2)
В	Black Histic (A3)			Loamy Mucky	Mineral (F1) (except MLR	A 1)	Very Shallow Dark Su	rface (TF12)
<u>х</u> н	lydrogen Sulfide (A4)			Loamy Gleyed	Matrix (F2)		Other (explain in Rem	arks)
D	Depleted Below Dark Su	rface (A1	1)	Depleted Matr	ix (F3)			
т	hick Dark Surface (A12	?)		Redox Dark S	urface (F6)	3Indiant-	re of hydrophytic vesstation	and wotland
s	Sandy Mucky Mineral (S	1)		Depleted Dark	(Surface (F7)		rs of hydrophytic vegetatior gy must be present, unless	
s	Sandy Gleyed Matrix (S4	ł)		Redox Depres	ssions (F8)		problematic.	
Restrictive L	ayer (if present):							
уре:								
epth (inches):):				Hydric 5	Soil Present? Y	es X No	
IYDROLOG	GY Irology Indicators:							
	ators (minimum of o	ne requi	ed: chack all th	at apply)		Sacon	dary Indicators (2 or mo	re required)
	Surface Water (A1)	ne requi	ed, check all th		Leaves (B9) (Except MI		Water stained Leaves	
	ligh Water Table (A2)		3	1, 2, 4A, and			(MLRA1, 2, 4A, and	, ,
	Saturation (A3)			Salt Crust (B1	1)		Drainage Patterns (B1	0)
	Vater Marks (B1)		Ta a	Aquatic Invert			Dry-Season Water Tal	-,
W	Sediment Deposits (B2)			Hydrogen Sulf	fide Odor (C1)			ble (C2)
	rift Deposits (B3)						Saturation Visible on A	
S				Oxidized Rhize	ospheres along Living Ro	oots (C3) X	-	Verial Imagery (C9
S. D.	ligal Mat or Crust (B4)				ospheres along Living Ro	pots (C3) X		Verial Imagery (C9
S	on Deposits (B5)			Presence of R			Geomorphic Position (Verial Imagery (C9
Si D D Al		į.		Presence of R	Reduced Iron (C4)	(C6)	Geomorphic Position (Shallow Aquitard (D3)	Aerial Imagery (C9
Si S	on Deposits (B5)		y (B7)	Presence of R	Reduced Iron (C4) eduction in Plowed Soils essed Plants (D1) (LRR A	(C6)	Geomorphic Position (Shallow Aquitard (D3) Fac-Neutral Test (D5)	Aerial Imagery (C9 D2)
Si Di Al	on Deposits (B5) Surface Soil Cracks (B6)	rial Image		Presence of R Recent Iron R Stunted or Str	Reduced Iron (C4) eduction in Plowed Soils essed Plants (D1) (LRR A	(C6)	Geomorphic Position (Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D	Aerial Imagery (C9 D2)
Si S	on Deposits (B5) durface Soil Cracks (B6) dundation Visible on Aer deparsely Vegetated Cond	rial Image		Presence of R Recent Iron R Stunted or Str	Reduced Iron (C4) eduction in Plowed Soils essed Plants (D1) (LRR A	(C6)	Geomorphic Position (Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D	Aerial Imagery (C9 D2)
Si S	on Deposits (B5) surface Soil Cracks (B6) nundation Visible on Aer sparsely Vegetated Conductations:	rial Image		Presence of R Recent Iron R Stunted or Str	Reduced Iron (C4) eduction in Plowed Soils essed Plants (D1) (LRR A	(C6)	Geomorphic Position (Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D	Aerial Imagery (C9 D2) D6) (LRR A)
Si D D Al Iro Si	on Deposits (B5) furface Soil Cracks (B6) fundation Visible on Aer sparsely Vegetated Concrations:	rial Image cave Surfa	ace (B8)	Presence of R Recent Iron R Stunted or Str Other (Explain	Reduced Iron (C4) eduction in Plowed Soils essed Plants (D1) (LRR A n in Remarks)	(C6)	Geomorphic Position (Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D Frost-Heave Hummoc	Aerial Imagery (C9 D2)
Signal Si	on Deposits (B5) curface Soil Cracks (B6) cundation Visible on Aer cparsely Vegetated Concrations: Present? Yes ent? Yes ent? Yes	rial Image cave Surfa	No	Presence of R Recent Iron R Stunted or Str Other (Explain	Reduced Iron (C4) eduction in Plowed Soils essed Plants (D1) (LRR A n in Remarks)	(C6) A) and Hydrology P	Geomorphic Position (Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D Frost-Heave Hummoc	Aerial Imagery (C9 D2) D6) (LRR A)
Signal Si	on Deposits (B5) surface Soil Cracks (B6) nundation Visible on Aer sparsely Vegetated Concrations: Present? Yes esent? Yes ent? Yes fringe)	x X X	NoNo	Presence of R Recent Iron R Stunted or Str Other (Explain Depth (inches): Depth (inches):	Reduced Iron (C4) eduction in Plowed Soils ressed Plants (D1) (LRR / n in Remarks) 4 0 Wetl:	(C6) A) and Hydrology P	Geomorphic Position (Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D Frost-Heave Hummoc	Aerial Imagery (C9 D2) D6) (LRR A)
Signal Si	on Deposits (B5) surface Soil Cracks (B6) nundation Visible on Aer sparsely Vegetated Concrations: Present? Yes esent? Yes ent? Yes fringe)	x X X	NoNo	Presence of R Recent Iron R Stunted or Str Other (Explain Depth (inches): Depth (inches):	Reduced Iron (C4) eduction in Plowed Soils ressed Plants (D1) (LRR / n in Remarks) 4 0 Wetl:	(C6) A) and Hydrology P	Geomorphic Position (Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D Frost-Heave Hummoc	Aerial Imagery (C9 D2)
Signal Si	on Deposits (B5) surface Soil Cracks (B6) nundation Visible on Aer sparsely Vegetated Concrations: Present? Yes esent? Yes ent? Yes fringe)	x X X	NoNo	Presence of R Recent Iron R Stunted or Str Other (Explain Depth (inches): Depth (inches):	Reduced Iron (C4) eduction in Plowed Soils ressed Plants (D1) (LRR / n in Remarks) 4 0 Wetl:	(C6) A) and Hydrology P	Geomorphic Position (Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D Frost-Heave Hummoc	Aerial Imagery (C9 D2)
Signal Si	on Deposits (B5) surface Soil Cracks (B6) nundation Visible on Aer sparsely Vegetated Concrations: Present? Yes esent? Yes ent? Yes fringe)	x X X	NoNo	Presence of R Recent Iron R Stunted or Str Other (Explain Depth (inches): Depth (inches):	Reduced Iron (C4) eduction in Plowed Soils ressed Plants (D1) (LRR / n in Remarks) 4 0 Wetl:	(C6) A) and Hydrology P	Geomorphic Position (Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D Frost-Heave Hummoc	Aerial Imagery (C9 D2)
Signal Si	on Deposits (B5) surface Soil Cracks (B6) nundation Visible on Aer sparsely Vegetated Concrations: Present? Yes esent? Yes ent? Yes fringe)	x X X	NoNo	Presence of R Recent Iron R Stunted or Str Other (Explain Depth (inches): Depth (inches):	Reduced Iron (C4) eduction in Plowed Soils ressed Plants (D1) (LRR / n in Remarks) 4 0 Wetl:	(C6) A) and Hydrology P	Geomorphic Position (Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D Frost-Heave Hummoc	Aerial Imagery (C9 D2) D6) (LRR A)

PHS # 6338 WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

oject/Site: Palmberg Property		City/County:	Gear	rhart/Clatsop	Sampling Date:	3/28	/2018
licant/Owner: Bill Palm	berg			State:	OR	Sampling Point:	20
estigator(s):	JT/CM/CR	Section, To	ownship, Range:	Section	10, Township 6N	l, Range 10W	
dform (hillslope, terrace, etc.:)			Local relief (con	ncave, convex, none):		Slope (%):	
region (LRR):	LRR A	Lat:	46.02	7 Long:	-123.9059	Datum:	WGS84
Map Unit Name:	Gearhart	Fine Sandy Loai	m	NWI Clas	sification:	PEMIC	
climatic/hydrologic conditions	on the site typical for this	time of year?	Yes	X No	(if no, expl	ain in Remarks)	
vegetation Soil	or Hydrology	significantly dist	turbed?	Are "Normal Circumstance	es" present? (Y/N)	Υ	
vegetation Soil	or Hydrology	naturally proble	matic? If needed,	explain any answers in Rer	narks.)		
	_ ,			, ,			
MMARY OF FINDINGS	5 – Attach site ma	p showing san	npling point	locations, transects	important feat	ures, etc.	
ophytic Vegetation Present?	Yes X	No	Is Sampled Are	ea within			
ic Soil Present?	Yes	No X	a Wetlan			No X	
and Hydrology Present?	Yes	NoX					
GETATION - Use scie			In disease	In: T			
	absolute % cover		Indicator Status	Dominance Test work	sneet:		
Stratum (plot size:)			Number of Dominant Spec	ies		
				That are OBL, FACW, or F	AC:	1	(A)
				Total Number of Dominant			
				Species Across All Strata:		1	(B)
	0	= Total Cover					
ing/Shrub Stratum (plot siz	e:)			Percent of Dominant Spec	es		
				That are OBL, FACW, or I	AC:	100%	(A/B)
				Prevalence Index Wo			
				Total % Cover of OBL Species	Multiply by x 1 =	· 0	
	0	= Total Cover		FACW species	x 2 =	0	
		_		FAC Species	x 3 =	0	
Stratum (plot size:	5)			FACU Species	x 4 =	0	
Unidentified grass	90	X	(FAC)	UPL Species	x 5 =	0	
Juncus effusus	10		FACW	Column Totals	0 (A)	0	(B)
Equisetum sp.	2		(FAC)				
Lotus corniculatus	1		FAC	Prevalence Index =B	/A = #	DIV/0!	
		-		Hydrophytic Vegetation	n Indicators:		
					on Indicators: - Rapid Test for Hydr	onhytic Vegetation	1
					- Rapid Test for Hydr - Dominance Test is		* **:
	103	= Total Cover			-Prevalence Index is		
		_			-Morphological Adapt		upporting
dy Vine Stratum (plot size:)			d	ata in Remarks or on	a separate sheet)
					- Wetland Non-Vascu		
				P	roblematic Hydrophy		,
							inlace
	0	= Total Cover		¹ Indicators of hydric soil an disturbed or problematic. Hydrophytic	d wetland hydrology i	must be present, ι	iness

SOIL			PHS#	63	38			Sampling Point: 20
Profile Descri	ption: (Describe to	the depth	needed to docume	nt the indi	cator or conf	firm the absen	ce of indicators.)	
Depth	Matrix				x Features		,	
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	7.5YR 2.5/2	100					Silt Loam	10% gravel
6-11	10YR 3/3	100					Silt Loam	
11-16	2.5YR 3/3	93	10YR 3/4	7	C	M	Fine Sand	Medium
¹ Type: C=Cond	entration, D=Deplet	ion RM=Re	educed Matrix. CS=	Covered or	Coated Sand	d Grains.		² Location: PL=Pore Lining, M=Matrix.
	ndicators: (Appl						Indic	ators for Problematic Hydric Soils ³ :
	Histosol (A1)				Sandy Redox	(S5)		2 cm Muck (A10)
	Histic Epipedon (A2)				Stripped Matr			Red Parent Material (TF2)
	Black Histic (A3)					Mineral (F1) (e	except MLRA 1)	Very Shallow Dark Surface (TF12)
	Hydrogen Sulfide (A	4)			Loamy Gleye			Other (explain in Remarks)
	Depleted Below Dark	-	A11)		Depleted Mat			
	hick Dark Surface (Redox Dark S			
	Sandy Mucky Minera					k Surface (F7)		³ Indicators of hydrophytic vegetation and wetland
	Sandy Gleyed Matrix				Redox Depre	, ,		hydrology must be present, unless disturbed or problematic.
Restrictive L	.ayer (if present)	·						
Туре:					-			
Depth (inches):				_		Hydric Soil Pres	sent? Yes NoX
HYDROLO Wetland Hyo	GY Irology Indicator	rs:						
Primary Indic	ators (minimum o	of one req	uired; check all th	nat apply)				Secondary Indicators (2 or more required)
	Surface Water (A1)				Water stained	d Leaves (B9) (Except MLRA	Water stained Leaves (B9)
H	ligh Water Table (A	2)			1, 2, 4A, and	4B)		(MLRA1, 2, 4A, and 4B)
	Saturation (A3)				Salt Crust (B	11)		Drainage Patterns (B10)
\	Vater Marks (B1)				Aquatic Inver	tebrates (B13)		Dry-Season Water Table (C2)
8	Sediment Deposits (32)			Hydrogen Sul	Ifide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
	Orift Deposits (B3)				Oxidized Rhiz	zospheres along	g Living Roots (C3)	Geomorphic Position (D2)
	Algal Mat or Crust (B	4)				Reduced Iron (C		Shallow Aquitard (D3)
	ron Deposits (B5)			Recent Iron Reduction in Plowed Soils (C6)				Fac-Neutral Test (D5)
	Surface Soil Cracks			Stunted or Stressed Plants (D1) (LRR A)				Raised Ant Mounds (D6) (LRR A)
	nundation Visible on				Other (Explain	n in Remarks)		Frost-Heave Hummocks (D7)
	Sparsely Vegetated (Joncave Su	итасе (В8)					
ield Observ	rations:							
Surface Water	Present? Yes		No X	Depth	(inches):		ľ	
Water Table Pr	esent? Yes	X	No	Depth	(inches):	17	Wetland Hyd	Irology Present?
Saturation Pres		<u> x</u>	No	Depth	(inches):	15		Yes NoX
			toring walli-t	otoo :	eun ing	no) if our il = 1.1	<u> </u>	
Describe Recoi	ded Data (stream g	auge, monii	toring well, aerial pri	iotos, previ	ous inspection	ns), if available:		
\								
Remarks:								

	PHS#	63
WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast	Region	

Project/Site:	et/Site: Palmberg Property			Gea	rhart/Clatsop	Sampli	ng Date:	3/28	2018	
Applicant/Owner:	Bill Palmberg				State	e: OR	OR		21	
Investigator(s):	vestigator(s): SE/JT/CM/CR			wnship, Range:			ship 6N	, Range 10W		
Landform (hillslope, te	rrace, etc.:)		_	Local relief (co	ncave, convex, none):			Slope (%):		
Subregion (LRR):	LRR	Α	Lat:	46.02	27 Lone	g: -123	.9059		WGS84	
Soil Map Unit Name:		Gearhart F	– ine Sandy Loar			Classification:		PEMIC		
,	conditions on the site t					-		ain in Remarks)	-	
Are vegetation		.512	significantly dist					•		
Are vegetation		ydrology	_		d, explain any answers in		(,			
					, , , , , , , , , , , , , , , , , , , ,	,				
SUMMARY OF F	INDINGS - Attac	ch site map	showing san	pling point	locations, transec	ts, importa	ant feat	ures, etc.	8084.248	
Hydrophytic Vegetatio	n Present? Yes	X No)	Is Sampled Ar	roa within					
Hydric Soil Present?	Yes	X No		a Wetlar		es X	I	No		
Wetland Hydrology Pr	esent? Yes	X No								
Remarks:										
VEGETATION -	Use scientific na	mes of plan								
		absolute % cover	Dominant Species?	Indicator Status	Dominance Test w	orksheet:				
Tree Stratum (plot s	size: 30	70 00 001	- Opecies :	Otatus	Number of Dominant S	pecies				
1 Alnus rubra		20	х	FAC	That are OBL, FACW,			5	(A)	
2						-				
3					Total Number of Domin	ant				
4					Species Across All Stra	ata:		5	(B)	
		20	= Total Cover							
Sapling/Shrub Stratum	1 (plot size: 10)			Percent of Dominant S	pecies				
1 Rubus armenia	acus	15	X	FAC	That are OBL, FACW,	or FAC:		100%	(A/B)	
2 Alnus rubra		10	х	FAC						
3					Prevalence Index \	Vorksheet:				
4					Total % Cover of		Multiply by:	<u> </u>		
5					OBL Species		x 1 =	0		
		25	= Total Cover		FACW species		x 2 =	0		
Herb Stratum (plot s	size: 5)				FAC Species FACU Species		x 3 = x 4 =	0		
1 Unidentified gr		65	Х	(FAC)	UPL Species		x 5 =			
2 Juncus effusus		25	x	FACW	Column Totals	0 (A)	0	(B)	
3 Equisetum sp.		10		(FAC)						
4					Prevalence Index	=B/A =	#	DIV/0!		
5										
6					Hydrophytic Veget	ation Indicat	tors:			
7						_ 1- Rapid Tes	st for Hydro	ophytic Vegetation	1	
8					x	2- Dominano				
		100	= Total Cover			3-Prevalence		≤ 3.01 ations ¹ (provide s	upporting	
Woody Vine Stratum	(plot size:)				_		a separate sheet		
1						5- Wetland N			,	
2								ic Vegetation ¹ (E	φlain)	
		0	= Total Cover		¹ Indicators of hydric soi					
					disturbed or problemati					
% Bare Ground in Her	b Stratum	0			Hydrophytic Vegetation	Yes	х	No		
					Present?	163_	^			
Remarks:	•		_							
Equisetum will ma	ike up a much larg	er portion of	cover when ma	ature; plants a	are only 2 to 4 inches	s tall at this	ume.			

SOIL			PHS#	6338			Sampling Point: 21	_
Profile Descr	ription: (Describe to	the depth	needed to docume	nt the indicator	or confirm the abs	sence of indicators.)		
Depth	Matrix			Redox Fea	tures	_		
(Inches)	Color (moist)	%	Color (moist)	<u> %</u> T	ype ¹ Loc ²	Texture	Remarks	_
0-7	10YR 2/2	96	5YR 3/4	3	С М	Loamy Sand	Fine	_
0-7			5YR 3/4	1	C PL		OR's	
7-12	10YR 2/1	97	7.5YR 2.5/3	3	C M	Loamy Sand		_
12-14	2.5YR 3/1	90	10YR 3/6	10	С М	Sand	Medium	_
								_
						_		
ype: C=Con	centration, D=Depleti	on, RM=Re	educed Matrix, CS=0	Covered or Coat	ed Sand Grains.		² Location: PL=Pore Lining, M=Matrix.	
ydric Soil	Indicators: (Appl	icable to	all LRRs, unless	s otherwise n	oted.)	Indica	tors for Problematic Hydric Soils ³ :	
	Histosol (A1)			Sand	y Redox (S5)		2 cm Muck (A10)	
	Histic Epipedon (A2)			Stripp	ped Matrix (S6)		Red Parent Material (TF2)	
	Black Histic (A3)			Loam	y Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)	
	Hydrogen Sulfide (A4	1)		Loam	y Gleyed Matrix (F2))	Other (explain in Remarks)	
	Depleted Below Dark	Surface (A	A11)	Deple	eted Matrix (F3)			
	Thick Dark Surface (A12)		X Redo	x Dark Surface (F6)			
	Sandy Mucky Minera			Deple	eted Dark Surface (F	7)	³ Indicators of hydrophytic vegetation and wetland	
	Sandy Gleyed Matrix			Redo	x Depressions (F8)		hydrology must be present, unless disturbed or problematic.	
estrictive	Layer (if present)						·	
	Layer (ii present)							
/pe:								
epth (inches	s):					Hydric Soil Pres	ent? Yes X No No	_
emarks:								
IYDROLO Vetland Hy	OGY drology Indicator	s:						
imary Indi	cators (minimum c	of one req	uired; check all th				Secondary Indicators (2 or more required)	<u>) </u>
	Surface Water (A1)				r stained Leaves (B9	(Except MLRA	Water stained Leaves (B9)	
	High Water Table (A2	2)			4A, and 4B)		(MLRA1, 2, 4A, and 4B)	
	Saturation (A3)				Crust (B11)		Drainage Patterns (B10)	
	Water Marks (B1)				tic Invertebrates (B1		Dry-Season Water Table (C2)	
	Sediment Deposits (E	32)			ogen Sulfide Odor (C		Saturation Visible on Aerial Imagery	(C9)
	Drift Deposits (B3)	43				ong Living Roots (C3)	Geomorphic Position (D2)	
	Algal Mat or Crust (B	4)			ence of Reduced Iron		Shallow Aquitard (D3)	
	Iron Deposits (B5)	DE)			nt Iron Reduction in ed or Stressed Plant		X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)	
	Surface Soil Cracks (Inundation Visible on		cop/(P7)		(Explain in Remark		Frost-Heave Hummocks (D7)	
				Other	(Explain in Remark	5)	Prost-neave nummocks (D7)	
			undoc (bo)					
eia Ubser	Sparsely Vegetated C	Juncave St						
	vations:	Concave St	No. V	Danith Grah				
rface Water	rvations: r Present? Yes		No X	Depth (inche		- Motland Hude	olowy Process (2	
rface Water ater Table P	rvations: r Present? Yes Present? Yes	x	No	Depth (inche	es): 8	– Wetland Hydr	ology Present?	
urface Water ater Table P aturation Pre	ryations: r Present? Yes Present? Yes esent? Yes				es): 8	_ Wetland Hydr _	ology Present? Yes X No	_
urface Water later Table P aturation Pre acludes capillar	r Present? Yes		No	Depth (inche	es): 8 es): 5	_		
urface Water later Table P aturation Pre acludes capillar	ryations: r Present? Yes Present? Yes esent? Yes		No	Depth (inche	es): 8 es): 5	_		_
urface Water /ater Table P aturation Pre	r Present? Yes		No	Depth (inche	es): 8 es): 5	_		_
urface Water /ater Table P aturation Pre loludes capillar escribe Reco	r Present? Yes		No	Depth (inche	es): 8 es): 5	_		
urface Water ater Table P aturation Pre cludes capillar escribe Reco	r Present? Yes		No	Depth (inche	es): 8 es): 5	_		
urface Water later Table P aturation Pre cludes capillar	r Present? Yes		No	Depth (inche	es): 8 es): 5	_		_
rface Water ater Table P turation Pre ludes capillar scribe Recc	r Present? Yes		No	Depth (inche	es): 8 es): 5	_		_

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Palmberg Pr	operty	City/County:	Gea	rhart/Clatsop	Sampling Date:	3/28/2018
Applicant/Owner: Bill Palmberg				State:	OR	Sampling Point: 22
Investigator(s): SE/JT/C	M/CR	Section, To	wnship, Range:	Section	10, Township 6N,	Range 10W
Landform (hillslope, terrace, etc.:)	Flats		Local relief (cor	ncave, convex, none):	Convex	Slope (%):
Subregion (LRR):	RR A	Lat:	46.026		-123.9063	Datum: WGS84
Soil Map Unit Name:	Gearhart Fir	- ne Sandy Loai	m	NWI Clas	sification:	PEMIC
Are climatic/hydrologic conditions on the	site typical for this tim	e of year?	Yes	X No	(if no, expla	in in Remarks)
Are vegetation Soil	or Hydrology	significantly dist	urbed?	Are "Normal Circumstance	es" present? (Y/N)	Υ
Are vegetation Soil	or Hydrology	 naturally proble 	matic? If needed,	, explain any answers in Rem	narks.)	
SUMMARY OF FINDINGS – A			npling point	locations, transects,	important featu	ires, etc.
Hydrophytic Vegetation Present? Yes	X No		Is Sampled Ar	ea within		
Hydric Soil Present? Yes	X No		a Wetlan			10 X
Wetland Hydrology Present? Yes	No	X				
Remarks:						
VEGETATION - Use scientific			I = -1! 1	In-minute 7 :	ab a str	
	absolute % cover	Dominant Species?	Indicator Status	Dominance Test work	sneet:	
Tree Stratum (plot size:)	-		Number of Dominant Speci	es	
1				That are OBL, FACW, or F.	AC:	1 (A)
2						
3				Total Number of Dominant		
4				Species Across All Strata:		1 (B)
	0	= Total Cover				
Sapling/Shrub Stratum (plot size:)			Percent of Dominant Speci	es	
1				That are OBL, FACW, or F	AC: 1	00% (A/B)
2	_					
3				Prevalence Index Wor	ksheet:	
4				Total % Cover of	Multiply by:	
5				OBL Species	x 1 =	
		= Total Cover		FACW species FAC Species	x 2 = x 3 =	0
Herb Stratum (plot size: 5)			FACU Species	x 4 =	0
1 Poa sp.	90	X	(FAC)	UPL Species	x 5 =	0
2 Juncus effusus	10		FACW	Column Totals	0 (A)	0 (B)
3						·
4				Prevalence Index =B/	'A = #[DIV/0!
5					3 D	
6				Hydrophytic Vegetation		
7					Rapid Test for Hydro	
8	100	- Tetal Cours			 Dominance Test is > Prevalence Index is ≤ 	
	100	= Total Cover				tions ¹ (provide supporting
Voody Vine Stratum (plot size:)				ata in Remarks or on a	
1				1	Wetland Non-Vascul	
2				P	roblematic Hydrophyti	c Vegetation ¹ (Explain)
	0	= Total Cover		¹ Indicators of hydric soil and	d wetland hydrology m	ust be present, unless
				disturbed or problematic.		
% Bare Ground in Herb Stratum	0			Hydrophytic Vegetation	Yes X	No
				Present?		

