WETLAND DELINEATION / DETERMINATION REPORT COVER FORM

A complete report and signed report cover form, along with applicable review fee, are required before a report review timeline can be initiated by the Department of State Lands. All applicants will receive an emailed confirmation that includes the report's unique file number and other information.

Ways to submit report:

- **Under 50MB** - A single unlocked PDF can be emailed to: wetland.delineation@dsl.oregon.gov.
- **50MB or larger** - A single unlocked PDF can be uploaded to DSL's Box.com website. After upload notify DSL by email at: wetland.delineation@dsl.oregon.gov.
- OR a hard copy of the unbound report and signed cover form can be mailed to: Oregon Department of State Lands, 775 Summer Street NE, Suite 100, Salem, OR 97301-1279.

Ways to pay review fee:

- By credit card on DSL's epayment portal after receiving the unique file number from DSL's emailed confirmation.
- By check payable to the Oregon Department of State Lands attached to the unbound mailed hardcopy OR attached to the complete signed cover form if report submitted electronically.

Contact and Authorization Information

☒ Applicant ☒ Owner Name, Firm and Address:
Manzanita Loft LLLC
11251 SE 232nd Ave
Damascus, OR 97089

Business phone # (503) 440-5766
Mobile phone # (optional)
E-mail: vito.cerelli@gmail.com

☐ Authorized Legal Agent, Name and Address (if different):

Business phone #
Mobile phone # (optional)
E-mail:

I either own the property described below or I have legal authority to allow access to the property. I authorize the Department to access the property for the purpose of confirming the information in the report, after prior notification to the primary contact.

Typed/Printed Name: Vito Cerelli **Signature:** Vito Cerelli

Date: 6.01.2022 Special instructions regarding site access: _____

Project and Site Information

Project Name: Manzanita Retreat

Latitude: 45.71638 Longitude: -123.929949
decimal degree - centroid of site or start & end points of linear project

Proposed Use:
Commercial-Hospitality

Tax Map # 3N1029D002100
Tax Lot(s) 2100

Tax Map # 3N1029DA02600
Tax Lot(s) 2600

Project Street Address (or other descriptive location):
Corner of Dorcas Lane and Classic Street

Township 3N Range 10W Section 29 QQ

Use separate sheet for additional tax and location information

City: Manzanita County: Tillamook

Waterway: River Mile:

Wetland Delineation Information

Wetland Consultant Name, Firm and Address:
NW Regolith
Austin Tomlinson
523 S. Cottage Ave
Gearhart, OR 97138

Phone # (503) 440-0084
Mobile phone # (if applicable)
E-mail: nwregolith@gmail.com

The information and conclusions on this form and in the attached report are true and correct to the best of my knowledge.

Consultant Signature: Austin Tomlinson Date: 06/10/2022

Primary Contact for report review and site access is ☒ Consultant ☒ Applicant/Owner ☐ Authorized Agent

Wetland/Waters Present? ☐ Yes ☒ No Study Area size: 4.7 acres Total Wetland Acreage:

Check Applicable Boxes Below

☐ R-F permit application submitted
☐ Fee payment submitted **$** _____
☐ Mitigation bank site
☐ Resubmittal of rejected report ($100)
☐ EFSC/ODOE Proj. Mgr:
☐ Request for Reissuance. See eligibility criteria. (no fee)
DSL # _____ Expiration date_____
☐ Wetland restoration/enhancement project (not mitigation)
☒ Previous delineation/application on parcel
If known, previous DSL # WD2022-0296 ;WD2017-0149
☐ LWI shows wetlands or waters on parcel
Wetland ID code _____

For Office Use Only

DSL Reviewer: DE Fee Paid Date: ____ / ____ / ____ DSL WD # 2022-0331

Date Delineation Received: 6 / 12 / 22 DSL App.# _____

Wetland Delineation

For

Manzanita Retreat

Manzanita, Tillamook County, OR

(Township 3N, Range 10W, Section 29)

NOTICE: REPORTS ARE CONSIDERED DRAFT DOCUMENTS UNTIL REVIEW IS COMPLETED BY DSL. WETLAND MAPS MAY CHANGE AS A RESULT OF DSL REVIEW.

Prepared for:

Manzanita Loft LLC
11251 SE 232nd Ave
Damascus, OR 97089

Prepared by:

NW Regolith
Austin Tomlinson
523 S. Cottage Ave
Gearhart, OR 97138
(503) 440-0084
nwregolith@gmail.com

June, 2022

TABLE OF CONTENTS

I. INTRODCUTION

NW Regolith conducted a wetland delineation within the proposed study area. The study area includes tax lots 3N1029DA02600, and 3N1029D002100. The study area is located in the incorporated community of Manzanita in Tillamook County, Oregon. All of tax lot 2600 and the northern portion of tax lot 2100 of the study area is being proposed for development of a hospitality business containing a number of small cabin like dwellings and common areas. Wetland delineation field work was conducted on March 26th and June 11th, 2022. This report presents the results of NW Regolith's wetland delineation. Figures, including a map depicting sample plot locations within the study area, located in Appendix A. Data sheets documenting on-site conditions are provided in Appendix B. Ground- level photos of the study area are in Appendix C. A discussion of the wetland delineation methodology is provided in Appendix E for the client.

II. RESULTS AND DISCUSSION

A. Landscape Setting and Land Use

The study area is located within the City of Manzanita in Tillamook County, Oregon, adjacent to the Manzanita Golf Course. It is zoned Special Residential/Recreational Zone (SR-R). All platted public rights-of-way in and around the study area are developed. The nearest developed right-of-way and access point is at the corner of Dorcas Lane and Classic Street. The study area is bordered by Classic St. to the east, the Manzanita Golf Course to the West, and residential housing to the north and south. The total area of the study area is approximately 4.7 acres.

The study area consists of a mixture of mature dune forest/open system and highly disturbed/ruderal areas. The forested system lies along the western boundary, adjacent to the golf course. While the flat ruderal portion of the property lies along the toe of slope of Classic St. and the housing development to the south and east. The elevation rises in the southern portion of the tax lot 2100 and within tax lot 2600. The middle portion of the study area is the lowest point.

The study area has not been developed in the past but has been affected by adjacent land use changes including the development of Classic St and residential housing. A pedestrian trial has been observed through the center of the study area in historical photos and during the present day. A significant amount of fill material has been placed within the southern area of the tax lot 2100. This fill area appears to have been utilized for several years.

