WETLAND DELINEATION / DETERMINATION REPORT COVER FORM

This form must be included with any wetland delineation report submitted to the Department of State Lands for review and approval. A wetland delineation report submittal is not "complete" unless the fully completed and signed report cover form and the required fee are submitted. Attach this form to the front of an unbound report or include a hard copy of the completed form with a CD/DVD that includes a single PDF file of the report cover form and report (minimum 300 dpi resolution) and submit to: Oregon Department of State Lands, 775 Summer Street NE, Suite 100, Salem, OR 97301-1279. A single PDF attachment of the completed cover from and report may be e-mailed to Wetland_Delineation@dsl.state.or.us. For submittal of PDF files larger than 10 MB, e-mail instructions on how to access the file from your ftp or other file sharing website. Fees can be paid by check or credit card. Make the check payable to the Oregon Department of State Lands. To pay the fee by credit card, call 503-986-5200.

Encore Development Inc. Jim Pentz P. O. Box 6299 Bend, Oregon 97708	Business phone # 503-7800210 Mobile phone # (optional) E-mail: jim@jptz.com
Authorized Legal Agent, Name and Address:	Business phone #
Same as above	Mobile phone #
	E-mail:
Typed/Printed Name: The Special instructions regarding site acc	cess:
Project and Site Information (using decimal degree formation)	for lat/long.enter centroid of site or start & end points of linear project)
Project Name: Encore Wetland Determination	Latitude: 45.71652 Longitude: 123.92684
Proposed Use: 300 unit housing development	Tax Map # 03N10W28 and 03N10W29D
Project Street Address (or other descriptive location):	Township 03N Range 10W Section QQ 28/29D
East of Manzanita. Classic Street borders the study	Tax Lot(s) 1401, 100 and 2100
area to the west and Necarney City Road to the south.	Waterway: n/a River Mile: n/a
City: Manzanita County: Tillamook	NWI Quad(s): Nehalem, Oregon
Wetland Consultant Name, Firm and Address:	neation Information Phone # 503-801-2243
Christine McDonald 6530 Weber Road Tillamook, OR 97141 The information and conclusions on this form and in the attached Consultant Signature: Thurtine McAnald	Mobile phone # same E-mail: contactchris100@gmail.com report are true and correct to the best of my knowledge. Date: 4.12.17
Primary Contact for report review and site access is 🛛 Co	onsultant Applicant/Owner Authorized Agent
Wetland/Waters Present? ☐ Yes ☒ No Study Are	The state of the s
	a size: 71.60 Total Wetland Acreage: none
	a size: 71.60 Total Wetland Acreage: none Fees:
Check Box Below if Applicable:	a size: 71.60 Total Wetland Acreage: none
Check Box Below if Applicable: R-F permit application submitted	a size: 71.60 Total Wetland Acreage: none Fees:
Check Box Below if Applicable: R-F permit application submitted Mitigation bank site	a size: 71.60 Total Wetland Acreage: none Fees: Fee payment submitted \$ 419 Fee (\$100) for resubmittal of rejected report
Check Box Below if Applicable: R-F permit application submitted Mitigation bank site Wetland restoration/enhancement project (not mitigation	a size: 71.60 Total Wetland Acreage: none Fees: Fee payment submitted \$ 419 Fee (\$100) for resubmittal of rejected report
Check Box Below if Applicable: R-F permit application submitted Mitigation bank site Wetland restoration/enhancement project (not mitigation Industrial Land Certification Program Site	Total Wetland Acreage: none Fees: Fee payment submitted \$ 419 Fee (\$100) for resubmittal of rejected report No fee for request for reissuance of an expired
Check Box Below if Applicable: R-F permit application submitted Mitigation bank site Wetland restoration/enhancement project (not mitigation	Total Wetland Acreage: none Fees: Fee payment submitted \$ 419 Fee (\$100) for resubmittal of rejected report No fee for request for reissuance of an expired report
Check Box Below if Applicable: R-F permit application submitted Mitigation bank site Wetland restoration/enhancement project (not mitigation Industrial Land Certification Program Site Reissuance of a recently expired delineation	Total Wetland Acreage: none Fees: Fee payment submitted \$ 419 Fee (\$100) for resubmittal of rejected report No fee for request for reissuance of an expired
Check Box Below if Applicable: R-F permit application submitted Mitigation bank site Wetland restoration/enhancement project (not mitigation Industrial Land Certification Program Site Reissuance of a recently expired delineation Previous DSL # Expiration date	Total Wetland Acreage: none Fees: Fee payment submitted \$ 419 Fee (\$100) for resubmittal of rejected report No fee for request for reissuance of an expired report Y N
Check Box Below if Applicable: R-F permit application submitted Mitigation bank site Wetland restoration/enhancement project (not mitigation Industrial Land Certification Program Site Reissuance of a recently expired delineation Previous DSL # Expiration date Other Information: Has previous delineation/application been made on parcel? Does LWI, if any, show wetland or waters on parcel?	Total Wetland Acreage: none Fees: Fee payment submitted \$ 419 Fee (\$100) for resubmittal of rejected report No fee for request for reissuance of an expired report Y N If known, previous DSL #
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1.0 Landscape Setting and Land Use (previous and current) OAR141-090-0035 (7) (a)

The 71.60-acre study area is located in Manzanita, Tillamook County, Oregon and consists of tax lot 100 T3NR10W section 29D, and all of tax lot 1401 and the southern third of tax lot 2100 in T3NR10W section 28 (see Figures 2A and 2B). The land is owned by Pine Grove Properties. All tax lots are accessible from Necarney City County Road to the south and/or Classic Street to the west.

The study area is located on gently to moderately sloping to rolling, stabilized coastal dunes. Slopes range from 0-40%. No water features are present. The land surface ranges in elevation from 50 to 160 feet (NAD 88).

Within the study area boundary, the Natural Resources Conservation Service (NRCS) has mapped the Netarts fine sandy loam, 5 to 30% slopes (11D), the Waldport fine sand, 3 to 15 percent slopes (9C) and the Haceta fine sand, 0-3% slopes (14A). The Netarts fine sandy loam comprises over 80% of the study area and is found on deep, well-drained soils that formed in eolian sand on marine terraces. The Waldport (9C) is found on recently stabilized dunes. Soils are deep, excessively drained and formed in sandy eolian material. The Heceta (14A) is mapped by the NRCS on the fringe of tax lot 2100. The Haceta is hydric soil and documented by NRCS as an inclusion within the Waldport (9C) soil mapping unit. According the NRCS, the Haceta soil develops on inter-dunal depressions and swales with poor soil drainage.

Vegetation within the study area is composed of forest and dune land plant communities, shrubs and pasture grasses. Vascular plant species found within the study area are included in Table 1.

Table 1. List of vascular plants observed within the study area, 2016.

Scientific Name	Common Name	Indicator Status	Native, Non-native, or Invasive
Agrostis exarata	Spiked Bentgrass	FACW	N
Agrostis capillaris	Colonial Bentgrass	FAC	NN
Alnus rubra	Red Alder	FAC	N
Ammophila arenaria	European Beachgrass	FACU	NN
Anthoxanthum odoratum	Sweet Vernal Grass	FAC	NN
Arcyostaphylos columbiana	Bristly Manzanita	N/L	N
Carex obnupta	Slough Sedge	OBL	N
Carex bolanderi	Bolander's Sedge		N
Cardionema ramosissimum	Sand Mat	N/L	NN
Cytisus scoparius	Scotch Broom	UPL/NL	I I
Dryopteris espansa	Spreading Wood Fern	facw	N
Frangula purshiana	Cascara	FAC	N
Gaultheria shallon	Salal	FACU	N
Holcus lanatus	Common Velvetgrass	FAC	NN
Hypochaeris radicata	Hairy Cat's Ears	FACU	NN
Juncus effuses	Soft Rush	FACW	N
Leucanthemum vulgare	Ox-eye Daisy	FACU	NN/I
Picea sitchensis	Sitka Spruce	FAC	N
Myrica californica	California Wax Myrtyl	N/L	N

	Common Name	Indicator Status	Native, Non-native, or Invasive
Scientific Name	Shore Pine	FAC	N
Pinus contorta Poa annua	Annual Bluegrass	FAC	NN
Polystichum munitum	Sword Fern	FACU	N
Pseudotsuga menziesii	Douglas-fir	FACU	N
Pteridium aquilinum	Bracken Fern	FACU	N
Rubus armeniacus	Himalayan Blackberry	FAC	I
Rubus ursinus	California Dewberry	FACU	N
Rumex acetosella	Common Sheep Sorrel	FACU	NN
Sambucus racemosa	Red Elderberry	FACU	N
Spiraea douglasii	Hardhack	FACW	N
Thuja plicata	Western Red Cedar	FAC	N
Tsuga heterophylla	Western Hemlock	FACU	N
Vaccinium ovatum	Evergreen Huckleberry	FACU	N

Previous and current land uses

The lots are currently being used as forest and wildlife habitat, and for recreation.

Tax lot 100 and 2100 are within the Manzanita City urban growth boundary and zoned SRR. Lot 1401 is zoned R-2. Development plans are currently underway with roads, green space and a 300-unit housing development.

2.0 Site Alterations OAR141-090-0035 (7) (c)

In 1990, the Manzanita Golf Club developed plans to expand the golf course to the east. The expansion included all of the lots within the study area boundary. Potential green areas were cleared of vegetation to construct a driving range and 9-hole golf course; however the golf course was never constructed.

A driving range for the Manzanita Golf Club was constructed in the southwest corner of the study area. Paved access and parking to the driving range are from Necarney City Road. The driving range is mowed and maintained by the Manzanita Golf Club. A small wooden rental shack was constructed near the parking area. No other building structures are present. A sewer pump station and wet well, power vaults and fiber optic vault can be found in the south west corner of the study area near Necarney City Road (See Figure 5). Construction of Necarney City Road may have altered wetlands to the south during construction. Classic Street was constructed in the mid 1990's.

Currently native and non-native vegetation commonly found on coastal sand dunes has reestablished where the golf course was cleared for expansion. On steeper slopes we found forestland with an overstory of 20-30 year old Sitka Spruce, Western Red Cedar and Shore Pine. In non-forested areas open, native shrubs and patches of 30 to 35 year old scotch broom was observed with a herbaceous ground cover.

3.0. Precipitation Data and Analysis OAR141-090-0035 (7)(i)

Climate data from the Western Regional Climate Center RAW (RAW) data for the station in Tillamook were used for this study. No precipitation was recorded on the day of the site visit on February 25, 2017. Two weeks prior to the site visit in February 5.86 inches of precipitation was recorded at the RAW Station in Tillamook. Two weeks prior to the March 6, 2017 the RAW station recorded 5.28 inches of precipitation and .45 inches of precipitation on the day of the site visit. There was 3.46 inches of precipitation recorded two weeks prior to the April 11, 2017 site and .36 inches of precipitation recorded on the day of the site visit.

NRCS Wetland Climate Evaluation Database (WETS) for Tillamook Oregon was used to obtain the normal precipitation data. Table 2 compares the RAW data with the WETS data (1971-2000). The summary shows December 2016 to be within normal levels. January precipitation was below average, but within a 30% range of the average. February and March precipitation were above normal and higher than the 30% range of average precipitation. Climatic conditions were considered typical for this time of year for the data collected in February and March even though some variation in precipitation was noted. Because March precipitation was 60% higher than the average for this time of year, climatic conditions were considered atypical for the data collected in April.

Table 2. Monthly precipitation recorded by the Oregon Climate Data for Tillamook, Oregon

compared with WETS data for Tillamook 1 W, Oregon (358494).

Month	RAWS Tillamook Precipitation (inches)	WETS average precipitation (inches)	Departure from normal (inches) and (%)
December, 2016	13.94	13.70	24(-2%)
January, 2017	8.34	13.08	-4.74(-36%)
February, 2017	14.94	10.79	+4.15(+38%)
March, 2017	15.84	9.90	+5.94(+60%)

4.0. Methods (<u>site-specific</u> methods for field investigation, determining wetland boundaries and geographic extent of other waters) *OAR141-090-0030*, *OAR141-090-0035* (7)(d-e), (g-h), (16)(a-b), (f), (d) or (g), (17), & (19-20)

Field investigation was conducted on February 25, March 6, 2017 and April 11, 2017. Christine McDonald and Kurt Heckeroth evaluated the site using the Corps of Engineers *Wetland Delineation Manual: Western Mountains, Valleys and Coast Region* (May, 2010) supplement. The study area was walked extensively to locate areas mapped as wetland by the National Wetlands Inventory (NWI), and to locate inter-dunal swales and depressions in low-lying areas where wetlands are most likely to be present.

The Corps of Engineers 2010 manual provides technical criteria, field indicators, and recommended procedures to be used in determining whether an area is a jurisdictional wetland. For wetlands to exist, there must be a prevalence of hydrophytic vegetation, hydric soils, and wetland hydrology. Under normal circumstances, all three parameters must be present to satisfy the criteria for jurisdictional wetlands.

Seven sample plots document non-wetlands within the study area. The sample sites were chosen based on mapped NWI wetlands (Figure 4), presence of hydric soils mapped by the NRCS (Figure 3), low-lying areas in the dune land, and sites representative of non-wetlands.

Hydric Soils

A hydric soil is a soil that remains wet long enough during the growing season to alter physical (redoximorphic) features of the soil. Due to saturation, flooding, or ponding, soils develop anaerobic conditions. This oxygen-deficient environment favors the growth and regeneration of hydrophytic vegetation. Soil color becomes altered as iron is reduced to a mobile form. Soils become oxidized and accumulate iron, or become reduced as a result of iron depletion. Wetland conditions also slow down the decomposition of organic material, thereby causing soil color to be very dark with a low soil chroma and high organic carbon content.

The wetland scientists analyzed soils collected from more than 30 soil pits by examining texture, moisture content, color, redoximorphic features, and structure. Sandy soils typical of the Haceta may have high organic carbon content, low values and hues, and/or redoximorphic features within 6-12 inches of the surface. Soils that met the hydric soil criteria were not found within the study

Hydrophytic Vegetation

Hydrophytic vegetation occurs in soils that are saturated for extended periods during the growing season and have adapted to wet soil conditions. More than 50% of the species must have a wetland indicator status of obligate wetland (OBL), facultative wetland (FACW), or facultative (FAC). Wetland scientists estimated vegetation cover visually at each sample point, identified all vascular plant species, and recorded the indicator status for each plant species from national wetland indicator lists. The 50/20 rule was used to determine dominance. The 2016 U.S. Army Corps of Engineers Plant List for the State of Oregon was used for this study.