Profile Description: (Describe to the		PHS#	63	38			Sampling Point:	22
Prome Describtion, (Describe to ti	ne depth r	needed to docur	nent the indi	cator or conf	firm the abser	nce of indicators.)		
Depth Matrix				x Features		,		
(Inches) Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remark	(S
0-4 10YR 3/1	100					Loamy Sand		
4-16 10YR 3/1	98	5YR 3/4	2	C	M	Loamy Sand		
16-24 10YR 4/2	50	10YR 3/6	50	С	M	Loamy Sand		
Type: C=Concentration, D=Depletio	n. RM=Re	duced Matrix, CS	=Covered or	Coated Sand	Grains.		² Location: PL=Pore Lining, M	1=Matrix.
ydric Soil Indicators: (Applie						Indica	ators for Problematic Hyd	
Histosol (A1)			:	Sandy Redox	(S5)		2 cm Muck (A1	0)
Histic Epipedon (A2)				Stripped Matr			Red Parent Mat	
Black Histic (A3)						except MLRA 1)	-	ark Surface (TF12)
Hydrogen Sulfide (A4)				Loamy Gleye		151	Other (explain i	
Depleted Below Dark		11)	-	Depleted Mat			(
Thick Dark Surface (A		,		, Redox Dark S				
					k Surface (F7)		³ Indicators of hydrophytic veg	
Sandy Mucky Mineral				Redox Depre			hydrology must be present, u problematic	
Sandy Mucky Mineral Sandy Gleyed Matrix (S4)					Г		** *
Sandy Gleyed Matrix (S4)							
Sandy Gleyed Matrix (Restrictive Layer (if present):	S4)	,						
Sandy Gleyed Matrix (estrictive Layer (if present): ype:	S4)			-		Hudria Sail Bros	ent? Ves V	No
Sandy Gleyed Matrix (Restrictive Layer (if present): Type: Depth (inches):	S4)			-		Hydric Soil Pres	ent? Yes X	No
Sandy Gleyed Matrix (Restrictive Layer (if present): Type: Depth (inches): Remarks:				-		Hydric Soil Pres	ent? Yes X	No
Sandy Gleyed Matrix (Restrictive Layer (if present): ype: lepth (inches): emarks: IYDROLOGY Vetland Hydrology Indicators	:	uired; check all	that apply)	-		Hydric Soil Pres	ent? Yes X Secondary Indicators (2	,
Sandy Gleyed Matrix (lestrictive Layer (if present): lepth (inches): lemarks: IYDROLOGY Vetland Hydrology Indicators	:	uired; check all		- - Water stained	d Leaves (B9) (Hydric Soil Pres		or more required)
Sandy Gleyed Matrix (lestrictive Layer (if present): lepth (inches): lemarks: YDROLOGY Vetland Hydrology Indicators Image: Primary Indicators (minimum of the content of the c	: one requ	uired; check all	\	Water stained			Secondary Indicators (2	or more required)_eaves (B9)
Sandy Gleyed Matrix (estrictive Layer (if present): ype: epth (inches): emarks: YDROLOGY //etland Hydrology Indicators rimary Indicators (minimum of Surface Water (A1)	: one requ	uired; check all			4B)		Secondary Indicators (2	or more required) eaves (B9) , and 4B)
Sandy Gleyed Matrix (estrictive Layer (if present): ype: epth (inches): emarks: YDROLOGY /etland Hydrology Indicators rimary Indicators (minimum of Surface Water (A1) High Water Table (A2)	: one requ	uired; check all		1, 2, 4A, and Salt Crust (B1	4B)		Secondary Indicators (2 Water stained L (MLRA1, 2, 4A	or more required) eaves (B9) , and 4B) ns (B10)
Sandy Gleyed Matrix (lestrictive Layer (if present): lestrict	: one requ	uired; check all		1, 2, 4A, and Salt Crust (B1 Aquatic Invert	4B)	Except MLRA	Secondary Indicators (2 Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa	or more required) eaves (B9) , and 4B) ns (B10)
Sandy Gleyed Matrix (Restrictive Layer (if present): ype: lepth (inches): emarks: IYDROLOGY /etland Hydrology Indicators rimary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	: one requ	uired; check all		1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul	4B) 11) tebrates (B13) fide Odor (C1)	Except MLRA	Secondary Indicators (2 Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa	or more required) eaves (B9) , and 4B) ns (B10) tter Table (C2) le on Aerial Imagery (C9
Sandy Gleyed Matrix (estrictive Layer (if present): ype: epth (inches): emarks: YDROLOGY /etland Hydrology Indicators rimary Indicators (minimum of	: one requ	iired; check all		1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz	4B) 11) tebrates (B13) fide Odor (C1)	Except MLRA g Living Roots (C3)	Secondary Indicators (2 Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visib	or more required) eaves (B9) , and 4B) ns (B10) ter Table (C2) le on Aerial Imagery (CS
Sandy Gleyed Matrix (Restrictive Layer (if present): ype: lepth (inches): lemarks: IYDROLOGY /etland Hydrology Indicators rimary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	: one requ	uired; check all		1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R	4B) 11) tebrates (B13) ifide Odor (C1) cospheres alon Reduced Iron (C	Except MLRA g Living Roots (C3) C4) owed Soils (C6)	Secondary Indicators (2 Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visib Geomorphic Po Shallow Aquitar Fac-Neutral Tes	or more required) eaves (B9) , and 4B) ns (B10) ter Table (C2) le on Aerial Imagery (C9) sition (D2) d (D3)
Sandy Gleyed Matrix (Restrictive Layer (if present): Popth (inches): Remarks: RYDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 Iron Deposits (B5) Surface Soil Cracks (B	cone requ			1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Stunted or Str	4B) (11) (11) (12) (13) (14) (15) (15) (16) (16) (16) (17) (17) (17) (18) (18) (19) (Except MLRA g Living Roots (C3) C4) owed Soils (C6)	Secondary Indicators (2 Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visib Geomorphic Po Shallow Aquitar Fac-Neutral Tes Raised Ant Mou	or more required) eaves (B9) , and 4B) ns (B10) ter Table (C2) le on Aerial Imagery (CS sition (D2) d (D3) st (D5) ends (D6) (LRR A)
Sandy Gleyed Matrix (estrictive Layer (if present): ype: epth (inches): emarks: YDROLOGY /etland Hydrology Indicators rimary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 Iron Deposits (B5) Surface Soil Cracks (B1) Inundation Visible on A	: one requ	ery (B7)		1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Stunted or Str	4B) 11) tebrates (B13) ifide Odor (C1) cospheres alon Reduced Iron (C	Except MLRA g Living Roots (C3) C4) owed Soils (C6)	Secondary Indicators (2 Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visib Geomorphic Po Shallow Aquitar Fac-Neutral Tes	or more required) eaves (B9) , and 4B) ns (B10) ter Table (C2) le on Aerial Imagery (CS sition (D2) d (D3) st (D5) ends (D6) (LRR A)
Sandy Gleyed Matrix (Restrictive Layer (if present): Popth (inches): Remarks: RYDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 Iron Deposits (B5) Surface Soil Cracks (B1) Inundation Visible on A Sparsely Vegetated Co	: one requ	ery (B7)		1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Stunted or Str	4B) (11) (11) (12) (13) (14) (15) (15) (16) (16) (16) (17) (17) (17) (18) (18) (19) (Except MLRA g Living Roots (C3) C4) owed Soils (C6)	Secondary Indicators (2 Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visib Geomorphic Po Shallow Aquitar Fac-Neutral Tes Raised Ant Mou	or more required) eaves (B9) , and 4B) ns (B10) ter Table (C2) le on Aerial Imagery (CS sition (D2) d (D3) st (D5) ends (D6) (LRR A)
Sandy Gleyed Matrix (Restrictive Layer (if present): ype: pepth (inches): emarks: IYDROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 Iron Deposits (B5) Surface Soil Cracks (B Inundation Visible on A Sparsely Vegetated Co ield Observations:	: one requ	ery (B7) rface (B8)		1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Stunted or Str Other (Explain	4B) (11) (11) (12) (13) (14) (15) (15) (16) (16) (16) (17) (17) (17) (18) (18) (19) (Except MLRA g Living Roots (C3) C4) owed Soils (C6)	Secondary Indicators (2 Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visib Geomorphic Po Shallow Aquitar Fac-Neutral Tes Raised Ant Mou	or more required) eaves (B9) , and 4B) ns (B10) ter Table (C2) le on Aerial Imagery (C9 sition (D2) d (D3) st (D5) inds (D6) (LRR A)
Sandy Gleyed Matrix (Destrictive Layer (if present): Lepth (inches): Lepth (inches): Lemarks: LYDROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B1) Sparsely Vegetated Coticeld Observations: Lurface Water Present? Yes	: one requ	iery (B7) rface (B8)	Depth (1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Stunted or Str Other (Explain	4B) 11) tebrates (B13) fide Odor (C1) cospheres alon Reduced Iron (C) deduction in Plot ressed Plants (In in Remarks)	Except MLRA g Living Roots (C3) C4) owed Soils (C6) D1) (LRR A)	Secondary Indicators (2 Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visib Geomorphic Po Shallow Aquitar Fac-Neutral Tes Raised Ant Mou Frost-Heave Hu	or more required) eaves (B9) , and 4B) ns (B10) ter Table (C2) le on Aerial Imagery (C9 sition (D2) d (D3) st (D5) inds (D6) (LRR A)
Sandy Gleyed Matrix (Restrictive Layer (if present): Type: Depth (inches): Depth (inches): Demarks: SYPOROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 Iron Deposits (B5) Surface Soil Cracks (B Inundation Visible on A Sparsely Vegetated Co ield Observations: urface Water Present? Yes Vater Table Present? Yes	: one requ	ery (B7) rface (B8) No X	Depth (1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Stunted or Str Other (Explain	tebrates (B13) difide Odor (C1) cospheres alon Reduced Iron (C) deduction in Ploressed Plants (In in Remarks)	Except MLRA g Living Roots (C3) C4) owed Soils (C6) D1) (LRR A)	Secondary Indicators (2 Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visib Geomorphic Po Shallow Aquitar Fac-Neutral Tes Raised Ant Mou Frost-Heave Hu	or more required) eaves (B9) , and 4B) ns (B10) ter Table (C2) le on Aerial Imagery (C9 sition (D2) d (D3) st (D5) inds (D6) (LRR A) mmocks (D7)
Sandy Gleyed Matrix (Restrictive Layer (if present): Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B1) Inundation Visible on A1 Sparsely Vegetated Coffield Observations: Surface Water Present? Yes	: one requ	iery (B7) rface (B8)	Depth (1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Stunted or Str Other (Explain	4B) 11) tebrates (B13) fide Odor (C1) cospheres alon Reduced Iron (C) deduction in Plot ressed Plants (In in Remarks)	Except MLRA g Living Roots (C3) C4) owed Soils (C6) D1) (LRR A)	Secondary Indicators (2 Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visib Geomorphic Po Shallow Aquitar Fac-Neutral Tes Raised Ant Mou Frost-Heave Hu	or more required) eaves (B9) , and 4B) ns (B10) ter Table (C2) le on Aerial Imagery (C9 sition (D2) d (D3) st (D5) inds (D6) (LRR A)

		PHS#	6338
TI AND DETERMINATION DATA FORM	Mostorn Mountains Valley	and Coast Basisa	

ect/Site: Palmberg Pro	perty	City/County:	Gea	rhart/Clatsop	Sampling	Date:	3/28/2018
icant/Owner: Bill Palmberg				State	OR	Samplin	g Point: 23
stigator(s): SE/JT/CN	//CR	Section, To	ownship, Range:	Section	n 10, Townsh	hip 6N, Range	= 10W
Iform (hillslope, terrace, etc.:)	Subtle Depr	ession	Local relief (co	ncave, convex, none):		Slc	ppe (%):
region (LRR): LR	R A	Lat:	46.02	67 Long:	-123.90)63	Datum: WGS84
Map Unit Name:		— Fine Sandy Loa	m	NWI C	assification:	P	EMIC
climatic/hydrologic conditions on the si	te typical for this t	ime of year?	Yes	X No	(if r	no, explain in Re	marks)
regetation Soil or	Hydrology	significantly dis	turbed?	Are "Normal Circumstar	nces" present? ((Y/N)	Υ
regetation Soil or	Hydrology	naturally proble	matic? If needed	I, explain any answers in R	emarks.)		
MMARY OF FINDINGS – Att	ach site mar		mpling point	locations transact	s importan	t features e	to
ophytic Vegetation Present? Yes	X N				s, importan	r reatures, e	
ic Soil Present? Yes	X N	0	Is Sampled A		X	No	
and Hydrology Present? Yes		0	a vvetia	iiu:			-
arks:							
OFTATION Has assessed for							
SETATION - Use scientific r			Indicator	Inominance Test we	rlabooti		
	absolute % cover	Dominant Species?	Indicator Status	Dominance Test wo	KSHEET.		
Stratum (plot size:)			Number of Dominant Sp	ecies		
				That are OBL, FACW, or	r FAC:	2	(A)
				1			
				Total Number of Domina	int		
	_			Species Across All Strate	a:	2	(B)
	0	= Total Cover		1			
ng/Shrub Stratum (plot size:)			Percent of Dominant Spe	ecies		
				That are OBL, FACW, o	or FAC:	100%	(A/B)
	_						
				Prevalence Index W	orksheet:		
				Total % Cover of	Mul	Itiply by:	
		- Total Course		OBL Species		x 1 =	0
		= Total Cover		FACW species FAC Species		x 2 = x 3 =	0
Stratum (plot size: 5)			FACU Species		x 4 =	0
Unidentified grass		x	(FAC)	UPL Species		x 5 =	0
luncus effusus	30	Х	FACW	Column Totals	0 (A)		0 (B)
							-
				Prevalence Index =	=B/A =	#DIV/0!	
				Liudnamh, 4: - Mara 4	tion Indian		
				Hydrophytic Vegeta			ogotatic=
				x	1- Rapid Test to 2- Dominance	or Hydrophytic V Test is >50%	egetation
	100	= Total Cover			3-Prevalence Ir		
		- Total Covel			-		provide supporting
dy Vine Stratum (plot size:)				data in Remark	s or on a separa	ite sheet)
THIS CHARGE					5- Wetland Nor	n-Vascular Plants	s ¹
					Problematic Hy	drophytic Vegeta	ation ¹ (Explain)
	_			¹ Indicators of hydric soil	and wetland hyd	rology must be p	oresent, unless
	0	= Total Cover					
<u></u>	0	= Total Cover		disturbed or problematic.			
are Ground in Herb Stratum	0	= Total Cover			Yes	x	No

0-7	Matrix Color (moist) 10YR 2/2 9 10YR 2/1 9 10YR 2/2 9 10YR 3/3 5 10YR 3/2 4 attion, D=Depletion, R	% 94 98 90 50	Color (moist) 5YR 3/4 7.5YR 2.5/3 7.5YR 2.5/3 7.5YR 3/4 7.5YR 3/4		c C C C	Loc² M M M M	Texture Sandy Loam Loamy Sand Loamy Sand Loamy Sand	Remarks Fine Fine Medium
(Inches) C 0-7 0-7 7-11 11-15 15-17 15-17 1Type: C=Concentral Hydric Soil Indic Histos Histic	10YR 2/2 9 10YR 2/1 9 10YR 2/2 9 10YR 3/3 5 10YR 3/2 4	98 90 50 40	5YR 3/4 7.5YR 2.5/3 7.5YR 2.5/3 7.54YR 3/4	% 1 5 2 10	C C	M M	Sandy Loam Loamy Sand Loamy Sand	Fine
0-7	10YR 2/1 9 10YR 2/1 9 10YR 2/2 9 10YR 3/3 5 10YR 3/2 4	98 90 50 40	5YR 3/4 7.5YR 2.5/3 7.5YR 2.5/3 7.54YR 3/4	1 5 2 10		M M	Sandy Loam Loamy Sand Loamy Sand	Fine
0-7 7-11 11-15 15-17 15-17 1-Type: C=Concentral Hydric Soil Indic Histos Histic	10YR 2/1 9 10YR 2/2 9 10YR 3/3 5 10YR 3/2 4	98 90 50 40	7.5YR 2.5/3 7.5YR 2.5/3 7.54YR 3/4	5 2 10	C	M	Loamy Sand	Fine
7-11 11-15 15-17 15-17 1-Type: C=Concentral Hydric Soil Indic Histos Histic	10YR 2/2 9 10YR 3/3 5 10YR 3/2 4 ation, D=Depletion, R	50	7.5YR 2.5/3 7.54YR 3/4	10	С	М	Loamy Sand	
11-15 15-17 15-17 1-Type: C=Concentral Hydric Soil Indic Histos Histic	10YR 2/2 9 10YR 3/3 5 10YR 3/2 4 ation, D=Depletion, R	50	7.54YR 3/4	10	С	М	Loamy Sand	
15-17 15-17 15-17 1Type: C=Concentral Hydric Soil Indic Histos Histic	10YR 3/3 5 10YR 3/2 4 ation, D=Depletion, R	40						Medium
15-17 Type: C=Concentral Hydric Soil Indic Histos Histic	10YR 3/2 4 ation, D=Depletion, R	40	7.5YR 3/4	10		M	Loamy Sand	
¹Type: C=Concentral Hydric Soil Indic Histos Histic	ation, D=Depletion, R	_						Medium-Fine
Hydric Soil Indic Histos Histic		 !M=Red					Loamy Sand	
Hydric Soil Indic Histos Histic			duced Matrix, CS=0	Covered o	or Coated San	d Grains.		² Location: PL=Pore Lining, M=Matrix.
Histos Histic							Indica	ators for Problematic Hydric Soils ³ :
Histic	sol (A1)		•		Sandy Redox			2 cm Muck (A10)
	Epipedon (A2)				Stripped Mat			Red Parent Material (TF2)
HISCK	Histic (A3)				_	y Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
	ogen Sulfide (A4)				-	ed Matrix (F2)	,	Other (explain in Remarks)
	eted Below Dark Surf	face (A	11)		Depleted Ma			
			' ' ' '	X	Redox Dark		*	
	Dark Surface (A12)				-			³ Indicators of hydrophytic vegetation and wetland
	y Mucky Mineral (S1)				-	rk Surface (F7)		hydrology must be present, unless disturbed or
Sandy	y Gleyed Matrix (S4)				Redox Depre	sasions (F8)		problematic.
HYDROLOGY Wetland Hydrolo	ogy Indicators:							
Primary Indicators	s (minimum of on	e requ						
Surfac	on Mater (A4)		ired; check all th	at apply	/)			Secondary Indicators (2 or more required)
	ce Water (A1)		ired; check all th	at apply	Water staine	d Leaves (B9) (Except MLRA	Water stained Leaves (B9)
High V	ce Water (A1) Water Table (A2)		iired; check all tr	at apply			Except MLRA	
		,	iired; check all th	at apply	Water staine	I 4B)	Except MLRA	Water stained Leaves (B9)
Satura	Water Table (A2)		ired; check all th	at apply	Water staine 1, 2, 4A, and Salt Crust (B	I 4B)	Except MLRA	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
Satura Water	Water Table (A2)		ired; check all th	at apply	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve	1 4B) 11)	,	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10)
Satura Water Sedim	Water Table (A2) ration (A3) r Marks (B1)		ired; check all th	at apply	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve	14B) 11) rtebrates (B13) ulfide Odor (C1)	,	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Satura Water Sedim Drift D	Water Table (A2) ration (A3) r Marks (B1) ment Deposits (B2)		ired; check all th	at apply	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rhi	14B) 11) rtebrates (B13) ulfide Odor (C1)	g Living Roots (C3)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery X Geomorphic Position (D2) Shallow Aquitard (D3)
Satura Water Sedim Drift D Algal N	Water Table (A2) ration (A3) r Marks (B1) ment Deposits (B2) Deposits (B3)		ired; check all th	at apply	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rhi Presence of Recent Iron	14B) 11) rtebrates (B13) ilfide Odor (C1) zospheres alon Reduced Iron (G	g Living Roots (C3) C4) owed Soils (C6)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5)
Satura Water Sedim Drift D Algal N Iron De	water Table (A2) ration (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ce Soil Cracks (B6)				Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron I Stunted or S	14B) 11) rtebrates (B13) ulfide Odor (C1) zospheres alon Reduced Iron (C) Reduction in Plot tressed Plants (g Living Roots (C3) C4) owed Soils (C6)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Satura Water Sedim Drift D Algal N Iron Do Surface	Water Table (A2) ration (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ce Soil Cracks (B6) lation Visible on Aeria		ery (B7)	at apply	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron I Stunted or S	14B) 11) rtebrates (B13) ilfide Odor (C1) zospheres alon Reduced Iron (G	g Living Roots (C3) C4) owed Soils (C6)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5)
Satura Water Sedim Drift D Algal N Iron Do Surface	water Table (A2) ration (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ce Soil Cracks (B6)		ery (B7)		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron I Stunted or S	14B) 11) rtebrates (B13) ulfide Odor (C1) zospheres alon Reduced Iron (C) Reduction in Plot tressed Plants (g Living Roots (C3) C4) owed Soils (C6)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Satura Water Sedim Drift D Algal N Iron Do Surface	water Table (A2) ration (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ce Soil Cracks (B6) lation Visible on Aericsely Vegetated Conce		ery (B7)		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron I Stunted or S	14B) 11) rtebrates (B13) ulfide Odor (C1) zospheres alon Reduced Iron (C) Reduction in Plot tressed Plants (g Living Roots (C3) C4) owed Soils (C6)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Satura Water Sedim Drift D Algal N Iron D Surfac Inunda	water Table (A2) ration (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ce Soil Cracks (B6) lation Visible on Aericsely Vegetated Conce		ery (B7)	X	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron I Stunted or S	14B) 11) rtebrates (B13) ulfide Odor (C1) zospheres alon Reduced Iron (C) Reduction in Plot tressed Plants (g Living Roots (C3) C4) owed Soils (C6)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Satura Water Sedim Drift D Algal N Iron De Surfac Inunda Sparse	water Table (A2) ration (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) oe Soil Cracks (B6) lation Visible on Aeric sely Vegetated Conce		ery (B7) rface (B8)	X	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron Stunted or S Other (Expla	14B) 11) rtebrates (B13) ulfide Odor (C1) zospheres alon Reduced Iron (C) Reduction in Plot tressed Plants (g Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Satura Water Sedim Drift D Algal N Iron Do Surface Inunda Sparse Field Observatio Surface Water Prese	water Table (A2) ration (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) oe Soil Cracks (B6) lation Visible on Aeric sely Vegetated Conce ons: ment? Yes yes yes	ave Su	ery (B7) rface (B8)	X Depth Depth	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rhi Presence of Recent Iron I Stunted or S Other (Expla	14B) 11) Intebrates (B13) Iffide Odor (C1) zospheres alon Reduced Iron (interpretation in Plot tressed Plants (interpretation in Remarks)	g Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Satura Water Sedim Drift D Algal M Iron Do Surface Inunda Sparse Field Observatio Surface Water Present Saturation Present?	water Table (A2) ration (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ce Soil Cracks (B6) lation Visible on Aeric sely Vegetated Conce Dns: ment? Yes ment? Yes ment? Yes ment? Yes	X X	ery (B7) face (B8) NoX No	X Depth Depth	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rhi Presence of Recent Iron Stunted or S Other (Explain in (inches): In (inches): In (inches):	14B) 11) rtebrates (B13) ilfide Odor (C1) zospheres alon Reduced Iron (CReduction in Plater Search Plants (CREDIT IN THE SEARCH PLANTS) 10 8	g Living Roots (C3) C4) owed Soils (C6) D1) (LRR A) Wetland Hyd	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

