



CRITICAL AREAS REPORT

August 2, 2023



La Center Exit Delineation *Clark County/La Center, Washington*

Prepared for

Timberland Inc.

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Vancouver, Washington 98665

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Prepared by

Ecological Land Services

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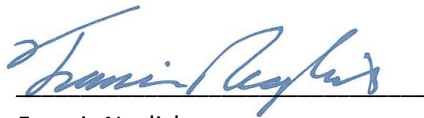
(360) 578-1371 • Project Number 3896.01

SIGNATURE PAGE

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

A handwritten signature in blue ink that reads "Sara Hastings". The signature is written in a cursive style with a horizontal line underneath.

Sara Hastings
Biologist II

A handwritten signature in blue ink that reads "Francis Naglich". The signature is written in a cursive style with a horizontal line underneath.

Francis Naglich
Sr. Wetland Biologist/Principal

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INTRODUCTION

Ecological Land Services, Inc. (ELS) was contracted by Timberland Inc. to conduct a critical areas assessment for wetlands and fish and wildlife habitat conservation areas for the purpose of future development. The site is located north adjacent to 31801 NW Paradise Park Road, in Ridgefield, Clark County, Washington and includes Clark County Tax Parcel Number 209708000. The site is approximately 2.48 acres and is located within Sections 4 and 9, Township 4 North, Range 1 East of the Willamette Meridian (Figure 1). ELS biologists conducted site visits on February 9 and June 1, 2023. This critical areas assessment summarizes the findings in accordance with the City of La Center Municipal Code (LCMC) *Title 18 Development Code, Chapter 18.300 – Critical Areas* (2023).

SITE DESCRIPTION

The 2.48-acre site consists of Clark County Tax Parcel Number 209708000 and is accessed at the northwest corner by a gravel driveway off NW Lacenter Road (Figure 2). The site is zoned JP-Junction Plan and consists of an area used for equipment storage in the western portion and a mowed field in the eastern portion. The parcel does not contain any structures, and the eastern portion of the site is mowed annually (based on Clark County and Google Earth aerial images). The site is bounded by NW Lacenter Road to the north, NW Paradise Park Road to the west, and undeveloped land to the south and east. The topography onsite is generally level in the western portion, with an approximately 40-foot drop in elevation from the edge of the equipment storage at the west to a stream at the southeastern site boundary. One maintained ditch is located along the southern site boundary, and an unnamed Type Ns (non-fish-bearing, seasonal) stream (Stream A) is located in the southeastern corner of the site. The general vegetation onsite is composed of pasture grasses, while the riparian corridor in the eastern portion is composed of mature coniferous and deciduous trees and areas of dense blackberry brambles (Figure 2; Photoplates 4 and 5).

METHODOLOGY

The site was evaluated for the presence of wetlands using the Routine Determination Method according to the U.S. Army Corps of Engineers' 1987 Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers' Wetland Delineation Manual (Environmental Laboratory 1987); Western Mountains, Valleys, and Coast Region (Version 2.0) (Corps 2010). The Routine Determination Method and defining wetland criteria are discussed further in Appendix C. Wetlands are regulated as "Waters of the United States" by the U.S. Army Corps of Engineers (Corps) and as "Waters of the State" by the Washington Department of Ecology (Ecology), and locally by the City of La Center. The ordinary high water mark (OHWM) delineation was conducted following *RCW 90.58.030* and *Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State* (Ecology 2016).

ELS biologists conducted a reconnaissance of the property on February 9 and June 1, 2023, to determine the presence or absence of wetlands, streams, and other fish and wildlife habitat conservation areas within or near the site and to map their approximate locations. One wetland (Wetland A) was observed offsite. Approximate wetland boundaries were determined through

breaks in topography, changes in vegetation, and indications of hydrology. Vegetation, hydrology, and soil data were collected from seven test plots to determine the location and extent of wetlands onsite. Test plot data sheets can be found in Appendix A. The OHWM of Stream A was demarcated with orange flagging based on obvious changes in topography, vegetation, and indicators of seasonal flow. The locations of test plots, wetland flags, and OHWM flagging were recorded using a hand-held GPS unit capable of sub-meter accuracy under ideal conditions (Figure 2).