Wetland Hydrology

Indications of wetland hydrology may include drainage patterns, sediment deposits, hydrogen sulfide odor, watermarks, oxidized root zones, saturation, high water table, or inundation. Wetland hydrology affects soil and vegetation by inundating soils or saturating soils to the surface for a significant length of time (5-12.5%) during the growing season.

Wetland scientist looked for the presence of oxidized root zones, presence of surface water, and the height of surface water, the water table, and saturation and/or moisture levels in the soil pits. Field personnel were able to observe surface water and water table levels following periods of precipitation. The higher than average precipitation in February and March, 2017 was taken into consideration when evaluating wetland hydrology indicators.

5.0. Description of All Wetlands and Other Non-Wetland Waters (their characteristics and boundaries, e.g. whether they extend offsite) OAR141-090-0035 (2), (7)(b), & (17)

No jurisdictional wetlands were observed within the study area boundary.

Non-wetlands are extensive on the level to hilly and undulating dunes and elevated terraces within the study area. Common shrubs and trees observed are Sitka Spruce, Western Hemlock, Douglas

fir, Shore Pine, Western Red Cedar, Salal, Bristly Manzanita, Himalayan Blackberry, California Dewberry, and Evergreen Huckleberry. Herbaceous species commonly found are Colonial and Spiked Bentgrass, Annual Bluegrass, Common Sheep Sorrel, Hairy Cat's Ears, Velvetgrass, and Sand Mat. Other hydrophytic vegetation such as Slough Sedge or Hardhack was observed in small isolated clumps in low-lying areas.

Soils typically are deep, well-drained sands or loamy sands with brown to very dark brown surfaces, and light brown, brown or yellowish brown sandy subsurface horizons. Redoximorphic features were not found with a soil layer starting within 6 inches of the soil surface. Soil moisture levels were observed following periods of heavy precipitation. None of the soil pits observed had surface water, elevated ground water or saturation within 20 inches of the soil surface.

6.0 Deviation from LWI or NWI (if any, wetland determination data or explanation required.) OAR141-090-0035 (16)(e)

A Local Wetland Inventory (LWI) does not exist for the City of Manzanita. The National Wetlands Inventory (NWI) mapped Palustrine Forested Seasonally Flooded Coniferous (PFOC) along the southern fringe of the study area, and Palustrine Emergent and Scrub Shrub Seasonally Flooded (PEM/SSC) wetlands in lot 100 west of Classic Street (Figure 4). The NWI maps are generated primarily on the basis of interpretation of color infrared photography (scale of 1:58,000) with limited ground-trothing or site-specific data.

This study found that the NWI overestimated forest, scrub-shrub and emergent wetlands within the study area boundary. The study area was walked extensively and soil pits dug to examine soils and hydrology. No jurisdictional wetlands or waterways were documented within the study area. Sample data points SP-1 and SP-6 document non-wetland areas mapped as wetland by the NWI.

7.0 Mapping Method (including mapping precision estimate) *OAR141-090-0035* (7)(f), (11), (12), (13), (18), & (22)

Christine McDonald and Kurt Heckeroth flagged sample points representing non-wetlands with blue pin flags and blue flagging. The study area boundary and non-wetland sample points were then professionally land surveyed by Onion Peak Design. The estimated accuracy is +/- 0.05 feet. A Topcon HIPER SR GPS RECEIVER WITH TOPCON TESLA DATA COLLECTOR was used for the survey.

8.0 Additional Information (i.e., if needed to establish state jurisdiction) *OAR141-085-0015* (1-7), *OAR141-090-0030* (2), *OAR141-090-0035* (6)(c), (16)(c), & (21)

None

9.0 Results and Conclusions of the Investigation OAR141-090-0035 (7)(j)

Jurisdictional wetlands within the 71.60-acre study area (Figure 5) were not documented or found by Christine McDonald and Kurt Heckeroth. Within the study area boundary, areas identified as non-wetlands have well to excessively-drained soils typical of the Waldport or Netarts soils. No evidence of hydric soils was found starting within 6 inches of the soil surface at the lowest elevation within the study area or within the Haceta map unit. The site was observed during the

growing season after prolonged periods of higher than average precipitation; however there was no evidence of an elevated water table or saturation starting within 12 inches of the soil surface.

Dominant species observed include Sitka Spruce, Western Hemlock, Douglas-fir, Shore Pine, Western Red Cedar, Salal, Bristly Manzanita, Himalayan Blackberry, California Wax Myrtyl, Evergreen Huckleberry, Colonial Bentgrass, Annual Bluegrass, Common Sheep Sorrel, Velvet grass, and Hairy Cat's Ears.

10.0 Required Disclaimer OAR141-090-0035 (7)(k)

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.

References

- Cowardin, L. M., V. Carter, P. C. Golet, and E. T. LaRoe, 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. 147 p., plates.
- Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (May 2010), U. S. Army Corps of Engineer Waterways Experiment Station, Vicksburg, MS.
- NRCS National Water and Climate Center WETS data available online at http://www.wcc.nrcs.usda.gov/climate/wetlands.htm
- Oregon Climate Data for the Tillamook Station available online at www.ocs.edu/oregon-climate-dataRAWS
- Natural Resource Conservation Service, National Cooperative Soil Survey, Web Soil Survey 1.1, available online at http://websoilsurvey.nrcs.usda.gov
- USDA, Natural Resources Conservation Service, Hydric Soil List available online at http://www.or.nrcs.gov/pnw_soil/ordata.html
- Munsell Color, 1990. Munsell Color Charts. Macbeth Division of Kollmorgen Corporation. Baltimore, MD
- Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X

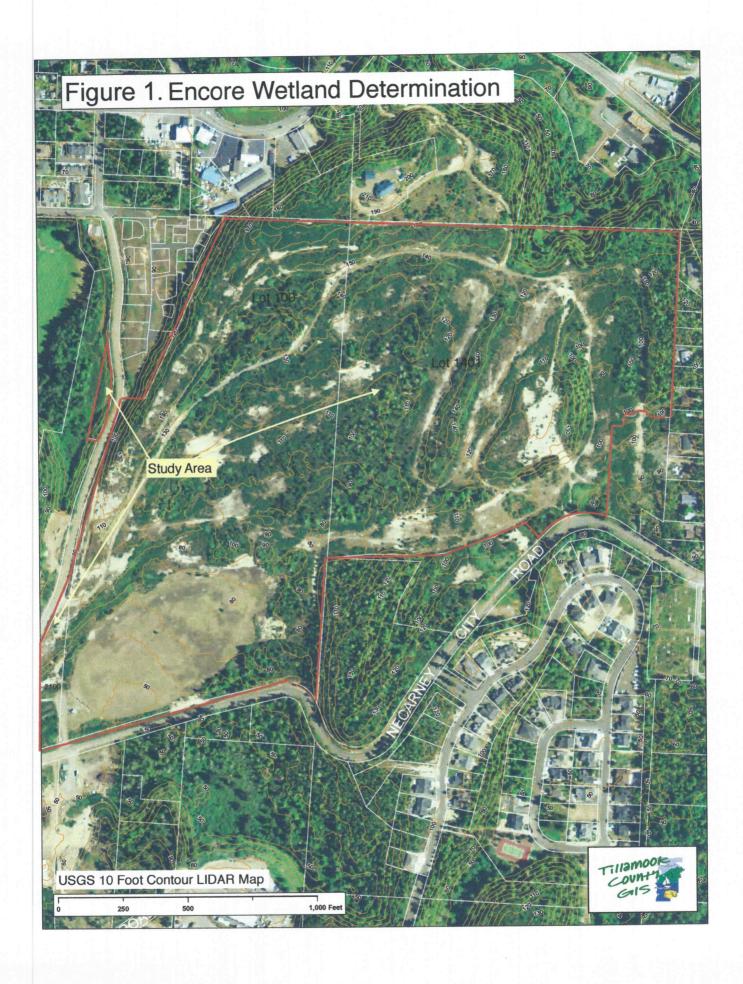


Figure 2a:Tax Lot Map

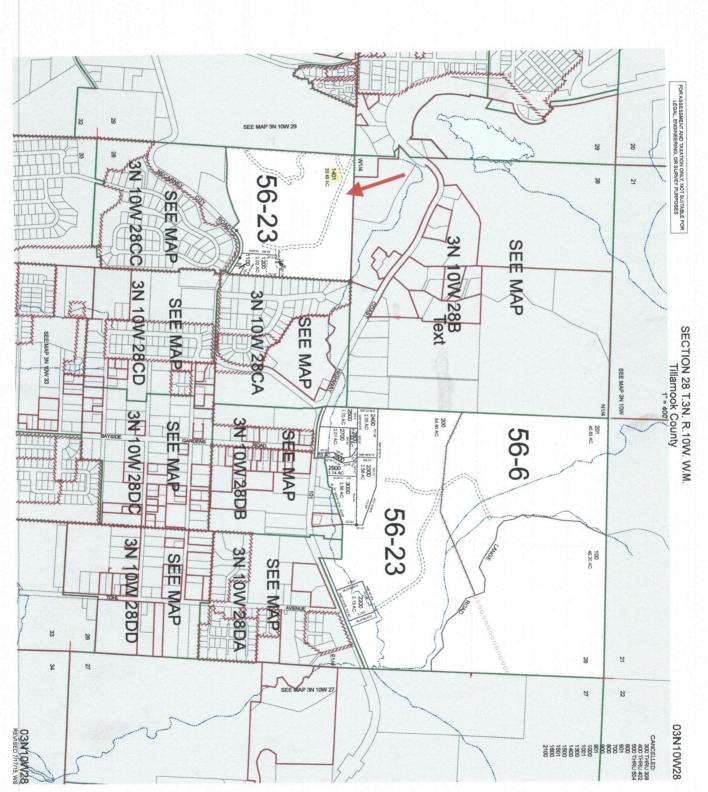
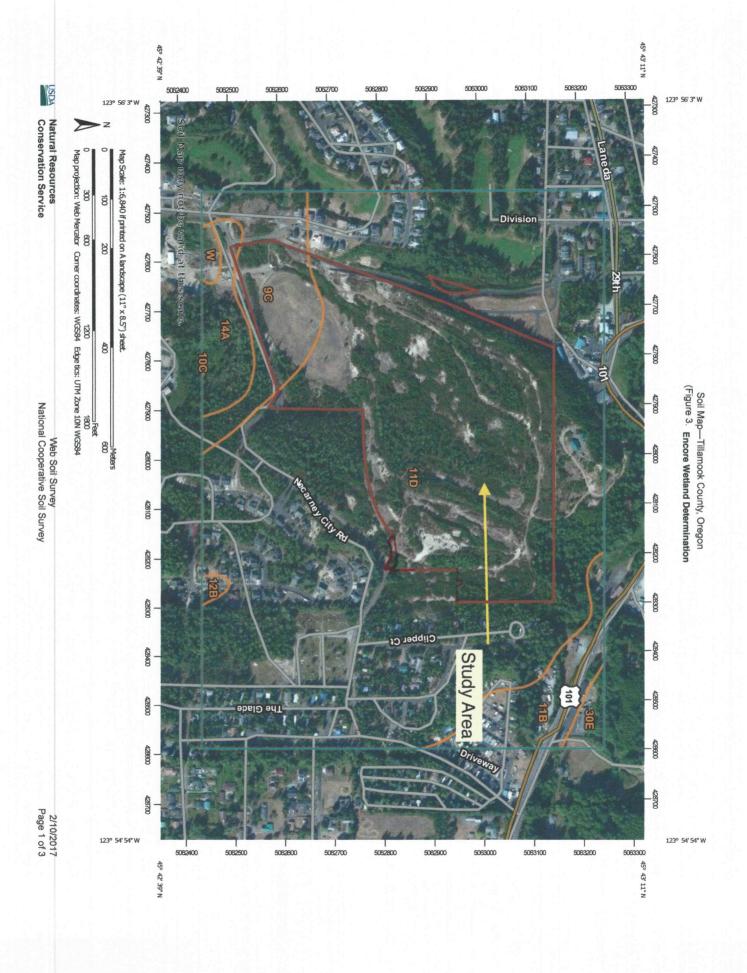


Figure 2b: Tax Lot Map FOR ASSESSMENT AND TAXATION ONLY, NOT SUITABLE FOR LEGAL, ENGINEERING, OR SURVEY PURPOSES 600 C1/4 PTN. P.2 % SEE MAP 3N 10W 29DB 2015-03 S.E.1/4 SEC.29 T.3N. R.10W. W.M.
Tillamook County SEE MAP 3N 10W 29DC PTN. P.2 600 50.90 AC P. PLA. 4 56-11 600 SEE MAP 3N 10W 29DA 2200 2.12 AC CT 1900 5.78 AC. 1905 1906 1903 SEE MAP 3N 10W 32 2000 1901 100 1 36.33 AC. ROAD 1902 32 29 03N10W29D MANZANITA 83 E1/4 MANZANITA
03N10W29D
REVISED 8/24/16, WS SEE MAP 3N 10W 28CC

CANCELLED 200 300 301 302 303 304 306 306 308



Area of Interest (AOI)

Soils Soil Map Unit Lines Soil Map Unit Polygons

Clay Spot Borrow Pit Blowout Special Point Features

Soil Map Unit Points

Gravelly Spot Gravel Pit

Closed Depression

Landfill Lava Flow

功 Mine or Quarry Marsh or swamp

Perennial Water

Miscellaneous Water

Rock Outcrop

Sandy Spot Saline Spot

Sinkhole Severely Eroded Spot

Slide or Slip

Sodic Spot

0 Stony Spot Spoil Area

8 Wet Spot Very Stony Spot

Other

Water Features Special Line Features

Transportation ŧ Rails

Streams and Canals

Interstate Highways

US Routes

Major Roads

Background Local Roads

Aerial Photography

MAP INFORMATION

1:24,000. The soil surveys that comprise your AOI were mapped at

Warning: Soil Map may not be valid at this scale

misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed Enlargement of maps beyond the scale of mapping can cause

measurements. Please rely on the bar scale on each map sheet for map

Source of Map: Natural Resources Conservation Service

Coordinate System: Web Mercator (EPSG:3857) Web Soil Survey URL:

accurate calculations of distance or area are required Albers equal-area conic projection, should be used if more distance and area. A projection that preserves area, such as the projection, which preserves direction and shape but distorts Maps from the Web Soil Survey are based on the Web Mercator

of the version date(s) listed below. This product is generated from the USDA-NRCS certified data as

Soil Survey Area: Tillamook County, Oregon

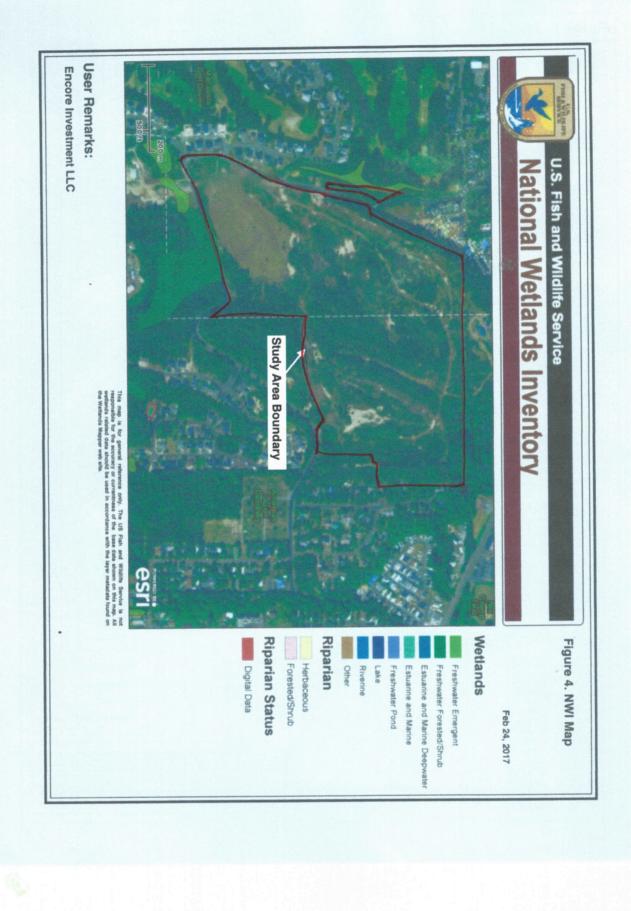
Soil map units are labeled (as space allows) for map scales Survey Area Data: Version 8, Sep 16, 2016 1:50,000 or larger.