B. Site Alterations

A significant amount of fill material has been placed in the southern portion of tax lot 2100 and is documented in this report (See Data Sheet P7, P8, P9 & Photos 30-44). This area was included in a previously DSL approved wetland delineation (WD2017-0149), which found no wetlands on site. NW Regolith did not observe any evidence of recent fill, excavation, or other disturbance within the study area outside of the documented fill area. Therefore, normal environmental conditions are considered to be present. Vegetation has likely been mowed or removed in years past, but no recent vegetation removal or cutting was observed.

C. Precipitation Data and Analysis

Table 1 compares the average monthly precipitation, as reported for the National Resources Conservation Service (NRCS) WETS Station in Tillamook County to the monthly precipitation observed at the Nehalem, OR in the three months prior to NW Regolith wetland delineation field work. Table 1 also compares the observed precipitation at the Nehalem recording station to the normal precipitation range, as identified in the NRCS WETS table.

It should be noted that the observed precipitation total for June in Table 1 is the amount of precipitation recorded on in the first 11 days of the month, prior to the start of NW Regolith wetland delineation field work. Spring 2022 has been significantly wet, all prior months to field investigation far exceed the normal range of precipitation. WETS data was taken from Tillamook station due to data availability from the Nehalem and Manzanita station.

Table 1: Comparison of Average and Observed Precipitation at the Nehalem/Tillamook for the Three Months Prior to the Wetland Delineation Field Work

Month	Average Precipitation	30% Chance Will Have		Observed Precipitation	Percent of Normal
		Less Than Average[a]	More Than Average[a]		
March	9.90	7.25	11.64	12.9	130%
April	6.82	4.79	8.09	9.8	143%
May	4.84	3.3	5.77	12.7	262%
June 11th	3.41	2.37	4.06	3.13	91%

Notes:
a. Source: NRCS WETS Table for theTillamook, Tillamook County, Oregon http://agacis.rcc-acis.org/?fips=41007
b. Source: Preliminary Monthly Climate Data for the Seaside, OR as reported by NOAA Regional Climate Center
c. The average precipitation for January, as provided above, is for the first 12 days of January. This amount presumes that the average precipitation for the entire month of January is spread evenly across the entire month.

Total observed precipitation from the start of the water year (October 1st, 2021) to the date of field work (June 11th, 2022) was 123.34 inches which is approximately 147 percent above the normal, if you include the entire month of June in the average. It is NW Regolith's opinion that existing hydrology conditions were far exceeded the normal during field work of the delineation.

D. Methods

NW Regolith conducted an initial reconnaissance on March 26th and completed the wetland delineation on June 11th, 2022. NW Regolith delineated the limits of jurisdictional wetlands in the study area based on the presence of wetland hydrology, hydric soils, and hydrophytic vegetation, in accordance with the Routine On-site Determination, as described in the *Corps of Engineers Wetland Delineation Manual*, *Wetlands Research Program Technical Report* Y-87-1 ("The 1987 Manual") and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region.*

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

NW Regolith identified no existing wetlands within the study area. All vegetation observed during the investigation contained little to no FACW or OBL wetland vegetation. A small area of *spirea* was observed within Plot 5, but no wetland soil or hydrology indicators were present. The forested portion of the study is dominated by *Pinus contorta* (FAC), *Thuja Plicata* (FAC), and *Picea stichensis* (FAC). Understory vegetation consisted of *Vaccinum ovatum* (FACU), *Gaultheria shallon* (FACU), and *Rubus ursinus* (FACU). Open areas within the study area is dominated by *Gaultheria shallon* (FACU), *Holcus lanatus* (FAC), *Pteridium aquilium* (FACU), Cytisus scoparius (n/l), and *Rubus americanus* (FAC). Disturbed areas (Plots 7-9) contained *Cytisus scoparius* (n/l) and *Phalaris arundinacea* (FAC).

Soils were consistent with NRCS mapped soil type, Netarts fine sandy loam, 5 to 30 percent slope. With a shallow dark surface horizon, and sandy subsurface horizons with no sign of streaking or concentrations. Plots 1-6 contained undisturbed soils that were consistent throughout. Plots 7-9 were in areas of historic disturbance and non-native soil material was found. These soils and the landscape on site appear to be well drained and significantly above any ground water elevation.

Despite the well above normal precipitation for this year, no hydrologic indicators were observed within the study area.

F. Deviation from LWI or NWI

The U.S Fish and Wildlife Service (USFWS) NWI shows wetlands within the study area. No LWI exists within the City of Manzanita. The area mapped by the NWI was observed and data was collected throughout its footprint. No wetlands were found within the NWI mapped wetlands. Therefore, NW Regolith believes that the wetland delineation presented in this report which is based on on-the ground observations, is a true representation of the wetland and upland conditions within the study area.

G. Mapping Method

NW Regolith marked all data plots with pink pin flags. Data points were survey-located by Avensa Map app. The estimated accuracy of the app is one meter. No other surveying or on the ground markings were placed since no wetlands were present on site. A previous survey of the tax lots was conducted in years past, evidence of this survey were observed on the ground.

H. Additional Information

Data points were chosen based on topographic position, field observations, and hydric vegetation within the study area. Soils and vegetation communities were relatively uniform throughout, indicating that further data points or investigation was not needed beyond what is presented in this report.

I. Results and Conclusions

No wetlands were found within the study area. Data points were taken within the mapped NWI and throughout the entirety of the study area. A majority of the vegetation did not

meet wetland indicators. No wetland soils or hydrology indicators were found within the study area.

J. Required Disclaimer

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

III. References

Adamus, P.R. and D. Field. 2001 *Guidebook for Hydrogeomorphic (HGM)-based Assessment of Oregon Wetland and Riparian Sites. Willamette Valley Ecoregion, Riverine Impounding and Slopes/Flats Subclasses*. Oregon Division of State Lands, Salem, OR.

Tillamook County Webmaps. maps.co.clatsop.or.us//

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Munsell Color, 2009. *Munsell Soil Color Charts*.

NRCS WETS Tables for Nehelam, Tillamook County, Oregon. http://www.wcc.nrcs.usda.gov/ftpref/support/climate/wetlands/or/41007.txt. Accessed June 2022

National Weather Service. Preliminary Monthly Climate Data for the Manzanita. http://www.nws.noaa.gov/climate/index.php?wfo=pqr. Accessed June 2022.

US Army Corps of Engineers, Environmental Laboratory, 1987. *Corps of Engineers Wetland Delineation Manual. Technical Report* Y-87-1.