VEGETATION

General vegetation consists of pasture grasses and weedy herbs and forbs. The riparian corridor along the eastern portion of the site consists mature coniferous and deciduous trees and areas of dense blackberry brambles. Additionally, the eastern portion of the parcel is mowed annually (based on County and Google Earth aerial images). The dominant riparian and upland species within the site, as well as the offsite wetland, are detailed below. The plant indicator status following each plant's scientific name is defined by the *National Wetland Plant List Indicator Rating Definitions* (Corps 2012) and can be found in Appendix C.

UPLANDS

Dominant upland vegetation includes bluegrass (*Poa* sp., assumed FAC), tall fescue (*Schedonorus arundinaceus*, FAC), American vetch (*Vicia americana*, FAC), tansy ragwort (*Senecio jacobaea*, FACU), Timothy (*Phleum pratense*, FAC), oxeye daisy (*Leucanthemum vulgare*, FACU), and Himalayan blackberry (*Rubus armeniacus*, FAC). Hydrophytic vegetation indicators were not met onsite.

RIPARIAN VEGETATION

Dominant riparian vegetation includes bigleaf maple (*Acer macrophyllum*, FACU), red alder (*Alnus rubra*, FAC), western red cedar (*Thuja plicata*, FAC), beaked hazelnut (*Corylus cornuta*, FACU), Nootka rose (*Rosa nutkana*, FAC), western sword fern (*Polystichum munitum*, FACU), and Himalayan blackberry.

WETLAND

Dominant offsite wetland vegetation includes reed canarygrass (*Phalaris arundinacea*, FACW), various grass species (assumed FAC), and Himalayan blackberry.

SOILS

As referenced on the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) website (2023a), the onsite soils are mapped as Gee silt loam, 0 to 8 percent slopes (GeB), Gee silt loam, 8 to 20 percent slopes (GeD), and Odne silt loam, 0 to 5 percent slopes (OdB) (Figure 3).

GeB is characterized as moderately well-drained soil with an average depth to water table of about 24 to 39 inches below ground surface (BGS). GeB is found on terraces from parent material consisting of alluvium. A typical profile of GeB consists of silt loam from 0 to 22 and silty clay loam from 22 to 60 inches BGS. The soil type is not listed as hydric by NRCS (NRCS 2023b).

GeD is characterized as moderately well-drained soil with an average depth to water table of about 24 to 39 inches BGS. GeD is found on terraces from parent material consisting of alluvium. A typical profile of GeD consists of silt loam from 0 to 20 and silty clay loam from 20 to 60 inches BGS. The soil type is not listed as hydric by NRCS (NRCS 2023b).

OdB is characterized as poorly-drained soil with an average depth to water table of about 0 to 18 BGS. OdB silt loam is found on terraces and drainageways from parent material consisting of alluvium. A typical profile of OdB consists of ashy silt loam from 0 to 5, silt loam from 5 to 33, and loam from 33 to 60 inches BGS. The soil type is rated as hydric by NRCS (NRCS 2023b).

WETLANDS

Soils within the offsite wetland were not evaluated, as ELS did not have permission to dig. The approximate wetland boundary was determined based on aerials, breaks in topography, and changes in vegetation (Photoplates 5 and 6).

UPLANDS

The evaluated upland soils consisted of loam, silt loam, and silty clay loam soil textures with dark brown, brown, dark grayish brown, and grayish brown (10YR 3/3, 3/2, 4/3, 4/2, and 5/2) matrix colors. Some upland test plots contained redoximorphic features at or below 12 inches BGS; however, due to the soil profile depth, they did not meet hydric soil indicators. Appendix A contains the wetland determination data forms.

ELS biologists' soil observations generally matched NRCS mapped soil series, as the evaluated soils onsite were delineated in areas where hydric soils are not mapped¹.