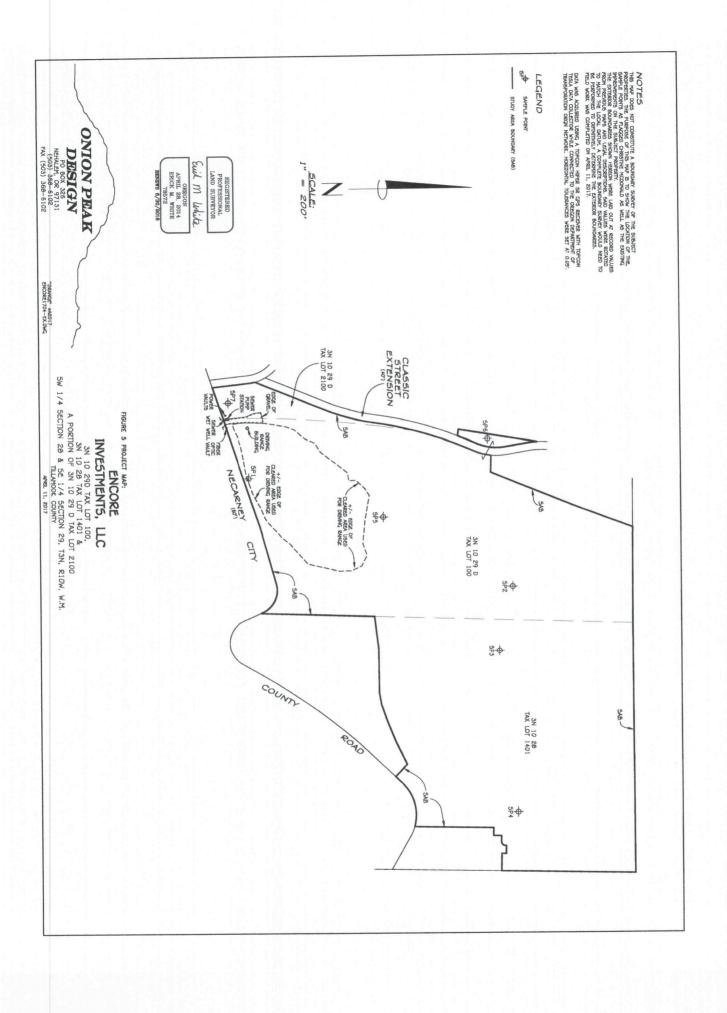
Date(s) aerial images were photographed: Jul 9, 2011—Sep 4,

shifting of map unit boundaries may be evident imagery displayed on these maps. As a result, some minor compiled and digitized probably differs from the background The orthophoto or other base map on which the soil lines were

Map Unit Legend

Tillamook County, Oregon (OR057)						
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI			
9C	Waldport fine sand, 3 to 15 percent slopes	16.3	7.2%			
10C	Waldport fine sand, thin surface, 3 to 12 percent slopes	0.0	0.0%			
11B	Netarts fine sandy loam, 0 to 5 percent slopes	10.7	4.7%			
11D	Netarts fine sandy loam, 5 to 30 percent slopes	189.1	83.5%			
12B	Yaquina loamy fine sand, 0 to 5 percent slopes	0.6	0.3%			
14A	Heceta fine sand, 0 to 3 percent slopes	7.0	3.1%			
30E	Templeton-Ecola medial silt loams, 30 to 60 percent slopes	2.0	0.9%			
W	Water	1.0	0.4%			
Totals for Area of Interest		226.5	100.0%			





Appendix A

Wetland Determination Data Forms

Project/Site: Encore Wetland Determination City	//County:	Manzanita/Till		Sampling Date: February 25, 2017
Applicant/Owner: Jim Pentz		State: OR		
Investigator(s): C. McDonald, K. Heckeroth	Section, To	wnship, Range	Section 3	one): linear Slope (%): 2
Landform (hillslope, terrace, etc.): terrace				
Subregion (LRR): A Lat				
Soil Map Unit Name: 9C- Waldport fine sand, 3-15	% slopes			//I classification: N/A
Are climatic / hydrologic conditions on the site typical	for this time	of year? Yes	x No _	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology	signific	cantly disturbed	I? Are "No	ormal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology	natura	ally problematic	? (If needed, explain any answers in Remarks.)
			int I	esetions transports important features etc
SUMMARY OF FINDINGS – Attach site in Hydrophytic Vegetation Present? Yes x No	nap snov	ving sampii	ng point i	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes x No Yes Hydric Soil Present? Yes X No		Is the Sample	ed Area with	in a Wetland? Yes No _x
Wetland Hydrology Present? Yes No	X			
Remarks: Sample plot is in lowest point of lot 100 ne	arest Necar	ney Boulevard.	Sample poi	nt is on the south edge of the driving range. NFW
manned DEOC wetlands mostly in the south side of N	lecarney Rd	with a very sm	nall portion no	orth of Necarney. We dug several soil pils in this area
and did not find wetlands. Precipitation is near norm	al levels for	this time of year	ar, 5.38 inche	s of precipitation in the previous two weeks.
VEGETATION – Use scientific names of	plants.			
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Number of Dominant Species
1. Pinus contorta	10	D	FAC	That Are OBL, FACW, or FAC:4 (A)
2.				Total Number of Dominant
3.				Species Across All Strata: 5 (B)
4.				Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)
				That / 10 002, 1 / 10 11, 10 11, 10 11
	10	_ = Total Cove	er	
Sapling/Shrub Stratum (Plot size: 20')				Prevalence Index worksheet:
1. Cystis scoparius	20	D	N/L	Total % Cover of: Multiply by:
2. Rubus aremeniacus	5	D	FAC	OBL species x 1 =
3.				FACW species x 2 =
4.				FAC species x 3 =
5.				FACU species x 4 =
	25	= Total	Cover	UPL species x 5 =
Herb Stratum (Plot size: 10')				Column Totals: (A)
1. Poa annua	30	D	FAC	Column rotals (v)
2. Carex bolanderi	1		FACU	Prevalence Index = B/A =
3. Hypochaeris radicata	T		FACU	
4. Rumex acetsosella	10		FACU	Hydrophytic Vegetation Indicators:
5. Agrostis exarata	15	D	FAC	1 - Rapid Test for Hydrophytic Vegetation
6. Holcus lanatus	2		FAC	x 2 - Dominance Test is >50%
7. Erigeron glaucus	<1		FACU	3 - Prevalence Index is ≤3.0 ¹
8. Pteridium aquilinum	T		FACU	4 - Morphological Adaptations ¹ (Provide supporting
9. Cardionema ramosissima	1		N/L	data in Remarks or on a separate sheet)
10.				5 - Wetland Non-Vascular Plants
11.				Problematic Hydrophytic Vegetation ¹ (Explain)
	58	_ = Total Cove	er	¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: 20')				be present, unless disturbed or problematic.
1.				
2.				
		= Total Cove	er	Hydrophytic Vegetation
% Bare Ground in Herb Stratum10				Present? Yes x No
Remarks: Carex obnupta outside of plot near the roa	ad Plot is o	on the driving ra	nge and mov	ved regularly
**	uu. riotis C	the unving la	go and mov	
그님 맛요 그래 가는 어린 맛이 가나 가를 다				
50/20 rule used to determine dominance.				