PHS # 6338 WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

	Property	City/County:	Gea	rhart/Clatsop	Sampling Da	te: 3	/28/2018
cant/Owner: Bill Palmbe	rg			State:		Sampling Poi	
tigator(s): SE/	JT/CM/CR	Section, To	wnship, Range:	Section	10, Township	6N, Range 10V	V
form (hillslope, terrace, etc.:)			Local relief (co	ncave, convex, none):		Slope (%	6):
egion (LRR):	LRR A	Lat:	46.02	67 Long:	-123.9073	Datu	m: WGS84
lap Unit Name:	Warrenton	Loamy Fine Sa	nd	NWI Cla	ssification:	None	
imatic/hydrologic conditions or	the site typical for this ti	me of year?	Yes	X No	(if no, e	explain in Remarks	s)
egetation Soil	or Hydrology	significantly dist	urbed?	Are "Normal Circumstance	es" present? (Y/N	i) Y	
egetation Soil	or Hydrology	naturally probler	matic? If needed	I, explain any answers in Re	marks.)		
MARY OF FINDINGS	- Attach site map	showing san	npling point	locations, transects	, important fe	eatures, etc.	
phytic Vegetation Present?	Yes X No		Is Sampled A	rea within			
c Soil Present?	Yes No	o <u>X</u>	a Wetla	nd? Yes_		No X	
and Hydrology Present?	Yes No	×					
ple point is just west of o	ific names of plan	nts.					
	absolute % cover	Dominant Species?	Indicator Status	Dominance Test wor	ksheet:		
Stratum (plot size:)		Julia	Number of Dominant Spec	cies		
				That are OBL, FACW, or I		2	(A)
				Total Number of Dominan	t		
				Species Across All Strata:		2	(B)
	0	= Total Cover					
ng/Shrub Stratum (plot size:)			Percent of Dominant Spec	cies		
P				That are OBL, FACW, or	FAC:	100%	(A/B)
				Prevalence Index Wo	rksheet:		
				Total % Cover of	Multiply	y by:	
				OBL Species		= 0	_
	0	= Total Cover		FACW species FAC Species	x2	2 = 0	_
Stratum (plot size:	5)			FACU Species	^s		
halaris arundinacea	60	×	FACW	UPL Species	x 5		
Inidentified grass	30	×	(FAC)	Column Totals	0 (A)	0	(B)
uncus effusus	10		FACW	1			
Rumex crispus	1		FAC	Prevalence Index =	3/A =	#DIV/0!	_
		9					
				Hydrophytic Vegetati			r.
					I- Rapid Test for H		ition
	101	= Total Cover			2- Dominance Tesi 3-Prevalence Index		
		- Total Cover			1-Morphological A		le supporting
)				data in Remarks or		
y Vine Stratum (plot size:					5- Wetland Non-Va	ascular Plants ¹	
y Vine Stratum (plot size:				1	Problematic Hydro	phytic Vegetation ¹	(Explain)
y Vine Stratum (plot size:							
y Vine Stratum (plot size:	0	= Total Cover		¹ Indicators of hydric soil ar disturbed or problematic. Hydrophytic	nd wetland hydrolo	gy must be preser	nt, unless

SOIL	PHS#	6338		Sampling Point: 24
Profile Description: (Describe to the depth n	eeded to documen	t the indicator or confirm the a	sence of indicators.)	
Depth Matrix		Redox Features		
(Inches) Color (moist) %	Color (moist)	% Type ¹ Loc ²	Texture	Remarks
0-16 10YR 2/2 90			Sandy Loam	
0-16 Cobble 10	2			Large Cobble
			_	
Type: C=Concentration, D=Depletion, RM=Rec	duced Matrix, CS=Co	overed or Coated Sand Grains.		² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to a	all LRRs, unless	otherwise noted.)	Indic	ators for Problematic Hydric Soils ³ :
Histosol (A1)		Sandy Redox (S5)		2 cm Muck (A10)
Histic Epipedon (A2)	_	Stripped Matrix (S6)		Red Parent Material (TF2)
Black Histic (A3)	-	Loamy Mucky Mineral (1) (except MI RA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	-	Loamy Gleyed Matrix (F		Other (explain in Remarks)
Depleted Below Dark Surface (A	- 11)	Depleted Matrix (F3)	-,	
Thick Dark Surface (A12)		Redox Dark Surface (Fi	5)	
Sandy Mucky Mineral (S1)	_	Depleted Dark Surface	(F7)	³ Indicators of hydrophytic vegetation and wetland
Sandy Gleyed Matrix (S4)	_	Redox Depressions (F8		hydrology must be present, unless disturbed or problematic.
Restrictive Layer (if present):				
Гуре:				
Depth (inches):			Hydric Soil Pres	sent? Yes No X
Remarks:			,	
HYDROLOGY				
HYDROLOGY Vetland Hydrology Indicators:	iired; check all tha	at apply)		Secondary Indicators (2 or more required)
HYDROLOGY Vetland Hydrology Indicators:	iired; check all tha	Water stained Leaves (39) (Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9)
IYDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requ	iired; check all tha		39) (Except MLRA	Secondary Indicators (2 or more required)
IYDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requSurface Water (A1)	iired; check all tha	Water stained Leaves (39) (Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9)
IYDROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requ Surface Water (A1) High Water Table (A2)	iired; check all tha - - -	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E	13)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
IYDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requestriance Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	iired; check all tha	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor	13) C1)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Vetland Hydrology Indicators: rimary Indicators (minimum of one requestriance Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	iired; check all tha	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres	13) C1) along Living Roots (C3)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requestrate Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	iired; check all tha	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir	13) C1) along Living Roots (C3) on (C4)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Vetland Hydrology Indicators: Irimary Indicators (minimum of one requestriance Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	iired; check all tha	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i	13) C1) along Living Roots (C3) on (C4) n Plowed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5)
AYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requestrated Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	- - - - - -	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i Stunted or Stressed Pla	13) C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) nts (D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one requestrated Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image	- - - - - ery (B7)	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i	13) C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) nts (D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5)
IYDROLOGY Vetland Hydrology Indicators: Irimary Indicators (minimum of one requisite Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagens	- - - - - ery (B7)	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i Stunted or Stressed Pla	13) C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) nts (D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
IYDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requestions) Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagestield Observations:	ery (B7)	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i Stunted or Stressed Pla Other (Explain in Rema	13) C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) nts (D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Vetland Hydrology Indicators: Irimary Indicators (minimum of one requisations) Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Images Sparsely Vegetated Concave Surfield Observations: urface Water Present? Yes	ery (B7)	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i Stunted or Stressed Pla Other (Explain in Rema	13) C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) nts (D1) (LRR A) ks)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
AYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requestion of surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagesparsely Vegetated Concave Surface Water Present? Ves X	ery (B7) face (B8)	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i Stunted or Stressed Pla Other (Explain in Rema	13) C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) nts (D1) (LRR A) ks)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requisation of surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image of Sparsely Vegetated Concave Surface Water Present? Water Table Present? Yes Water Table Present? Yes Saturation Present? Yes X	ery (B7)	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i Stunted or Stressed Pla Other (Explain in Rema	13) C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) nts (D1) (LRR A) ks)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requestriance Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagesparsely Vegetated Concave Surficient Water Present? Field Observations: Surface Water Present? Yes Water Table Present? Yes	ery (B7) fface (B8) No No	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i Stunted or Stressed Pla Other (Explain in Rema	13) C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) nts (D1) (LRR A) ks) Wetland Hyd	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requested Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surface Water Present? Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes X Saturation Present? Yes Mater Table Present? Yes	ery (B7) fface (B8) No No	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i Stunted or Stressed Pla Other (Explain in Rema	13) C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) nts (D1) (LRR A) ks) Wetland Hyd	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surfield Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes X Saturation Present? Yes Describe Recorded Data (stream gauge, monitor)	ery (B7) fface (B8) No No	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i Stunted or Stressed Pla Other (Explain in Rema	13) C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) nts (D1) (LRR A) ks) Wetland Hyd	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requivations) Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surficial Observations: Surface Water Present? Yes Water Table Present? Yes Water	ery (B7) face (B8) No No No pring well, aerial pho	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i Stunted or Stressed Pla Other (Explain in Rema	13) C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) nts (D1) (LRR A) ks) Wetland Hyd	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requiser of some sequence of so	ery (B7) face (B8) No No No pring well, aerial pho	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i Stunted or Stressed Pla Other (Explain in Rema	13) C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) nts (D1) (LRR A) ks) Wetland Hyd	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

PHS # 6338

ect/Site:	Palmberg Prop	erty	City/County:	Gear	hart/Clatsop	Sampl	ing Date:	3/28	2018
cant/Owner:	Bill Palmberg				Stat	e: OR	5	ampling Point:	25
tigator(s):	SE/JT/CM/	/CR	Section, To	ownship, Range:	Sect	ion 10, Towi	nship 6N,	Range 10W	
orm (hillslope, te	errace, etc.:)	Depressi	on	Local relief (con-	cave, convex, none):	Con	cave	Slope (%):	0
egion (LRR):	LRR	A	Lat:	46.026	7 Lon	g: -123	.9073	Datum:	WGS84
fap Unit Name:		Warrenton L	- .oamv Fine Sa	nd	NWI	Classification:		- None	
	conditions on the site			Yes		-	-	n in Remarks)	
	Soil or h		significantly dist		Are "Normal Circumst		. , ,	Y	
egetation		Hydrology	_		explain any answers in	,	. (/////		
			- naturally problem	mate: miceaea,	explain any anomers in	rtemarko.j			
IMARY OF F	INDINGS – Atta	ach site map	showing sar	npling point l	ocations, transec	cts, import	ant featu	res, etc.	
phytic Vegetation	n Present? Yes	X No		Is Sampled Are	a within				
Soil Present?	Yes	X No		a Wetland		es X	N		
and Hydrology Pre	esent? Yes	X No							
irks:									
ETATION - I	Use scientific na								
		absolute % cover	Dominant Species?	Indicator Status	Dominance Test w	orksheet:			
Stratum (plot s	size:)			Number of Dominant S	pecies			
		•			That are OBL, FACW,			1	(A)
						-			
					Total Number of Domir	nant			
					Species Across All Stra	ata:		1	(B)
		0	= Total Cover						
ng/Shrub Stratum	1 (plot size:)			Percent of Dominant S	pecies			
					That are OBL, FACW,	or FAC:	10	00%	(A/B)
					Prevalence Index \	Worksheet:			
					Total % Cover of		Multiply by:	_	
					OBL Species		x 1 =	0	
		0	= Total Cover		FACW species		x 2 =	0	
Stratum (plot s	size: 5)			FAC Species FACU Species		x 3 = x 4 =	0	
halaris arund		- ′ 100	Х	FACW	UPL Species		x 5 =	0	
					Column Totals	0	(A)		B)
		-					C 37		-,
					Prevalence Index	(=B/A =	#D	IV/0!	
					Hydrophytic Veget	ation Indica	tors:		
						_ 1- Rapid Te	st for Hydrop	hytic Vegetation	
					X	2- Dominano			
		100	= Total Cover			3-Prevalenc			
y Vine Stratum	(plot size:)						ions ¹ (provide si	
y vine Sudiuiii	(piot 5126.					5- Wetland I		separate sheet) r Plants ¹	
						_		Vegetation ¹ (Ex	plain)
		0	= Total Cover		¹ Indicators of hydric so	_		-	
					disturbed or problemati		3,	L Savid et	2000 (1900 (19 5)
					Lively and by Air				
re Ground in Herl	. 04	0			Hydrophytic Vegetation	Yes	X	No	

Depth	iption: (Describe to Matrix				x Features		,	
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 2/1	100					Loamy Sand	
4-14	10YR 2/1	90	5YR 3/4	10	C	M	Loamy Sand	Medium
					_			
¹ Type: C=Con	centration, D=Depleti	on, RM=Re	duced Matrix, CS=	Covered or	Coated Sand	d Grains.		² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appli	icable to	all LRRs, unles	s otherwi	ise noted.)		Indic	ators for Problematic Hydric Soils ³ :
	Histosol (A1)			X	Sandy Redox	x (S5)		2 cm Muck (A10)
	Histic Epipedon (A2)				Stripped Mat	trix (S6)		Red Parent Material (TF2)
×	Black Histic (A3)				Loamy Muck	y Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
	Hydrogen Sulfide (A4	·)			Loamy Gleve	ed Matrix (F2)		Other (explain in Remarks)
	Depleted Below Dark		(11)		Depleted Ma			
	Thick Dark Surface (A				Redox Dark			
	Sandy Mucky Mineral					rk Surface (F7)		³ Indicators of hydrophytic vegetation and wetland
								hydrology must be present, unless disturbed or
	Sandy Gleyed Matrix Layer (if present):				Redox Depre	5551U115 (FB)		problematic.
Туре:					_			
Depth (inches	s):				_		Hydric Soil Pres	sent? Yes X No
Remarks:	be an old barrier	area.						
Remarks: Appears to HYDROLO Wetland Hy	IGY drology Indicator	s:	iired: check all th	nat anniv)				Secondary Indicators (2 or more required)
Remarks: Appears to HYDROLO Wetland Hy Primary India	OGY drology Indicator cators (minimum o	s:	uired; check all th			d Leaves (B9)	Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (89)
Remarks: Appears to HYDROLO Wetland Hy Primary India X	OGY drology Indicator cators (minimum o Surface Water (A1)	s: f one requ	uired; check all th		Water staine	` ' '	Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
HYDROLO Wetland Hy Primary India X X	drology Indicator cators (minimum o Surface Water (A1) High Water Table (A2	s: f one requ	uired; check all th		Water staine	I 4B)	Except MLRA	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
Remarks: Appears to HYDROLO Wetland Hy Primary India X X X	drology Indicator cators (minimum o Surface Water (A1) High Water Table (A2 Saturation (A3)	s: f one requ	uired; check all th		Water stained 1, 2, 4A, and Salt Crust (B	1 4B)	•	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10)
HYDROLO Wetland Hy Primary Indi X X X	drology Indicator cators (minimum o Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1)	s: f one requ	uired; check all th		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver	1 4B) 111) rtebrates (B13)	•	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
HYDROLO Wetland Hy Primary India X X X	drology Indicator cators (minimum o Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (E	s: f one requ	uired; check all th		Water stained 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su	14B) 111) rtebrates (B13) ulfide Odor (C1)		Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C
HYDROLO Wetland Hy Primary Indi X X X	drology Indicator cators (minimum o Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (E Drift Deposits (B3)	s: f one requ	uired; check all th		Water stained 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi	14B) (11) rtebrates (B13) ulfide Odor (C1) zospheres alon	g Living Roots (C3)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C
HYDROLO Wetland Hy Primary India X X	drology Indicator cators (minimum o Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (E Drift Deposits (B3) Algal Mat or Crust (B-	s: f one requ	uired; check all th		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi: Presence of	1 4B) 11) rtebrates (B13) ulfide Odor (C1) zospheres alon Reduced Iron (6	g Living Roots (C3) C4)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3)
HYDROLO Wetland Hy Primary India X X	drology Indicator cators (minimum o Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B Drift Deposits (B3) Algal Mat or Crust (B- Iron Deposits (B5)	s: f one requ 2) 32)	uired; check all th		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi: Presence of I Recent Iron F	I 4B) Intebrates (B13) Ilfide Odor (C1) Izospheres alon Reduced Iron (I	g Living Roots (C3) C4) owed Soils (C6)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5)
Remarks: Appears to HYDROLO Wetland Hy Primary India X X X	drology Indicator cators (minimum o Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 Iron Deposits (B5) Surface Soil Cracks (s: f one requ 2) 32) 4)			Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi: Presence of I Recent Iron F Stunted or St	rtebrates (B13) ulfide Odor (C1) zospheres alon Reduced Iron (CReduction in Platterssed Plants (g Living Roots (C3) C4) owed Soils (C6)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Remarks: Appears to HYDROLO Wetland Hy Primary India X X X	drology Indicator cators (minimum o Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B- Iron Deposits (B5) Surface Soil Cracks (Inundation Visible on	s: f one requ 2) 32) 4) B6) Aerial Imag	gery (B7)		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi: Presence of I Recent Iron F Stunted or St	I 4B) Intebrates (B13) Ilfide Odor (C1) Izospheres alon Reduced Iron (I	g Living Roots (C3) C4) owed Soils (C6)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5)
Remarks: Appears to HYDROLO Wetland Hy Primary India X X	drology Indicator cators (minimum o Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 Iron Deposits (B5) Surface Soil Cracks (Inundation Visible on Sparsely Vegetated C	s: f one requ 2) 32) 4) B6) Aerial Imag	gery (B7)		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi: Presence of I Recent Iron F Stunted or St	rtebrates (B13) ulfide Odor (C1) zospheres alon Reduced Iron (CReduction in Platterssed Plants (g Living Roots (C3) C4) owed Soils (C6)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Remarks: Appears to HYDROLO Wetland Hy Primary India X X X	drology Indicator cators (minimum o Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 Iron Deposits (B5) Surface Soil Cracks (Inundation Visible on Sparsely Vegetated C	s: f one requ 2) 32) 4) B6) Aerial Imag	gery (B7)		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi: Presence of I Recent Iron F Stunted or St	rtebrates (B13) ulfide Odor (C1) zospheres alon Reduced Iron (CReduction in Platterssed Plants (g Living Roots (C3) C4) owed Soils (C6)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Remarks: Appears to HYDROLO Wetland Hy Primary India X X	drology Indicator cators (minimum o Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B- Iron Deposits (B5) Surface Soil Cracks (Inundation Visible on Sparsely Vegetated C vations:	s: f one requ 2) 32) 4) B6) Aerial Imag	gery (B7) irface (B8)		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi: Presence of I Recent Iron F Stunted or St	rtebrates (B13) ulfide Odor (C1) zospheres alon Reduced Iron (CReduction in Platterssed Plants (g Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Remarks: Appears to HYDROLO Wetland Hy Primary India X X X Field Obser	drology Indicator cators (minimum o Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B- Iron Deposits (B5) Surface Soil Cracks (Inundation Visible on Sparsely Vegetated C vations:	s: f one requ 2) 32) 4) B6) Aerial Imag Concave Su	gery (B7) urface (B8)	Depth	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi: Presence of I Recent Iron F Stunted or St Other (Explai	rtebrates (B13) ulfide Odor (C1) zospheres alon Reduced Iron (i Reduction in Plateressed Plants (i in in Remarks)	g Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Remarks: Appears to HYDROLO Wetland Hy Primary India X X X X S Field Obser Surface Water Water Table P Saturation Pre (includes capillar)	drology Indicator cators (minimum of Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 Iron Deposits (B5) Surface Soil Cracks (Inundation Visible on Sparsely Vegetated Covations: Present? Yes Present? Yes Sent? Yes Springe)	s: f one requ 32) 4) B6) Aerial Imag Concave Su X X	gery (B7) Irface (B8) No No No	Depth Depth Depth	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi: Presence of I Recent Iron F Stunted or St Other (Explai	at 4B) Intebrates (B13) Intebrates (B13) Intebrates (B13) Intebrates (B13) Interpreted (C1) Inte	g Living Roots (C3) C4) owed Soils (C6) D1) (LRR A) Wetland Hyd	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Remarks: Appears to HYDROLO Wetland Hy Primary India X X X X S Field Obser Surface Water Water Table P Saturation Pre (includes capillar)	drology Indicator cators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (Inundation Visible on Sparsely Vegetated Covations: Present? Yes Iresent? Yes Issent? Yes	s: f one requ 32) 4) B6) Aerial Imag Concave Su X X	gery (B7) Irface (B8) No No No	Depth Depth Depth	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi: Presence of I Recent Iron F Stunted or St Other (Explai	at 4B) Intebrates (B13) Intebrates (B13) Intebrates (B13) Intebrates (B13) Interpreted (C1) Inte	g Living Roots (C3) C4) owed Soils (C6) D1) (LRR A) Wetland Hyd	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Remarks: Appears to HYDROLO Wetland Hy Primary India X X X X S Field Obser Surface Water Water Table P Saturation Pre (includes capillar)	drology Indicator cators (minimum of Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 Iron Deposits (B5) Surface Soil Cracks (Inundation Visible on Sparsely Vegetated Covations: Present? Yes Present? Yes Sent? Yes Springe)	s: f one requ 32) 4) B6) Aerial Imag Concave Su X X	gery (B7) Irface (B8) No No No	Depth Depth Depth	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi: Presence of I Recent Iron F Stunted or St Other (Explai	at 4B) Intebrates (B13) Intebrates (B13) Intebrates (B13) Intebrates (B13) Interpreted (C1) Inte	g Living Roots (C3) C4) owed Soils (C6) D1) (LRR A) Wetland Hyd	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Remarks: Appears to HYDROLO Wetland Hy Primary India X X X X S Field Obser Surface Water Water Table P Saturation Pre (includes capillar)	drology Indicator cators (minimum of Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 Iron Deposits (B5) Surface Soil Cracks (Inundation Visible on Sparsely Vegetated Covations: Present? Yes Present? Yes Sent? Yes Springe)	s: f one requ 32) 4) B6) Aerial Imag Concave Su X X	gery (B7) Irface (B8) No No No	Depth Depth Depth	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi: Presence of I Recent Iron F Stunted or St Other (Explai	at 4B) Intebrates (B13) Intebrates (B13) Intebrates (B13) Intebrates (B13) Interpreted (C1) Inte	g Living Roots (C3) C4) owed Soils (C6) D1) (LRR A) Wetland Hyd	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

PHS#	6338
WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region	

Project/Site:	Palmberg Pro	perty	City/County:	Gea	rhart/Clatsop		Sampling Date:	3/2	8/2018
Applicant/Owner:	Bill Palmberg			9		State: C	OR	Sampling Point	26
nvestigator(s):	SE/JT/CI	M/CR	Section, To	ownship, Range:		Section 10	Township 6	N, Range 10W	
andform (hillslope	, terrace, etc.:)			Local relief (cor	ncave, convex, nor	e):		Slope (%)	1
Subregion (LRR):	LR	R A	Lat:	46.027	72	Long:	-123.9087	Datum	: WGS84
Soil Map Unit Name	e:	Warrenton L	_ .oamy Fine Sa	ind		NWI Classific	cation:	None	
re climatic/hydrolc	gic conditions on the s	ite typical for this tin	ne of year?	Yes	X	No	(if no, exp	olain in Remarks)	
re vegetation	Soil o	r Hydrology	significantly dis	turbed?	Are "Normal Circ				
		r Hydrology	_						-
					,,,		,		
UMMARY OF	FINDINGS - At	tach site map	showing sar	mpling point	locations, tra	nsects, in	portant fea	tures, etc.	
ydrophytic Vegeta	tion Present? Yes	X No		Is Sampled Ar	aa wiithin				
ydric Soil Present	? Yes	No	X	a Wetlar		Yes		No X	_
etland Hydrology	Present? Yes	No	Х					•	
emarks:									
EGETATION	- Use scientific ı	names of plan	ts.						
		absolute	Dominant	Indicator	Dominance To	est worksh	eet:		
ee Stratum (pl	ot size:	% cover	Species?	Status	Number of Danie	ant Crasis			
ee stratum (pr		_'			Number of Domi	-		2	(A)
					That are OBL, FA	CW, OF FAC.			_(^)
					Total Number of	Dominant			
					Species Across A			3	(B)
		0	= Total Cover		,				_ (-/
anling/Shruh Strat	um (plot size:	`			Descent of Demir	ant Chasias			
parigroniab otrac	(plot size.				Percent of Domir That are OBL, FA			67%	(A/B)
,		7			mat are OBL, 17	CW, OITAC		0176	_(\(\(\) \(\) \)
					Prevalence In	dex Works	heet:		
					Total % Cover of		Multiply b	y:	
					OBL Specie	es	x 1 =		
		0	= Total Cover		FACW spec	ies	x 2 =	0	_
					FAC Speci	es	x 3 =	0	- -
erb Stratum (pl	-	_)		*	FACU Spec	_	x 4 =		_
Unidentified		45	X	(FAC)	UPL Specie		x 5 =		-
Carex obnup		40	X	OBL	Column Tot	als	0 (A)	0	- (B)
Plantago lan			X	FACU FAC	Droveles	Index =B/A =		#DIV/0!	
Rubus arme				FAC	Prevalence	index =B/A =	-	#DIV/U!	-
Juncus effus				FACW	Hydrophytic V	enetation I	ndicators:		
ouncus enus	343			17011	i iyaropiiyac v			rophytic Vegetati	on
							minance Test is		011
		119	= Total Cover		1		evalence Index is		
						4-Mo	rphological Ada	otations ¹ (provide	supporting
oody Vine Stratur	n (plot size:)				data	in Remarks or o	n a separate she	et)
							etland Non-Vaso		
					,	-		ytic Vegetation ¹ (
		0	= Total Cover				etland hydrology	must be present	, unless
					disturbed or prob	ematic.			
	lerb Stratum				Vegetation		Yes X	No)
Bare Ground in F	TOTAL CHICATON								