US Army Corps of Engineers, Environmental Laboratory, 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0).*

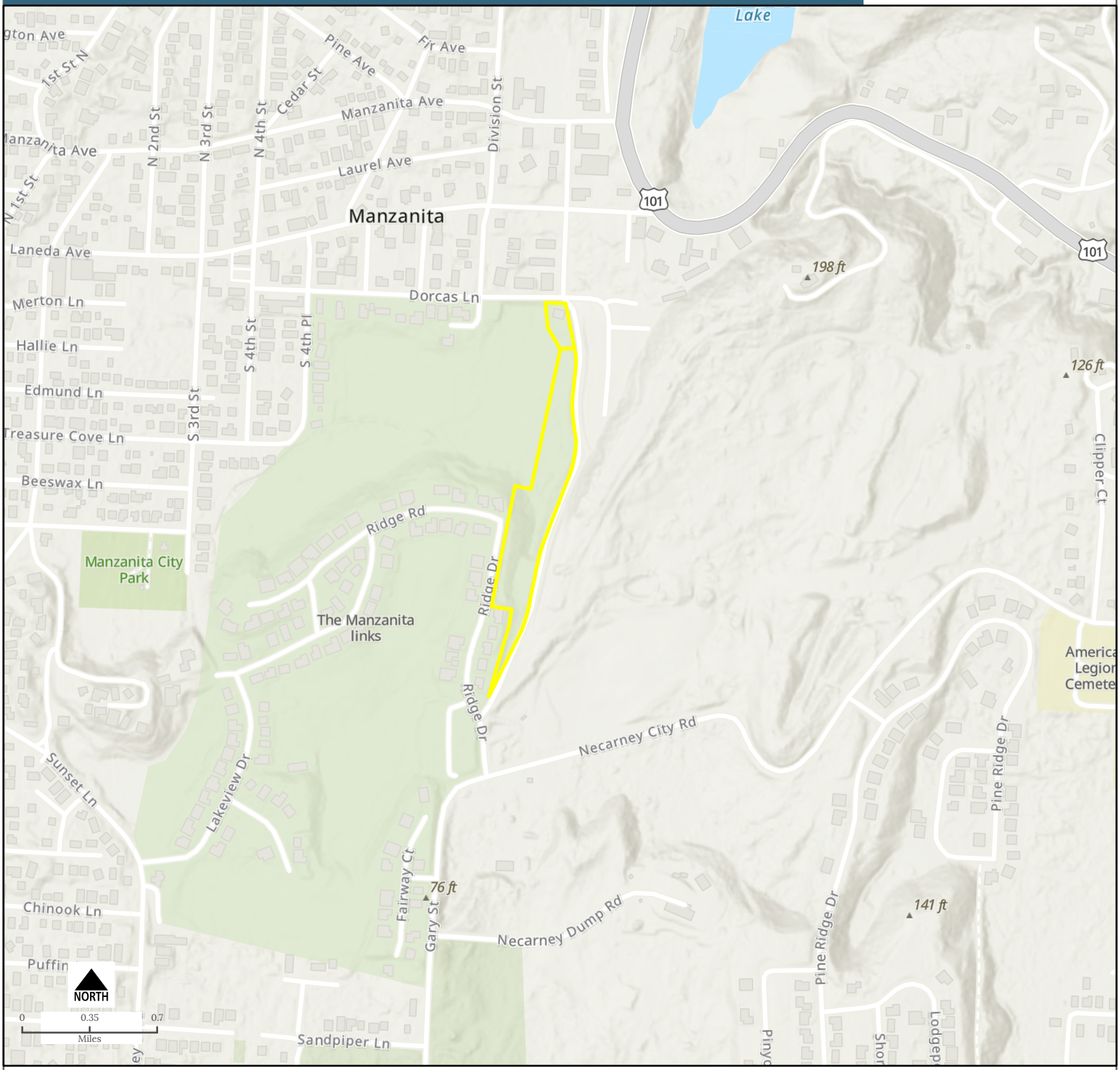
USDA, Web Soil Mapper 2011. *Soil Survey of Tillamook County, Oregon.* *http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx*

USFWS, National Wetland Inventory, 2015. Manzanita, OR. *http://www.fws.gov/wetlands/Wetlands-Mapper.html*