Depth	ription: (Describe Matrix			Redox Fea	atures			
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Texture	Remarks
-4	7.5YR 4/3	100					Loamy sand	
-20+	10YR 5/3	100					sand	
-20+	101K 3/3	_100_						
		-						
				-				
Гуре: С=Сс	oncentration, D=Dep	oletion, RM:	=Reduced Matrix, CS	=Covered	or Coated Sa	and Grains.	² Location: PL=Pore	Lining, M=Matrix.
Hydric Soil	Indicators: (Appli	cable to al	I LRRs, unless othe	rwise note	ed.)	Ind	licators for Problemat	tic Hydric Soils ³ :
Histosol			Sandy Redox (S				2 cm Muck (A10)	
Histic E	pipedon (A2)		Stripped Matrix				Red Parent Material (
	istic (A3)		Loamy Mucky M			RA 1)	Very Shallow Dark Su Other (Explain in Rem	
	en Sulfide (A4)	00 (411)	Loamy Gleyed N Depleted Matrix				Other (Explain in Ken	iaiks)
	d Below Dark Surfacer (A12)	ce (ATT) _	Redox Dark Sur				³ Indicators of hydroph	vtic vegetation and
	Mucky Mineral (S1)		Depleted Dark S		")		wetland hydrology mu	
	Gleyed Matrix (S4)		Redox Depressi	ons (F8)			unless disturbed or pr	oblematic
	(if).							
	ayer (if present):				Hydric So	oil Present?	Yes	No x
Type: Depth (incl	haa).				Tiyano o	on i rodone.		
					1 5 1 10 1 111			
		nt rainfall. (Good drainage typica	I of the Wa	l aldport.			
DROLOG	il is moist from recer				I aldport.			
DROLOG	il is moist from recer		check all that apply)				ondary Indicators (2 or	
DROLOG etland Hydrimary Indica	il is moist from recer iY rology Indicators: ttors (minimum of on		check all that apply) Water-Stain	ed Leaves	(B9) (except	V	Vater-Stained Leaves (
DROLOG etland Hydr mary Indica	il is moist from recer SY rology Indicators: ttors (minimum of or		check all that apply) Water-Staine MLRA 1, 2,	ed Leaves 4A, and 4I	(B9) (except	V 4	Vater-Stained Leaves (A, and 4B)	(B9) (MLRA 1, 2,
DROLOG etland Hydrimary Indica Surface Water	il is moist from recer FY FOLOGY Indicators: Itors (minimum of or ater (A1) Table (A2)		check all that apply) Water-Stain MLRA 1, 2, Salt Crust (E	ed Leaves 4A, and 4l 311)	(B9) (except	4	Vater-Stained Leaves (A, and 4B) Orainage Patterns (B10	(B9) (MLRA 1, 2,
DROLOG etland Hydrimary Indica Surface Water High Water Saturation	il is moist from recer iversely indicators: itors (minimum of or inter (A1) in Table (A2) in Table (A3)		check all that apply) Water-Staine MLRA 1, 2,	ed Leaves 4A, and 4l 311) ertebrates ((B9) (except B) B13)	V 	Vater-Stained Leaves (A, and 4B)	B9) (MLRA 1, 2,) e (C2)
DROLOG etland Hydr mary Indica Surface Water	il is moist from recer iversely indicators: itors (minimum of or inter (A1) in Table (A2) in Table (A3)		check all that apply) Water-Stain MLRA 1, 2, Salt Crust (E Aquatic Inve	ed Leaves 4A, and 4l 311) artebrates (ulfide Odor	(B9) (except B) B13)	V 6 6	Vater-Stained Leaves (A, and 4B) Orainage Patterns (B10 Ory-Season Water Tabl Saturation Visible on Ac	(B9) (MLRA 1, 2, 1) (b) (C2) (crial Imagery (C9)
DROLOG etland Hydr mary Indica Surface Wa High Water Saturation Water Mark	FY rology Indicators: ttors (minimum of on ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2)		check all that apply) Water-Stain MLRA 1, 2, Salt Crust (E Aquatic Inve Hydrogen So Oxidized Rh Roots (C3)	ed Leaves 4A, and 4I 311) artebrates (ulfide Odor izospheres	(B9) (except B) B13) r (C1) s along Living	4	Vater-Stained Leaves (A, and 4B) Orainage Patterns (B10 Ory-Season Water Table Saturation Visible on Ae Geomorphic Position (D	(B9) (MLRA 1, 2, 1) (b) (C2) (crial Imagery (C9)
DROLOG etland Hydr mary Indica Surface Wa High Water Saturation Water Mark	FY rology Indicators: ttors (minimum of on ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2)		check all that apply) Water-Staine MLRA 1, 2, Salt Crust (E Aquatic Inve Hydrogen So Oxidized Rh Roots (C3) Presence of	ed Leaves 4A, and 4I 311) rtebrates (ulfide Odor izospheres	(B9) (except B) B13) r (C1) s along Living	4	Vater-Stained Leaves (A, and 4B) Orainage Patterns (B10 Ory-Season Water Tabl Saturation Visible on Ac	(B9) (MLRA 1, 2, 1) (b) (C2) (crial Imagery (C9)
DROLOG etland Hydr mary Indica Surface Wa High Water Saturation Water Marl Sediment I Drift Depos	rology Indicators: ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3)		check all that apply) Water-Stain MLRA 1, 2, Salt Crust (E Aquatic Inve Hydrogen So Oxidized Rh Roots (C3)	ed Leaves 4A, and 4I 311) rtebrates (ulfide Odor izospheres	(B9) (except B) B13) r (C1) s along Living	V 4	Vater-Stained Leaves (A, and 4B) Orainage Patterns (B10 Ory-Season Water Table Saturation Visible on Ae Geomorphic Position (D	(B9) (MLRA 1, 2, 1) (b) (C2) (crial Imagery (C9)
DROLOG Surface War High Water Saturation Water Mart Sediment I Drift Depos	rology Indicators: stors (minimum of or ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4)		check all that apply) Water-Staine MLRA 1, 2, Salt Crust (E Aquatic Inve Hydrogen Si Oxidized Rh Roots (C3) Presence of Recent Iron Soils (C6) Stunted or S	ed Leaves 4A, and 4I 311) artebrates (ulfide Odor izospheres Reduced I	(B9) (except B) B13) r (C1) s along Living Iron (C4) in Tilled	V 4	Vater-Stained Leaves (A, and 4B) Orainage Patterns (B10 Ory-Season Water Table Saturation Visible on Ae Seomorphic Position (D Shallow Aquitard (D3) FAC-Neutral Test (D5)	B9) (MLRA 1, 2,) le (C2) erial Imagery (C9) 02)
DROLOG etland Hydr mary Indica Surface Wa High Water Saturation Water Mart Sediment I Drift Depos Algal Mat o	il is moist from recer rology Indicators: stors (minimum of or ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5)		check all that apply) Water-Staine MLRA 1, 2, Salt Crust (E Aquatic Inve Hydrogen Scottist (C3) Presence of Recent Iron Soils (C6) Stunted or S (LRR A)	ed Leaves 4A, and 4I 311) Intebrates (ulfide Odor izospheres Reduced I Reduction	(B9) (except B) (B13) r (C1) s along Living Iron (C4) in Tilled	V 4 5 5 6 F F	Vater-Stained Leaves (AA, and 4B) Orainage Patterns (B10 Ory-Season Water Table Saturation Visible on Active Second (DS) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6)	(B9) (MLRA 1, 2, 1) (b) (e (C2) (crial Imagery (C9)
DROLOG etland Hydrimary Indica Surface Water Marl Sediment I Drift Depos Algal Mat of	il is moist from recer rology Indicators: stors (minimum of or ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6)	ne required;	check all that apply) Water-Staine MLRA 1, 2, Salt Crust (E Aquatic Inve Hydrogen Si Oxidized Rh Roots (C3) Presence of Recent Iron Soils (C6) Stunted or S	ed Leaves 4A, and 4I 311) Intebrates (ulfide Odor izospheres Reduced I Reduction	(B9) (except B) (B13) r (C1) s along Living Iron (C4) in Tilled	V 4 5 5 6 F F	Vater-Stained Leaves (A, and 4B) Orainage Patterns (B10 Ory-Season Water Table Saturation Visible on Ae Seomorphic Position (D Shallow Aquitard (D3) FAC-Neutral Test (D5)	(B9) (MLRA 1, 2, 1) (b) (e (C2) (crial Imagery (C9)
DROLOG etland Hydrimary Indica Surface Water Marl Sediment I Drift Depos Algal Mat of	il is moist from recer rology Indicators: stors (minimum of or ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5)	ne required;	check all that apply) Water-Staine MLRA 1, 2, Salt Crust (E Aquatic Inve Hydrogen Si Oxidized Rh Roots (C3) Presence of Recent Iron Soils (C6) Stunted or S (LRR A) Other (Explain	ed Leaves 4A, and 4I 311) Intebrates (ulfide Odor izospheres Reduced I Reduction	(B9) (except B) (B13) r (C1) s along Living Iron (C4) in Tilled	V 4 5 5 6 F F	Vater-Stained Leaves (AA, and 4B) Orainage Patterns (B10 Ory-Season Water Table Saturation Visible on Active Second (DS) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6)	(B9) (MLRA 1, 2, 1) (b) (e (C2) (crial Imagery (C9)
DROLOG Surface Wathigh Water Saturation Water Mart Drift Depos Algal Mat colored Iron Depos Surface Solundation Sparsely V	il is moist from recer FY rology Indicators: ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) Visible on Aerial Im regetated Concave S	ne required;	check all that apply) Water-Staine MLRA 1, 2, Salt Crust (E Aquatic Inve Hydrogen Si Oxidized Rh Roots (C3) Presence of Recent Iron Soils (C6) Stunted or S (LRR A) Other (Explain	ed Leaves 4A, and 4I 311) Intebrates (ulfide Odor izospheres Reduced I Reduction	(B9) (except B) (B13) r (C1) s along Living Iron (C4) in Tilled	V 4 5 5 6 F F	Vater-Stained Leaves (AA, and 4B) Orainage Patterns (B10 Ory-Season Water Table Saturation Visible on Active Second (DS) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6)	(B9) (MLRA 1, 2, 1) (b) (e (C2) (crial Imagery (C9)
DROLOG etland Hydrimary Indica Surface Water Mark Sediment I Drift Depos Algal Mat of Iron Depos Surface So Inundation Sparsely V	il is moist from recer iverse f	ne required; agery (B7) Surface (B8	water-Staine Water-Staine MLRA 1, 2, Salt Crust (E Aquatic Inve Hydrogen Sc Oxidized Rh Roots (C3) Presence of Recent Iron Soils (C6) Stunted or S (LRR A) Other (Explain	ed Leaves 4A, and 4I 311) Intebrates (ulfide Odor izospheres Reduced I Reduction Stressed Pl ain in Rema	(B9) (except B) (B13) r (C1) s along Living Iron (C4) in Tilled	V 4 5 5 6 F F	Vater-Stained Leaves (AA, and 4B) Orainage Patterns (B10 Ory-Season Water Table Saturation Visible on Active Second (DS) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6)	(B9) (MLRA 1, 2, 1) (b) (e (C2) (crial Imagery (C9)
DROLOG etland Hydrimary Indica Surface Water Marl Saturation Water Marl Drift Depos Algal Mat of Iron Depos Surface So Inundation Sparsely V	il is moist from recer iverse f	ne required; nagery (B7) Surface (B8	water-Staine Water-Staine MLRA 1, 2, Salt Crust (E Aquatic Inve Hydrogen Si Oxidized Rh Roots (C3) Presence of Recent Iron Soils (C6) Stunted or S (LRR A) Other (Explains)	ed Leaves 4A, and 4I 311) Intebrates (ulfide Odor izospheres Reduced I Reduction Stressed PI ain in Rema	(B9) (except B) (B13) r (C1) s along Living Iron (C4) in Tilled lants (D1) arks)	V4	Vater-Stained Leaves (AA, and 4B) Orainage Patterns (B10 Ory-Season Water Table Saturation Visible on Active Second (District Control of Challow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) Frost-Heave Hummock	(B9) (MLRA 1, 2, 1) (b) (c) (C2) (c) (c) (C9) (c
DROLOG etland Hydrimary Indica Surface Water Mark Sediment I Drift Depos Algal Mat of Iron Depos Surface So Inundation Sparsely V eld Observater Table P	il is moist from recer iverse f	ne required; nagery (B7) Surface (B8	water-Staine Water-Staine MLRA 1, 2, Salt Crust (E Aquatic Inve Hydrogen Sc Oxidized Rh Roots (C3) Presence of Recent Iron Soils (C6) Stunted or S (LRR A) Other (Explain	ed Leaves 4A, and 4I 311) Intebrates (ulfide Odor izospheres Reduced I Reduction Stressed PI ain in Rema	(B9) (except B) (B13) r (C1) s along Living Iron (C4) in Tilled lants (D1) arks)	V4	Vater-Stained Leaves (AA, and 4B) Orainage Patterns (B10 Ory-Season Water Table Saturation Visible on Ae Geomorphic Position (D Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6 Frost-Heave Hummocks	(B9) (MLRA 1, 2, 1) (b) (c) (C2) (c) (c) (C9) (c
DROLOG etland Hydrimary Indica Surface Water Mart Sediment In Drift Depos Algal Mat of Iron Depos Surface So Inundation Sparsely Veld Observator Communication Iron Depos Surface So Inundation Sparsely Veld Observator Communication Precious Capiller Communication Com	rology Indicators: stors (minimum of ordater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) Visible on Aerial Im regetated Concave Seriesent? Present? Yes resent? Yes resent? Yes resent? Yes	ne required; nagery (B7) Surface (B8	water-Staine MLRA 1, 2, Salt Crust (E Aquatic Inve Hydrogen Si Oxidized Rh Roots (C3) Presence of Recent Iron Soils (C6) Stunted or S (LRR A) Other (Explained) x Depth (inches) x Depth (inches)	ed Leaves 4A, and 4I 311) Intebrates (ulfide Odor izospheres Reduced I Reduction Stressed PI ain in Rema	(B9) (except B) B13) r (C1) s along Living Iron (C4) in Tilled ants (D1) arks)	Y 4 4 5 5 5 5 5 5 6 5 6 6 6 6 6 6 6 6 6 6	Vater-Stained Leaves (AA, and 4B) Orainage Patterns (B10 Ory-Season Water Table Saturation Visible on Ae Geomorphic Position (D Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6 Frost-Heave Hummocks	(B9) (MLRA 1, 2, 1) (b) (e (C2) (crial Imagery (C9) (crial Imagery
DROLOG etland Hydrimary Indica Surface Water Mark Sediment In Drift Depos Algal Mat of Iron Depos Surface So Inundation Sparsely Veld Observator Table Potential of Precludes capil	rology Indicators: stors (minimum of ordater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) Visible on Aerial Im regetated Concave Seriesent? Present? Yes resent? Yes resent? Yes resent? Yes	ne required; nagery (B7) Surface (B8	Check all that apply) Water-Staine MLRA 1, 2, Salt Crust (E Aquatic Inve Hydrogen Si Oxidized Rh Roots (C3) Presence of Recent Iron Soils (C6) Stunted or S (LRR A) Other (Explains) X Depth (inches)	ed Leaves 4A, and 4I 311) Intebrates (ulfide Odor izospheres Reduced I Reduction Stressed PI ain in Rema	(B9) (except B) B13) r (C1) s along Living Iron (C4) in Tilled ants (D1) arks)	Y 4 4 5 5 5 5 5 5 6 5 6 6 6 6 6 6 6 6 6 6	Vater-Stained Leaves (AA, and 4B) Orainage Patterns (B10 Ory-Season Water Table Saturation Visible on Ae Geomorphic Position (D Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6 Frost-Heave Hummocks	(B9) (MLRA 1, 2, 1) (b) (e (C2) (crial Imagery (C9) (crial Imagery
DROLOG etland Hydrimary Indica Surface Water Mark Sediment In Drift Depos Algal Mat of Iron Depos Surface So Inundation Sparsely Veld Observator Table Potential of Precludes capil	rology Indicators: stors (minimum of ordater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) Visible on Aerial Im regetated Concave Seriesent? Present? Yes resent? Yes resent? Yes resent? Yes	ne required; nagery (B7) Surface (B8	water-Staine MLRA 1, 2, Salt Crust (E Aquatic Inve Hydrogen Si Oxidized Rh Roots (C3) Presence of Recent Iron Soils (C6) Stunted or S (LRR A) Other (Explained) x Depth (inches) x Depth (inches)	ed Leaves 4A, and 4I 311) Intebrates (ulfide Odor izospheres Reduced I Reduction Stressed PI ain in Rema	(B9) (except B) B13) r (C1) s along Living Iron (C4) in Tilled ants (D1) arks)	Y 4 4 5 5 5 5 5 5 6 5 6 6 6 6 6 6 6 6 6 6	Vater-Stained Leaves (AA, and 4B) Orainage Patterns (B10 Ory-Season Water Table Saturation Visible on Ae Geomorphic Position (D Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6 Frost-Heave Hummocks	(B9) (MLRA 1, 2, 1) (b) (e (C2) (crial Imagery (C9) (crial Imagery

Project/Site: Encore Wetland Determination Cit	v/County:	Manzanita/Till	lamook	Sampling Date: February 25, 2017
Applicant/Owner: Jim Pentz		state: OR	Sampling	Point: SP-2
		-		
Investigator(s): C. McDonald, K. Heckeroth Landform (hillslope, terrace, etc.): Dune terrace		I relief (conca	ve. convex. n	one): Linear/concave Slope (%): 3
	CONTRACTOR OF THE PROPERTY OF	2 Long:		
Subregion (LRR): A La Soil Map Unit Name: 11D- Netarts fine sandy loar	CHARLES THE STREET STREET, STR			VI classification: N/A
Are climatic / hydrologic conditions on the site typical	for this time	of year? Yes	x No	
				ormal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology Are Vegetation , Soil , or Hydrology	significa	v problematic		If needed, explain any answers in Remarks.)
Are Vegetation , Soil , or Hydrology	naturan	y problematic		
SUMMARY OF FINDINGS - Attach site	map show	ing sampli	ng point le	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes x No)			
Hydric Soil Present? Yes No	And the second s	Is the Sample	ed Area with	in a Wetland? Yes No _x_
Wetland Hydrology Present? YesNo			446-	the distance Commute exercent today. Precipitation is
Remarks: Sample plot is behind the gate east of Cl near normal levels for this time of year, 5.86 inches of	assic Street a of precipitation	nd about 60 fe in the previou	eet south of a us two weeks	the dirt trail. Sunny to overcast today. Precipitation is . Blue flagging and pin flag mark location.
VEGETATION – Use scientific names of	f nlante			
VEGETATION - Use scientific fiames o	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Number of Dominant Species
1. Pinus contorta	30	D	FAC	That Are OBL, FACW, or FAC:4(A)
2.				Total Number of Dominant
3.				Species Across All Strata:5 (B)
4.				Percent of Dominant Species
	The state of			That Are OBL, FACW, or FAC:80 (A/B)
	10	= Total Cove	er	
Sapling/Shrub Stratum (Plot size: 20')				Prevalence Index worksheet:
1. Cytisus scoparius	20	D	UPL/NL	Total % Cover of: Multiply by:
2. Rubus aremeniacus	1		FAC	OBL species x 1 =
3. Vacinium ovatum	15	D	FACU	FACW species x 2 =
4.				FAC species x 3 =
5.				FACU species x 4 =
	36	= Total	Cover	UPL species x 5 =
Herb Stratum (Plot size: 10')	l Bartons			
Rumex acetsosella	25	D	FACU	Column Totals: (A)
2. Holcus lanatus	<1		FAC	Prevalence Index = B/A =
3. Hypochaeris radicata	40	D	FACU	
4. Agrostis capillaris	10		FAC	Hydrophytic Vegetation Indicators:
5. Leucanthemum vulgare	1		FACU	1 - Rapid Test for Hydrophytic Vegetation
6.				x 2 - Dominance Test is >50%
7.				3 - Prevalence Index is ≤3.0¹
8.			The Late of the A	4 - Morphological Adaptations ¹ (Provide supporting
				data in Remarks or on a separate sheet)
10.				5 - Wetland Non-Vascular Plants
11.				Problematic Hydrophytic Vegetation ¹ (Explain)
	76	= Total Cove	er	¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: 20')				be present, unless disturbed or problematic.
1.				
2.				Hydronhytic
함께의 되는 것이 하나는 이렇게 하다 하나 하다.		= Total Cove	er	Hydrophytic Vegetation
% Bare Ground in Herb Stratum 10				Present? Yes X No
Remarks: Photos north and south. More scotch bro	om to the sou	ıth.		I
FO/20 mile used to determine descriptions				열린 중계 그렇지 않는 사람들이 맛있다.
50/20 rule used to determine dominance.				등 몸이 제 그리고 돼지 않아서 그 중에 어떻게 하다니 이 모든 모이다.