SOIL			PHS#	6	338			Sampling Point: 26
Profile Descrip	otion: (Describe to	the depth	needed to docum	ent the ind	icator or conf	firm the absen	ce of indicators.)	
Depth	Matrix		and a second		x Features			
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	10YR 3/3	100					Sandy Loam	
6-11	10YR 3/2	70	7.5YR 3/3	20	С	М	Loamy Sand	Medium
6-11	Gravel	10						Gravel
11-15	10YR 3/4	60					Sand	
11-15	Gravel	20						Gravel
11-15	10YR 3/3	20					Sand	
Type: C=Conc	entration, D=Depletion	n PM-De	aduced Matrix CS	=Covered o	r Coated Sand			² Location: PL=Pore Lining, M=Matrix.
	ndicators: (Appli					oranis.	Indica	ators for Problematic Hydric Soils ³ :
	Histosol (A1)	cable to	an Errico, anne	oo omerw	Sandy Redox	(95)	maio	2 cm Muck (A10)
				-				Red Parent Material (TF2)
	listic Epipedon (A2)				Stripped Matr		wasne sei DA 4)	
	Black Histic (A3)			-		y Mineral (F1) (e	except MLRA 1)	Very Shallow Dark Surface (TF12)
	lydrogen Sulfide (A4			-	Loamy Gleyer	20.0		Other (explain in Remarks)
	Depleted Below Dark		(11)		Depleted Mat	15 15		
	hick Dark Surface (A	5			Redox Dark S			³ Indicators of hydrophytic vegetation and wetland
S	Sandy Mucky Mineral	(S1)			Depleted Darl	k Surface (F7)		hydrology must be present, unless disturbed or
s	Sandy Gleyed Matrix	(S4)			Redox Depres	ssions (F8)		problematic.
Restrictive L	ayer (if present):							
Гуре:								
					_			ant? Van Na V
epth (inches)	0						Hydric Soil Pres	ent? Yes No X
	:				_		Hydric Soil Pres	ent? Yes No X
lemarks:		s:			_		Hydric Soil Pres	entr res NOX
Remarks: HYDROLOG Wetland Hyd	GY		uired; check all	that apply)		Hydric Soil Pres	
IYDROLOG Vetland Hyd	GY Irology Indicator		uired; check all	that apply		d Leaves (B9) (I		Secondary Indicators (2 or more required) Water stained Leaves (B9)
IYDROLOG Vetland Hyd Primary Indica	GY Irology Indicators ators (minimum o	f one requ	uired; check all	that apply				Secondary Indicators (2 or more required)
HYDROLOG Vetland Hyd Primary Indica S	GY Irology Indicator: ators (minimum o surface Water (A1)	f one requ	uired; check all	that apply	Water stained	4B)		Secondary Indicators (2 or more required) Water stained Leaves (B9)
YDROLOG /etland Hyd rimary Indica B	GY Irology Indicators ators (minimum o surface Water (A1) ligh Water Table (A2	f one requ	uired; check all	that apply	Water stained 1, 2, 4A, and Salt Crust (B1	4B)		Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
emarks: IYDROLOG Vetland Hyd rimary Indica S H S	GY Irology Indicators ators (minimum of surface Water (A1) ligh Water Table (A2) staturation (A3)	f one requ	uired; check all	that apply	Water stained 1, 2, 4A, and Salt Crust (B1 Aquatic Invert	4B)		Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10)
emarks: IYDROLOG Vetland Hyd rimary Indica S H S	Irology Indicators ators (minimum of surface Water (A1) ligh Water Table (A2 saturation (A3) Vater Marks (B1)	f one requ	uired; check all	that apply	Water stained 1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul	4B) 11) tebrates (B13) ifide Odor (C1)		Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
IYDROLOG Vetland Hyd irimary Indica	ators (minimum o surface Water (A1) digh Water Table (A2 saturation (A3) Water Marks (B1) sediment Deposits (B	f one requ	uired; check all	that apply	Water stained 1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz	4B) 11) tebrates (B13) ifide Odor (C1)	Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C
emarks: IYDROLOG Vetland Hyd rimary Indica S H S W S	ators (minimum o surface Water (A1) ligh Water Table (A2 saturation (A3) Vater Marks (B1) sediment Deposits (B3)	f one requ	uired; check all	that apply	Water stained 1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F	4B) 11) tebrates (B13) fide Odor (C1) tospheres along Reduced Iron (C	Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2)
emarks: IYDROLOG Vetland Hyd rimary Indica S H S V S D A	ators (minimum o surface Water (A1) ligh Water Table (A2 saturation (A3) Vater Marks (B1) sediment Deposits (B brift Deposits (B3)	f one request.	uired; check all	that apply	Water stained 1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R	4B) 11) tebrates (B13) fide Odor (C1) tospheres along Reduced Iron (C	Except MLRA g Living Roots (C3) (24) wed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3)
emarks: IYDROLOG Vetland Hyd rimary Indica S W S D A Ir	ators (minimum o durface Water (A1) digh Water Table (A2 daturation (A3) Water Marks (B1) dediment Deposits (B3) digal Mat or Crust (B4 on Deposits (B5)	f one requered (2)		that apply	Water stained 1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R	4B) 11) tebrates (B13) fide Odor (C1) cospheres along Reduced Iron (C) Reduction in Plo ressed Plants (I	Except MLRA g Living Roots (C3) (24) wed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5)
YDROLOG Vetland Hyd rimary Indica S H S V S In	ators (minimum of surface Water (A1) digh Water Table (A2) diaturation (A3) Water Marks (B1) diediment Deposits (B3) digal Mat or Crust (B4) on Deposits (B5) durface Soil Cracks (diators)	f one required (2) (2) (2) (3) (4) (6) (6) (7) (7) (8) (8) (8) (8) (8) (8) (8) (8) (8) (8	gery (B7)	that apply	Water stained 1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Stunted or Str	4B) 11) tebrates (B13) fide Odor (C1) cospheres along Reduced Iron (C) Reduction in Plo ressed Plants (I	Except MLRA g Living Roots (C3) (24) wed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
emarks: IYDROLOG Vetland Hyd rimary Indica S W S In S Ir S	ators (minimum of purface Water (A1) aligh Water Table (A2) aturation (A3) aligh Water Marks (B1) aligh Mat or Crust (B4) on Deposits (B5) aurface Soil Cracks (in undation Visible on sparsely Vegetated C	f one required (2) (2) (2) (3) (4) (6) (6) (7) (7) (8) (8) (8) (8) (8) (8) (8) (8) (8) (8	gery (B7)	that apply	Water stained 1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Stunted or Str	4B) 11) tebrates (B13) fide Odor (C1) cospheres along Reduced Iron (C) Reduction in Plo ressed Plants (I	Except MLRA g Living Roots (C3) (24) wed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
emarks: IYDROLOG Vetland Hyd rimary Indicates S W S D A Ir S Ir S ield Observ	ators (minimum of surface Water (A1) digh Water Table (A2) saturation (A3) Water Marks (B1) diediment Deposits (B3) digal Mat or Crust (B4) on Deposits (B5) durface Soil Cracks (finundation Visible on sparsely Vegetated Cations:	f one required (2) (2) (2) (3) (4) (6) (6) (7) (7) (8) (8) (8) (8) (8) (8) (8) (8) (8) (8	gery (B7) uface (B8)		Water stained 1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of Recent Iron R Stunted or Str Other (Explain	4B) 11) tebrates (B13) fide Odor (C1) cospheres along Reduced Iron (C) Reduction in Plo ressed Plants (I	Except MLRA g Living Roots (C3) (24) wed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLOG Vetland Hyd Primary Indica S H S U S In S ield Observ	ators (minimum of purface Water (A1) ligh Water Table (A2) saturation (A3) Vater Marks (B1) sediment Deposits (B3) light Deposits (B3) light Deposits (B5) surface Soil Cracks (inhundation Visible on sparsely Vegetated Carations:	f one required (2) (2) (2) (3) (4) (6) (6) (7) (7) (8) (8) (8) (8) (8) (8) (8) (8) (8) (8	gery (B7) irface (B8)	Depth	Water stained 1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Stunted or Str Other (Explair	4B) Italian (B13) I	g Living Roots (C3) C4) wed Soils (C6) D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
emarks: IYDROLOG Vetland Hyd Irimary Indica S H S In S Irimas I	ators (minimum of purface Water (A1) ligh Water Table (A2) staturation (A3) Water Marks (B1) sediment Deposits (B3) ligal Mat or Crust (B4) on Deposits (B5) surface Soil Cracks (in undation Visible on sparsely Vegetated Corations: Present? Yes esent? Yes	f one required (2) (2) (3) (4) (5) (6) (6) (7) (7) (8) (8) (9) (9) (9) (9) (9) (9) (9) (9) (9) (9	gery (B7) Inface (B8) No X No X	Depth	Water stained 1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Stunted or Str Other (Explair (inches): (inches):	4B) 11) tebrates (B13) ifide Odor (C1) cospheres along Reduced Iron (C Reduction in Plo ressed Plants (I in in Remarks)	g Living Roots (C3) C4) wed Soils (C6) D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
AYDROLOG Wetland Hyd Primary Indica S H S In S Field Observ Surface Water F Vater Table Presentation Presenta	ators (minimum of purface Water (A1) ligh Water Table (A2) saturation (A3) Water Marks (B1) sediment Deposits (B3) algal Mat or Crust (B4) on Deposits (B5) surface Soil Cracks (in undation Visible on sparsely Vegetated Cations: Present? Yes ent? Yes ent? Yes	f one required (2) (2) (2) (3) (4) (6) (6) (7) (7) (8) (8) (8) (8) (8) (8) (8) (8) (8) (8	gery (B7) irface (B8)	Depth	Water stained 1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Stunted or Str Other (Explair	4B) Italian (B13) I	g Living Roots (C3) C4) wed Soils (C6) D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOG Wetland Hyd Primary Indica S H S U S In S Field Observ Surface Water F Water Table Pre Saturation Press includes capillary	ators (minimum of purface Water (A1) ligh Water Table (A2) saturation (A3) Water Marks (B1) sediment Deposits (B3) algal Mat or Crust (B4) on Deposits (B5) surface Soil Cracks (in undation Visible on sparsely Vegetated Cations: Present? Yes ent? Yes ent? Yes	f one required (2)	gery (B7) Irface (B8) No X No X	Depth Depth Depth	Water stained 1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of Recent Iron R Stunted or Str Other (Explair (inches): (inches): (inches):	4B) 11) tebrates (B13) Ifide Odor (C1) cospheres along Reduced Iron (C Reduction in Plo ressed Plants (I in in Remarks) >15 3-8	Except MLRA g Living Roots (C3) (24) wed Soils (C6) (C1) (LRR A) Wetland Hydr	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Primary Indicates S H S W S D A Ir S Ir S Field Observ Surface Water F Water Table Pres Saturation Press includes capillary	ators (minimum of surface Water (A1) digh Water Table (A2) diaturation (A3) Water Marks (B1) dediment Deposits (B3) digal Mat or Crust (B4) on Deposits (B5) durface Soil Cracks (foundation Visible on sparsely Vegetated Control (Present? Yes esent? Yes ent? Yes effringe)	f one required (2)	gery (B7) Irface (B8) No X No X	Depth Depth Depth	Water stained 1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of Recent Iron R Stunted or Str Other (Explair (inches): (inches): (inches):	4B) 11) tebrates (B13) Ifide Odor (C1) cospheres along Reduced Iron (C Reduction in Plo ressed Plants (I in in Remarks) >15 3-8	Except MLRA g Living Roots (C3) (24) wed Soils (C6) (C1) (LRR A) Wetland Hydr	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOG Wetland Hyd Primary Indica S H S U S In S Field Observ Surface Water F Water Table Pre Saturation Press includes capillary	ators (minimum of surface Water (A1) digh Water Table (A2) diaturation (A3) Water Marks (B1) dediment Deposits (B3) digal Mat or Crust (B4) on Deposits (B5) durface Soil Cracks (foundation Visible on sparsely Vegetated Control (Present? Yes esent? Yes ent? Yes effringe)	f one required (2)	gery (B7) Irface (B8) No X No X	Depth Depth Depth	Water stained 1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of Recent Iron R Stunted or Str Other (Explair (inches): (inches): (inches):	4B) 11) tebrates (B13) Ifide Odor (C1) cospheres along Reduced Iron (C Reduction in Plo ressed Plants (I in in Remarks) >15 3-8	Except MLRA g Living Roots (C3) (24) wed Soils (C6) (C1) (LRR A) Wetland Hydr	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOG Wetland Hyd Primary Indica S H S U S In S Field Observ Surface Water F Water Table Pre Saturation Press includes capillary	ators (minimum of surface Water (A1) digh Water Table (A2) diaturation (A3) Water Marks (B1) dediment Deposits (B3) digal Mat or Crust (B4) on Deposits (B5) durface Soil Cracks (foundation Visible on sparsely Vegetated Control (Present? Yes esent? Yes ent? Yes effringe)	f one required (2)	gery (B7) Irface (B8) No X No X	Depth Depth Depth	Water stained 1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of Recent Iron R Stunted or Str Other (Explair (inches): (inches): (inches):	4B) 11) tebrates (B13) Ifide Odor (C1) cospheres along Reduced Iron (C Reduction in Plo ressed Plants (I in in Remarks) >15 3-8	Except MLRA g Living Roots (C3) (24) wed Soils (C6) (C1) (LRR A) Wetland Hydr	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Primary Indicates Saturation Prescribe Record	ators (minimum of purface Water (A1) ligh Water Table (A2) staturation (A3) Water Marks (B1) sediment Deposits (B3) ligal Mat or Crust (B4) on Deposits (B5) surface Soil Cracks (injunctation Visible on sparsely Vegetated Cations: Present? Yes esent? Yes ent? Yes fringe) ded Data (stream gains)	f one required (2) (2) (3) (4) (5) (6) (7) (8) (8) (8) (9) (9) (9) (9) (9) (9) (9) (9) (9) (9	gery (B7) Inface (B8) No X No X No oring well, aerial p	Depth Depth Depth	Water stained 1, 2, 4A, and Salt Crust (B1 Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Stunted or Str Other (Explair (inches): (inches): (inches):	4B) 11) tebrates (B13) ifide Odor (C1) cospheres along Reduced Iron (C Reduction in Plo ressed Plants (I in in Remarks) >15 3-8 ns), if available:	Except MLRA g Living Roots (C3) (24) wed Soils (C6) D1) (LRR A) Wetland Hydr	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)



PHS # 6338 WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

cant/Owner:	Bill Palmbe	erg				,	State: OR	S	ampling Point:	27
tigator(s):		JT/CM/CI	R	Section	, Township, Range:			— wnship 6N, F		
				ats	-	oncave, convex, none)				
form (hillslope, te					_				-	
				La			Long:		_	WGS84
332				on Loamy Fine		SH03	WI Classificatio	n:	None	
imatic/hydrologic	conditions on	the site ty	pical for th	is time of year?	Yes	X	No	(if no, explain	in Remarks)	
egetation	Soil	or Hyd	drology	significantly	disturbed?	Are "Normal Circuit	mstances" pres	ent? (Y/N)	Υ	
egetation	Soil	or Hyd	drology	naturally pro	blematic? If neede	d, explain any answers	s in Remarks.)			
MADY OF F	INDINGS	Attac	h cita m	an chowing o	ampling point	locations, trans	sacts impo	rtant featur	os etc	
		Yes				liocations, trans	sects, impo	rtant reatur	es, etc.	
phytic Vegetation	ii Present?	_	X	No	I is Sampled A		V V			
Soil Present?		Yes _	X	No	_ a Wetla	nd?	Yes X	_ No		
nd Hydrology Pr	esent?	Yes _	X	No	_					
ETATION - I	Use scient	ific nan	nes of p		t Indicator	Dominance Tes	st worksheet:			
			% cove							
Stratum (plot s	size:)				Number of Domina				
				_		That are OBL, FAC	CW, or FAC:		3	(A)
				_						
				_		Total Number of Do				
A140						Species Across All	Strata:		3	. ^(B)
			0	= Total Cov	er					
g/Shrub Stratum	(plot size:	15	_)			Percent of Dominar	nt Species			
alix sp.			5	X	(FAC)	That are OBL, FAC	W, or FAC:	10	0%	(A/B)
					_	Prevalence Inde	ex Workshee	t:		
						Total % Cover of		Multiply by:	-	
						OBL Species		_ x1=	0	•
			5	= Total Cov	er	FACW species FAC Species		- x2= x3=	0	
Stratum (plot s	size:	5)				FACU Species		- x4=	0	
otus cornicul			60	x	FAC	UPL Species		x 5 =	0	•
nidentified gr			20	X	(FAC)	Column Totals		(A)	0	(B)
halaris arund	inacea		10	17	FACW					
arex obnupta			10		OBL	Prevalence Ir	ndex =B/A =	#DI	IV/0!	
lantago lance	olata		<1		FACU					·
eontodon sax	atilis		<1		FACU	Hydrophytic Ve	getation Indi	cators:		
							1- Rapid	Test for Hydrop	hytic Vegetatio	n
					_	X		ance Test is >5		
			100	= Total Cov	er			ence Index is ≤ 3		
	(plot size:		1					ological Adaptati		
Wine Start	(plot size:		-'					emarks or on a and Non-Vascular		1)
y Vine Stratum								nd Non-Vasculai atic Hydrophytic		vnlain\
ly Vine Stratum									_	
ly Vine Stratum				= Total Cour	or	Indicators of hudge		IN TOURDIDAY IIIU	or he hieselff.	
dy Vine Stratum			0	= Total Cov	er	¹ Indicators of hydric disturbed or probler		,	,	arnooo
dy Vine Stratum			0	= Total Cov	er	The second secon		s X	,	amood

Hydric Soil	Color (moist) 10YR 3/3 10YR 4/1 10YR 4/2 Dentration, D=Depletic Indicators: (Applie Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Thick Dark Surface (A Sandy Mucky Mineral Sandy Gleyed Matrix (A)	Surface (A	all LRRs, unless		vise noted.) Sandy Redox Stripped Mat		Texture Silt Loam Loamy Sand Loamy Sand Loamy Sand	Remarks Fine Large Large Large Large 2Location: PL=Pore Lining, M=Matrix. Eators for Problematic Hydric Soils ³ : 2 cm Muck (A10)	
5-11 5-11 11-16 Type: C=Cond Hydric Soil Restrictive I Type:	10YR 4/1 10YR 4/2 10YR 4/2 Dentration, D=Depletic Indicators: (Applia Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Thick Dark Surface (A Sandy Mucky Mineral Sandy Gleyed Matrix (85 100 n, RM=Recable to	2.5YR 2.5/1 5YR 3/4 educed Matrix, CS=0 all LRRs, unless	5 10	C C or Coated San vise noted.) Sandy Redo	M M	Loamy Sand Loamy Sand Loamy Sand	Large Large Large 2Location: PL=Pore Lining, M=Matrix. cators for Problematic Hydric Soils ³ :	
5-11 11-16 Type: C=Cone Hydric Soil Restrictive I Type:	normation, D=Depletice Indicators: (Applied Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Thick Dark Surface (A Sandy Mucky Mineral Sandy Gleyed Matrix (n, RM=Recable to	educed Matrix, CS=0	10	c or Coated San vise noted.) Sandy Redo	M d Grains.	Loamy Sand Loamy Sand	Large 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
11-16 Type: C=Cond Hydric Soil Restrictive I Type:	centration, D=Depletic Indicators: (Applid Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Thick Dark Surface (A Sandy Mucky Mineral Sandy Gleyed Matrix (n, RM=Recable to	educed Matrix, CS=0	Covered o	or Coated San vise noted.) Sandy Redo	d Grains.	Loamy Sand	² Location: PL=Pore Lining, M=Matrix. cators for Problematic Hydric Soils ³ :	
1-Type: C=Cond Hydric Soil Restrictive I Type:	centration, D=Depletic Indicators: (Applid Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Thick Dark Surface (A Sandy Mucky Mineral Sandy Gleyed Matrix (n, RM=Recable to	all LRRs, unless		vise noted.) Sandy Redox Stripped Mat			cators for Problematic Hydric Soils ³ :	
Hydric Soil Hydric Soil Restrictive I Type:	Indicators: (Applie Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Thick Dark Surface (A Sandy Mucky Mineral Sandy Gleyed Matrix (Surface (A	all LRRs, unless		vise noted.) Sandy Redox Stripped Mat		Indic	cators for Problematic Hydric Soils ³ :	
Hydric Soil Hydric Soil Restrictive I Type:	Indicators: (Applie Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Thick Dark Surface (A Sandy Mucky Mineral Sandy Gleyed Matrix (Surface (A	all LRRs, unless		vise noted.) Sandy Redox Stripped Mat		Indic	cators for Problematic Hydric Soils ³ :	
Restrictive I	Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Thick Dark Surface (A Sandy Mucky Mineral Sandy Gleyed Matrix (Surface (A		otherv	Sandy Redo	(S5)	Indic		
Restrictive I	Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Thick Dark Surface (A Sandy Mucky Mineral Sandy Gleyed Matrix (Surface (A			Stripped Mat	(S5)		2 cm Muck (A10)	
Restrictive I	Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Thick Dark Surface (A Sandy Mucky Mineral Sandy Gleyed Matrix (Surface (A			-				
Restrictive I	Hydrogen Sulfide (A4) Depleted Below Dark Thick Dark Surface (A Sandy Mucky Mineral Sandy Gleyed Matrix (Surface (A		Loamy Mucky Mineral (F1) (e				Red Parent Material (TF2)	
Restrictive I	Depleted Below Dark Thick Dark Surface (A Sandy Mucky Mineral Sandy Gleyed Matrix (Surface (A		Loamy Gleyed Matrix (F2)		y Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12	
Restrictive I	Thick Dark Surface (A Sandy Mucky Mineral Sandy Gleyed Matrix (Loamy Gleye	d Matrix (F2)		Other (explain in Remarks)	
Restrictive I	Sandy Mucky Mineral Sandy Gleyed Matrix (12)	(11)	X	Depleted Ma	rix (F3)			
Restrictive I	Sandy Gleyed Matrix (Redox Dark	Surface (F6)		3Indicators of huder-hide and the	
Restrictive I		(S1)			Depleted Da	k Surface (F7)		Indicators of hydrophytic vegetation and wetlan hydrology must be present, unless disturbed or	
Туре:		S4)			Redox Depre	ssions (F8)		problematic.	
-	drology Indicators								
Primary India	cators (minimum of	one req	uired; check all th	at apply		7		Secondary Indicators (2 or more require	
	Surface Water (A1)				Water staine	. , ,	Except MLRA	Water stained Leaves (B9)	
	High Water Table (A2					-		(MLRA1, 2, 4A, and 4B)	
	Saturation (A3)				Salt Crust (B			Drainage Patterns (B10)	
	Water Marks (B1)				•	tebrates (B13)		Dry-Season Water Table (C2)	
	Sediment Deposits (B:	2)				Ifide Odor (C1)		Saturation Visible on Aerial Image	
	Orift Deposits (B3) Algal Mat or Crust (B4	1			•	cospneres alon Reduced Iron ((g Living Roots (C3)	Geomorphic Position (D2) Shallow Aquitard (D3)	
	ron Deposits (B5)	,				•	owed Soils (C6)	X Fac-Neutral Test (D5)	
	Surface Soil Cracks (E	6)			•	ressed Plants (Raised Ant Mounds (D6) (LRR A)	
	nundation Visible on A		gery (B7)		•	n in Remarks)		Frost-Heave Hummocks (D7)	
	Sparsely Vegetated Co		,		,-,-	,			
Field Observ	vations:						<u> </u>		
Surface Water			No	Depth	(inches):				
Water Table Pr	-		No		(inches):		Wetland Hyd	drology Present?	
Saturation Pres			No	-	(inches):			Yes X No	
Describe Reco	rded Data (stream gai			otos, prev	rious inspectio	ns), if available	:		

PHS#	6338
WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region	

Gearhart/Clatsop

3/28/2018

Sampling Date:

City/County:

Palmberg Property

Project/Site:

Applicant/Owner: Bill Paln	berg			A.		State: C	DR	Sampling Point:	28
Investigator(s):	E/JT/CM/CR		Section, To	wnship, Range:		Section 10,	Township 6N	Range 10W	
andform (hillslope, terrace, etc.:		Pit		Local relief (cor	ncave, convex, nor	ne):		Slope (%):	×
Subregion (LRR):	LRR A		Lat:	46.02	78	Long:	-123.9075	Datum:	WGS84
Soil Map Unit Name:	Ge	arhart Fi	– ne Sandy Loai	m		NWI Classific	ation:	PFOC	
Are climatic/hydrologic conditions				Yes	X		(if no, expla	in in Remarks)	-
Are vegetation Soil			significantly dist				oresent? (Y/N)		
Are vegetation Soil			-		, explain any answ	•			•
Are vegetation Soil	or Hydrolog		- naturally problem	matic? it fleeded	, explain any answ	eis in Remaik	.5.)		
SUMMARY OF FINDING	S – Attach si	te map	showing san	npling point	locations, tra	nsects, im	portant feat	ıres, etc.	
lydrophytic Vegetation Present?		. No		343					
Hydric Soil Present?	Yes	— No	x	Is Sampled Ar		Yes	1	No X	
Wetland Hydrology Present?	Yes	No	Х Х	a mena					•
Remarks:									
Cerriains.									
/EGETATION - Use scie	ntific names	of plant	ts.						
		solute	Dominant	Indicator	Dominance T	est worksh	eet:		
		cover	Species?	Status	9 50				
Free Stratum (plot size:	30				Number of Domi				
1 Alnus rubra		75	X	FAC	That are OBL, F	ACW, or FAC:		5	(A)
2									
					Total Number of				
4					Species Across	All Strata:		5	- ^(B)
	-	75	= Total Cover		1				
Sapling/Shrub Stratum (plot s	ze:10)				Percent of Domi	nant Species			
Rubus armeniacus		10	X	FAC	That are OBL, F	ACW, or FAC	:	00%	(A/B)
Rubus spectabilis		10	X	FAC					
Lonicera involucrata		5	X	FAC	Prevalence In	dex Works	heet:		
4					Total % Cover of	f ,	Multiply by:	_	
5					OBL Speci		x 1 =	0	•
		25	= Total Cover		FACW spec	-	x 2 =	0	
lerb Stratum (plot size:	5)				FAC Speci		x 3 = x 4 =	0	•
1 Ranunculus repens		60	X	FAC	UPL Speci		x5=	0	-
2 Equisetum arvense		10		FAC	Column Tot		0 (A)	0	(B)
3 Polystichum munitum		5		FACU	0.5.5				\-/
4 Juncus effusus		1		FACW	Prevalence	e Index =B/A =	#	OIV/0!	
5 Lapsana communis		1		FACU					•
6 Oenanthe sarmentosa		1		OBL	Hydrophytic \	/egetation I	ndicators:		
7						1- Ra	pid Test for Hydro	phytic Vegetation	on
8						X 2- Do	minance Test is >	50%	
		78	= Total Cover				valence Index is		
						4-Mo	rphological Adapta	ations ¹ (provide	supporting
Voody Vine Stratum (plot size)						in Remarks or on		t)
1							etland Non-Vascu		
2							ematic Hydrophyt		
		0	= Total Cover		Indicators of hyd disturbed or prob		etland hydrology n	nust be present,	unless
					Hydrophytic	nematio.			
	20				Vegetation		Yes X	No	
% Bare Ground in Herb Stratum									