Appendix A: Figures

Figure 1-Topography & General Location

Manzanita Retreat



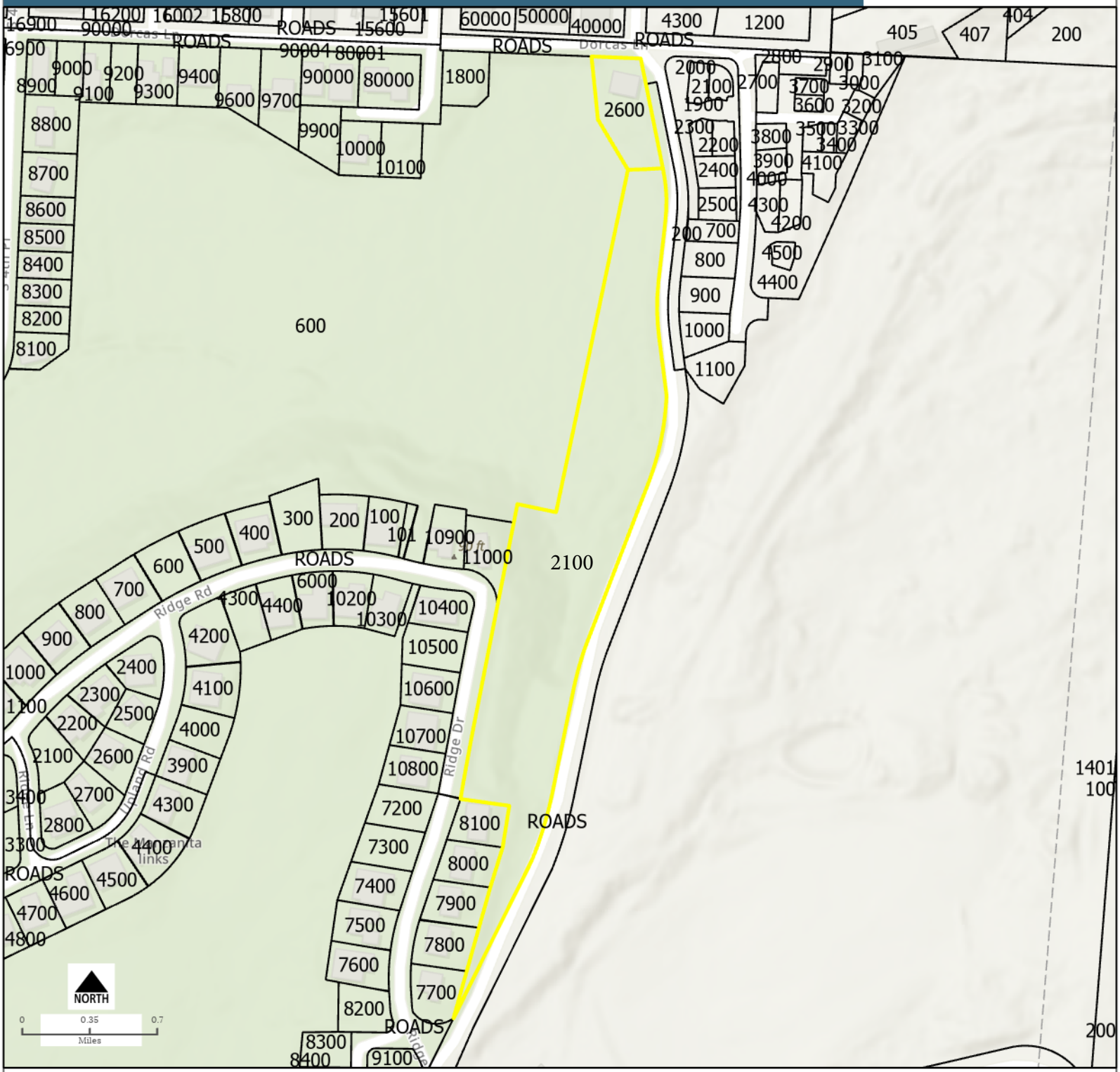
Legend

Study Area

Updated: 6/10/2022

Figure 2-Taxlot Map

Manzanita Retreat



Legend

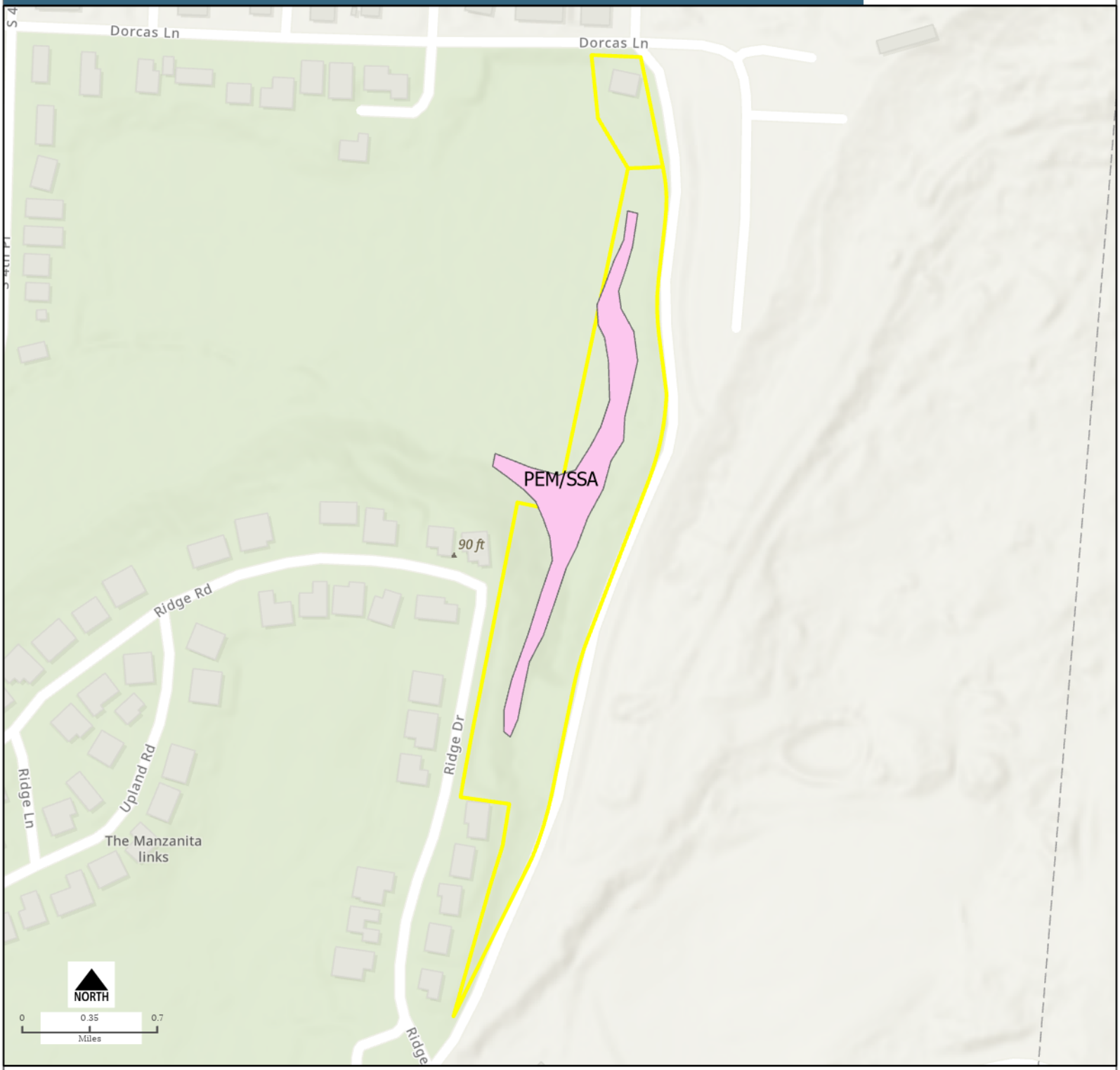