Depth	Matrix			Redox Fea			osence of indicators	7
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	7.5YR 2.5/2	100					Loamy sand	
1-20+	10YR 5/4	100					sand	
20.	1011(0)4	_100_		-		-	Saliu	
			ALLEMAN AND SE	-				
				***************************************		-		
Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, CS	S=Covered	or Coated San	d Grains.	² Location: PL=Pore	Lining, M=Matrix
Hydric Soil	Indicators: (Appli	cable to all	LRRs, unless othe	rwise note	d.)	Indic	cators for Problemat	ic Hydric Soils ³ :
Histoso			Sandy Redox (S	5)			cm Muck (A10)	
	pipedon (A2)		Stripped Matrix ((S6)			Red Parent Material (1	
	istic (A3)		Loamy Mucky M		(except MLRA	-	ery Shallow Dark Su	
	en Sulfide (A4) d Below Dark Surfac	- (144)	Loamy Gleyed N				Other (Explain in Rem	arks)
Thick D	ark Surface (A12)	e (A11) _	 Depleted Matrix Redox Dark Surf 			3.		
	Mucky Mineral (S1)		Depleted Dark S				Indicators of hydrophy	ytic vegetation and
	Gleyed Matrix (S4)	-	Redox Depression			V	vetland hydrology mus inless disturbed or pro	st be present,
etrictive La	yer (if present):							
Type:	iyer (ii present).				Hydric Soil	Draganta	Vaa	
Depth (incl	hes).				nyuric Soil	Present?	Yes	No x
narks: Soi					10 10 10 10 10 10 10 10 10 10 10 10 10 1			
iains. Ooi	i is moist from recen	t raintali. G	ood drainage typical	of the Net	arts.			
DROLOG	Y ology Indicators:			or the Neta	arts.			
DROLOG	Υ		check all that apply)				dary Indicators (2 or m	
DROLOG etland Hydr mary Indica	Y ology Indicators: tors (minimum of one		check all that apply) Water-Staine	d Leaves (I	39) (except	Wa	ter-Stained Leaves (E	
DROLOG	Y ology Indicators: tors (minimum of one		check all that apply) Water-Staine MLRA 1, 2, 4	d Leaves (I	39) (except	Wa 4A,	ter-Stained Leaves (E and 4B)	39) (MLRA 1, 2,
DROLOG etland Hydr mary Indica Surface Wa	ology Indicators: tors (minimum of one ater (A1) Table (A2)		check all that apply) Water-Staine MLRA 1, 2, 4 Salt Crust (B	d Leaves (I	39) (except	Wa 4A, Dra	ter-Stained Leaves (E , and 4B) iinage Patterns (B10)	39) (MLRA 1, 2,
DROLOG etland Hydr mary Indica Surface Wa High Water	ology Indicators: tors (minimum of one ater (A1) Table (A2)		check all that apply) Water-Staine MLRA 1, 2, 4	d Leaves (I A, and 4B) 11) tebrates (B	39) (except	Wa 4A, Dra Dry	ter-Stained Leaves (E and 4B)	(C2)
DROLOG etland Hydr mary Indicar Surface Wa High Water Saturation (Water Mark	ology Indicators: tors (minimum of one ater (A1) Table (A2) (A3) (s (B1)		check all that apply) Water-Staine MLRA 1, 2, 4 Salt Crust (B' Aquatic Inver Hydrogen Su Oxidized Rhiz	d Leaves (I A, and 4B 11) tebrates (B Ifide Odor (39) (except 13) C1)	Wa 4A, Dra Dry Sat	ter-Stained Leaves (E , and 4B) linage Patterns (B10) Season Water Table uration Visible on Aer	(C2) ial Imagery (C9)
DROLOG etland Hydr mary Indica Surface Wa High Water Saturation (Water Mark Sediment D	ology Indicators: tors (minimum of one ater (A1) Table (A2) (A3) is (B1)		Check all that apply) Water-Staine MLRA 1, 2, 4 Salt Crust (B' Aquatic Inver Hydrogen Su Oxidized Rhiz Roots (C3)	d Leaves (I A, and 4B) 11) tebrates (B lfide Odor (zospheres a	39) (except 13) C1) along Living	Wa 4A, Dra Dry Sat	ter-Stained Leaves (E , and 4B) tinage Patterns (B10) -Season Water Table uration Visible on Aer omorphic Position (D2	(C2) ial Imagery (C9)
DROLOG etland Hydr mary Indicar Surface Wa High Water Saturation (Water Mark	ology Indicators: tors (minimum of one ater (A1) Table (A2) (A3) is (B1)		Check all that apply) Water-Staine MLRA 1, 2, 4 Salt Crust (B' Aquatic Inver Hydrogen Su Oxidized Rhiz Roots (C3) Presence of B	d Leaves (I A, and 4B, 11) tebrates (B Ifide Odor (zospheres a	39) (except 13) C1) along Living on (C4)	Wa 4A, Dra Dry Sat	ter-Stained Leaves (E , and 4B) linage Patterns (B10) Season Water Table uration Visible on Aer	(C2) ial Imagery (C9)
DROLOG etland Hydr mary Indicat Surface Wa High Water Saturation (Water Mark Sediment D Drift Depos	ology Indicators: tors (minimum of one ater (A1) Table (A2) (A3) (s (B1) Deposits (B2) its (B3)		Check all that apply) Water-Staine MLRA 1, 2, 4 Salt Crust (B' Aquatic Inver Hydrogen Su Oxidized Rhiz Roots (C3) Presence of F Recent Iron F	d Leaves (I A, and 4B, 11) tebrates (B Ifide Odor (zospheres a	39) (except 13) C1) along Living on (C4)	Wa 4A, Dra Dry Sat Geo	ter-Stained Leaves (E., and 4B) hinage Patterns (B10) r-Season Water Table huration Visible on Aer homorphic Position (D2 hallow Aquitard (D3)	(C2) (ial Imagery (C9)
DROLOG etland Hydr mary Indicat Surface Wa High Water Saturation (Water Mark Sediment D Drift Depos	ology Indicators: tors (minimum of one ater (A1) Table (A2) (A3) is (B1) Deposits (B2) its (B3) r Crust (B4)		Check all that apply) Water-Staine MLRA 1, 2, 4 Salt Crust (B' Aquatic Inver Hydrogen Su Oxidized Rhiz Roots (C3) Presence of B	d Leaves (I IA, and 4B, 11) tebrates (B Iffide Odor (zospheres a Reduced Ind Reduction in	13) (C1) along Living on (C4)	Wa 4A, Dra Dry Sat Geo	ter-Stained Leaves (E , and 4B) tinage Patterns (B10) -Season Water Table uration Visible on Aer omorphic Position (D2	(C2) (ial Imagery (C9)
DROLOG etland Hydr mary Indicat Surface Wa High Water Saturation (Water Mark Sediment D Drift Depos Algal Mat of	ology Indicators: tors (minimum of one ater (A1) Table (A2) (A3) (S (B1) Deposits (B2) its (B3) r Crust (B4) ts (B5)		check all that apply) Water-Staine MLRA 1, 2, 4 Salt Crust (B' Aquatic Inver Hydrogen Su Oxidized Rhiz Roots (C3) Presence of F Recent Iron F Soils (C6)	d Leaves (I IA, and 4B, 11) tebrates (B Iffide Odor (zospheres a Reduced Ind Reduction in	13) (C1) along Living on (C4)	Wa 4A, Dra Dry Sat Gee Sha	ter-Stained Leaves (E., and 4B) hinage Patterns (B10) r-Season Water Table huration Visible on Aer homorphic Position (D2 hallow Aquitard (D3)	(C2) (C9) (C9)
DROLOG etland Hydr mary Indicat Surface Wa High Water Saturation (Water Mark Sediment D Drift Deposi Algal Mat of	ology Indicators: tors (minimum of one ater (A1) Table (A2) (A3) is (B1) Deposits (B2) its (B3) r Crust (B4) ts (B5) il Cracks (B6)	e required; o	check all that apply) Water-Staine MLRA 1, 2, 4 Salt Crust (B' Aquatic Inver Hydrogen Su Oxidized Rhiz Roots (C3) Presence of F Recent Iron F Soils (C6) Stunted or Sti	d Leaves (I IA, and 4B, 11) tebrates (B Iffide Odor (zospheres a Reduced Iro Reduction ir	13) C1) along Living on (C4) a Tilled onts (D1)	Wa 4A, Dra Dry Sat Gee FAC	ter-Stained Leaves (E., and 4B) iinage Patterns (B10) -Season Water Table uration Visible on Aer omorphic Position (D2 allow Aquitard (D3) C-Neutral Test (D5)	(C2) (C9) (C9) (CRR A)
DROLOG etland Hydr mary Indicat Surface Wa High Water Saturation (Water Mark Sediment D Drift Deposi Algal Mat of Iron Deposi Surface Soi Inundation	ology Indicators: tors (minimum of one ater (A1) Table (A2) (A3) is (B1) Deposits (B2) its (B3) r Crust (B4) ts (B5) il Cracks (B6) Visible on Aerial Ima	e required; o	check all that apply) Water-Staine MLRA 1, 2, 4 Salt Crust (B' Aquatic Inver Hydrogen Sul Oxidized Rhiz Roots (C3) Presence of F Recent Iron F Soils (C6) Stunted or Sti (LRR A)	d Leaves (I IA, and 4B, 11) tebrates (B Iffide Odor (zospheres a Reduced Iro Reduction ir	13) C1) along Living on (C4) a Tilled onts (D1)	Wa 4A, Dra Dry Sat Gee FAC	ter-Stained Leaves (E., and 4B) inage Patterns (B10) -Season Water Table uration Visible on Aer comorphic Position (D2 allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6)	(C2) (C9) (C9) (CRR A)
DROLOG etland Hydr mary Indicat Surface Wa High Water Saturation (Water Mark Sediment D Drift Deposi Algal Mat of Iron Deposi Surface Soi Inundation	ology Indicators: tors (minimum of one ater (A1) Table (A2) (A3) is (B1) Deposits (B2) its (B3) r Crust (B4) ts (B5) il Cracks (B6)	e required; o	check all that apply) Water-Staine MLRA 1, 2, 4 Salt Crust (B' Aquatic Inver Hydrogen Sul Oxidized Rhiz Roots (C3) Presence of F Recent Iron F Soils (C6) Stunted or Sti (LRR A)	d Leaves (I IA, and 4B, 11) tebrates (B Iffide Odor (zospheres a Reduced Iro Reduction ir	13) C1) along Living on (C4) a Tilled onts (D1)	Wa 4A, Dra Dry Sat Gee FAC	ter-Stained Leaves (E., and 4B) inage Patterns (B10) -Season Water Table uration Visible on Aer comorphic Position (D2 allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6)	(C2) (C9) (C9) (CRR A)
DROLOG etland Hydr mary Indicat Surface Wa High Water Saturation (Water Mark Sediment D Drift Deposi Algal Mat of Iron Deposi Surface Soi Inundation	ology Indicators: tors (minimum of one ater (A1) Table (A2) (A3) as (B1) Deposits (B2) at Crust (B4) at (B5) at Cracks (B6) Visible on Aerial Imalegetated Concave Sa	e required; o	check all that apply) Water-Staine MLRA 1, 2, 4 Salt Crust (B' Aquatic Inver Hydrogen Sul Oxidized Rhiz Roots (C3) Presence of F Recent Iron F Soils (C6) Stunted or Sti (LRR A)	d Leaves (I IA, and 4B, 11) tebrates (B Iffide Odor (zospheres a Reduced Iro Reduction ir	13) C1) along Living on (C4) a Tilled onts (D1)	Wa 4A, Dra Dry Sat Gee FAC	ter-Stained Leaves (E., and 4B) inage Patterns (B10) -Season Water Table uration Visible on Aer comorphic Position (D2 allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6)	(C2) (C9) (C9) (CRR A)
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DROLOG etland Hydr mary Indicat Surface Water Saturation (Water Mark Sediment D Drift Deposi Algal Mat of Iron Deposi Surface Soi Inundation (Sparsely Ve Id Observa rface Water Iter Table Pr turation Prescludes capilla	ology Indicators: tors (minimum of one ater (A1) Table (A2) (A3) as (B1) Deposits (B2) ats (B3) ar Crust (B4) ats (B5) al Cracks (B6) Visible on Aerial Ima egetated Concave Sa tions: Present? Yes ary fringe) Yes	gery (B7) urface (B8)	check all that apply) Water-Staine MLRA 1, 2, 4 Salt Crust (B' Aquatic Inver Hydrogen Su Oxidized Rhiz Roots (C3) Presence of F Recent Iron F Soils (C6) Stunted or Sti (LRR A) Other (Explain X Depth (inches): X Depth (inches):	d Leaves (I A, and 4B, 11) tebrates (B Ifide Odor (zospheres a Reduced Iro Reduction ir ressed Plan n in Remark	13) (C1) along Living on (C4) on Tilled onts (D1) (Ks) Wetla	Wa 4A,	ter-Stained Leaves (E. and 4B) sinage Patterns (B10) -Season Water Table uration Visible on Aer comorphic Position (D2 allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) st-Heave Hummocks	89) (MLRA 1, 2, c (C2) rial Imagery (C9) 2) (LRR A) (D7)
DROLOG etland Hydr mary Indicat Surface Water Saturation (Water Mark Sediment D Drift Deposi Algal Mat of Iron Deposi Surface Soi Inundation (Sparsely Ve Id Observa rface Water Iter Table Pr turation Prescludes capilla	ology Indicators: tors (minimum of one ater (A1) Table (A2) (A3) as (B1) Deposits (B2) ats (B3) ar Crust (B4) ats (B5) al Cracks (B6) Visible on Aerial Ima egetated Concave Sa tions: Present? Yes ary fringe) Yes	gery (B7) urface (B8)	check all that apply) Water-Staine MLRA 1, 2, 4 Salt Crust (B' Aquatic Inver Hydrogen Su Oxidized Rhiz Roots (C3) Presence of F Recent Iron F Soils (C6) Stunted or Str (LRR A) Other (Explain X Depth (inches):	d Leaves (I A, and 4B, 11) tebrates (B Ifide Odor (zospheres a Reduced Iro Reduction ir ressed Plan n in Remark	13) (C1) along Living on (C4) on Tilled onts (D1) (Ks) Wetla	Wa 4A,	ter-Stained Leaves (E. and 4B) sinage Patterns (B10) -Season Water Table uration Visible on Aer comorphic Position (D2 allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) st-Heave Hummocks	89) (MLRA 1, 2, c (C2) rial Imagery (C9) 2) (LRR A) (D7)
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Project/Site: Encore Wetland Determination Ci	ity/County:	Manzanita/Till	amook	Sampling Date: February 25, 2017
Applicant/Owner: Jim Pentz		State: OR	Sampling	Point: SP-3
Investigator(s): C. McDonald, K. Heckeroth	Section, Tov	vnship, Range	Section 2	28, T3N R10W Lot 1401
Landform (hillslope, terrace, etc.): Dune terrace s	lope Loca			one): concave Slope (%): 7
Subregion (LRR): A La			123.9255	51 Datum: NAD 83
Soil Map Unit Name: 11D- Netarts fine sandy loa			NV	VI classification: N/A
Are climatic / hydrologic conditions on the site typica	al for this time	of year? Yes	x No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	signific	antly disturbed	? Are "No	ormal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology	natural	ly problematic		If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site	map show	ing sampli	ng point le	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes N	0 X			
Trydrio con Trocont.	-	Is the Sample	ed Area with	in a Wetland? Yes Nox_
	lo _X_			
Remarks: Sample plot is in the forest in a dune swa previous two weeks. Blue flagging and pin flag mar	ale. Precipitati k location.	on is near non	mal levels for	this time of year, 5.86 inches of precipitation in the
VEGETATION – Use scientific names of	of plants.			
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Number of Dominant Species
1. Pinus contorta	20	D	FAC	That Are OBL, FACW, or FAC:1 (A)
Pseudotsuga menziesii	1		FACU	Total Number of Dominant
3. Tsuga heterophylla	20	D	FACU	Species Across All Strata: 4 (B)
4.				Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)
				That Are OBE, I AOVV, OI TAG (700)
	41	= Total Cove	er	그 사람들 이 없는 것이 없는 것이 없는 것이 없다.
Sapling/Shrub Stratum (Plot size: 20')				Prevalence Index worksheet:
Myrica californica	1		UPL/NL	Total % Cover of: Multiply by:
2. Vacinium ovatum	50	D	FACU	OBL species x 1 =
3. Gaultheria shallon	20	D	FACU	FACW species x 2 =
4. Arctostaphylos columbiana	2		UPL/NL	FAC species x 3 =
5.				FACU species x 4 =
	73	= Total	Cover	UPL species x 5 =
Herb Stratum (Plot size: 10')				Column Totals: (A)
1.				Column Totals (A)
2.				Prevalence Index = B/A =
3.	25			
4.				Hydrophytic Vegetation Indicators:
5.				1 - Rapid Test for Hydrophytic Vegetation
6.				2 - Dominance Test is >50%
7.				3 - Prevalence Index is ≤3.0¹
8.				4 - Morphological Adaptations ¹ (Provide supporting
<u> </u>	AN LIGHT			data in Remarks or on a separate sheet)
10.			127 8 7 2 2	5 - Wetland Non-Vascular Plants ¹
11.				Problematic Hydrophytic Vegetation ¹ (Explain)
	0	_ = Total Cov	er	¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: 20')				be present, unless disturbed or problematic.
1.				
2.				
	0	= Total Cov	er	Hydrophytic Vegetation
% Bare Ground in Herb Stratum 30%litter		- L		Present? Yes No x
Demorks: Dhotos and and and A forces and a	the plot			
Remarks: Photos north and south. A few snags in	trie plot.			
50/20 rule used to determine dominance.				