SOIL			PH	4S#	63	38			S	ampling Point:	28
Profile Descri	ption: (Describe to	the depth ne	eded to	documen	t the indi	cator or co	nfirm the absen	ce of indicators.)		3	
Depth	Matrix		_		Redo	x Features					
(Inches)	Color (moist)		Color (moist)	%	Type ¹	Loc²	Texture		Remar	ks
0-19	10YR 3/3	100						Silt Loam			
		_									
1			9 579						2		
	centration, D=Depletion							t di		L=Pore Lining, N	
	ndicators: (Appli	cable to al	ILKKS	s, uniess				Indica	ators for P	roblematic Hy	
	Histosol (A1)			-		Sandy Red	ox (S5)			2 cm Muck (A1	0)
	Histic Epipedon (A2)			_		Stripped Ma	atrix (S6)			Red Parent Ma	terial (TF2)
E	Black Histic (A3)			_		Loamy Muc	ky Mineral (F1) (e	except MLRA 1)		Very Shallow D	ark Surface (TF12)
	Hydrogen Sulfide (A4)		_		Loamy Gley	ed Matrix (F2)			Other (explain	in Remarks)
	Depleted Below Dark	Surface (A1	1)	_		Depleted M	atrix (F3)			0.00	
7	Thick Dark Surface (A	A12)				Redox Dark	Surface (F6)				
	Sandy Mucky Mineral						ark Surface (F7)			, , ,	getation and wetland
	Sandy Gleyed Matrix			-		•	ressions (F8)		nyarology i	must be present, problemati	unless disturbed or c.
Poetrictive I	ayer (if present):										
	ayer (ii present).										
Type:						-	9				
Depth (inches)):							Hydric Soil Pres	sent? Yes		No X
Remarks:											
HYDROLOG Wetland Hyd	GY Irology Indicator	s:									
Primary Indic	ators (minimum o	f one requir	ed; che	eck all tha	at apply)				Seconda	ry Indicators (2	or more required)
S	Surface Water (A1)					Water stain	ed Leaves (B9) (I	Except MLRA		Water stained I	_eaves (B9)
	High Water Table (A2	2)		_		1, 2, 4A, an	d 4B)			(MLRA1, 2, 4A	A, and 4B)
	Saturation (A3)					Salt Crust (I	B11)			Drainage Patte	rns (B10)
v	Vater Marks (B1)			_		Aquatic Inve	ertebrates (B13)			Dry-Season Wa	ater Table (C2)
	Sediment Deposits (E	32)		_			ulfide Odor (C1)			_	ole on Aerial Imagery (C
	Orift Deposits (B3)			-				Living Roots (C3)		Geomorphic Po	
	Algal Mat or Crust (B	1)		-			Reduced Iron (C			Shallow Aquita	
	ron Deposits (B5)			_			Reduction in Plo			Fac-Neutral Te	
	Surface Soil Cracks (B6)		-			Stressed Plants (I			-	unds (D6) (LRR A)
	nundation Visible on		ry (B7)	_			ain in Remarks)			Frost-Heave Hu	
	Sparsely Vegetated C			_		(F	,				()
			()								
Field Observ			NI-	v	C	(ih					
Surface Water			No _	<u>X</u>		(inches):					
Water Table Pr			No_	X		(inches):	>19	Wetland Hyd			
Saturation Pres			No_	X	Depth	(inches):	>19		Yes	·	No X
(includes capillary				22 6 6 7							
Describe Recor	ded Data (stream ga	uge, monitor	ing well,	aerial pho	tos, previ	ous inspecti	ons), if available:				
Remarks:											

PHS #	6338
WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region	

ject/Site:	Palmberg Pro	operty	City/County:	Gea	rhart/Clatsop	Sampling Date:	3/28/2018
licant/Owner: B	ill Palmberg				State:	OR :	Sampling Point: 29
estigator(s):	SE/JT/C	M/CR	Section, To	ownship, Range:	Section	n 10, Township 6N,	Range 10W
dform (hillslope, terra	ace, etc.:)	Depres	sion	Local relief (cor	ncave, convex, none):		Slope (%):
region (LRR):	LI	RR A	Lat:	46.02	78 Long:	-123.9075	Datum: WGS84
Map Unit Name:		Gearhart	Fine Sandy Loa	m	NWI CI	assification:	PFOC
climatic/hydrologic c	onditions on the	site typical for this	time of year?	Yes	X No	(if no, expla	in in Remarks)
vegetation	Soil	or Hydrology	significantly dist	turbed?	Are "Normal Circumstar	ces" present? (Y/N)	Υ
vegetation		or Hydrology			, explain any answers in Re	emarks.)	
		_					
MMARY OF FIN	NDINGS - A	ttach site ma	p showing san	npling point	locations, transect	s, important featu	res, etc.
ophytic Vegetation F	Present? Yes	X	No	Is Sampled Ar	ea within		
ric Soil Present?	Yes	X	No	a Wetlar		X	lo
land Hydrology Pres	ent? Yes	X	No				
arks:							
SETATION - Us	se scientific	names of pla	ints.				
p		absolute	Dominant	Indicator	Dominance Test wo	rksheet:	
01-1		% cover	Species?	Status			
Stratum (plot size	e:)			Number of Dominant Spe		197
					That are OBL, FACW, or	FAC:	1 (A)
		_	-		Total Number of Domina		4 (D)
			= Total Cover		Species Across All Strata	1:	1 (B)
			Total Cover				
ing/Shrub Stratum	(plot size:)			Percent of Dominant Spe		
					That are OBL, FACW, o	r FAC: 1	00% (A/B)
		_			Describer on Index 160		
					Prevalence Index W		
					Total % Cover of OBL Species	Multiply by: x 1 =	_ 0
			= Total Cover		FACW species	x 2 =	0
					FAC Species	x 3 =	0
Stratum (plot size	e: 5)			FACU Species	x 4 =	0
Carex obnupta		100	X	OBL	UPL Species	x 5 =	0
					Column Totals	0 (A)	0 (B)
					Prevalence Index =	B/A = #[0IV/0!
		_			Hydrophytic Vegetat		
						1- Rapid Test for Hydro	3 51 151
			= Tetal Course		X	2- Dominance Test is > 3-Prevalence Index is ≤	
		100	= Total Cover				tions ¹ (provide supporting
	plot size:)			-	data in Remarks or on a	
dy Vine Stratum (5- Wetland Non-Vascula	
dy Vine Stratum (Problematic Hydrophytic	Vegetation ¹ (Explain)
dy Vine Stratum (Indicators of hydric soil a	and wetland hydrology m	ust be present, unless
dy Vine Stratum (0	= Total Cover				
ody Vine Stratum (0	= Total Cover		disturbed or problematic.		
are Ground in Herb S	Stratum	0	= Total Cover			Yes X	No

SOIL	PHS#	6338			Sampling Point: 29
rofile Description: (Describe to the de	pth needed to doo	cument the indicator or co	nfirm the absence of i	ndicators.)	
Depth Matrix		Redox Features			
(Inches) Color (moist) %	Color (mois	st) % Type ¹	Loc ²	Texture	Remarks
0-7 10YR 3/3 10	0		Si	It Loam	<u> </u>
7-12 10YR 3/3 93	10YR 3/6	5 7 C	M Si	It Loam	Medium
	_				*
			· 		
					2
pe: C=Concentration, D=Depletion, RN dric Soil Indicators: (Applicable					² Location: PL=Pore Lining, M=Matrix. tors for Problematic Hydric Soils ³ :
Histosol (A1)		Sandy Redo			2 cm Muck (A10)
Histic Epipedon (A2)		Stripped Ma			Red Parent Material (TF2)
				M DA 4\	
Black Histic (A3)					Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)					Other (explain in Remarks)
Depleted Below Dark Surfa	ce (A11)	Depleted Ma			
Thick Dark Surface (A12)			Surface (F6)		³ Indicators of hydrophytic vegetation and wetland
Sandy Mucky Mineral (S1)			ark Surface (F7)		hydrology must be present, unless disturbed or
Sandy Gleyed Matrix (S4)		Redox Depr	ressions (F8)		problematic.
strictive Layer (if present):					
pe:					
epth (inches):			Hydr	ic Soil Pres	ent? Yes X No No
YDROLOGY etland Hydrology Indicators:			,		,
imary Indicators (minimum of one	required; check	all that apply)	10.000		Secondary Indicators (2 or more required)
X Surface Water (A1)		Constitution of the Consti	ed Leaves (B9) (Except	t MLRA	Water stained Leaves (B9)
X High Water Table (A2)		1, 2, 4A, and	d 4B)		(MLRA1, 2, 4A, and 4B)
X Saturation (A3)		Salt Crust (E	B11)		Drainage Patterns (B10)
Water Marks (B1)		Aquatic Inve	ertebrates (B13)		Dry-Season Water Table (C2)
Sediment Deposits (B2)		Hydrogen Si	ulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)		Oxidized Rh	nizospheres along Living	g Roots (C3)	Geomorphic Position (D2)
Algal Mat or Crust (B4)		Presence of	f Reduced Iron (C4)		Shallow Aquitard (D3)
Iron Deposits (B5)			Reduction in Plowed S	, ,	X Fac-Neutral Test (D5)
Surface Soil Cracks (B6)		Stunted or S	Stressed Plants (D1) (LI	RR A)	Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial		Other (Expla	ain in Remarks)		Frost-Heave Hummocks (D7)
Sparsely Vegetated Concav	ve Surface (B8)				
ld Observations:					
face Water Present? Yes X	_				
- T D V V	No	Depth (inches):		etland Hydr	ology Present?
			0		
aturation Present? Yes X		Depth (inches):			Yes X No
aturation Present? Yes X cludes capillary fringe)	No				Yes X No
aturation Present? Yes X cludes capillary fringe)	No				Yes X No
	No				Yes <u>X</u> No
aturation Present? Yes X cludes capillary fringe)	No				Yes X No
uturation Present? Yes X cludes capillary fringe)	No				Yes X No
turation Present? Yes X cludes capillary fringe) scribe Recorded Data (stream gauge, r	No				Yes X No

PHS #	6338
WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region	

ct/Site: Palmberg Prope	rty	City/County:	Gea	rhart/Clatsop	Sampling D	ate:	3/28/2018
ant/Owner: Bill Palmberg				State:	OR	Sampling	Point: 30
gator(s): SE/JT/CM/0	CR	Section, To	wnship, Range:	Sectio	n 10, Townshi	p 6N, Range	10W
orm (hillslope, terrace, etc.:)	Pit		Local relief (co	ncave, convex, none):		Slop	e (%):
gion (LRR): LRR	A	Lat:	46.02	74 Long:	-123.905	9 D	atum: WGS84
ap Unit Name:	Gearhart F	— ine Sandy Loai	m	NWI CI	assification:	PF	ос
matic/hydrologic conditions on the site	typical for this tir	ne of year?	Yes	X No	(if no	, explain in Rem	arks)
egetation Soil or H	ydrology	significantly dist	urbed?	Are "Normal Circumstan	ces" present? (Y/	/N) Y	,
	ydrology	_		I, explain any answers in Re	,		
				, orpiani any anonoro mi	indine.)		
IMARY OF FINDINGS - Atta	ch site map	showing sar	npling point	locations, transect	s, important	features, etc	.
phytic Vegetation Present? Yes	No.	X					
Soil Present? Yes	No.	xx	Is Sampled A			No X	<u> </u>
nd Hydrology Present? Yes	No	X	385				
rks:			J.,				
ETATION - Use scientific na	mes of plan	ts.					
20 41	absolute	Dominant	Indicator	Dominance Test wo	rksheet:		
Stratum (plot size:	% cover	Species?	Status	Niverban of Description Co.	_:		
AUGUIT (PIOC SIZE.)			Number of Dominant Spe That are OBL, FACW, or		1	(A)
				mat are OBL, FACW, OF	FAC.		(A)
				Total Number of Domina	nt		
				Species Across All Strata		2	(B)
	0	= Total Cover					(-/
g/Shrub Stratum (plot size: 15	`			Descent of Descious Co.	-1		
g/Shrub Stratum (plot size: 15 ambucus racemosa	—' 90	X	FACU	Percent of Dominant Spe That are OBL, FACW, o		50%	(A/B)
ubus spectabilis	10		FAC	mat are OBL, FACW, O		50%	(A/B)
ubus speciabilis			170	Prevalence Index W	orksheet:		
				Total % Cover of		ply by:	
				OBL Species		(1 = 0	
	100	= Total Cover		FACW species		2 = 0	
				FAC Species	×	3 = 0	
Stratum (plot size: 5)			FACU Species	×	4 = 0	-
anunculus repens	60	X	FAC	UPL Species	x	5 = 0	
olystichum munitum	3		FACU	Column Totals	0 (A)	0	(B)
quisetum arvense	1		FAC				
ardamine sp.	1		(FAC)	Prevalence Index =	B/A =	#DIV/0!	
		-		Hydrophytic Vandat	ion India-4-		
				Hydrophytic Vegetat			retation
	. ———				 Rapid Test for Dominance Te 		jetation
	65	= Total Cover			3-Prevalence Inde		
		,			4-Morphological A		ovide supporting
Vine Stratum (plot size:	_)				data in Remarks	or on a separate	sheet)
					5- Wetland Non-\		
					Problematic Hydr	ophytic Vegetati	on ¹ (Explain)
	0	= Total Cover		¹ Indicators of hydric soil a	and wetland hydrol	logy must be pre	sent, unless
				disturbed or problematic.			
	35			Hydrophytic Vegetation	Yes		No X
re Ground in Herb Stratum							

SOIL			PHS#	633	8			Sampling Point:	30
Profile Descrip	otion: (Describe to	the depth n	eeded to docume	ent the indica	tor or confir	m the absen	ce of indicators.)		
Depth	Matrix			Redox F	-				
(Inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks	
0-11	10YR 2/2	100					Sandy Loam		
11-16	10YR 3/3	100					Sandy Loam		*
Type: C=Conc	entration, D=Depleti	on, RM=Red	duced Matrix, CS=	Covered or C	oated Sand C	Grains.		² Location: PL=Pore Lining, M=Mat	rix.
lydric Soil I	ndicators: (Appl	icable to a	II LRRs, unles	s otherwise	e noted.)		Indica	ators for Problematic Hydric S	
	listosol (A1)				andy Redox (S	S5)		2 cm Muck (A10)	
	listic Epipedon (A2)				ripped Matrix			Red Parent Material (TF2)
	Black Histic (A3)						except MLRA 1)	Very Shallow Dark Su	
	lydrogen Sulfide (A4	1)			amy Gleyed !		4	Other (explain in Ren	
	Depleted Below Dark		11)		epleted Matrix			Outer (explain in Reli	.a.noj
			• • • •						
	hick Dark Surface (edox Dark Su	, ,		³ Indicators of hydrophytic vegetation	n and wetland
	Sandy Mucky Minera				epleted Dark			hydrology must be present, unless	
	Sandy Gleyed Matrix			R	edox Depress	ions (F8)		problematic.	
Restrictive L	ayer (if present)	:					-		
Гуре:									
Depth (inches)	:						Hydric Soil Pres	ent? Yes No	X
HYDROLOG Wetland Hyd	GY Irology Indicator	s:							
Primary Indic	ators (minimum o	f one requ	ired; check all th	nat apply)				Secondary Indicators (2 or mo	ore required)
	Surface Water (A1)	•			ater stained L	eaves (B9) (E	Except MLRA	Water stained Leaves	
	ligh Water Table (A2	2)		1,	2, 4A, and 4	3)		(MLRA1, 2, 4A, and	4B)
	Saturation (A3)			Sa	ilt Crust (B11))		Drainage Patterns (B	10)
v	Vater Marks (B1)			Ac	uatic Inverteb	orates (B13)		Dry-Season Water Ta	ible (C2)
s	Sediment Deposits (E	32)		Hy	drogen Sulfid	le Odor (C1)		Saturation Visible on	
	Prift Deposits (B3)				-		Living Roots (C3)	Geomorphic Position	
Α	lgal Mat or Crust (B	4)		Pr	esence of Re	duced Iron (C	:4)	Shallow Aquitard (D3)	
Ir	on Deposits (B5)			Re	cent Iron Red	duction in Plo	wed Soils (C6)	Fac-Neutral Test (D5)	
s	iurface Soil Cracks (B6)		St	unted or Stres	ssed Plants ([D1) (LRR A)	Raised Ant Mounds (I	06) (LRR A)
Ir	nundation Visible on	Aerial Imag	ery (B7)	Ot	her (Explain i	n Remarks)		Frost-Heave Hummoo	ks (D7)
S	parsely Vegetated C	Concave Sur	face (B8)						
ield Observ	ations:								
urface Water I	Present? Yes		No X	Depth (in	ches):		,		
Vater Table Pr			No X	Depth (in		>16	Wetland Hydi	rology Present?	
Saturation Pres			No X	Depth (in		>16		Yes No	x
includes capillary				,					
Describe Recor	ded Data (stream ga	auge, monito	ring well, aerial ph	otos, previou	s inspections), if available:			
emarks:									

PHS # 6338 TI AND DETERMINATION DATA FORM, Western Mountains, Valleys, and Coast Pegion

ct/Site:	Palmberg Prope	erty	City/County:	Gea	rhart/Clatsop	San	npling Date:	3/2	8/2018
cant/Owner:	Bill Palmberg					State: OR	Sa	ampling Point	31
tigator(s):	SE/JT/CM/	CR	Section, To	ownship, Range:	Se	ection 10, To	— wnship 6N, F	Range 10W	
form (hillslope, te	errace, etc.:)			Local relief (cor	ncave, convex, none):			-0.000	:
egion (LRR):	LRR	A	Lat:	46.027		Long: -1	23.9059	-	WGS84
Map Unit Name:			_			WI Classification		PFOC	
	c conditions on the site			Yes			(if no, explain		
-		•						•	
	Soil or H						ent? (Y/N)	Y	-
egetation	Soil or F	lydrology	_ naturally proble	matic? If needed,	, explain any answers	in Remarks.)			
MARY OF I	FINDINGS – Atta	ch site map	showing sar	mpling point	locations, trans	sects, impo	rtant featur	es, etc.	
phytic Vegetation)						
Soil Present?	Yes	X No		Is Sampled Are		Yes X	No		
nd Hydrology Pr	resent? Yes			a vvetian	iu:		_		-
irks:									
ETATION -	Use scientific na	mes of plan	ts.						
		absolute	Dominant	Indicator	Dominance Tes	t worksheet:			
		% cover	Species?	Status					
Stratum (plot	size: 30)			Number of Dominal	nt Species			
inus rubra		80	X	FAC	That are OBL, FAC	W, or FAC:		5	(A)
	141				Total Number of Do	minant			
					Species Across All	Strata:		5	_(B)
		80	= Total Cover						
ng/Shrub Stratur	<u>m</u> (plot size: 10)			Percent of Dominar	nt Species			
ubus specta	bilis	25	x	FAC	That are OBL, FAC	W, or FAC:	10	0%	(A/B)
piraea dougl	asii	10	Х	FACW					
onicera invo	lucrata	10	Х	FAC	Prevalence Inde	x Workshee	et:	4	
Inus rubra		5		FAC	Total % Cover of		Multiply by:	_	
ubus armeni	iacus	2		FAC	OBL Species		x 1 =	0	_
		52	= Total Cover		FACW species	ŝ	x 2 =	0	_
					FAC Species		x 3 =	0	-
Stratum (plot)			FACU Species	·	_ x 4 =	0	_
arex obnupta		75	X	OBL	UPL Species		x 5 =	0	_
thyrium ame		5		FAC	Column Totals	0	_ (A)	0	(B)
anunculus re	·	5		FAC					
eum macrop		3		FAC	Prevalence In	idex =B/A =	#DI	V/0!	-
sichiton am	ericanus	1		OBL					
					Hydrophytic Ve	_			
							Test for Hydroph	-	on
					X		ance Test is >50		
		89	= Total Cover				ence Index is ≤ 3 ological Adaptatio		supporting
y Vine Stratum	(plot size:)					emarks or on a s		
, raic ouatum	\F	—′					nd Non-Vascular		··)
							atic Hydrophytic		=xplain)
		0	= Total Cover		¹ Indicators of hydric				
			- rotal COVE		disturbed or probler		nyarology mus	or present,	G111033
					Hydrophytic				
	rb Stratum	15			Vegetation		s X	No	

SOIL			PHS#	63	38			Sampling Point:	31
Profile Descri	iption: (Describe to	the depth	needed to docum	ent the indi	cator or con	firm the abser	nce of indicators.)		
Depth	Matrix				x Features				
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-9	2.5Y 2.5/1	75	7.5YR 2.5/3	5	C	M	Loamy Sand	Fine	
0-9	Gravel	20						Gravel	
9-14	2.5Y 3/3	93	5YR 4/6	7	C	M	Sand	Fine to Medium	
14-17	10YR 2/2	100					Mucky Peat		
	×								
								Photographic Control of the Control	
1								2	
	centration, D=Deplet						1	² Location: PL=Pore Lining, M=Matrix.	3
-	Indicators: (Appl	icable to	all LKKS, unles				Indica	ators for Problematic Hydric Soils	":
	Histosol (A1)				Sandy Redox	(S5)		2 cm Muck (A10)	
	Histic Epipedon (A2)				Stripped Mati	rix (S6)		Red Parent Material (TF2)	
	Black Histic (A3)				Loamy Muck	y Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface	: (TF12)
X	Hydrogen Sulfide (A	1)			Loamy Gleye	d Matrix (F2)		Other (explain in Remarks)
[Depleted Below Dark	Surface (A11)		Depleted Mat	trix (F3)			
-	Thick Dark Surface (A12)		X	Redox Dark S	Surface (F6)		4	
	Sandy Mucky Minera	I (S1)			Depleted Dar	rk Surface (F7)		Indicators of hydrophytic vegetation and hydrology must be present, unless distu	1000
	Sandy Gleyed Matrix	(S4)			Redox Depre	essions (F8)		problematic.	ibed of
Restrictive L	Layer (if present)	:							
Туре:	, , ,						16		
					-		Uhadaia Cail Basa		
Depth (inches	·)-				-		Hydric Soil Pres	ent? Yes X No	
Remarks:									
_	GY drology Indicator		uired: check all t	hat apply)				Secondary Indicators (2 or more re	equired)
	Surface Water (A1)	one req	ulled, check all t			d Leaves (R9) (Except MLRA	Water stained Leaves (B9)	
	High Water Table (A	2)			1, 2, 4A, and	, , ,		(MLRA1, 2, 4A, and 4B)	
	Saturation (A3)	<i>L</i>)			Salt Crust (B	11\		Drainage Patterns (B10)	
	Water Marks (B1)					tebrates (B13)		Dry-Season Water Table (C3)
	Sediment Deposits (E	321			•	lfide Odor (C1)		Saturation Visible on Aeria	
	Drift Deposits (B3)	52)					g Living Roots (C3)	Geomorphic Position (D2)	imagery (C9)
	Algal Mat or Crust (B	4)				Reduced Iron (Shallow Aquitard (D3)	
	ron Deposits (B5)	7)					owed Soils (C6)	X Fac-Neutral Test (D5)	
	Surface Soil Cracks ('D6\				ressed Plants (Raised Ant Mounds (D6) (I	DD A\
	nundation Visible on		con/(P7)			n in Remarks)	D () (EXX A)		
	Sparsely Vegetated (Other (Explain	ii iii Keiliaiks)		Frost-Heave Hummocks (D	""
	. , ,	Jonicave 30							
Field Observ	vations:								
Surface Water	Present? Yes		No X	Depth ((inches):		9		
Water Table Pr	resent? Yes	x	No	Depth ((inches):	4	Wetland Hydi	rology Present?	
Saturation Pres		X	No	Depth ((inches):	2		Yes X No	
(includes capillar									
Describe Recor	rded Data (stream ga	auge, moni	toring well, aerial p	notos, previo	ous inspection	ns), if available	9		
Remarks: High water t	able may actually	y be perc	hed water table	·.					