Study Area

Tax lot

Updated: 6/10/2022

Figure 3-NWI Map

Manzanita Retreat



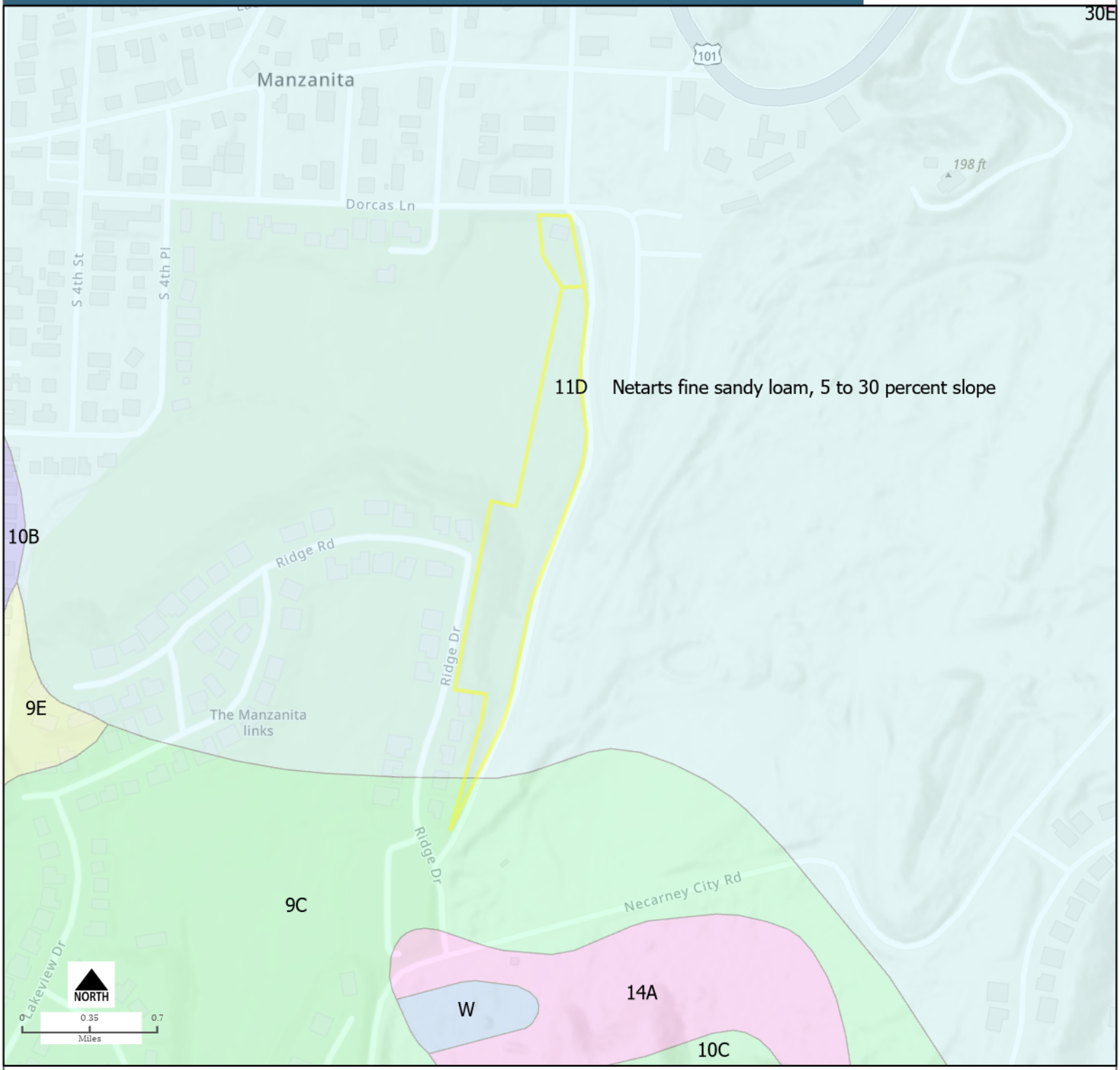
Legend

Study Area

Updated: 6/10/2022

Figure 4-Soils

Manzanita Retreat



Legend

Study Area

Updated: 6/10/2022
Data:

Figure 5-Aerial Map

Manzanita Retreat

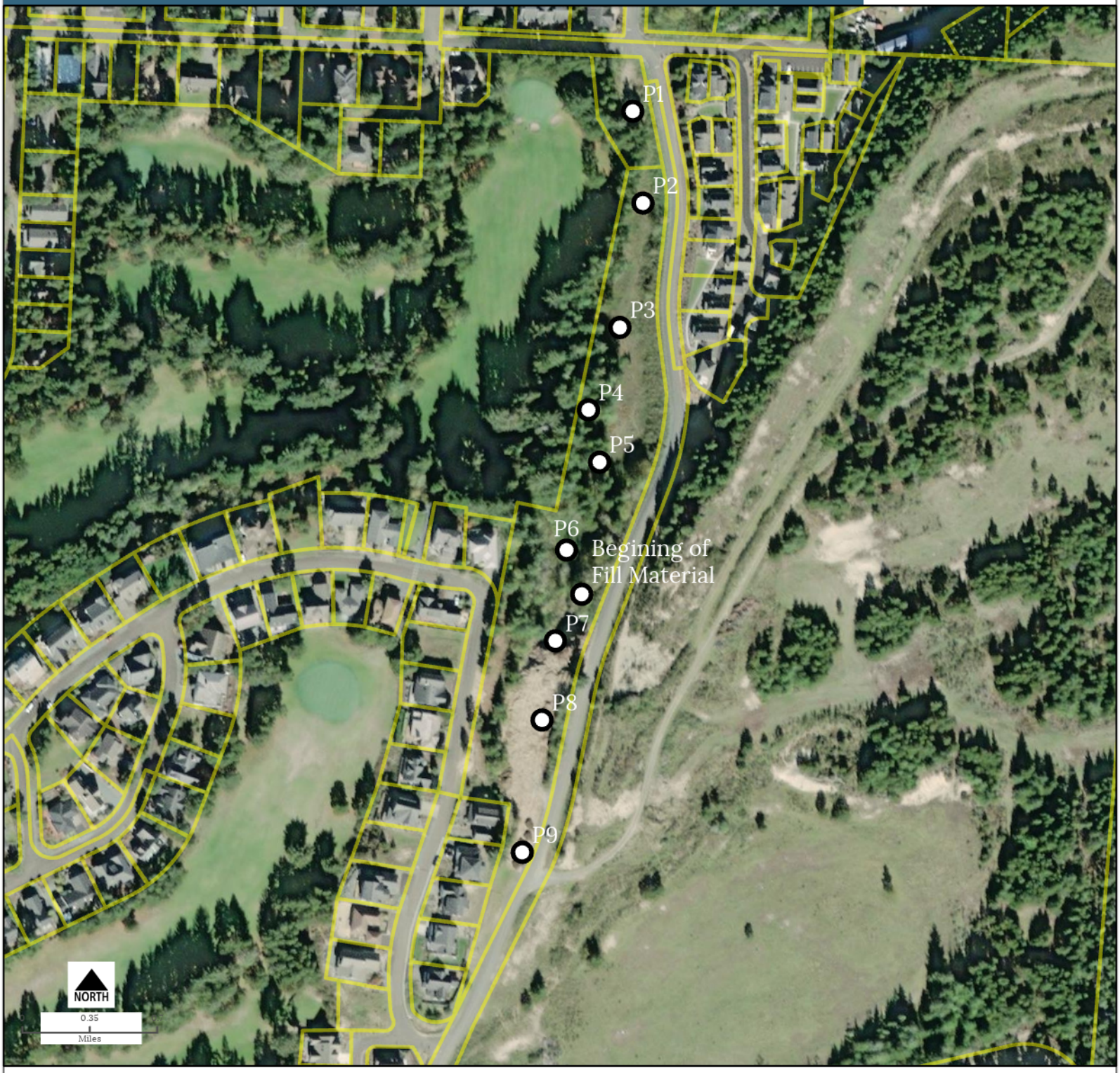
Legend

Study Area

Updated: 6/11/2022
Data:

Figure 6-Wetland Delineation Map

Manzanita Retreat



Legend

Study Area

NOTICE: REPORTS ARE CONSIDERED DRAFT DOCUMENTS UNTIL REVIEW IS COMPLETED BY DSL. WETLAND MAPS MAY CHANGE AS A RESULT OF DSL REVIEW.

Updated: 6/11/2022

Appendix B: Data Sheets

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

Project/Site: Manzanita Retreat | City/County: Manzanita/Tillamook | Sampling Date: 6/11/2022
Applicant/Owner: Manzanita Loft LLC | State: OR | Sampling Point: P1
Investigator(s): Austin Tomlinson | Section, Township, Range: 3N-10W-29
Landform (hillslope, terrace, etc.): Dune Terrace | Local relief (concave, convex, none): concave | Slope (%):
Subregion (LRR): A | Lat: 45.7163 | Long: -123.9299 | Datum: NAD 83
Soil Map Unit Name: Netarts fine sandy loam, 5 to 30 percent slope | NWI classification:
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 ___ significantly disturbed? Are "Normal Circumstances" present? Yes x No ___
Are Vegetation ___ , Soil ___ , or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	x	No	
Hydric Soil Present?	Yes		No	x
Wetland Hydrology Present?	Yes		No	x

Is the Sampled Area within a Wetland? Yes ___ No x

Remarks: Sample point at highest point of the property.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rubra	1		FAC
2. Picea stichensis	5		FAC
3. Pinus contorta	40	Y	FAC
4.			
	46	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15ft)			
1. Cytisus scoparius	40	Y	N/L
2. Rubus armeniacus	5		FACU
3.			
4.			
5.			
	45	= Total Cover	

Herb Stratum (Plot size: 15ft)			
1. Maianthemum dilatatum	5		FAC
2. Holcus lanatus	30	Y	FAC
3. Pteridium aquilinum	1		FACU
4. Hypochaeris radicata	1		FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	37	= Total Cover	

Woody Vine Stratum (Plot size: ___)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 35

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:		(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- x 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes x No ___

Remarks:

SOIL

Sampling Point: P1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/3	100					LS	
8-20	10YR 4/4	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** x

Remarks: Soil moist with recent rainfall

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): _____

Water Table Present? Yes ___ No x Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No x Depth (inches): _____

Wetland Hydrology Present? **Yes** ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Project/Site: Manzanita Retreat City/County: Manzanita/Tillamook Sampling Date: 6/11/2022
Applicant/Owner: Manzanita Loft LLC State: OR Sampling Point: P2
Investigator(s): Austin Tomlinson Section, Township, Range: 3N-10W-29
Landform (hillslope, terrace, etc.): Dune Terrace Local relief (concave, convex, none): concave Slope (%):
Subregion (LRR): A Lat: 45.7163 Long: -123.9299 Datum: NAD 83
Soil Map Unit Name: Netarts fine sandy loam, 5 to 30 percent slope NWI classification:
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 ___ significantly disturbed? Are "Normal Circumstances" present? Yes x No ___
Are Vegetation ___ , Soil ___ , or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	___	No	x
Hydric Soil Present?	Yes	___	No	x
Wetland Hydrology Present?	Yes	___	No	x

Is the Sampled Area within a Wetland? Yes ___ No x

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	___ = Total Cover		

Sapling/Shrub Stratum (Plot size: 15ft)			
1. Rubus armeniacus	15	Y	FACU
2. Cytisus scoparius	5		N/L
3. Gaultheria shallon	30	Y	FACU
4. Rubus ursinus	5		FACU
5.			
	55 = Total Cover		

Herb Stratum (Plot size: 15ft)			
1. Holcus lanatus	80	Y	FAC
2. Digitalis purpurea	1		FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	81 = Total Cover		

Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	___ = Total Cover		

% Bare Ground in Herb Stratum ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	___	x 1 =	
FACW species	___	x 2 =	
FAC species	___	x 3 =	
FACU species	___	x 4 =	
UPL species	___	x 5 =	
Column Totals:	___ (A)		___ (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ___ No x

Remarks:

SOIL

Sampling Point: P2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 2/1	100					LS	
4-8	10YR 4/1	100					Sand	
8-20	7.5YR 4/6	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** x

Remarks: Soil moist with recent rainfall

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): _____

Water Table Present? Yes ___ No x Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No x Depth (inches): _____

Wetland Hydrology Present? **Yes** ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Project/Site: Manzanita Retreat | City/County: Manzanita/Tillamook | Sampling Date: 6/11/2022
Applicant/Owner: Manzanita Loft LLC | State: OR | Sampling Point: P3
Investigator(s): Austin Tomlinson | Section, Township, Range: 3N-10W-29
Landform (hillslope, terrace, etc.): Dune Terrace | Local relief (concave, convex, none): concave | Slope (%):
Subregion (LRR): A | Lat: 45.7163 | Long: -123.9299 | Datum: NAD 83
Soil Map Unit Name: Netarts fine sandy loam, 5 to 30 percent slope | NWI classification:
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 ___ significantly disturbed? Are "Normal Circumstances" present? Yes x No ___
Are Vegetation ___ , Soil ___ , or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	___	No	x
Hydric Soil Present?	Yes	___	No	x
Wetland Hydrology Present?	Yes	___	No	x