Donth	Matrix	to the dept	ii needed to doct	Redox Fe	atures		absence of indicators	
Depth inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Texture	Remarks
5-0	Litter/organic							7.5YR 2.5/2
		100					Loamy sand	
-3	7.5YR 2.5/2						sand	Weak albic
-20+	7.5YR 5/3	_10					Sand	
	7.5YR 6/4	90		-				
Type: C=Co	ncentration, D=Dep	oletion, RM=	Reduced Matrix, (CS=Covered	or Coated S			e Lining, M=Matrix.
Hydric Soil	Indicators: (Applie	cable to all	LRRs, unless ot	herwise not	ted.)	Inc	licators for Problema	atic Hydric Soils ³ :
Histosol	(A1)		Sandy Redox	(S5)			2 cm Muck (A10)	
Histic Ep	oipedon (A2)		Stripped Matri		\ / 4 B#1	DA 4)	Red Parent Material Very Shallow Dark S	
Black His			Loamy Mucky			.RA 1)	Other (Explain in Re	
	en Sulfide (A4)	(444) -	Loamy Gleyed			- 11	Other (Explain in Nei	narks)
	d Below Dark Surface	ce (A11) _	Depleted Mati Redox Dark S				³ Indicators of hydrop	hytic vegetation and
	ark Surface (A12)	-	Depleted Dark	' '	7)		wetland hydrology m	
	Mucky Mineral (S1) Gleyed Matrix (S4)		Redox Depres		"		unless disturbed or p	
Sandy G	sieyeu watrix (04)			30.01.0 (1.0)				
strictive La	ver (if present):				Physical R			
Туре:					Hydric S	oil Present	? Yes	No x
Depth (inch		Jest Donath						
	l is moist from recer					£		
etland Hydro	ology Indicators:	ne required:		lv)			ondary Indicators (2 or	more required)
etland Hydro		ne required;	check all that app	ly)		Seco	ondary Indicators (2 or Water-Stained Leaves	
etland Hydro imary Indicat	ology Indicators: tors (minimum of on	ne required;	check all that app Water-Sta	ined Leaves	s (B9) (excep	Seco	ondary Indicators (2 or Nater-Stained Leaves 4A , a nd 4B)	
etland Hydro imary Indicat Surface Wa	ology Indicators: tors (minimum of on ater (A1)	ne required;	check all that app Water-Sta	ined Leaves 2, 4A, and 4	s (B9) (excep	Second 1	Water-Stained Leaves 4A, and 4B) Drainage Patterns (B1	(B9) (MLRA 1, 2,
etland Hydro imary Indicat Surface Wa High Water	ology Indicators: tors (minimum of on ater (A1) Table (A2)	ne required;	check all that app Water-StaMLRA 1,Salt Crust	ined Leaves 2, 4A, and 4	s (B9) (excep	Second 1	Nater-Stained Leaves 4A, and 4B) Drainage Patterns (B1 Dry-Season Water Tal	(B9) (MLRA 1, 2, 0) ble (C2)
etland Hydro imary Indicat Surface Wa	ology Indicators: tors (minimum of on ater (A1) Table (A2) (A3)	ne required;	check all that app Water-Sta MLRA 1, Salt Crust Aquatic In	ined Leaves 2, 4A, and 4 (B11)	s (B9) (excep B) (B13)	Second 1	Water-Stained Leaves 4A, and 4B) Drainage Patterns (B1	(B9) (MLRA 1, 2, 0) ble (C2)
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Project/Site: Encore Wetland Determination Ci	ty/County:	Manzanita/Til	lamook	Sampling Date: February 25, 2017
Applicant/Owner: Jim Pentz		State: OR		
Investigator(s): C. McDonald, K. Heckeroth	Section, Tox	wnship, Range	: Section 3	32, T3N R10W 29D Lot 1401
Landform (hillslope, terrace, etc.): Dune terrace				one): concave Slope (%): 3
Subregion (LRR): A La	at: 45.7165	6 Long:	123.9222	26 Datum: NAD 83
Soil Map Unit Name: 11D- Netarts fine sandy loa	m 5-30% slop	es	N\	VI classification: N/A
Are climatic / hydrologic conditions on the site typica	I for this time	of year? Yes	x No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	signific	antly disturbed	d? Are "No	rmal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology				f needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site	map show	ing sampli	ng point l	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes W N Hydric Soil Present? Yes N		Is the Sample	ed Area with	in a Wetland? Yes Nox_
	o X	is the camp.		
Daniela Cample plet in in the dune swale closest	to the east lot	line Flatter a	rea has been	logged and Scotch broom has reestablished. Sloping
due has native forest vegetation. Sunny to overcast	today. Preci	pitation is near	r normal level	s for this time of year, 5.86 inches of precipitation in the
previous two weeks. Blue flagging and pin flag mar	k location.			
VEGETATION - Use scientific names of	f plants.			
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Number of Dominant Species
1. Pinus contorta	10	D	FAC	That Are OBL, FACW, or FAC:3(A)
Pseudotsuga menziesii	10	D	FACU	Total Number of Dominant
3. Thuja plicata	10	D	FAC	Species Across All Strata: 7 (B)
4.				Percent of Dominant Species That Are OBL, FACW, or FAC: 43 (A/B)
				That 710 002, 171011, 01 7701
	30	= Total Cov	er	
Sapling/Shrub Stratum (Plot size: 20')				Prevalence Index worksheet:
Arctostaphylos columbiana	3		UPL/NL	Total % Cover of: Multiply by:
2. Cytisus scoparius	50	D	UPL/NL	OBL species x 1 =
3. Vacinium ovatum	5		FACU	FACW species x 2 =
4. Gaultheria shallon	25	D	FACU	FAC species x 3 =
5.				FACU species x 4 =
	83	= Total	Cover	UPL species x 5 =
Herb Stratum (Plot size: 10')				Column Totals: (A)
Hypocharis radicata	11	D	FACU	Oddini rodio.
2. Agrostis capillaris	70		FaC	Prevalence Index = B/A =
Pteridium aquilinum	40	D	FACU	
4.				Hydrophytic Vegetation Indicators:
5.				1 - Rapid Test for Hydrophytic Vegetation
6.				2 - Dominance Test is >50%
7.				3 - Prevalence Index is ≤3.0¹
8.	TE Carl			4 - Morphological Adaptations¹ (Provide supporting
				data in Remarks or on a separate sheet)
10.	111-8			5 - Wetland Non-Vascular Plants ¹
11.				Problematic Hydrophytic Vegetation ¹ (Explain)
	121	_ = Total Cov	er	¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: 20')				be present, unless disturbed or problematic.
1.				
2.				Hydrophytic
		_ = Total Cov	er	Vegetation
% Bare Ground in Herb Stratum 40% litter				Present? Yes Nox
Remarks: Photos east and west. The PTAQ and	Agrostis is mo	stly litter from	last year.	
50/20 rule used to determine dominance.				
COLE THE GOOD TO GOLDHAILE GOLHHAICE.				