PHS # 6338 WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Palmberg Prope	erty	City/County:	Gea	arhart/Clatsop Sampling Date: 3/28/2018
Applicant/Owner: Bill Palmberg				State: OR Sampling Point: 32
nvestigator(s): SE/JT/CM/0	CR	Section, To	wnship, Range:	
_andform (hillslope, terrace, etc.:)	Flats			ncave, convex, none): Slope (%):
Subregion (LRR): LRR		Lat:	46.02	
Soil Map Unit Name:		- ne Sandy Loai		NWI Classification: PFOC
Are climatic/hydrologic conditions on the site			Yes	
Are vegetation Soil or H	2000			Are "Normal Circumstances" present? (Y/N)
Are vegetation Soil or H		•		· · · · · ——
				, orpian any anonoral normanies,
SUMMARY OF FINDINGS - Attac	ch site map s	showing san	npling point	locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	X No		Is Sampled A	rea within
Hydric Soil Present? Yes	No.	X	a Wetlan	
Wetland Hydrology Present? Yes	X No			
Remarks:				
Sample point is located immediately	south of the v	vetland bound	dary.	
	-			
VEGETATION - Use scientific na				
	absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Free Stratum (plot size:)			Number of Dominant Species
1				That are OBL, FACW, or FAC: 2 (A)
2				
3				Total Number of Dominant
4				Species Across All Strata: 2 (B)
	0	= Total Cover		
Sapling/Shrub Stratum (plot size: 15	_)			Percent of Dominant Species
1 Rosa pisocarpa	50	Χ	FAC	That are OBL, FACW, or FAC: 100% (A/B)
2 Oemleria cerasiformis	10		FACU	
3 Sambucus racemosa	10		FACU	Prevalence Index Worksheet:
4				Total % Cover of Multiply by:
5				OBL Species x1 = 0
	70	= Total Cover		FAC Species
Herb Stratum (plot size: 5)			FACU Species x 4 = 0
1 Carex obnupta	40	X	OBL	UPL Species x 5 = 0
2 Polystichum munitum	10	20	FACU	Column Totals 0 (A) 0 (B)
3 Lysichiton americanus	2		OBL	
4				Prevalence Index =B/A = #DIV/0!
5				
6	-			Hydrophytic Vegetation Indicators:
7				1- Rapid Test for Hydrophytic Vegetation
8				2- Dominance Test is >50% 3-Prevalence Index is ≤ 3.0 ¹
	52	= Total Cover		4-Morphological Adaptations ¹ (provide supporting
Noody Vine Stratum (plot size:)			data in Remarks or on a separate sheet)
	_			5- Wetland Non-Vascular Plants ¹
1				Problematic Hydrophytic Vegetation ¹ (Explain)
				Problematic Hydrophytic Vegetation (Explain)
1	0	= Total Cover		¹ Indicators of hydric soil and wetland hydrology must be present, unless
1	0	= Total Cover		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1 2	0	= Total Cover		¹ Indicators of hydric soil and wetland hydrology must be present, unless

SOIL			PHS#	6338			Sampling Point:	32
rofile Description	: (Describe to	the depth r	needed to docur	nent the indicat	or or confirm the at	sence of indicators.)		
Depth	Matrix			Redox Fe	eatures			
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹ Loc ²	Texture	Remarks	
0-18	10YR 3/2	100				Silt Loam		
			***************************************			_		
	-							
ype: C=Concentra							² Location: PL=Pore Lining, M=Matr	
ydric Soil Indic		icable to	all LRRs, unle		,	Indica	ators for Problematic Hydric S	oils ³ :
	sol (A1)				ndy Redox (S5)		2 cm Muck (A10)	
	Epipedon (A2)				pped Matrix (S6)	-d\	Red Parent Material ((12)
	Histic (A3)				amy Mucky Mineral (F		Very Shallow Dark Su	
	ogen Sulfide (A4		44)		amy Gleyed Matrix (F	2)	Other (explain in Rem	arks)
	eted Below Dark		11)		oleted Matrix (F3)			
	Dark Surface (Character and a second	dox Dark Surface (F6		³ Indicators of hydrophytic vegetation	and wetland
	y Mucky Minera				oleted Dark Surface (hydrology must be present, unless	disturbed or
	y Gleyed Matrix			Re	dox Depressions (F8)	,	problematic.	
estrictive Laye	r (if present)	:						
ype:								
epth (inches):						Hydric Soil Pres	sent? Yes No	X
YDROLOGY Vetland Hydrolo	ogy Indicator	s:						
rimary Indicator	s (minimum c	f one requ	ired; check al	I that apply)			Secondary Indicators (2 or mo	re required)_
Surfa	ce Water (A1)				ter stained Leaves (E	99) (Except MLRA	X Water stained Leaves	
X High	Water Table (A	2)		1, 2	2, 4A, and 4B)		(MLRA1, 2, 4A, and	4B)
X Satura	ation (A3)			Sal	t Crust (B11)		Drainage Patterns (B1	0)
Water	r Marks (B1)			Aqı	uatic Invertebrates (B	13)	Dry-Season Water Ta	ble (C2)
	nent Deposits (E	32)			drogen Sulfide Odor (Saturation Visible on A	
	Deposits (B3)				0.000 500 00.00	along Living Roots (C3)	X Geomorphic Position (
	Mat or Crust (B	4)			sence of Reduced In		Shallow Aquitard (D3)	
	Deposits (B5) ce Soil Cracks ('DE\			cent Iron Reduction in nted or Stressed Pla		X Fac-Neutral Test (D5) Raised Ant Mounds (E	
	ation Visible on		iery (B7)		er (Explain in Remar		Frost-Heave Hummoo	
	sely Vegetated (ici (Expidiii iii itomai	no,		NO (D1)
ield Observation								
urface Water Pres	ent? Yes		No X	Depth (inc	thes):			
ater Table Presen	t? Yes	×	No	Depth (inc		Wetland Hyd	rology Present?	
aturation Present?		Х	No	Depth (inc	thes): 9		Yes X No	
ncludes capillary fring						-11		
escribe Recorded				photos, previous	inspections), if avail	able:		
	Data (stream ga	auge, monito	oring well, aerial	F, F				
	Data (stream ga	auge, monite	oring well, aerial	F, F				
	Data (stream ga	auge, monite	onng well, aenal	,,,,				
marks:	Data (stream ga	auge, monite	oring well, aerial				· · · · · · · · · · · · · · · · · · ·	
	Data (stream ga	auge, monit	oring well, aerial			,		
	Data (stream ga	auge, monit	oring well, aenal				-	

	PHS#	633
/ETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast R	egion	

Project/Site:	Palmberg Proper	ty	City/County:	Gear	rhart/Clatsop	Sampling Date:	3/28	/2018
Applicant/Owner:	Bill Palmberg				State:	OR	Sampling Point:	33
Investigator(s):	SE/JT/CM/C	R	Section, To	wnship, Range:	Section	10, Township 6N	, Range 10W	(
Landform (hillslope, to	errace, etc.:)	Flats		Local relief (con	cave, convex, none):		Slope (%):	
Subregion (LRR):	LRR A		Lat:	46.027	8 Long:	-123.9075	Datum:	WGS84
Soil Map Unit Name:		Gearhart Fin	e Sandy Loar	n	NWI Cla	ssification:	PFOC	
Are climatic/hydrologi	c conditions on the site ty	pical for this time	e of year?	Yes	X No	(if no, expl	ain in Remarks)	
Are vegetation	Soil or Hy	drology	significantly dist	urbed?	Are "Normal Circumstance			
Are vegetation	Soil or Hy	drology	naturally probler	natic? If needed,	explain any answers in Re	marks.)		
					,	,		
SUMMARY OF	FINDINGS – Attac	h site map s	howing san	pling point	locations, transects	, important feat	ures, etc.	
Hydrophytic Vegetation	on Present? Yes	X No		Is Sampled Are	a within			
Hydric Soil Present?	Yes _	X No		a Wetlan		X	No	
Wetland Hydrology P	resent? Yes	X No						
Remarks:								
VEGETATION -	Use scientific nan	nes of plants	5.					
		absolute % cover	Dominant Species?	Indicator Status	Dominance Test wor	ksheet:		
Tree Stratum (plot	size:)	70 00101	Ореско:	Otatas	Number of Dominant Spec	cies		
1					That are OBL, FACW, or I		2	(A)
2								
3					Total Number of Dominan	t		
4					Species Across All Strata:		3	(B)
		0	= Total Cover					
Sapling/Shrub Stratur	n (plot size: 15)			Percent of Dominant Spec	cies		
1 Rosa pisocar	oa	40	X	FAC	That are OBL, FACW, or	FAC:	67%	(A/B)
2 Sambucus rad	cemosa	10	Х	FACU				
3					Prevalence Index Wo	rksheet:		
4					Total % Cover of	Multiply by	<u> </u>	
5					OBL Species	x 1 =	0	
		50	= Total Cover		FACW species FAC Species	x 2 = x 3 =	0	
Herb Stratum (plot	size: 5)				FACU Species	x 4 =	0	
1 Carex obnupta		30	X	OBL	UPL Species	x 5 =	0	
2 Lysichiton am	ericanus	3		OBL	Column Totals	0 (A)	0 ((B)
3 Pteridium aqu	ilinum	1		FACU	_			
4					Prevalence Index =E	3/A = #	DIV/0!	
5								
6	*		×.		Hydrophytic Vegetati	on Indicators:		
7						1- Rapid Test for Hydro		1
8			T. / 10			2- Dominance Test is a 3-Prevalence Index is a		
		34	= Total Cover			3-Prevalence Index is : 1-Morphological Adapt		upporting
Woody Vine Stratum	(plot size:)				data in Remarks or on		
1		•				5- Wetland Non-Vascu		
2						Problematic Hydrophyt	ic Vegetation ¹ (Ex	rplain)
		0	= Total Cover		¹ Indicators of hydric soil ar	nd wetland hydrology r	nust be present, u	nless
					disturbed or problematic.			
% Bare Ground in He	rb Stratum 6	66			Hydrophytic Vegetation	Yes X	No	
					Present?			
Remarks:								

Profile Descri	ntion: (Describe to	the dorth -	anded to docume	ant the in-	licator or ser	firm the chec-	oce of indicators \	-
Depth	ption: (Describe to t Matrix	uie aeptn n	reeded to docume		ox Features	iiim the abser	ice of indicators.)	
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	10YR 3/2	30	5GY3	70	D	M	Silt Loam	matrix has depleted to gley
6-10	10YR 4/2	100					Silt Loam	matrix has depicted to gie
10-16	10YR 4/2	90	5GY3	10		M	Silt Loam	depleting matrix but not as much as
10-10	1011(4/2			-10			One Louin	upper profile
			1					apper prome
	centration, D=Depletion							² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appli	icable to a	all LRRs, unles	s otherw	rise noted.)		Indic	ators for Problematic Hydric Soils ³ :
	Histosol (A1)				Sandy Redox	x (S5)		2 cm Muck (A10)
	Histic Epipedon (A2)				Stripped Mat	rix (S6)		Red Parent Material (TF2)
	Black Histic (A3)				Loamy Muck	y Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
	Hydrogen Sulfide (A4	1)		X	Loamy Gleye	ed Matrix (F2)		Other (explain in Remarks)
	Depleted Below Dark	Surface (A	.11)		Depleted Ma	trix (F3)		
	Thick Dark Surface (A	A12)			Redox Dark	Surface (F6)		3
	Sandy Mucky Mineral	I (S1)			Depleted Dar	rk Surface (F7)		Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or
	Sandy Gleyed Matrix	(S4)			Redox Depre	essions (F8)		problematic.
Restrictive I	_ayer (if present):	:						
	2							
Type:					_			
Dauth Castan	X:						I bedein Call Dear	
Depth (inches):				<u>-</u>		Hydric Soil Pres	sent? Yes X No
HYDROLO Wetland Hyd	GY drology Indicator		uired: check all t	hat annive			Hydric Soil Pres	
HYDROLO Wetland Hyd Primary Indic	GY drology Indicators ators (minimum o		uired; check all tl			d Leaves (RQ) f		Secondary Indicators (2 or more required)
HYDROLO Wetland Hyd Primary Indic	GY drology Indicators sators (minimum o Surface Water (A1)	f one requ	uired; check all tl		Water staine	d Leaves (B9) (Secondary Indicators (2 or more required) Water stained Leaves (B9)
HYDROLO Wetland Hyd Primary Indic	GY drology Indicators ators (minimum o Surface Water (A1) High Water Table (A2	f one requ	uired; check all tl		Water stained	(4B)		Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
HYDROLO Wetland Hyd Primary Indic	GY drology Indicators eators (minimum o Surface Water (A1) High Water Table (A2 Saturation (A3)	f one requ	uired; check all tl		Water stained 1, 2, 4A, and Salt Crust (B	1 4B) 11)		Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) X Drainage Patterns (B10)
HYDROLO Wetland Hyd Primary India X X	GY drology Indicators sators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	of one requ	uired; check all ti	X	Water stained 1, 2, 4A, and Salt Crust (B Aquatic Inver	14B) 11) tebrates (B13)	Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) X Drainage Patterns (B10) Dry-Season Water Table (C2)
HYDROLO Wetland Hyd Primary India	GY drology Indicators sators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B	of one requ	uired; check all tl	X	Water stained 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su	14B) 11) tebrates (B13)	Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) X Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C
HYDROLO Wetland Hyd Primary India X X	GY drology Indicators cators (minimum of Surface Water (A1)) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3)	f one required	uired; check all tl	X	Water stained 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz	14B) 11) tebrates (B13) lifide Odor (C1) zospheres alon	Except MLRA g Living Roots (C3)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) X Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
HYDROLO Wetland Hyd Primary India X X	GY Arology Indicators cators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4)	f one required	uired; check all ti	X	Water stained 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of I	11) tebrates (B13) lifide Odor (C1) zospheres alon Reduced Iron (0	Except MLRA g Living Roots (C3) C4)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) X Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3)
HYDROLO Wetland Hyd Primary Indic	GY drology Indicators cators (minimum of Surface Water (A1)) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3)	f one requ 2) 32) 4)	uired; check all tl	X	Water stained 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F	11) tebrates (B13) ilfide Odor (C1) zospheres alon Reduced Iron (G	Except MLRA g Living Roots (C3) C4) owed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) X Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
HYDROLO Wetland Hyd Primary India X X	GY drology Indicators cators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5)	one required (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)		X	Water stained 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Stunted or St	11) tebrates (B13) lifide Odor (C1) zospheres alon Reduced Iron (0	Except MLRA g Living Roots (C3) C4) owed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) X Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C) X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5)
HYDROLO Wetland Hyd Primary India X X	GY drology Indicators sators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) Surface Soil Cracks (one requests 32) 4) B6) Aerial Imag	gery (B7)	X	Water stained 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Stunted or St	14B) 11) tebrates (B13) lifide Odor (C1) zospheres alon Reduced Iron (C) Reduction in Plot tressed Plants (Except MLRA g Living Roots (C3) C4) owed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) X Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C) X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLO Wetland Hyd Primary India X X	GY drology Indicators cators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) Surface Soil Cracks (Inundation Visible on Sparsely Vegetated C	one requests 32) 4) B6) Aerial Imag	gery (B7)	X	Water stained 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Stunted or St	14B) 11) tebrates (B13) lifide Odor (C1) zospheres alon Reduced Iron (C) Reduction in Plot tressed Plants (Except MLRA g Living Roots (C3) C4) owed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) X Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C) X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLO Wetland Hyd Primary India X X S S Field Observa	GY drology Indicators cators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) Surface Soil Cracks (Innundation Visible on Sparsely Vegetated Covations:	one requests 32) 4) B6) Aerial Imag	gery (B7) rface (B8)	X	Water stained 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Stunted or St Other (Explain	14B) 11) tebrates (B13) lifide Odor (C1) zospheres alon Reduced Iron (C) Reduction in Plot tressed Plants (Except MLRA g Living Roots (C3) C4) owed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) X Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C) X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLO Wetland Hyd Primary Indic X X S S Field Obsert	GY drology Indicators cators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Fron Deposits (B5) Surface Soil Cracks (innundation Visible on Sparsely Vegetated Covations: Present? Yes	of one requipment of one requi	gery (B7) rface (B8)	X	Water stained 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Stunted or St Other (Explai	11) tebrates (B13) iffide Odor (C1) zospheres alon Reduced Iron (C Reduction in Plot tressed Plants (in in Remarks)	g Living Roots (C3) C4) owed Soils (C6) D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) X Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C) X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLO Wetland Hyd Primary India X X S Field Observ Surface Water Water Table Primary India	GY drology Indicators cators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) Surface Soil Cracks (Inundation Visible on Sparsely Vegetated Covations: Present? Yes resent? Yes	2) 32) 4) B6) Aerial Imag	gery (B7) rface (B8) NoX No	Depth	Water stained 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhin Presence of I Recent Iron F Stunted or St Other (Explai	11) tebrates (B13) ilfide Odor (C1) zospheres alon Reduced Iron (CReduction in Plot tressed Plants (in in Remarks)	g Living Roots (C3) C4) owed Soils (C6) D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) X Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C) X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLO Wetland Hyd Primary Indic X X S S Field Obsert	GY drology Indicators cators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) Surface Soil Cracks (inundation Visible on Sparsely Vegetated Covations: Present? Yes sent? Yes	of one requipment of one requi	gery (B7) rface (B8)	Depth	Water stained 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Stunted or St Other (Explai	11) tebrates (B13) iffide Odor (C1) zospheres alon Reduced Iron (C Reduction in Plot tressed Plants (in in Remarks)	g Living Roots (C3) C4) owed Soils (C6) D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) X Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C) X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLO Wetland Hyd Primary Indic X X S Field Obsert Surface Water Table Pri Saturation Press (includes capillar)	GY drology Indicators cators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) Surface Soil Cracks (Inundation Visible on Sparsely Vegetated Covations: Present? Yes resent? Yes sent? Yes y fringe)	of one required (2) 32) 4) B6) Aerial Imag Concave Sur	nery (B7) rface (B8) NoX No No	Depth Depth	Water stained 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Stunted or St Other (Explain (inches): (inches): (inches):	14B) 11) tebrates (B13) lifide Odor (C1) zospheres alon Reduced Iron (C Reduction in Plot tressed Plants (in in Remarks)	g Living Roots (C3) C4) bwed Soils (C6) D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) X Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C) X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLO Wetland Hyd Primary Indic X X S Field Obsert Surface Water Table Pri Saturation Press (includes capillar)	GY drology Indicators cators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) Surface Soil Cracks (inundation Visible on Sparsely Vegetated Covations: Present? Yes sent? Yes	of one required (2) 32) 4) B6) Aerial Imag Concave Sur	nery (B7) rface (B8) NoX No No	Depth Depth	Water stained 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Stunted or St Other (Explain (inches): (inches): (inches):	14B) 11) tebrates (B13) lifide Odor (C1) zospheres alon Reduced Iron (C Reduction in Plot tressed Plants (in in Remarks)	g Living Roots (C3) C4) bwed Soils (C6) D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) X Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C) X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLO Wetland Hyd Primary Indic X X S Field Obsert Surface Water Table Pri Saturation Press (includes capillar)	GY drology Indicators cators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) Surface Soil Cracks (Inundation Visible on Sparsely Vegetated Covations: Present? Yes resent? Yes sent? Yes y fringe)	of one required (2) 32) 4) B6) Aerial Imag Concave Sur	nery (B7) rface (B8) NoX No No	Depth Depth	Water stained 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Stunted or St Other (Explain (inches): (inches): (inches):	14B) 11) tebrates (B13) lifide Odor (C1) zospheres alon Reduced Iron (C Reduction in Plot tressed Plants (in in Remarks)	g Living Roots (C3) C4) bwed Soils (C6) D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) X Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C) X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLO Wetland Hyd Primary Indic X X S Field Obsert Surface Water Table Pri Saturation Press (includes capillar)	GY drology Indicators cators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) Surface Soil Cracks (Inundation Visible on Sparsely Vegetated Covations: Present? Yes resent? Yes sent? Yes y fringe)	of one required (2) 32) 4) B6) Aerial Imag Concave Sur	nery (B7) rface (B8) NoX No No	Depth Depth	Water stained 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Stunted or St Other (Explain (inches): (inches): (inches):	14B) 11) tebrates (B13) lifide Odor (C1) zospheres alon Reduced Iron (C Reduction in Plot tressed Plants (in in Remarks)	g Living Roots (C3) C4) bwed Soils (C6) D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) X Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C) X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

PHS#	6338
WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region	

ect/Site: Palmberg Prop	ercy	City/County:	Gea	rhart/Clatsop		Sampling Dat	_	3/28/2	
icant/Owner: Bill Palmberg						<u>R</u>		ing Point: _	34
stigator(s): SE/JT/CM/		Section, To	wnship, Range:	<u> </u>	Section 10,	Township			
Iform (hillslope, terrace, etc.:)			,	ncave, convex, nor	ne):			lope (%): _	
egion (LRR): LRR	Α	_ Lat:	46.028	31	Long:	-123.9078		Datum: _	WGS84
flap Unit Name:	Gearhart F	ine Sandy Loai	n		NWI Classifica	ation:		PFOC	
limatic/hydrologic conditions on the site	typical for this tir	ne of year?	Yes	X	No	(if no, e	explain in R	emarks)	
egetation Soil or F	Hydrology	significantly dist	urbed?	Are "Normal Cir	cumstances" p	resent? (Y/N)	Υ	
egetation Soil or H		naturally proble	matic? If needed	, explain any answ	ers in Remarks	s.)			
MARY OF FINDINGS – Atta	ch site man	chowing can	anling noint	locations tra	neacte im	nortant fo	aturac	oto	
phytic Vegetation Present? Yes	X No		Pility Point	iocations, tra	11130013, 1111	portant ic	atures,	eto.	
c Soil Present? Yes			Is Sampled Ar		Vaa		No	~	
	No		a Wetlar	nd?	Yes		No	X	
and Hydrology Present? Yes	No	X							
irks:									
SETATION - Use scientific na	mes of plan	ts.						101 101000	
	absolute	Dominant	Indicator	Dominance T	est workshe	et:			
	% cover	Species?	Status						
Stratum (plot size: 30	.)			Number of Domi					
Vinus rubra	60	X	FAC	That are OBL, F	ACW, or FAC:		3	(۹)
ex aquifolium	10		FACU	Tatal Norman of	Daminant				
huja plicata			FAC	Total Number of Species Across			5	(1	3)
	80	= Total Cover		Species Across /	All Strata.			(<i>3)</i>
(0) 1 0) 1		- rotal coves							
ng/Shrub Stratum (plot size: 10	— ′	~	E4011	Percent of Domi				,	. (D.)
Sambucus racemosa	40	X	FACU	That are OBL, F	ACW, or FAC:		60%	(,	4∕B)
Rubus spectabilis	10	X	FAC	Prevalence In	dov Market	anot:			
	-			Total % Cover of		Multiply	(b)c		
				OBL Speci		x 1		0	
	50	= Total Cover		FACW spec		x 2		0	
				FAC Speci		x3	-	0	
Stratum (plot size: 5)			FACU Spec	cies	x 4	=	0	
Carex obnupta	50	X	OBL	UPL Speci	es	x 5	=	0	
Polystichum munitum	20	X	FACU	Column Tot	tals ((A)		0 (E	3)
laianthemum dilatatum	5		FAC	3					
				Prevalence	e Index =B/A =		#DIV/0!		
				Lister and stin N	/a matatian le				
				Hydrophytic \	_		vdranhvtia	Vocatation	
						pid Test for H minance Test		vegetation	
	75	= Total Cover				valence Index			
		70141 00701				phological Ac		(provide su	pporting
ly Vine Stratum (plot size:)				data i	n Remarks or	on a sepa	rate sheet)	
					5- We	etland Non-Va	scular Plan	nts ¹	
						ematic Hydro			
· · · · · · · · · · · · · · · · · · ·	0	= Total Cover		¹ Indicators of hyd		etland hydrolo	gy must be	present, ur	iless
				disturbed or prob	olematic.				
				Lively and Lotte					
are Ground in Herb Stratum	25			Hydrophytic Vegetation		Yes X	[No	

SOIL			PHS#	6338	_		Sampling Point:	34
Profile Descrip	otion: (Describe to t	the depth n	eeded to docume	ent the indicator or co	onfirm the absen	ce of indicators.)		
Depth	Matrix			Redox Features				
(Inches)	Color (moist)	%	Color (moist)	% Type ¹	Loc ²	Texture	Remarks	
0-5	7.5YR 2.5/2	100				Loam		
5-19	10YR 2/2	100				Loamy Sand		
								-
		-					2	*
				Covered or Coated Sa		India	² Location: PL=Pore Lining, M=Ma	
		icable to a	ili LKKS, unies	s otherwise noted		indica	ators for Problematic Hydric	Solis :
	Histosol (A1)			Sandy Red			2 cm Muck (A10)	
Н	listic Epipedon (A2)			Stripped M			Red Parent Materia	I (TF2)
В	Black Histic (A3)			Loamy Muc	cky Mineral (F1) (except MLRA 1)	Very Shallow Dark	Surface (TF12)
Н	lydrogen Sulfide (A4)		Loamy Gle	yed Matrix (F2)		Other (explain in Re	emarks)
D	Depleted Below Dark	Surface (A	11)	Depleted M	fatrix (F3)			
Т	hick Dark Surface (A	A12)		Redox Dari	k Surface (F6)			
s	Sandy Mucky Mineral	I (S1)		Depleted D	ark Surface (F7)		³ Indicators of hydrophytic vegetati	
	Sandy Gleyed Matrix			Redox Dep	ressions (F8)		hydrology must be present, unler problematic.	so disturbed Of
	ayer (if present):					1.		
	ye. (p. eee)							
rpe:								
epth (inches)):					Hydric Soil Pres	ent? YesN	loX
YDROLOC etland Hyd	GY Irology Indicator	s:	20	*				
imary Indica	ators (minimum o	f one requ	ired; check all th	hat apply)			Secondary Indicators (2 or r	nore required)
S	Surface Water (A1)			Water stair	ned Leaves (B9) (Except MLRA	Water stained Leav	es (B9)
——	ligh Water Table (A2	2)		1, 2, 4A, ar	nd 4B)		(MLRA1, 2, 4A, an	d 4B)
	Saturation (A3)			Salt Crust ((B11)		Drainage Patterns (B10)
	Vater Marks (B1)				ertebrates (B13)		Dry-Season Water	
	Sediment Deposits (E	32)			Sulfide Odor (C1)			n Aerial Imagery (C9
	Orift Deposits (B3)					g Living Roots (C3)	Geomorphic Positio	
	Algal Mat or Crust (B4	4)			of Reduced Iron (0		Shallow Aquitard (D	
	ron Deposits (B5)				Reduction in Plo		Fac-Neutral Test (D	
	Surface Soil Cracks (B6)			Stressed Plants (Raised Ant Mounds	
	nundation Visible on		erv (B7)		lain in Remarks)		Frost-Heave Humm	
	Sparsely Vegetated C	_			,			(,
eld Observ			(,					
rface Water F			No. Y	Donth (inches):				
			No X	Depth (inches):	>10	Watland Hyd	rology Procent?	
ater Table Pre			No X	Depth (inches):	>19	vveuand Hydi	rology Present?	v
turation Preseludes capillary			No X	Depth (inches):	>19		YesN	oX
		auge monitr	oring well aerial of	notos, previous inspect	tions), if available	:		
JUSTINE INCOME	and Date (official) ge	-ago, monte	g, acrial pr	, promodo mopeo	, ii aranabie			
marks:								