Is the Sampled Area within a Wetland? Yes ___ No x

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus contorta	10	Y	FAC
2.			
3.			
4.			
	10	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15ft)			
1. Vaccinium ovatum	5		FACU
2. Cytisus scoparius	25	Y	N/L
3. Gaultheria shallon	35	Y	FACU
4. Rubus ursinus	5		FACU
5.			
	70	= Total Cover	

Herb Stratum (Plot size: 15ft)			
1. Hypochaeris radicata	10	Y	FACU
2. Holcus lanatus	25	Y	FAC
3. Pteridium aquilinum	15	Y	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	50	= Total Cover	

Woody Vine Stratum (Plot size: ___)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 6 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ___ No x

Remarks:

SOIL

Sampling Point: P3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/1	100					LS	
6-11	10YR 5/2	100					Sand	
11-20	7.5YR 4/6	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** **x**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): _____

Water Table Present? Yes ___ No x Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No x Depth (inches): _____

Wetland Hydrology Present? **Yes** ____ **No** **x**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Project/Site: Manzanita Retreat | City/County: Manzanita/Tillamook | Sampling Date: 6/11/2022
Applicant/Owner: Manzanita Loft LLC | State: OR | Sampling Point: P4
Investigator(s): Austin Tomlinson | Section, Township, Range: 3N-10W-29
Landform (hillslope, terrace, etc.): Dune Terrace | Local relief (concave, convex, none): concave | Slope (%):
Subregion (LRR): A | Lat: 45.7163 | Long: -123.9299 | Datum: NAD 83
Soil Map Unit Name: Netarts fine sandy loam, 5 to 30 percent slope | NWI classification:
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 ___ significantly disturbed? Are "Normal Circumstances" present? Yes x No ___
Are Vegetation ___ , Soil ___ , or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	___	No	x
Hydric Soil Present?	Yes	___	No	x
Wetland Hydrology Present?	Yes	___	No	x

Is the Sampled Area within a Wetland? Yes ___ No x

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Thuja plicata	75	Y	FAC
2. Pinus contorta	40	Y	FAC
3. Picea stichensis	10		FAC
4.			
	120	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15ft)			
1. Gaultheria shallon	5	Y	FACU
2. Vaccinium ovatum	5	Y	FACU
3.			
4.			
5.			
	10	= Total Cover	

Herb Stratum (Plot size: 15ft)			
1. Pteridium aquilinum	1	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	1	= Total Cover	

Woody Vine Stratum (Plot size: ___)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 95

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:		(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ___ No x

Remarks:

SOIL

Sampling Point: P4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/1	100					LS	
2-6	10YR 5/2	100					Sand	
6-20	7.5YR 4/6	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** **x**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? **Yes** ____ **No** **x**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Project/Site: Manzanita Retreat | City/County: Manzanita/Tillamook | Sampling Date: 6/11/2022
Applicant/Owner: Manzanita Loft LLC | State: OR | Sampling Point: P5
Investigator(s): Austin Tomlinson | Section, Township, Range: 3N-10W-29
Landform (hillslope, terrace, etc.): Dune Terrace | Local relief (concave, convex, none): concave | Slope (%):
Subregion (LRR): A | Lat: 45.7163 | Long: -123.9299 | Datum: NAD 83
Soil Map Unit Name: Netarts fine sandy loam, 5 to 30 percent slope | NWI classification:
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 ___ significantly disturbed? Are "Normal Circumstances" present? Yes x No ___
Are Vegetation ___ , Soil ___ , or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	___	No	x
Hydric Soil Present?	Yes	___	No	x
Wetland Hydrology Present?	Yes	___	No	x

Is the Sampled Area within a Wetland? Yes ___ No x

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus contorta			
2.			
3.			
4.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15ft)			
1. Spiraea douglasii	40	Y	FACW
2. Gaultheria shallon	70	Y	FACU
3. Vaccinium ovatum	1		
4. Rubus ursinus	5		
5. Cytisus scoparius	5		
	121 = Total Cover		

Herb Stratum (Plot size: 15ft)			
1. Pteridium aquilinum	10	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	10 = Total Cover		

Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 5

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ___ No x

Remarks:

SOIL

Sampling Point: P5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 2/1	100					LS	
4-10	10YR 4/2	100					Sand	
10-20	7.5YR 4/6	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): _____

Water Table Present? Yes ___ No x Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No x Depth (inches): _____

Wetland Hydrology Present? **Yes** ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Project/Site: Manzanita Retreat City/County: Manzanita/Tillamook Sampling Date: 6/11/2022
Applicant/Owner: Manzanita Loft LLC State: OR Sampling Point: P6
Investigator(s): Austin Tomlinson Section, Township, Range: 3N-10W-29
Landform (hillslope, terrace, etc.): Dune Terrace Local relief (concave, convex, none): concave Slope (%):
Subregion (LRR): A Lat: 45.7163 Long: -123.9299 Datum: NAD 83
Soil Map Unit Name: Netarts fine sandy loam, 5 to 30 percent slope NWI classification:
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 ___ significantly disturbed? Are "Normal Circumstances" present? Yes x No ___
Are Vegetation ___ , Soil ___ , or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	___	No	x
Hydric Soil Present?	Yes	___	No	x
Wetland Hydrology Present?	Yes	___	No	x

Is the Sampled Area within a Wetland? Yes ___ No x

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15ft)			
1. Gaultheria shallon	100	Y	FACU
2. Rubus ursinus	15		FACU
3.			
4.			
5.			
	115 = Total Cover		

Herb Stratum (Plot size: 15ft)			
1. Polystichum munitum	1		FACU
2. Digitalis purpurea	1		FACU
3. Holcus lanatus	5	Y	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	7 = Total Cover		

Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ___ No x

Remarks:

SOIL

Sampling Point: P6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 2/1	100					LS	
3-10	10YR 4/2	100					Sand	
10-20	7.5YR 4/6	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** **x**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? **Yes** ____ **No** **x**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Project/Site: Manzanita Retreat | City/County: Manzanita/Tillamook | Sampling Date: 6/11/2022
Applicant/Owner: Manzanita Loft LLC | State: OR | Sampling Point: P7
Investigator(s): Austin Tomlinson | Section, Township, Range: 3N-10W-29
Landform (hillslope, terrace, etc.): Dune Terrace | Local relief (concave, convex, none): concave | Slope (%):
Subregion (LRR): A | Lat: 45.7163 | Long: -123.9299 | Datum: NAD 83
Soil Map Unit Name: Netarts fine sandy loam, 5 to 30 percent slope | NWI classification:
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 ___ significantly disturbed? Are "Normal Circumstances" present? Yes x No ___
Are Vegetation ___ , Soil ___ , or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	___	No	x
Hydric Soil Present?	Yes	___	No	x
Wetland Hydrology Present?	Yes	___	No	x