Depth	Matrix		in noodod to door	Redox Fea	tures		bsence of indicators	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
1.5-0	Litter/organic							mosses
					- 1 , t		and	Wavy boundary
)-5	10YR 4/3	100					sand	boundary
5-21+	7.5YR 5/4	_10					sand	
Type: C=C	oncentration, D=Dep	letion, RM=	=Reduced Matrix, 0	CS=Covered	or Coated Sa	nd Grains.	² Location: PL=Poi	re Lining, M=Matrix.
Hydric Soil	Indicators: (Appli	cable to all	LRRs, unless oth	nerwise note	d.)	Ind	icators for Problema	atic Hydric Soils ³ :
Histoso			Sandy Redox	Caracia de la composição			2 cm Muck (A10)	
	pipedon (A2)		Stripped Matri	x (S6)			Red Parent Material	
Black H	listic (A3)		Loamy Mucky		(except MLR		Very Shallow Dark S	
	en Sulfide (A4)	_	Loamy Gleyed				Other (Explain in Re	marks)
	ed Below Dark Surface	ce (A11) _	Depleted Matr				³ Indicators of hydrop	hytic vegetation and
	Park Surface (A12) Mucky Mineral (S1)		Redox Dark S Depleted Dark				wetland hydrology m	
	Gleyed Matrix (S4)		Redox Depres				unless disturbed or p	
		_					valation resident	14 - 15 - 25
strictive La	ayer (if present):							
Type:		0-2-1855			Hydric So	il Present?	Yes	No x
Depth (inc	:hes):							
narks: So	il is moist from recer	t rainfall. S	Soils indicate distur	bance from p	revious land o	clearing. Go	ood soil drainage typi	ical of the Netarts.
DROLOG	SY .	nt rainfall. S	Soils indicate distur	bance from p	revious land o	clearing. Go	ood soil drainage typi	ical of the Netarts.
DROLOG	SY rology Indicators:				Tevious land o		ood soil drainage typi	
DROLOG	SY.		check all that appl	у)	revious land o	Seco		r more required)
DROLOG etland Hyd imary Indica Surface W	SY rology Indicators: ators (minimum of on later (A1)		check all that appl Water-Sta MLRA 1, 2	y) ined Leaves (2, 4A, and 4E	(B9) (except	Seco W	ndary Indicators (2 or l/ater-Stained Leaves A, and 4B)	more required) (B9) (MLRA 1, 2,
DROLOG etland Hyd imary Indica Surface W High Wate	rology Indicators: ators (minimum of on ater (A1) ar Table (A2)		check all that appl Water-StaMLRA 1, 2 Salt Crust	y) ined Leaves (2, 4A, and 4E (B11)	(B9) (except	Seco W 4.	ndary Indicators (2 or /ater-Stained Leaves A, and 4B) rainage Patterns (B1	more required) (B9) (MLRA 1, 2,
DROLOG etland Hyd imary Indica Surface W High Wate Saturation	rology Indicators: ators (minimum of on later (A1) r Table (A2) (A3)		check all that appl Water-Sta MLRA 1, 2 Salt Crust Aquatic In	y) ined Leaves (2 , 4A, and 4E (B11) vertebrates (B	(B9) (except 3) 313)	Seco W 4. D	ndary Indicators (2 or /ater-Stained Leaves A, and 4B) rainage Patterns (B1 ry-Season Water Tal	r more required) (B9) (MLRA 1, 2, 0) ple (C2)
DROLOG etland Hyd imary Indica Surface W High Wate	rology Indicators: ators (minimum of on later (A1) r Table (A2) (A3)		check all that appl Water-Sta MLRA 1, 2 Salt Crust Aquatic Int Hydrogen	y) ined Leaves (2, 4A , and 4E (B11) vertebrates (B Sulfide Odor	(B9) (except B) 313) (C1)	Seco W 4. D	ndary Indicators (2 or /ater-Stained Leaves A, and 4B) rainage Patterns (B1	r more required) (B9) (MLRA 1, 2, 0) ple (C2)
DROLOG etland Hyd imary Indica Surface W High Wate Saturation Water Mar	rology Indicators: ators (minimum of on later (A1) ar Table (A2) (A3) aks (B1)		check all that appl Water-Sta MLRA 1, 2 Salt Crust Aquatic Int Hydrogen	y) ined Leaves (2, 4A, and 4E (B11) vertebrates (B Sulfide Odor Rhizospheres	(B9) (except B) 313) (C1)	Seco W 4. D S	ndary Indicators (2 or /ater-Stained Leaves A, and 4B) rainage Patterns (B1 ry-Season Water Tal	r more required) (B9) (MLRA 1, 2, 0) ple (C2) Aerial Imagery (C9)
DROLOG etland Hyd imary Indica Surface W High Wate Saturation Water Mar	Frology Indicators: ators (minimum of on later (A1) or Table (A2) (A3) rks (B1) Deposits (B2)		check all that appl Water-Sta MLRA 1, 2 Salt Crust Aquatic In Hydrogen Oxidized F Roots (C3 Presence	y) ined Leaves (2, 4A, and 4E (B11) vertebrates (B Sulfide Odor Rhizospheres) of Reduced II	(B9) (except B) 313) (C1) along Living ron (C4)	Seco W 4. D S	ndary Indicators (2 or Vater-Stained Leaves A, and 4B) rainage Patterns (B1 ry-Season Water Tat aturation Visible on A	r more required) (B9) (MLRA 1, 2, 0) ple (C2) Aerial Imagery (C9)
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Project/Site: Encore Wetland Determination Ci	ity/County:	Manzanita/Til	lamook	Sampling Date: February 25, 2017
Applicant/Owner: Jim Pentz		State: OR	825 T S DA 17	
Investigator(s): C. McDonald, K. Heckeroth				
Landform (hillslope, terrace, etc.): Dune terrace	Loc	al relief (conca	ve, convex, n	ione): concave Slope (%): 2
Subregion (LRR): A La	at: 45 714	81 Long:	123.928	10 Datum: NAD 83
Soil Map Unit Name: 11D- Netarts fine sandy loa				VI classification: N/A
Are climatic / hydrologic conditions on the site typica	al for this time	of year? Yes	x No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	sianifi	cantly disturbed	d? Are "No	ormal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology	natura	ally problematic	? (If needed, explain any answers in Remarks.)
				나는 사람이 되고 있는 그들로 대로 발표되었다. 중심점
SUMMARY OF FINDINGS - Attach site	map show	ving sampli	ng point l	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	lo x			nin a Wetland? Yes Nox
Hydric Soil Present? Yes Netland Hydrology Present? Yes N	lo X	is the Sampi	ed Area Willi	illi a Weudild! Tes NoX
			Single on avenue	eted area to areato a harm for driving range. Scotch
Remarks: Sample plot is in closed depression above broom has reestablished as dominate species in dis	e the driving	range. Looks I	ike an excava	ated area to create a berm for driving range. Scotch
Sunny to overcast today. Precipitation is near norm	al levels for t	his time of year	, 5.86 inches	of precipitation in the previous two weeks. Blue flagging
VEGETATION – Use scientific names of	of plants			
VEGETATION – Use scientific frames of			I. dia stan	Dominance Test worksheet:
Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Number of Dominant Species
	5	D	FAC	That Are OBL, FACW, or FAC: 2 (A)
1. Pinus contorta			17.0	Total Number of Dominant
2.				Species Across All Strata:5(B)
3.			TER AT LEAST	Percent of Dominant Species
4.				That Are OBL, FACW, or FAC: 40 (A/B)
	5	= Total Cov	er	
Sapling/Shrub Stratum (Plot size: 20')		10.01.001		Prevalence Index worksheet:
Arctostaphylos columbiana	15	D	UPL/NL	Total % Cover of: Multiply by:
	45	D	UPL/NL	OBL species x 1 =
Cytisus scoparius S.		<u> </u>	OI LINE	FACW species x 2 =
4.				FAC species x3 =
5.	4 4 6 7 5			FACU species x 4 =
	60	= Total	Cover	
Herb Stratum (Plot size: 10')				UPL species x 5 =
1. Agrostius capillaris	50	D	FAC	Column Totals: (A)
2. Holcus lanatus	5		FAC	Prevalence Index = B/A =
3. Dryopteris espansa.	1		FACW	
4. Hypocharis radicata	1		FACU	Hydrophytic Vegetation Indicators:
5. Moneywort spp.	2		N/L	1 - Rapid Test for Hydrophytic Vegetation
6. Rumex acetosella	1		FACU	2 - Dominance Test is >50%
7.				3 - Prevalence Index is ≤3.0 ¹
8.				4 - Morphological Adaptations ¹ (Provide supporting
			34-77	data in Remarks or on a separate sheet)
10.		4		5 - Wetland Non-Vascular Plants ¹
11.				Problematic Hydrophytic Vegetation ¹ (Explain)
	60	= Total Cov	er	¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: 20')				be present, unless disturbed or problematic.
1. Rubus ursinus	20	D	FACU	
2.				
	20	= Total Cov	er	Hydrophytic Vegetation
% Bare Ground in Herb Stratum 40% litter				Present? Yes No x
Remarks: Photos east and west.				
iveniains. Filotos east affu west.				
L Site S S S S S S S S S S S S S S				
50/20 rule used to determine dominance.				

	Matrix	to the dope	in needed to dock	Redox Fe	atures		bsence of indicator	
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Texture	Remarks Some
)-2	7.5YR 5/2	100				10 7	sand	organics 10%
2-21+	7.5YR 5/4	100					sand	
Type: C=C	oncentration, D=Dep	oletion, RM=	=Reduced Matrix,	CS=Covered	or Coated Sa	nd Grains.	² Location: PL=Po	re Lining, M=Matrix.
Hydric Soi	I Indicators: (Appli	cable to all	LRRs, unless ot	herwise not	ed.)	Ind	licators for Problem	atic Hydric Soils ³ :
Histoso			Sandy Redox				2 cm Muck (A10)	
	pipedon (A2)		Stripped Matri	ix (S6)			Red Parent Material	
	Histic (A3)		Loamy Mucky			RA 1)	Very Shallow Dark S Other (Explain in Re	
	jen Sulfide (A4) ed Below Dark Surfa	co (A11) -	Loamy Gleyed Depleted Mate				Other (Explain in ite	marks)
	Dark Surface (A12)	CE (A11) _	Redox Dark S	, ,			³ Indicators of hydrop	hytic vegetation and
	Mucky Mineral (S1)		Depleted Dark		7)		wetland hydrology m	
Sandy	Gleyed Matrix (S4)	HILLER THE	Redox Depres	ssions (F8)			unless disturbed or p	problematic
strictive L	ayer (if present):							
Type:					Hydric Sc	il Present	Yes	No x
Depth (inc	ches):				144.4			
narks: So	il is moist from rece	nt rainfall. S	Soils indicate distu	rbance from	recreation dev	velopment.		
DROLOG	GY	nt rainfall. S	Soils indicate distu	rbance from	recreation dev	velopment.		
DROLOG	GY rology Indicators:				recreation dev	Seco	ondary Indicators (2 o	r more required)
DROLO(etland Hyd imary Indic	GY rology Indicators: ators (minimum of or		check all that app Water-Sta	ly) ined Leaves	(B9) (except	Seco	Vater-Stained Leaves	r more required) 5 (B9) (MLRA 1, 2,
DROLOG etland Hyd imary Indica	GY Irology Indicators: ators (minimum of or /ater (A1)		check all that app Water-Sta	ly) lined Leaves 2, 4A, and 4	(B9) (except	Seco	Vater-Stained Leaves IA, and 4B)	(B9) (MLRA 1, 2,
DROLOG etland Hyd imary Indic Surface W High Wate	GY Irology Indicators: ators (minimum of or /ater (A1) er Table (A2)		check all that app Water-Sta MLRA 1, Salt Crust	ly) lined Leaves 2, 4A, and 4 (B11)	(B9) (except	Secco	Nater-Stained Leaves IA, and 4B) Drainage Patterns (B1	6 (B9) (MLRA 1, 2, 0)
DROLOG etland Hyd imary Indic Surface W High Wate Saturation	GY Irology Indicators: ators (minimum of or /ater (A1) er Table (A2) (A3)		check all that app Water-Sta MLRA 1, Salt Crust Aquatic In	ly) lined Leaves 2, 4A, and 4 (B11) vertebrates ((B9) (except B) (B13)	Seco	Vater-Stained Leaves IA, and 4B) Drainage Patterns (B1 Dry-Season Water Tal	6 (B9) (MLRA 1, 2, 0) ble (C2)
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WETLAND DETERMINATION DATA FOR	M – West	ern Mounta	ins, Valle	ys, and Coast Region
Project/Site: Encore Wetland Determination City	//County: _	Manzanita/Tilla	amook	Sampling Date: March 6, 2017
Applicant/Owner: Jim Pentz	S	tate: OR	_ Sampling I	Point: SP-6
Investigator(s): C. McDonald, K. Heckeroth	Section, Tow	nship, Range:	Section 3	2, 13N R10W 29D Lot 100
Landform (hillslope, terrace, etc.): Base of dune sle	ope Loca	I relief (concav	e, convex, no	one): linear Slope (%): 3
Subregion (LRR): A Lat	45.71618	Long:	123.9297	70 Datum: NAD 83
Soil Map Unit Name: 11D- Netarts fine sandy loan	15-30% slope	es		VI classification: N/A
Are climatic / hydrologic conditions on the site typical	for this time	of year? Yes	x No _	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology	significa	antly disturbed	? Are "No	rmal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology	natural	ly problematic?) (I	f needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site r	nap show	ing samplir	ng point lo	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	X			in a Wetland? Yes Nox_
area boundary. Erick White marked the southwest of	orner and who slope. Histo	ere the lot line pric vegetation l d normal circur	intersects Cla has been clea mstances are	e present. Overcast with light covering of showman on
VEGETATION - Use scientific names of	plants.			선물 사람들 기가 있는 경우 경우 나는 그 것으로 하는데요?
	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30'</u>) 1.	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC:2 (A)
2.				Total Number of Dominant Species Across All Strata:4 (B)
3				Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)
	0	= Total Cove	r	Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 20')	1		UPL	Total % Cover of: Multiply by:
1. Sambucus racemosa	30	D	UPL/NL	OBL species 0 x1=
2. Cytisus scoparius	1	U	FACU	
3. Gaultheria shallon	30	D	FAC	
4. Rubus armenicus	5	U	FACU	FAC species 70 x 3 = 210
5. Rhamnus pershiana	71	= Total		FACU species 52 x 4 = 228
Herb Stratum (Plot size: 10')		- Total	00101	UPL species <u>35</u> x 5 = <u>175</u>
Agrostius capillaris	40	D	FAC	Column Totals: <u>164</u> (A) <u>617</u>
2. Juncus effusus	1		FACW	Prevalence Index = B/A = 3.76
3. Polystichum munitum	1		FACU	
4. Epilobium angustifolium	1		FACW	Hydrophytic Vegetation Indicators:
5.				1 - Rapid Test for Hydrophytic Vegetation
6.				2 - Dominance Test is >50%
7.				3 - Prevalence Index is ≤3.01
8.				4 - Morphological Adaptations ¹ (Provide supporting
				data in Remarks or on a separate sheet)
10.				5 - Wetland Non-Vascular Plants
11.				Problematic Hydrophytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size: 20')	53	= Total Cove	er	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Rubus ursinus	50	D	FACU	
2.	50	= Total Cove	er	Hydrophytic
% Bare Ground in Herb Stratum 20% litter				Vegetation Present? Yes No _x
Remarks: Photos north to Classic Street and south	to lot corner v	vith pink flaggir	ng.	

50/20 rule used to determine dominance.