	PHS#	6338
ETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Ro	aion -	

,	ETLAND									
Project/Site:	Palmberg	Prope	rty	City/County:	Gea	arhart/Clatsop		Sampling Date:	3/	28/2018
Applicant/Owner:							State:	OR	Sampling Poir	nt: 35
Investigator(s):						ownship, Range:		Section 10	, Township 6N	I, Range 10V
Landform (hillslope, ter	terrace, etc.:)			Local relief (co	encave, convex, non	e):		Slope (%	6):	
Subregion (LRR):		LRR	A	Lat:	46.02	81	Long:	-123.9078	Datu	m: WGS84
Soil Map Unit Name:			Gearhar	t Fine Sandy Loa	ım		NWI Classifi	cation:	PFOC	
are climatic/hydrologic	conditions on	the site t	typical for thi	s time of year?	Yes	x	No	(if no, exp	lain in Remarks	5)
Are vegetation	Soil	or H	ydrology	significantly dis	sturbed?	Are "Normal Circ	cumstances"	present? (Y/N)	Y	_
are vegetation	Soil	or H	ydrology	naturally proble	ematic? If needed	d, explain any answe	ers in Remar	ks.)		
SUMMARY OF F	INDINGS	Λtta	ch cita m	an showing sa	malina aoint	locations tra	ncoete in	nnortant foat	uros oto	
lydrophytic Vegetation		Yes	X	No	T		1150015, 11	iiportant ieat	ures, etc.	
Hydric Soil Present?		Yes	×		Is Sampled A		Yes	x	No	
Vetland Hydrology Pre	sent?	Yes -	X	No	a Wetla	nu f				_
Remarks:	.sent:	-								
/EGETATION - U	Jse scient	ific na	mes of p	ants.						
			absolut		Indicator	Dominance Te	est worksh	neet:		
			% cove	r Species?	Status					
ree Stratum (plot si	ize:))			Number of Domir				
1						That are OBL, FA	CW, or FAC): 	3	_ (A)
2										
						Total Number of I			•	(D)
						Species Across A	ui Strata:		3	(B)
			0	= Total Cover						
apling/Shrub Stratum		10	_)			Percent of Domin	ant Species			
Rubus spectab	ilis		25	x	FAC	That are OBL, FA	CW, or FAC	D:	100%	(A/B)
Lonicera involu			10	x	FAC					
Rubus armenia	cus		3		FAC	Prevalence In		sheet:		
4						Total % Cover of		Multiply by		
5						OBL Specie	-	x 1 =		_
			38	= Total Cover		FACW species		x 2 = x 3 =	0	_
erb Stratum (plot si	ize:	5)			FAC Specie		x 4 =	0	_
Carex obnupta			80	X	OBL	UPL Specie		x5=	0	_
2 Athyrium ameri	icanum		10		FAC	Column Tota		0 (A)	0	(B)
Polystichum m			5		FACU			(-1)		
4						Prevalence	Index =B/A	= _ #	DIV/0!	
5										
6						Hydrophytic V	egetation	Indicators:		
7							1- R	apid Test for Hydr	ophytic Vegeta	tion
3						x		ominance Test is		
			95	= Total Cover				evalence Index is		
	/=l=4 =!===		,					orphological Adap		
	(plot size:		_'					in Remarks or on		eet)
						I		etland Non-Vascu		/Eveloin)
2				_ T-1-1-0		Indicators of body		olematic Hydrophy		
			0	= Total Cover		disturbed or problem		vetland hydrology	must be preser	ii, uniess
						Hydrophytic				
	Charles		5			Vegetation		Yes X	N	О
% Bare Ground in Herb	Stratum					Present?		169 V		

	Matrix		needed to docume		Features						
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remark	S	
0-11	10YR 2/2	100					Sand	Mucky			
11-14	7.5YR2.5/1	98	7.5YR 3/4	2	С	М	Sand				
1=								2			
	entration, D=Depletion ndicators: (Appli						India		PL=Pore Lining, M		
	Histosol (A1)	cable to	an Lixixs, umes		Sandy Redo		man	Jacors Ioi F	2 cm Muck (A10		
										1	
	Histic Epipedon (A2)				Stripped Mat		avana sel DA di		Red Parent Mat		0)
	Black Histic (A3)				,	xy Mineral (F1) (except MLKA 1)			ark Surface (TF1	2)
	Hydrogen Sulfide (A4		an.			ed Matrix (F2)			Other (explain in	Remarks)	
	Depleted Below Dark	•	(11)		Depleted Ma						
	Thick Dark Surface (A					Surface (F6)		3Indicators	of hydrophytic veg	etation and wetla	and
	Sandy Mucky Mineral	, ,				rk Surface (F7)			must be present, u	inless disturbed	
	Sandy Gleyed Matrix	(S4)		F	Redox Depre	essions (F8)			problemation).	
Restrictive L	.ayer (if present):										
Type:											
	٠,						Undria Sail Dra	namt2 Van		N.	
Depth (inches))						Hydric Soil Pre	sentr res	sx	No	
	onded for at least	t 2 weeks	s. Land form tha	it concent	rated wat	er.					
Saturated/Po			s. Land form tha	it concent	rated wat	er.					
HYDROLOG Wetland Hyd	GY Irology Indicators	s:			rated wat	er.		Seconda	ary Indicators (2 o	or more requir	ed)
HYDROLOG Wetland Hyd Primary Indic	GY	s:		nat apply)		d Leaves (B9) (Except MLRA	Seconda	ary Indicators (2 o Water stained L		ed)
HYDROLOG Wetland Hyd Primary Indic	GY Irology Indicators ators (minimum of Surface Water (A1)	s: f one requ		nat apply) V		rd Leaves (B9) (Except MLRA	Seconda		eaves (B9)	ed)
HYDROLOG Wetland Hyd Primary Indic	GY Irology Indicators ators (minimum of	s: f one requ		nat apply) V 1	Vater staine	ed Leaves (B9) (Except MLRA	Seconda	Water stained L (MLRA1, 2, 4A,	eaves (B9) and 4B)	ed)
HYDROLOG Wetland Hyd Primary Indic X S	GY Irology Indicators ators (minimum of Surface Water (A1) High Water Table (A2	s: f one requ		nat apply) V 1	Vater staine , 2 , 4A , an d Salt Crust (B	ed Leaves (B9) (Except MLRA	Seconda	Water stained L	eaves (B9) , and 4B) ns (B10)	ed)
HYDROLOG Wetland Hyd Primary Indic X S	GY Irology Indicators ators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	s: f one requ		nat apply) V 1 S	Vater staine , 2, 4A, and Salt Crust (B Aquatic Inver	d Leaves (B9) (i 4B) i11)		Seconda	Water stained L. (MLRA1, 2, 4A, Drainage Pattern Dry-Season Wa	eaves (B9) , and 4B) ns (B10) ter Table (C2)	
HYDROLOG Wetland Hyd Primary Indic X S S S S S S S S S S S S S S S S S S	GY Irology Indicators ators (minimum of Surface Water (A1) High Water Table (A2 Saturation (A3)	s: f one requ		nat apply) V 1 S	Vater staine , 2, 4A, and Salt Crust (B Aquatic Inver	ed Leaves (B9) (1 4B) 111) rtebrates (B13) ulfide Odor (C1)		Seconda	Water stained L (MLRA1, 2, 4A, Drainage Patter	eaves (B9) , and 4B) ns (B10) ter Table (C2) le on Aerial Imag	
HYDROLOG Wetland Hyd Primary Indic X S S S S S S S S S S S S S S S S S S	GY Irology Indicators ators (minimum of Surface Water (A1) digh Water Table (A2 Saturation (A3) Vater Marks (B1) Sediment Deposits (B	s: f one requ		nat apply) V 1 S A	Vater staine , 2 , 4A , and Salt Crust (B Aquatic Inver Hydrogen Su Dxidized Rhi	ed Leaves (B9) (1 4B) 111) rtebrates (B13) ulfide Odor (C1)	g Living Roots (C3)		Water stained L (MLRA1, 2, 4A, Drainage Pattern Dry-Season Wa Saturation Visible	eaves (B9) and 4B) ns (B10) ter Table (C2) le on Aerial Imag sition (D2)	
HYDROLOG Wetland Hyd Primary Indic X S S S S S S S S S S S S S S S S S S	GY Irology Indicators ators (minimum of Surface Water (A1) digh Water Table (A2 Saturation (A3) Vater Marks (B1) Sediment Deposits (B Orift Deposits (B3)	s: f one requ		nat apply) V 1 S A H C P	Vater staine , 2, 4A, and Salt Crust (B Aquatic Invertiged Substitution Substitutio	ed Leaves (B9) (d 4B) (111) rtebrates (B13) ulfide Odor (C1) izospheres alon Reduced Iron (6	g Living Roots (C3)		Water stained L (MLRA1, 2, 4A, Drainage Pattern Dry-Season Wa Saturation Visibl	eaves (B9) and 4B) ns (B10) ter Table (C2) le on Aerial Imag sition (D2) d (D3)	
HYDROLOG Wetland Hyd Primary Indic X S V S S S S S S S S S S S S S S S S S	GY Irology Indicators ators (minimum of Surface Water (A1) digh Water Table (A2 Saturation (A3) Vater Marks (B1) Sediment Deposits (B Drift Deposits (B3) Algal Mat or Crust (B4	s: f one requ		nat apply) V 1 S A H C F	Vater staine , 2 , 4A , and Salt Crust (B Aquatic Invertigation Substitution Subs	ed Leaves (B9) (d 4B) (111) rtebrates (B13) ulfide Odor (C1) izospheres alon Reduced Iron (6	g Living Roots (C3) C4) owed Soils (C6)	X	Water stained L (MLRA1, 2, 4A) Drainage Pattern Dry-Season Wa Saturation Visibl Geomorphic Pos Shallow Aquitard Fac-Neutral Tes	eaves (B9) and 4B) ns (B10) ter Table (C2) le on Aerial Imag sition (D2) d (D3)	gery (C
HYDROLOG Wetland Hyd Primary Indic X S H S I S I S I S I S I S I S I S I S I	GY Irology Indicators ators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Vater Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5)	s: f one requ 2)	uired; check all th	nat apply) V 1 S A H C P S S S	Vater staine , 2, 4A, and Salt Crust (B Aquatic Invertydrogen Su Dxidized Rhi Presence of Recent Iron F Stunted or Si	d Leaves (B9) (d 4B) (111) rtebrates (B13) ulfide Odor (C1) izospheres alon Reduced Iron (G	g Living Roots (C3) C4) owed Soils (C6)	X	Water stained L (MLRA1, 2, 4A) Drainage Pattern Dry-Season Wa Saturation Visibl Geomorphic Pos Shallow Aquitard Fac-Neutral Tes	eaves (B9) and 4B) ns (B10) ter Table (C2) le on Aerial Imag sition (D2) d (D3) t (D5) nds (D6) (LRR A	gery (C
HYDROLOG Wetland Hyd Primary Indic X S S S S S S S S S S S S S S S S S S	GY Irology Indicators ators (minimum of Surface Water (A1) digh Water Table (A2) Saturation (A3) Vater Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 ron Deposits (B5) Surface Soil Cracks (B3)	s: f one required: (2) (2) (3) (4) (5) (6) (6) (6) (7) (7) (7) (8) (8) (9) (9) (9) (9) (9) (9) (9) (9) (9) (9	uired; check all th	nat apply) V 1 S A H C P S S S	Vater staine , 2, 4A, and Salt Crust (B Aquatic Invertydrogen Su Dxidized Rhi Presence of Recent Iron F Stunted or Si	ed Leaves (B9) (i 4B) i11) rtebrates (B13) ulfide Odor (C1) izospheres alon Reduced Iron (i Reduction in Plot tressed Plants (g Living Roots (C3) C4) owed Soils (C6)	X	Water stained L (MLRA1, 2, 4A, Drainage Pattern Dry-Season Wa Saturation Visibl Geomorphic Pos Shallow Aquitard Fac-Neutral Tes Raised Ant Mou	eaves (B9) and 4B) ns (B10) ter Table (C2) le on Aerial Imag sition (D2) d (D3) t (D5) nds (D6) (LRR A	gery (C
HYDROLOG Wetland Hyd Primary Indic X S S S S S S S S S S S S S S S S S S	GY Irology Indicators ators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Vater Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Forn Deposits (B5) Surface Soil Cracks (Innundation Visible on Sparsely Vegetated C	s: f one required: (2) (2) (3) (4) (5) (6) (6) (6) (7) (7) (7) (8) (8) (9) (9) (9) (9) (9) (9) (9) (9) (9) (9	uired; check all th	nat apply) V 1 S A H C P S S S	Vater staine , 2, 4A, and Salt Crust (B Aquatic Invertydrogen Su Dxidized Rhi Presence of Recent Iron F Stunted or Si	ed Leaves (B9) (i 4B) i11) rtebrates (B13) ulfide Odor (C1) izospheres alon Reduced Iron (i Reduction in Plot tressed Plants (g Living Roots (C3) C4) owed Soils (C6)	X	Water stained L (MLRA1, 2, 4A, Drainage Pattern Dry-Season Wa Saturation Visibl Geomorphic Pos Shallow Aquitard Fac-Neutral Tes Raised Ant Mou	eaves (B9) and 4B) ns (B10) ter Table (C2) le on Aerial Imag sition (D2) d (D3) t (D5) nds (D6) (LRR A	gery (C
HYDROLOG Wetland Hyd Primary Indic X S V S In S In S S In S S S In S S S S In S S S S	drology Indicators ators (minimum of Surface Water (A1) digh Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Fon Deposits (B5) Surface Soil Cracks (Inundation Visible on a	s: f one required: (2) (2) (3) (4) (5) (6) (6) (6) (7) (7) (7) (8) (8) (9) (9) (9) (9) (9) (9) (9) (9) (9) (9	uired; check all th	nat apply) V 1 S A H C P S S S	Vater staine , 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Didized Rhi Presence of Recent Iron F Stunted or Si Other (Explain	ed Leaves (B9) (i 4B) i11) rtebrates (B13) ulfide Odor (C1) izospheres alon Reduced Iron (i Reduction in Plot tressed Plants (g Living Roots (C3) C4) owed Soils (C6)	X	Water stained L (MLRA1, 2, 4A, Drainage Pattern Dry-Season Wa Saturation Visibl Geomorphic Pos Shallow Aquitard Fac-Neutral Tes Raised Ant Mou	eaves (B9) and 4B) ns (B10) ter Table (C2) le on Aerial Imag sition (D2) d (D3) t (D5) nds (D6) (LRR A	gery (C
HYDROLOG Wetland Hyd Primary Indic X S S S S S S S S S S S S S S S S S S	drology Indicators ators (minimum of surface Water (A1) digh Water Table (A2) Saturation (A3) Vater Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 ron Deposits (B5) Surface Soil Cracks (In undation Visible on Sparsely Vegetated Corations: Present? Yes	s: f one required: (2) (3) (4) (5) (6) (6) (7) (7) (8) (8) (9) (9) (9) (9) (9) (9) (9) (9) (9) (9	uired; check all th	nat apply) V 1 S A H C P S S C	Vater staine , 2, 4A, and Salt Crust (B Aquatic Inverted of Stanta or Stanta	ed Leaves (B9) (1 4B) 111) Intebrates (B13) Interpreted (C1) Interpreted	g Living Roots (C3) C4) owed Soils (C6)	X	Water stained L (MLRA1, 2, 4A, Drainage Pattern Dry-Season Wa Saturation Visibl Geomorphic Pos Shallow Aquitard Fac-Neutral Tes Raised Ant Mou Frost-Heave Hun	eaves (B9) and 4B) ns (B10) ter Table (C2) le on Aerial Imag sition (D2) d (D3) t (D5) nds (D6) (LRR A	gery (C
HYDROLOG Wetland Hyd Primary Indic X S S S S S S S S S S S S S S S S S S	GY Irology Indicators ators (minimum of Surface Water (A1) digh Water Table (A2 Saturation (A3) Vater Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 ron Deposits (B5) Surface Soil Cracks	s: f one required: (2) (3) (4) (5) (6) (6) (7) (7) (8) (8) (9) (9) (9) (9) (9) (9) (9) (9) (9) (9	gery (B7) urface (B8)	nat apply) V 1 S A H C F S C Depth (i	Vater staine , 2, 4A, and Salt Crust (B Aquatic Invert Hydrogen Su Dixidized Rhi Presence of Recent Iron F Stunted or Si Dither (Explainances):	ed Leaves (B9) (d 4B) (d 11) Intebrates (B13) Idfide Odor (C1) Izospheres alon Reduced Iron (Called Iron (Ca	g Living Roots (C3) C4) owed Soils (C6) D1) (LRR A)	X X	Water stained L (MLRA1, 2, 4A, Drainage Pattern Dry-Season Wa Saturation Visibl Geomorphic Pos Shallow Aquitard Fac-Neutral Tes Raised Ant Mou Frost-Heave Hun	eaves (B9) and 4B) ns (B10) ter Table (C2) le on Aerial Imag sition (D2) d (D3) t (D5) nds (D6) (LRR A	gery (C
HYDROLOG Wetland Hyd Primary Indic X S H S In S Field Observ Surface Water I Water Table Pr Saturation Pres (includes capillary	Irology Indicators ators (minimum of Surface Water (A1) digh Water Table (A2 Saturation (A3) Vater Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 ron Deposits (B5) Surface Soil Cracks (B1 nundation Visible on Sparsely Vegetated C rations: Present? Yes esent? Yes pent? Yes	s: f one required: (2) (3) (4) (5) (5) (6) (6) (7) (7) (8) (8) (8) (8) (8) (8) (8) (8) (8) (8	gery (B7) Inface (B8) No No No No No	nat apply) V 1 S A H C P S S O Depth (i Depth (i	Vater staine , 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Didized Rhi Presence of Recent Iron F Stunted or Si Other (Explainanches): Inches): Inches	ed Leaves (B9) (1 4B) 111) Intebrates (B13) Ilfide Odor (C1) Izospheres alon Reduced Iron (I Reduction in Plot tressed Plants (in in Remarks) 8 >14 Surface	g Living Roots (C3) C4) owed Soils (C6) D1) (LRR A) Wetland Hyd	X X	Water stained L (MLRA1, 2, 4A, Drainage Pattern Dry-Season Wa Saturation Visibl Geomorphic Pos Shallow Aquitard Fac-Neutral Tes Raised Ant Mou Frost-Heave Hun	eaves (B9) and 4B) as (B10) ter Table (C2) de on Aerial Imag sition (D2) d (D3) t (D5) ands (D6) (LRR A	gery (C
HYDROLOG Wetland Hyd Primary Indic X S H S I S I S I S I S I S I S I S I S I	GY Irology Indicators ators (minimum of Surface Water (A1) digh Water Table (A2 Saturation (A3) Vater Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 ron Deposits (B5) Surface Soil Cracks	s: f one required: (2) (3) (4) (5) (5) (6) (6) (7) (7) (8) (8) (8) (8) (8) (8) (8) (8) (8) (8	gery (B7) Inface (B8) No No No No No	nat apply) V 1 S A H C P S S O Depth (i Depth (i	Vater staine , 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Didized Rhi Presence of Recent Iron F Stunted or Si Other (Explainanches): Inches): Inches	ed Leaves (B9) (1 4B) 111) Intebrates (B13) Ilfide Odor (C1) Izospheres alon Reduced Iron (I Reduction in Plot tressed Plants (in in Remarks) 8 >14 Surface	g Living Roots (C3) C4) owed Soils (C6) D1) (LRR A) Wetland Hyd	X X	Water stained L (MLRA1, 2, 4A, Drainage Pattern Dry-Season Wa Saturation Visibl Geomorphic Pos Shallow Aquitard Fac-Neutral Tes Raised Ant Mou Frost-Heave Hun	eaves (B9) and 4B) as (B10) ter Table (C2) de on Aerial Imag sition (D2) d (D3) t (D5) ands (D6) (LRR A	gery (C
HYDROLOG Wetland Hyd Primary Indic X S H S I S I S I S I S I S I S I S I S I	Irology Indicators ators (minimum of Surface Water (A1) digh Water Table (A2 Saturation (A3) Vater Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 ron Deposits (B5) Surface Soil Cracks (B1 nundation Visible on Sparsely Vegetated C rations: Present? Yes esent? Yes pent? Yes	s: f one required: (2) (3) (4) (5) (5) (6) (6) (7) (7) (8) (8) (8) (8) (8) (8) (8) (8) (8) (8	gery (B7) Inface (B8) No No No No No	nat apply) V 1 S A H C P S S O Depth (i Depth (i	Vater staine , 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Didized Rhi Presence of Recent Iron F Stunted or Si Other (Explainanches): Inches): Inches	ed Leaves (B9) (1 4B) 111) Intebrates (B13) Idfide Odor (C1) Izospheres alon Reduced Iron (I Reduction in Plot tressed Plants (in in Remarks) 8 >14 Surface	g Living Roots (C3) C4) owed Soils (C6) D1) (LRR A) Wetland Hyd	X X	Water stained L (MLRA1, 2, 4A, Drainage Pattern Dry-Season Wa Saturation Visibl Geomorphic Pos Shallow Aquitard Fac-Neutral Tes Raised Ant Mou Frost-Heave Hun	eaves (B9) and 4B) as (B10) ter Table (C2) de on Aerial Imag sition (D2) d (D3) t (D5) ands (D6) (LRR A	gery (C

	PHS#	6338
WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Re	gion	

Project/Site: Palmberg Proper	ty	City/County:	Gea	rhart/Clatsop		Sampling Date:	3/2	3/2018	
Applicant/Owner: Bill Palmberg					State: (Sampling Point:	36	
Investigator(s): SE/JT/CM/C	R	Section, To	wnship, Range:		Section 10	 , Township 6N	, Range 10W		
Landform (hillslope, terrace, etc.:)	Slope	-	Local relief (cor	ncave, convex, none	e):		Slope (%):	100	
Subregion (LRR): LRR A	\	Lat:	46.027	79	Long:	-123.9083	Datum:	WGS84	
Soil Map Unit Name:	Warrenton L	- oamy Fine Sar	nd		NWI Classifi	cation:	PFOC		
Are climatic/hydrologic conditions on the site t	pical for this tim	e of year?	Yes	X	No	(if no, expl	ain in Remarks)	T	
Are vegetation Soil or Hy	drology	significantly dist	urbed?	Are "Normal Circ	umstances"	present? (Y/N)	Y		
Are vegetation Soil or Hy	drology	naturally problem	natic? If needed	, explain any answe	ers in Remarl	ks.)			
SUMMARY OF FINDINGS – Attac			ipling point	locations, trar	nsects, in	nportant feat	ures, etc.		_
Hydrophytic Vegetation Present? Yes			Is Sampled Ar	ea within			The state of the s		
Hydric Soil Present? Yes	No		a Wetlan		Yes		No X		
Wetland Hydrology Present? Yes	No	X							
Remarks:									
VEGETATION - Use scientific nar	nes of niant	· c							_
VEGETATION - Use scientific flat	absolute	Dominant	Indicator	Dominance Te	st worksh	eet:			_
* * .	% cover	Species?	Status						
Tree Stratum (plot size: 30)				Number of Domin					
1 Ainus rubra	100	X	FAC	That are OBL, FA	CW, or FAC		3	(A)	
2 Picea sitchensis	5 5		FAC (FACIL)	Total Number of F	Daminant				
3 Tsuga sp.			(FACU)	Total Number of E Species Across A			4	(B)	
	110	= Total Cover		Opedes Adioss A	iii Otiata.		-	.(5)	
Sapling/Shrub Stratum (plot size: 15	`			Descent of Demin	ant Chasias				
Sapling/Shrub Stratum (plot size: 15 1 Rubus armeniacus	_ ⁾ 30	x	FAC	Percent of Domina That are OBL, FA			75%	(A/B)	
2				That are OBE, I A	CVV, OITAC		1378	(~8)	
3				Prevalence Inc	dex Works	heet:			_
4				Total % Cover of		Multiply by			
5				OBL Specie	es	x 1 =	0		
	30	= Total Cover		FACW specie		x 2 =	0		
Lloth Stratum (plot size: 5)				FAC Specie		x 3 =	0		
Herb Stratum (plot size: 5) 1 Polystichum munitum	20	x	FACU	FACU Specie UPL Specie		x 4 = x 5 =	0	•	
2 Unidentified grass	10	X	(FAC)	Column Tota	_	0 (A)	0	(B)	
3	-					`		.(-)	
4				Prevalence	Index =B/A =	= #	DIV/0!		
5									
6				Hydrophytic V	egetation	Indicators:			
7						apid Test for Hydr	-	n	
8	30	- Tetal Cours		x		ominance Test is a evalence Index is			
		= Total Cover				orphological Adapt		supporting	
Woody Vine Stratum (plot size:)					in Remarks or on			
1					5- W	etland Non-Vascu	ılar Plants ¹		
2	-				Prob	elematic Hydrophy	tic Vegetation ¹ (E	xplain)	
	0	= Total Cover		¹ Indicators of hydr		etland hydrology r	nust be present,	unless	
			(disturbed or proble Hydrophytic	ematic.				
% Bare Ground in Herb Stratum	70			Vegetation		Yes X	No		
				Present?					
Remarks: Bare ground percentage is actually contained to the second perc	overed in mo	ss.							
]									