Is the Sampled Area within a Wetland? Yes ___ No x

Remarks: Sample location is within recent fill area not to little vegetation exists. Soils are unconsolidated fill material

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15ft)			
1. Rubus americanus	1	Y	FAC
2.			
3.			
4.			
5.			
	1 = Total Cover		

Herb Stratum (Plot size: 15ft)			
1. Phalaris arundinacea	1	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	1 = Total Cover		

Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- x 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes x No ___

Remarks:

SOIL

Sampling Point: P7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 3/3						Sand	Fill material

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** **x**

Remarks:unconsolidated fill material

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? **Yes** ____ **No** **x**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Project/Site: Manzanita Retreat | City/County: Manzanita/Tillamook | Sampling Date: 6/11/2022
Applicant/Owner: Manzanita Loft LLC | State: OR | Sampling Point: P8
Investigator(s): Austin Tomlinson | Section, Township, Range: 3N-10W-29
Landform (hillslope, terrace, etc.): Dune Terrace | Local relief (concave, convex, none): concave | Slope (%):
Subregion (LRR): A | Lat: 45.7163 | Long: -123.9299 | Datum: NAD 83
Soil Map Unit Name: Netarts fine sandy loam, 5 to 30 percent slope | NWI classification:
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 ___ significantly disturbed? Are "Normal Circumstances" present? Yes x No ___
Are Vegetation ___ , Soil ___ , or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	x	No	X
Hydric Soil Present?	Yes		No	X
Wetland Hydrology Present?	Yes		No	X

Is the Sampled Area within a Wetland? **Yes** ___ **No** x

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15ft)			
1. Cytisus scoparius	60	Y	N/L
2. Rubus americanus	15	Y	FAC
3.			
4.			
5.			
	75	= Total Cover	

Herb Stratum (Plot size: 15ft)			
1. Phalaris arundinacea	75	Y	FACW
2. Lotus corniculatus	30	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	105	= Total Cover	

Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- x 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** x **No** ___

Remarks:

SOIL

Sampling Point: P8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/3						Sand/gravels	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** **x**

Remarks: unconsolidated material

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No x Depth (inches): _____

Wetland Hydrology Present? **Yes** ____ **No** **x**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Project/Site: Manzanita Retreat | City/County: Manzanita/Tillamook | Sampling Date: 6/11/2022
Applicant/Owner: Manzanita Loft LLC | State: OR | Sampling Point: P9
Investigator(s): Austin Tomlinson | Section, Township, Range: 3N-10W-29
Landform (hillslope, terrace, etc.): Dune Terrace | Local relief (concave, convex, none): concave | Slope (%):
Subregion (LRR): A | Lat: 45.7163 | Long: -123.9299 | Datum: NAD 83
Soil Map Unit Name: Netarts fine sandy loam, 5 to 30 percent slope | NWI classification:
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 ___ significantly disturbed? Are "Normal Circumstances" present? Yes x No ___
Are Vegetation ___ , Soil ___ , or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	___	No	x
Hydric Soil Present?	Yes	___	No	x
Wetland Hydrology Present?	Yes	___	No	x

Is the Sampled Area within a Wetland? Yes ___ No x

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	___ = Total Cover		

Sapling/Shrub Stratum (Plot size: 15ft)			
1. Rubus ursinus	5	Y	FACU
2.			
3.			
4.			
5.			
	5 = Total Cover		

Herb Stratum (Plot size: 15ft)			
1. Holcus lanatus	80	Y	FACU
2. Rumex occidentalis	15		FACW
3. plantago lanceolata	25		FACU
4. Agrostis spp.	10		FAC
5. Trifolium spp.	20		FAC
6.			
7.			
8.			
9.			
10.			
11.			
	140 = Total Cover		

Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	___ = Total Cover		

% Bare Ground in Herb Stratum ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	___	x 1 =	___
FACW species	___	x 2 =	___
FAC species	___	x 3 =	___
FACU species	___	x 4 =	___
UPL species	___	x 5 =	___
Column Totals:	___ (A)		___ (B)

Prevalence Index = B/A = ___

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ___ No x

Remarks:

SOIL

Sampling Point: P9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 2/1	100					LS	
6-16	10YR 3/3	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** **x**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No x Depth (inches): _____

Water Table Present? Yes ____ No x Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No x Depth (inches): _____

Wetland Hydrology Present? **Yes** ____ **No** **x**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Appendix C: Site Photos

Photo 1: P1 soils

Photo 2: P1 looking west

Photo 3: P1 looking east

Photo 4: P1 looking south

Photo 5: P1 looking north

Photo 6: P2

Photo 7: P2 looking west

Photo 8: P2 looking north

Photo 9: P2 looking east

Photo 10: P2 looking south

Photo 11: P3

Photo 12: P3 looking south

Photo 13: P3 looking west

Photo 14: P3 looking north

Photo 15: P3 looking east

Photo 16: P4 soils

Photo 17: P4 looking south

Photo 18: P4 looking west

Photo 19: P4 looking north

Photo 20: P4 looking east

Photo 21: P5 soils

Photo 22: P5 looking south

Photo 23: P5 looking west

Photo 24: P5 looking north

Photo 25: P5 looking east

Photo 26: P6 looking south

Photo 27: P6 looking west

Photo 28: P6 looking north

Photo 29: P6 looking east

Photo 30: Location of fill area

Photo 31: P7 looking north

Photo 32: P7 looking east

Photo 33: P7 looking south

Photo 34: P7 looking west

Photo 35: P8 looking south

Photo 36: P8 looking north

Photo 37: P8 looking west

Photo 38: P8 looking east

Photo 39: P9 soils

Photo 40: P9 looking west

Photo 41: P9 looking south

Photo 42: P9 looking north

Photo 43: P9 looking east

Photo 44: Fill area taken from Classic Road

Photo 45: Looking south towards the southern end of tax lot 2100

Photo 46: Looking south; Taken from Classic Road about the middle of tax lot 2100

Photo 47: Looking west; Taken from Classic Road about the middle of tax lot 2100

Photo 48: Looking north; Taken from Classic Road near northern boundary of tax lot 2100