Depth	Matrix			Redox Fe	eatures	- 714 112	bsence of indicators.	
(inches)	Color (moist)	%	Color (moist)		Type'	_Loc ²	Texture	Remarks
-5	7.5YR 2.5/1	100					LS	
-9	7.5YR 4/3	70					sand	
	7.5YE 3/2	30				- <u>- 1 </u>		
-20	7.5YR 4/4	100					sand	
Type: C=C	concentration, D=Dep	letion, RM=	=Reduced Matrix, CS	S=Covered	d or Coated Sa	nd Grains.	² Location: PL=Pore	Lining, M=Matrix.
Hydric Soi	I Indicators: (Appli	cable to all	LRRs, unless othe	rwise not	ted.)	Ind	licators for Problemat	tic Hydric Soils ³ :
Histoso Histic E Black H			Sandy Redox (S Stripped Matrix Loamy Mucky M Loamy Gleyed M Depleted Matrix	55) (S6) Iineral (F1 Matrix (F2)) (except MLF	EA 1)	2 cm Muck (A10) Red Parent Material (Very Shallow Dark Su Other (Explain in Rem	rface (TF12)
Thick I	Dark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4)		Redox Dark Sur Depleted Dark S Redox Depressi	face (F6) Surface (F	7)		³ Indicators of hydroph wetland hydrology mu unless disturbed or pr	st be present,
Junuy	2.0) 02 man (0 r)	-		(-/	1			
strictive L	ayer (if present):							
Type:					Hydric Sc	il Present?	Yes	No x
Depth (inc	ches):							
narks: So second hor	oil is moist from recer izon but did not find t	nt rainfall. S hem. Wate	Soil has been disturb er table is well below	ed. Found 6-12" eve	d charcoal fron n during high p	n historic cle precipitation	earing and burning. I lo periods.	ooked for splotching
DROLOG	izon but did not find t GY Irology Indicators:	hem. Wate	er table is well below	6-12" eve	d charcoal fron	Seco	periods.	more required)
DROLOG etland Hyd imary Indic	izon but did not find to a second sec	hem. Wate	check all that apply) Water-Stain	6-12" eve	en during high p	Seco	ondary Indicators (2 or Nater-Stained Leaves (more required)
DROLOGetland Hydimary Indic	GY Irology Indicators: ators (minimum of or	hem. Wate	check all that apply) Water-StainMLRA 1, 2,	6-12" eve	en during high p	Seco	ondary Indicators (2 or invater-Stained Leaves (4A, and 4B)	more required) (B9) (MLRA 1, 2,
DROLOG etland Hyd imary Indic Surface W High Wate	GY Irology Indicators: ators (minimum of or /ater (A1) er Table (A2)	hem. Wate	check all that apply) Water-Stain MLRA 1, 2, Salt Crust (E	6-12" eve	en during high p	Secondary Second	ondary Indicators (2 or invater-Stained Leaves (4A, and 4B) Orainage Patterns (B10	more required) (B9) (MLRA 1, 2,
DROLOGetland Hydimary Indic	GY Irology Indicators: ators (minimum of or //ater (A1) er Table (A2)	hem. Wate	check all that apply) Water-Stain MLRA 1, 2, Salt Crust (E Aquatic Inve	ed Leaves 4A, and 4 311) ertebrates ulfide Odo	s (B9) (except B) (B13) or (C1)	Second Se	ondary Indicators (2 or invater-Stained Leaves (4A, and 4B)	more required) (B9) (MLRA 1, 2,
DROLOG etland Hyd imary Indic Surface W High Wate Saturation Water Ma	GY Irology Indicators: ators (minimum of or Vater (A1) er Table (A2) i (A3) rks (B1)	hem. Wate	check all that apply) Water-Stain MLRA 1, 2, Salt Crust (E Aquatic Inve Hydrogen S Oxidized Rh	ed Leaves 4A, and 4 311) ertebrates ulfide Odo	en during high properties (B9) (except BB)	Seccion Seccio	ondary Indicators (2 or evaluations) Vater-Stained Leaves (4A, and 4B) Orainage Patterns (B10 Ory-Season Water Table Saturation Visible on Ae	more required) (B9) (MLRA 1, 2,) le (C2) erial Imagery (C9)
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DROLOG etland Hyd imary Indic Surface W High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S	GY Irology Indicators: ators (minimum of or /ater (A1) er Table (A2) i (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6)	hem. Wate	check all that apply) Water-Stain MLRA 1, 2, Salt Crust (E Aquatic Inve Hydrogen S Oxidized Rh Roots (C3) Presence of Recent Iron Soils (C6)	ed Leaves 4A, and 4 311) ertebrates ulfide Odo nizosphere f Reduced Reduction	s (B9) (except IB) (B13) or (C1) es along Living Iron (C4) in in Tilled	Seco	ondary Indicators (2 or on Nater-Stained Leaves (14A, and 4B) Orainage Patterns (B10 Ory-Season Water Table Saturation Visible on Action (D3) Geomorphic Position (D3)	more required) (B9) (MLRA 1, 2,) le (C2) erial Imagery (C9) (C2)
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WETLAND DETERMINATION DATA FOR	M – West	ern Mounta	ins, Valle	eys, and Coast Region
Project/Site: Encore Wetland Determination City	/County:	Manzanita/ I III	атоок	Sampling Date. April 11, 2017
Applicant/Owner: Jim Pentz	S	tate: OR	Sampling	Point: SP-7
Investigator(s): C. McDonald	Section, Tow	nship, Range:	Section 3	32, T3N R10W 29D Lot 2100
Landform (hillslope, terrace, etc.): Sloping dunes	Loca	relief (concav	e, convex, n	one): linear Slope (%): 3-5
Subregion (LRR): A Lat	45.71264	Long:	123.9304	10 Datum: NAD 83
Soil Map Unit Name: 14A- Haceta fine sand 0-5%	slopes		NV	VI classification: N/A
Are climatic / hydrologic conditions on the site typical	for this time	of year? Yes	No _	x (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology	significa	antly disturbed	? Are "No	ormal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology	natural	y problematic?) (If needed, explain any answers in Remarks.)
				ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes x No Hydric Soil Present? Yes No No				in a Wetland? Yes Nox
	et in toy lot 3	100 NPCS m	anned the H	laceta in this area, which is a hydric soil. Soils are well-
drained and no evidence of ponding, saturation or hig Site disturbance from land clearing and road construc- levels for February and March. 3.46 inches of precip flagging.	th water table tion is older itation in the	was observed	d even thoug nd normal ci	rcumstances are present. Precipitation above average
VEGETATION – Use scientific names of	plants.			Dayles - Test we debest
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
1. Thuja plicata	5	D	FAC	
2.				Total Number of Dominant Species Across All Strata: 6 (B)
3.				Percent of Dominant Species
4.				That Are OBL, FACW, or FAC: 67 (A/B)
그리 2017년 대로 작가 가게 되는 것이다.	British 1			
	5	= Total Cove	r	
Sapling/Shrub Stratum (Plot size: 20')				Prevalence Index worksheet:
Vaccinium ovatum	5		FACU	Total % Cover of: Multiply by:
2. Cytisus scoparius	7	D	UPL/NL	OBL species x 1 =
3. Gaultheria shallon	5		FACU	FACW species x 2 =
4. Rubus armenicus	10	D	FAC	FAC species x 3 =
5.				FACU species x 4 =
	27	= Total	Cover	
Herb Stratum (Plot size: 10')				UPL species x 5 =
Agrostius capillaris	25	D	FAC	Column Totals: (A)
Agrosius capillaris Carex obnupta	15		OBL	Prevalence Index = B/A =
3. Hypocharis radicata	10		FACU	
	25	D	FAC	Hydrophytic Vegetation Indicators:
	8		FAC	1 - Rapid Test for Hydrophytic Vegetation
5. Holcus lanatus	0		FAC	
6.				x 2 - Dominance Test is >50%
7.				3 - Prevalence Index is ≤3.0¹
8.				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
				5 - Wetland Non-Vascular Plants ¹
10.		<u> </u>		
11.				Problematic Hydrophytic Vegetation ¹ (Explain)
	83	= Total Cove	er	¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: 20')				be present, unless disturbed or problematic.
1. Rubus ursinus	10	D	FACU	
2.				
% Bare Ground in Herb Stratum10	10	= Total Cove	er	Hydrophytic Vegetation Present? Yes <u>x</u> No
Remarks: Photos south to Necarney City Road and	north toward	Classic Stree	t	

Changes in vegetation from sloping dune to interdune. Sample plot location chosen because of the soils mapped in the area and the dominance of hydrophytic vegetation. 10% litter.

Depth	Matrix	to the dept	ii noodod to doo	Redox Fea	atures		absence of indicators	
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
)-3	7.5YR 3/2	100					LS	
3-11	7.5YR 5/4	100				1 - 1	sand	
1-17	7.5YR 4/4	100					sand	
Type: C=C	oncentration, D=Dep	bletion RM=	-Reduced Matrix.	 CS=Covered	or Coated Sa	nd Grains.	² Location: PL=Pore	e Lining, M=Matrix.
	Indicators: (Appli						licators for Problema	tic Hydric Soils ³ :
Histoso Histic E Black H Hydrog Deplete Thick E Sandy	I (A1) pipipedon (A2) listic (A3) en Sulfide (A4) ed Below Dark Surface park Surface (A12) Mucky Mineral (S1)	=	Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyer Depleted Matri Redox Dark S Depleted Dark	(S5) x (S6) Mineral (F1) d Matrix (F2) rix (F3) urface (F6) c Surface (F7	(except MLR		2 cm Muck (A10) Red Parent Material (Very Shallow Dark St Other (Explain in Ren ³ Indicators of hydroph wetland hydrology mu unless disturbed or pi	TF2) urface (TF12) narks) nytic vegetation and ust be present,
Sandy	Gleyed Matrix (S4)		Redox Depres	SSIONS (FO)			uness disturbed or pr	TODICINATIO
estrictive L	ayer (if present):							
Type:					Hydric So	il Present	? Yes	No x
Depth (inc	thes): ill is moist from recer	nt rainfall an	d well drained.					
marks: So	il is moist from recer	nt rainfall an	d well drained.					
DROLOG	il is moist from recer			(v)		Seco	ondary Indicators (2 or	more required)
DROLOG	il is moist from recer		check all that app Water-Sta	ined Leaves	(B9) (except	1	Nater-Stained Leaves	
TDROLOG Toronto Indicator Surface W	GY rology Indicators: ators (minimum of on		check all that app Water-Sta MLRA 1,	ined Leaves 2, 4A, and 4E		\	Water-Stained Leaves (4A, and 4B)	(B9) (MLRA 1, 2,
DROLOG (etland Hydrimary Indica Surface W High Wate	GY rology Indicators: ators (minimum of on later (A1) or Table (A2)		check all that app Water-StaMLRA 1,	ined Leaves 2, 4A, and 4E (B11)	3)		Water-Stained Leaves 1A, and 4B) Drainage Patterns (B10)	(B9) (MLRA 1, 2,
TDROLOG (etland Hydrimary Indica Surface W High Wate Saturation	GY rology Indicators: ators (minimum of on later (A1) or Table (A2) (A3)		check all that app Water-Sta MLRA 1, Salt Crust Aquatic In	ined Leaves 2, 4A, and 4E (B11) vertebrates (l	B13)		Nater-Stained Leaves 1A, and 4B) Drainage Patterns (B10 Dry-Season Water Tab	(B9) (MLRA 1, 2, 0) ole (C2)
TDROLOG (etland Hydrimary Indica Surface W High Wate	GY rology Indicators: ators (minimum of on later (A1) or Table (A2) (A3)		check all that app Water-Sta MLRA 1, Salt Crust Aquatic In Hydrogen	ined Leaves 2, 4A, and 4E (B11) vertebrates (I Sulfide Odor	B13)		Water-Stained Leaves 1A, and 4B) Drainage Patterns (B10)	(B9) (MLRA 1, 2, 0) le (C2)
DROLOC etland Hydrimary Indica Surface W High Wate Saturation Water Man	FY rology Indicators: ators (minimum of on fater (A1) or Table (A2) (A3) rks (B1)		check all that app Water-Sta MLRA 1, Salt Crust Aquatic In Hydrogen Oxidized I	ined Leaves 2, 4A, and 4E (B11) vertebrates (I Sulfide Odor Rhizospheres	B13)		Water-Stained Leaves 1A, and 4B) Drainage Patterns (B10 Dry-Season Water Tab Saturation Visible on A	(B9) (MLRA 1, 2, 0) ole (C2) erial Imagery (C9)
TDROLOG (etland Hydrimary Indica Surface W High Wate Saturation Water Man	For the second s		check all that app Water-Sta MLRA 1, Salt Crust Aquatic In Hydrogen Oxidized I Roots (C3	ined Leaves 2, 4A, and 4E (B11) vertebrates (I Sulfide Odor Rhizospheres	B13) (C1) along Living		Water-Stained Leaves 1A, and 4B) Drainage Patterns (B10 Dry-Season Water Tab Saturation Visible on A Geomorphic Position (I	(B9) (MLRA 1, 2, 0) ole (C2) erial Imagery (C9)
DROLOC etland Hydrimary Indica Surface W High Wate Saturation Water Man	For the second s		check all that app Water-Sta MLRA 1, Salt Crust Aquatic In Hydrogen Oxidized I Roots (C3 Presence	ined Leaves 2, 4A, and 4E (B11) vertebrates (I Sulfide Odor Rhizospheres	B13) (C1) along Living		Water-Stained Leaves 1A, and 4B) Drainage Patterns (B10 Dry-Season Water Tab Saturation Visible on A	(B9) (MLRA 1, 2, 0) ole (C2) erial Imagery (C9)
PROLOC Vetland Hydrimary Indica Surface W High Water Saturation Water Man Sediment Drift Depo	For the second s		check all that app Water-Sta MLRA 1, Salt Crust Aquatic In Hydrogen Oxidized I Roots (C3 Presence	ined Leaves 2, 4A, and 4E (B11) vertebrates (I Sulfide Odor Rhizospheres (I) of Reduced I on Reduction	B13) (C1) along Living		Water-Stained Leaves 1A, and 4B) Drainage Patterns (B10 Dry-Season Water Tab Saturation Visible on A Geomorphic Position (I	(B9) (MLRA 1, 2, 0) ole (C2) erial Imagery (C9)
PROLOC Vetland Hydrimary Indica Surface W High Wate Saturation Water Man Sediment Drift Depo	rology Indicators: ators (minimum of on the Table (A2) (A3) (ks (B1) Deposits (B2) sits (B3) or Crust (B4)		check all that app Water-Sta MLRA 1, Salt Crust Aquatic In Hydrogen Oxidized I Roots (C3 Presence Recent Irc Soils (C6)	ined Leaves 2, 4A, and 4E (B11) vertebrates (I Sulfide Odor Rhizospheres (I) of Reduced I on Reduction	B13) (C1) along Living ron (C4) in Tilled		Water-Stained Leaves 1A, and 4B) Drainage Patterns (B10 Dry-Season Water Tab Saturation Visible on Ac Geomorphic Position (I Shallow Aquitard (D3) FAC-Neutral Test (D5)	(B9) (MLRA 1, 2, 0) lle (C2) erial Imagery (C9) 02)
TDROLOC Tetland Hyd rimary Indica Surface W High Wate Saturation Water Man Sediment Drift Depo Algal Mat	FY rology Indicators: ators (minimum of on fater (A1) or Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) bil Cracks (B6)	e required;	check all that app Water-Sta MLRA 1, Salt Crust Aquatic In Hydrogen Oxidized I Roots (C3 Presence Recent Irc Soils (C6) Stunted o	ined Leaves 2, 4A, and 4E (B11) vertebrates (I Sulfide Odor Rhizospheres Of Reduced I on Reduction	B13) (C1) along Living ron (C4) in Tilled ants (D1)		Water-Stained Leaves 1A, and 4B) Drainage Patterns (B10 Dry-Season Water Tab Saturation Visible on A Geomorphic Position (I Shallow Aquitard (D3)	(B9) (MLRA 1, 2, 0) ole (C2) erial Imagery (C9) 02)
TDROLOC Tetland Hyd rimary Indica Surface W High Wate Saturation Water Man Sediment Drift Depo Algal Mat Iron Depos Surface Si Inundation	rology Indicators: ators (minimum of on fater (A1) r Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4)	e required;	check all that app Water-Sta MLRA 1, Salt Crust Aquatic In Hydrogen Oxidized I Roots (C3 Presence Recent Irc Soils (C6) Stunted or (LRR A) Other (Ex	ined Leaves 2, 4A, and 4E (B11) vertebrates (I Sulfide Odor Rhizospheres) of Reduced I on Reduction r Stressed Pla	B13) (C1) along Living ron (C4) in Tilled ants (D1)		Water-Stained Leaves 4A, and 4B) Drainage Patterns (B10 Dry-Season Water Tab Saturation Visible on Ad Geomorphic Position (I Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6)	(B9) (MLRA 1, 2, 0) ole (C2) erial Imagery (C9) 02)
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Figure 1. Landscape view of the northeast from SP-1 at the driving range in lot 100 (P-1)



Figure 2. SP-2 looking northwest from edge of plot (P-2).



Figure 3. View of forest north from SP-3. (P-3).



Figure 4. SP-5 looking west to the berm behind the driving range (P-4).



Figure 5. Landscape view from lot 1401 ridge looking north (P-5)



Figures 6. Lot 100 west of Classic Street. At SP-6 looking south (P-6).



Figure 7. View of tax lot 2100 from edge of Necarney City Road looking north with SP-7 flag in the mid ground (P-7).