SOIL	PHS#	6338		Sampling Point: 36
Profile Description: (Describe to the depth r	needed to documen	t the indicator or confirm the a	bsence of indicators.)	
Depth Matrix		Redox Features		
(Inches) Color (moist) %	Color (moist)	% Type ¹ Loc ²	Texture	Remarks
0-16 10YR 3/2 100			Silt Loam	
	-			
				·
Type: C=Concentration, D=Depletion, RM=Re				² Location: PL=Pore Lining, M=Matrix.
lydric Soil Indicators: (Applicable to	all LRRs, unless	•	Indica	ators for Problematic Hydric Soils ³ :
Histosol (A1)	-	Sandy Redox (S5)		2 cm Muck (A10)
Histic Epipedon (A2)	-	Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except MI PA 1)	Red Parent Material (TF2)
Black Histic (A3) Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F		Very Shallow Dark Surface (TF12) Other (explain in Remarks)
Depleted Below Dark Surface (A	- (11)	Depleted Matrix (F3)	-,	Care (explain in remarks)
Thick Dark Surface (A12)		Redox Dark Surface (Fe	5)	
Sandy Mucky Mineral (S1)	-	Depleted Dark Surface		³ Indicators of hydrophytic vegetation and wetland
Sandy Gleyed Matrix (S4)	_	Redox Depressions (F8)	hydrology must be present, unless disturbed or problematic.
lestrictive Layer (if present):		,		
ype:			7	
Depth (inches):			Hydric Soil Pres	sent? Yes No X
iome gravel and charcoal in sample.				
Some gravel and charcoal in sample. HYDROLOGY Vetland Hydrology Indicators:	uired; check all tha	at apply)		Secondary Indicators (2 or more required)
IYDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requestrated)	uired; check all tha	Water stained Leaves (B9) (Except MLRA	Water stained Leaves (B9)
YDROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requestrated Water (A1) High Water Table (A2)	uired; check all tha	Water stained Leaves (B9) (Except MLRA	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
YDROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requestrate Water (A1) High Water Table (A2) Saturation (A3)	uired; check all tha	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11)		Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10)
YDROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requestrate Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	uired; check all tha - - -	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E	313)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
VYDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requestrate Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	uired; check all tha - - - -	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11)	313) (C1)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
IYDROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requestrate Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	uired; check all tha	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor	(C1) along Living Roots (C3)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hydrology Indicators: Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	uired; check all that - - - - -	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres	(C1) along Living Roots (C3) on (C4)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
HYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requestrate Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	uired; check all tha	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir	(C1) along Living Roots (C3) on (C4) n Plowed Soils (C6)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
AYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requestrate Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image	- - - - - gery (B7)	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i	(C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) nts (D1) (LRR A)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5)
AYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requestrated Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Images	- - - - - gery (B7)	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i Stunted or Stressed Pla	(C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) nts (D1) (LRR A)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
IYDROLOGY Vetland Hydrology Indicators: Irimary Indicators (minimum of one requestriance Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Images Sparsely Vegetated Concave Surield Observations:	gery (B7)	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i Stunted or Stressed Pla Other (Explain in Rema	(C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) nts (D1) (LRR A)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Irimary Indicators (minimum of one requestrated Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Images Sparsely Vegetated Concave Surface Water Present? Yes	gery (B7)	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i Stunted or Stressed Pla Other (Explain in Rema	(C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) nts (D1) (LRR A)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
AYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requestrated Marks (Marks (Mar	gery (B7)	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i Stunted or Stressed Pla Other (Explain in Rema	(C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) nts (D1) (LRR A)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imag Sparsely Vegetated Concave Su Field Observations: Surface Water Present? Yes	gery (B7)	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i Stunted or Stressed Pla Other (Explain in Rema	(C1) along Living Roots (C3) on (C4) n Plowed Soils (C6) nts (D1) (LRR A)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requestriance Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Images Sparsely Vegetated Concave Surface Water Present? Water Table Present? Yes Water Table Present? Yes Saturation Present? Yes Includes capillary fringe)	pery (B7) Inface (B8) No X No X No X	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i Stunted or Stressed Pla Other (Explain in Rema Depth (inches): >16 Depth (inches): >16	(C1) (C1) (C1) (C1) (Along Living Roots (C3) (C4) (Along Plowed Soils (C6) (Along Clarks) (C1) (LRR A) (C1) (LRR A) (C2) (C3) (C3) (C3) (C3) (C3) (C3) (C4) (C4) (C4) (C4) (C4) (C4) (C4) (C4	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requestriance Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Images Sparsely Vegetated Concave Surface Water Present? Water Table Present? Yes Saturation Present? Yes	pery (B7) Inface (B8) No X No X No X	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i Stunted or Stressed Pla Other (Explain in Rema Depth (inches): >16 Depth (inches): >16	(C1) (C1) (C1) (C1) (Along Living Roots (C3) (C4) (Along Plowed Soils (C6) (Along Clarks) (C1) (LRR A) (C1) (LRR A) (C2) (C3) (C3) (C3) (C3) (C3) (C3) (C4) (C4) (C4) (C4) (C4) (C4) (C4) (C4	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requestriance Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Images Sparsely Vegetated Concave Surface Water Present? Water Table Present? Yes Water Table Present? Yes Saturation Present? Yes Includes capillary fringe)	pery (B7) Inface (B8) No X No X No X	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i Stunted or Stressed Pla Other (Explain in Rema Depth (inches): >16 Depth (inches): >16	(C1) (C1) (C1) (C1) (Along Living Roots (C3) (C4) (Along Plowed Soils (C6) (Along Clarks) (C1) (LRR A) (C1) (LRR A) (C2) (C3) (C3) (C3) (C3) (C3) (C3) (C4) (C4) (C4) (C4) (C4) (C4) (C4) (C4	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requestriance Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Images Sparsely Vegetated Concave Surface Water Present? Water Table Present? Yes Water Table Present? Yes Saturation Present? Yes Includes capillary fringe)	pery (B7) Inface (B8) No X No X No X	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i Stunted or Stressed Pla Other (Explain in Rema Depth (inches): >16 Depth (inches): >16	(C1) (C1) (C1) (C1) (Along Living Roots (C3) (C4) (Along Plowed Soils (C6) (Along Clarks) (C1) (LRR A) (C1) (LRR A) (C2) (C3) (C3) (C3) (C3) (C3) (C3) (C4) (C4) (C4) (C4) (C4) (C4) (C4) (C4	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requestriance Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Images Sparsely Vegetated Concave Surface Water Present? Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes Concludes capillary fringe) Describe Recorded Data (stream gauge, monitor)	pery (B7) Inface (B8) No X No X No X	Water stained Leaves (1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced Ir Recent Iron Reduction i Stunted or Stressed Pla Other (Explain in Rema Depth (inches): >16 Depth (inches): >16	(C1) (C1) (C1) (C1) (Along Living Roots (C3) (C4) (Along Plowed Soils (C6) (Along Clarks) (C1) (LRR A) (C1) (LRR A) (C2) (C3) (C3) (C3) (C3) (C3) (C3) (C4) (C4) (C4) (C4) (C4) (C4) (C4) (C4	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

PHS #	6338
WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region	

ect/Site:	Palmberg	Property	<u>y</u>	City/County:	Gea	rhart/Clatsop		Sampling	Date:	3/28	8/2018
cant/Owner: E	Bill Palmbe	rg				7.	State:	OR	Sar	npling Point:	37
tigator(s):	SE/J	T/CM/CR	2	Section, To	ownship, Range:		Section 1	10, Towns	hip 6N, Ra	ange 10W	
form (hillslope, terr	ace, etc.:)		Depression	on	Local relief (co	ncave, convex, no	ne):			Slope (%):	27
egion (LRR):		LRR A		Lat:	46.02	79	Long:	-123.9	083	Datum:	WGS84
-Map Unit Name:				– .oamy Fine Sa	nd		NWI Class	ification:		PFOC	
imatic/hydrologic o	conditions on	the site typ	oical for this tim	ne of year?	Yes	x	No	(if i	no, explain i	n Remarks)	
egetation	Soil	or Hydi	rology	significantly dist	turbed?	Are "Normal Cir		s" present?	(Y/N)	Υ	
egetation				_		l, explain any answ			_		
		S. 7.174		- matarany proble	made. A necess	, explain any anen		u			
MARY OF FI	NDINGS -	- Attach	site map	showing sar	npling point	locations, tra	nsects,	importan	t feature	s, etc.	
phytic Vegetation	Present?	Yes	X No		In Committed As						
Soil Present?		Yes	X No		Is Sampled Ar		Yes	X	No_		
nd Hydrology Pres	sent?	Yes	X No								
arks:											
ETATION - U	se scient	ific nam	es of plant	ts.							
			absolute	Dominant Species?	Indicator	Dominance T	est works	sheet:			
Stratum (plot siz	ze: 3	0)	% cover	Species?	Status	Number of Dom	inant Specie	, s			
Inus rubra			50	X	FAC	That are OBL, F			2		(A)
						I mar are OBE, 1					
						Total Number of	Dominant				
						Species Across			3		(B)
			50	= Total Cover							- 12 C
ng/Shrub Stratum	(plot size:	20)			Percent of Domi	nant Specie	es.			
Demleria cerasi			5	X	FACU	That are OBL, F			679	V ₀	(A/B)
						7774	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				. (, , , ,
						Prevalence Ir	ndex Worl	ksheet:			
						Total % Cover o	f	Mu	Itiply by:		
						OBL Spec	ies		x 1 =	0	
	_		5	= Total Cover		FACW spec	cies		x 2 =	0	
						FAC Spec	_		x 3 =	0	
Stratum (plot siz	ze: 2	0)				FACU Spec	_		x 4 =	0	
arex obnupta			60	X	OBL	UPL Spec			x 5 =	0	
						Column To	tals	0 (A)	-	0	(B)
									#D1\	'' 01	
						Prevalence	e Index =B/A	<u> </u>	#DIV	70!	
						Hydrophytic '	Vegetation	n Indicato	re.		
						, iyar opiiyac				tic Vegetatio	n
								Dominance			
			60	= Total Cover				Prevalence I			
							4-1	Morphologica	al Adaptation	ns ¹ (provide :	supporting
y Vine Stratum	(plot size:)				da	ta in Remark	s or on a se	eparate shee	t)
								Wetland No			
										egetation ¹ (E	
			0	= Total Cover		¹ Indicators of hydisturbed or prob		wetland hyd	rology must	be present,	unless
						disturbed or prot Hydrophytic	лентанс.				
re Ground in Herb	Stratum					Vegetation		Yes	X	No	

Profile Description: (Describe to the de					
Depth Matrix	oth needed to docum	nent the indicator or con	firm the absence	of indicators.)	
(In ab an) Onlan (maint) 0/		Redox Features		,	
(Inches) Color (moist) %	Color (moist)	% Type ¹	Loc ²	Texture	Remarks
0-12 10YR 2/1 100)			Silt Loam	
	_				
	_				
ype: C=Concentration, D=Depletion, RM	=Reduced Matrix CS	=Covered or Coated San	d Grains		² Location: PL=Pore Lining, M=Matrix.
ydric Soil Indicators: (Applicable				Indica	ators for Problematic Hydric Soils ³ :
Histosol (A1)	,	Sandy Redo			2 cm Muck (A10)
Histic Epipedon (A2)		Stripped Mat			Red Parent Material (TF2)
Black Histic (A3)			y Mineral (F1) (exce	ept MLRA 1)	Very Shallow Dark Surface (TF12)
X Hydrogen Sulfide (A4)			ed Matrix (F2)	,	Other (explain in Remarks)
Depleted Below Dark Surface	e (A11)	Depleted Ma			outer (explain in remarke)
Thick Dark Surface (A12)	· (* /	Redox Dark			
Sandy Mucky Mineral (S1)			rk Surface (F7)		³ Indicators of hydrophytic vegetation and wetland
Sandy Gleyed Matrix (S4)		Redox Depre			hydrology must be present, unless disturbed or problematic.
Salluv Gleveu iviallik (34)					
estrictive Layer (if present):					
estrictive Layer (if present): ype: epth (inches): emarks:	e to inundation.		H	ydric Soil Pres	ent? Yes X No
estrictive Layer (if present): ype: epth (inches): emarks: ould nto get a deeper sample du	e to inundation.		H	ydric Soil Pres	ent? Yes X No
Restrictive Layer (if present): ype: pepth (inches): emarks: could nto get a deeper sample due IYDROLOGY Vetland Hydrology Indicators:		that apply)	H	ydric Soil Pres	
estrictive Layer (if present): ype: epth (inches): emarks: ould nto get a deeper sample due YDROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one					Secondary Indicators (2 or more required)
estrictive Layer (if present): /pe: epth (inches): emarks: ould nto get a deeper sample due YDROLOGY fetland Hydrology Indicators: emary Indicators (minimum of one X Surface Water (A1)			d Leaves (B9) (Exc		
estrictive Layer (if present): //pe: epth (inches): emarks: ould nto get a deeper sample due YDROLOGY etland Hydrology Indicators: cimary Indicators (minimum of one X Surface Water (A1) X High Water Table (A2)		Water staine 1, 2, 4A, and	d Leaves (B9) (Exc		Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
estrictive Layer (if present): /pe: epth (inches): emarks: ould nto get a deeper sample due YDROLOGY fetland Hydrology Indicators: fimary Indicators (minimum of one X Surface Water (A1) X High Water Table (A2)		Water staine 1, 2, 4A, and Salt Crust (B	d Leaves (B9) (Exc		Secondary Indicators (2 or more required) Water stained Leaves (B9)
estrictive Layer (if present): ype: epth (inches): emarks: ould nto get a deeper sample due YDROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one X Surface Water (A1) X High Water Table (A2) X Saturation (A3)		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver	d Leaves (B9) (Exc 14B)		Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10)
estrictive Layer (if present): ype: epth (inches): emarks: ould nto get a deeper sample due YDROLOGY Yetland Hydrology Indicators: rimary Indicators (minimum of one X Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1)		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver	d Leaves (B9) (Exc 1 4B) 11) tebrates (B13)	cept MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
rimary Indicators (minimum of one X Surface Water (A1) X High Water Table (A2) X Sediment Deposits (B2) Sediment Deposits (B2)		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi	d Leaves (B9) (Exc 4B) 11) tebrates (B13)	cept MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
estrictive Layer (if present): ype: epth (inches): emarks: ould nto get a deeper sample due YDROLOGY fetland Hydrology Indicators: rimary Indicators (minimum of one X Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi	d Leaves (B9) (Exc 14B) 11) tebrates (B13) lifide Odor (C1) zospheres along Li	ving Roots (C3)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) X Geomorphic Position (D2)
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Appendix C

Site Photos





Photo A:

View to the east of Wetland B from the northwest corner of the study area.

(Photo taken: March 28, 2018)

Photo B:

View to the southwest. Photos shows the forested and shrub community typical of Wetland B.

(Photo taken: March 28, 2018)



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Palmberg Property Wetland Delineation - Gearhart, Oregon



Photo C:

View to the northeast across the northern, herbaceous portion of Wetland B. Photo includes the north end of the pond in the background.

(Photo taken: December 11, 2017)

Photo D:

View to south across the east-central portion of Wetland B. Pond lies to the east (left).

(Photo taken: December 11, 2017)



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Photo E:

View to the southeast. Shows the character of the south-central portion of Wetland B.

(Photo taken: March 28, 2018)

Photo F:

View to the southwest. Shows the transition from herbaceous to forested conditions along the east side of Wetland B.

(Photo taken: March 28, 2018)



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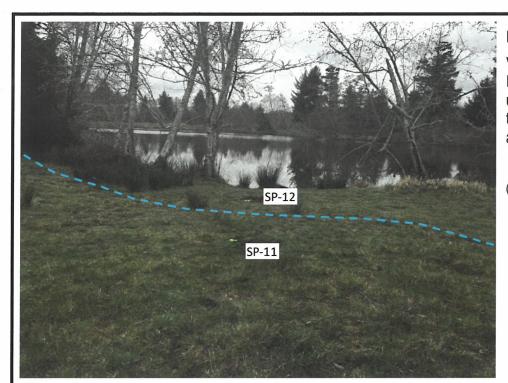


Photo G:

View to the north east.
Foreground includes herbaceous upland (Sample point 11), which transitions to herbaceous wetland along the pond edge.

(Photo taken: March 28, 2018)

Photo H:

View to the east along the roadside ditch north of Pacific Way that serves as the outlet channel for the onsite pond.

(Photo taken: March 28, 2018)



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Photo I:

View to the north. Includes the southern limits of the pond as seen from Pacific Way south of the site.

(Photo taken: March 28, 2018)

Photo J:

View to the southeast. Includes the south end of the pond.

(Photo taken: March 28, 2018)



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Photo K:

View to the north. Includes the south end of Wetland I.

McCormick Gardens Road is to the right.

(Photo taken: March 28, 2018)

Photo L:

View to the south of typical upland conditions in the southeastern portion of the study area.

(Photo taken: March 28, 2018)



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Photo M:

View of Wetland E as seen from the west (looking east).

(Photo taken: March 28, 2018)

Photo N:

View to the east of the eastern portion of Wetland G.

(Photo taken: December 11, 2017)



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Photo O:

View to the north at the east end of Wetland A.

(Photo taken: March 28, 2018)

Photo P:

View to the north of Wetland D (in the foreground) and adjoining forested upland beyond.

(Photo taken: March 28, 2018)



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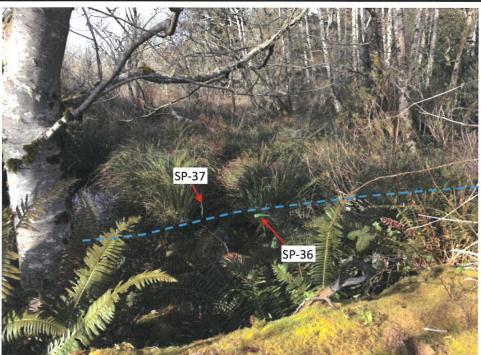


Photo Q:

View to the north of typical conditions in Wetland A.

(Photo taken: March 28, 2018)

Photo R:

View to the west. Shows western access road that lies between Wetland A (to the right) and Wetland B (to the left).

(Photo taken: March 28, 2018)



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Appendix D

Wetland Definitions, Methodology, and References



WATERS OF THE STATE AND WETLAND DEFINITION AND CRITERIA

Regulatory Jurisdiction

Wetlands and water resources in Oregon are regulated by the Oregon Department of State Lands (DSL) under the Removal-Fill Law (ORS 196.800-196.990) and by the U.S. Army Corps of Engineers (COE) through Section 404 of the Clean Water Act.

The primary source document for wetland delineations within Oregon is the *Corps of Engineers Wetlands Delineation Manual*, *Technical Report Y-87-1* (Environmental Laboratory 1987) which is recognized by both DSL and COE.

Waters of the State and Wetland Definition

Waters of the State are defined as "natural waterways including all tidal and nontidal bays, intermittent streams, constantly flowing streams, lakes, wetlands and other bodies of water in this state, navigable and nonnavigable...". "Natural waterways" is further defined as waterways created naturally by geological and hydrological processes, waterways that would be natural but for human-caused disturbances (e.g. channelized or culverted streams, impounded waters, partially drained wetlands or ponds created in wetlands)..."(DSL, 2001).

Wetlands are defined as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (DSL, 2001).

Wetland Criteria

Based on the above definition, three major factors characterize a wetland: hydrology, substrate, and biota.

Wetland Hydrology

Wetland hydrology is related to duration of saturation, frequency of saturation, and critical depth of saturation. The 1987 manual defines wetland hydrology as inundation or saturation within a major portion of the root zone (usually above 12 inches), typically for at least 12.5% of the growing season. The wetland hydrology criterion can be met, however, if saturation within the major portion of the root zone is present for only 5% of the growing season, depending on other evidence.

The growing season is defined as the portion of the year when soil temperatures at 19.7 inches below the soil surface are higher than biological zero (41 degrees Fahrenheit, 5 degrees Celsius), but also allows approximation from frost free days, based on air temperature. The growing season for any given site or location is determined from US Natural Resources Conservation Service, (formerly Soil Conservation Service) data and information.

Wetland hydrologic indicators include the following: visual observation of inundation or saturation, watermarks, drift lines, sediment deposits, drainage pattern, and/or oxidized rhizospheres with living roots. Oxidized rhizospheres are defined as yellowish-red zones around the roots and rhizomes of some plants that grow in frequently saturated soils.

Wetland Substrate (Soils)

Most wetlands are characterized by hydric soils. Hydric soils are those that are ponded, flooded, or saturated for long enough during the growing season to develop anaerobic conditions. Periodic saturation of soils causes alternation of reduced and oxidized conditions, which leads to the formation of redoximorphic features (gleying and mottling). Mineral hydric soils will be either gleyed or will have bright mottles and/or low matrix chroma. The redoximorphic feature known as gley is a result of greatly reduced soil conditions, which result in a characteristic grayish, bluish or greenish soil color. The term mottling is used to describe areas of contrasting color within a soil matrix. The soil matrix is the portion of the soil layer that has the predominant color. Soils that have brightly colored mottles and a low matrix chroma are indicative of a fluctuating water table.

Hydric soil indicators include: organic content of greater than 50% by volume, sulfidic material or "rotten egg" odor, and/or presence of redoximorphic features and dark soil matrix, as determined by the use of a Munsell Soil Color Chart. This chart establishes the chroma, value and hue of soils based on comparison with color chips. Mineral hydric soils usually have a matrix chroma of 2 or less in mottled soils, or a matrix chroma of 1 or less in unmottled soils.

Wetland Biota (Vegetation)

Wetland biota is defined as hydrophytic vegetation. A hydrophyte is a plant species that is capable of growing in substrates that are periodically deficient in oxygen as a result of saturated soil conditions. The U.S. Fish and Wildlife Service, in the *National List of Plant Species that Occur in Wetlands*, has established five basic groups of vegetation based on their frequency of occurrence in wetlands. These categories, referred to as the "wetland indicator status", are as follows: obligate wetland plants (OBL), facultative wetland (FACW), facultative (FAC), facultative upland (FACU), and obligate upland (UPL). Table 1 gives a definition of the plant indicator codes.

 Table 1.
 Description of Wetland Plant Indicator Status Codes

Indicator Code	Status
OBL	Obligate wetland. Estimated to occur almost exclusively in wetlands (>99%)
FACW	Facultative wetland. Estimated to occur 67-99% of the time in wetlands.
FAC	Facultative. Occur equally in wetlands and non-wetlands (34-66%).
FACU	Facultative upland. Usually occur in non-wetlands (67-99%).
UPL	Obligate upland. Estimated to occur almost exclusively in non-wetlands (>99%). If a species is not assigned to one of the four groups described above it is assumed to be obligate upland.
NI	Has not yet received a wetland indicator status, but is probably not obligate upland.

Observations of hydrology, soils, and vegetation, were made using the "Routine On-site" delineation method as defined in the 1987 manual for areas that were not currently in agricultural production. One-foot diameter soil pits were excavated to 16 inches and soil profiles were examined for hydric soil and wetland hydrology field indicators. In addition, a visual percent-

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cover estimate of the dominant species of the plant community was performed using soil pit locations as a center of reference. Dominant plant species are based on estimates of percent cover for herbaceous, woody vine, and shrub species within a 5 foot radius of the sample point, and basal area cover for tree species within a 30 foot radius of the sample point. Plant species in each vegetative layer, which are estimated at less than 20%, are not considered to be dominant. The wetland indicator status is then used to determine if there is an overall dominance (greater than 50%) of wetland or upland plant species.

During data collection, the soil profiles were examined for hydric soil and wetland hydrology field indicators. Plant species and cover were recorded. Data was recorded on standard data sheets which contain the information specified in the 1987 Corps manual.