Table 1. Mapped Soils

Soil Series	Unit Symbol	Percent Slope	Landform	Drainage Class	Hydric Soil	Test Plots per Soil Series
Gee silt loam	GeB	0 to 8	Terraces	Moderately well-drained	No	--
Gee silt loam	GeD	8 to 20	Terraces	Moderately well-drained	No	1-7
Odne silt loam	OdB	0 to 5	Terraces, drainageways	Poorly-drained	Yes	--

HYDROLOGY

WETLAND A

Wetland A is an emergent, slope wetland located approximately 30 feet south of the site. Hydrology is sourced by precipitation, a shallow groundwater table, input from offsite Ditch 2, and runoff from nearby upslope areas. Wetland A provides flood storage, delay, and groundwater recharge functions. ELS did not have permission to access the property; however, wetland hydrology was evaluated based on observation of primary indicators: Surface Water (A1) and

¹Areas mapped as hydric soils do not necessarily mean that an area is or is not a wetland—hydrology, hydrophytic vegetation, and hydric soils must all be present to classify an area as a wetland.

detection of Hydrogen Sulfide Odor (C1), and secondary indicators: Drainage Patterns (B10) and Geomorphic Position (D2).

STREAM A

Stream A is a Type Ns (non-fish-bearing) seasonal stream located in the southeastern portion of the site. Stream A originates at the southern extent of Wetland A (offsite), approximately 30 feet southwest of the site's southeast corner, and flows easterly for 0.29 miles where it outlets to McCormick Creek. McCormick Creek discharges to the East Fork Lewis River approximately 1.07 miles downstream of the site. Per visual observation from upslope, the stream channel varies between approximately 6 inches to 2 feet wide with 2 to 4 inches of water flowing during the February 9 site visit. The Washington State Department of Ecology's Water Quality Atlas maps the site in the Watershed Resource Inventory Areas (WRIA) 27 Lewis within the Lockwood Creek-East-Fork Lewis River 12-digit HUC: 170800020507.

DITCHES

There is one maintained ditch (Ditch 1) located onsite along the southern site boundary. The ditch is approximately one-foot wide and did not have flowing water during the February or June site visits. Ditch hydrology is supported by precipitation and stormwater runoff from nearby upslope areas. Additionally, there is one unmaintained ditch (Ditch 2) located approximately 40 feet offsite to the south. Ditch 2 flows east, discharging into Wetland A. Ditch hydrology is supported by a stormwater facility directly east, precipitation, and runoff from nearby upslope areas.

PRECIPITATION

Precipitation data were gathered from the NOAA Regional Climate Centers *Cowlitz County, Washington (WETS Station: Mayfield Power Plant)*, and *Washington County, Oregon (WETS Station: Dilley 2 S)*, which are located closest to the project site and/or have the most complete data within 30 miles of the site. The precipitation two weeks prior to the site visit on February 9 totaled 2.2 inches, with no rainfall occurring on the day of the field visit. There was no precipitation two weeks prior to the June 1 site visit, and no rainfall occurred on the day of the field visit. Furthermore, a review of the Corps Antecedent Precipitation Tool (APT) indicates that the rainfall three months prior to both site visits was normal. A copy of the APT data is provided in Appendix D. Table 2 summarizes the precipitation data.

Table 2. Precipitation Data

Precipitation (inches)								
Date of Visit ¹	2 Weeks Prior ¹	3 Months Prior ³		30% Below ³	30% Above ³	DAREM ^{3,4}		
		Month (30 Days Ending)	Monthly Total			Value	Weight	Total
2/9/23 0.00	2.2	2/9/23	8.16	6.33	10.24	2	3	6
		1/10/23	9.90	8.38	12.11	2	2	4
		12/11/22	8.70	7.65	12.44	2	1	2
Rainfall 3 months prior was: drier than normal (sum 6-9), normal (sum 10-14), wetter (sum 15-18).								12
Year to Date Mean Rainfall ¹ : 38.78								
Year to Date Actual Rainfall ¹ : 38.70								
Precipitation (inches)								
Date of Visit ²	2 Weeks Prior ²	3 Months Prior ³		30% Below ³	30% Above ³	DAREM ^{3,4}		
		Month (30 Days Ending)	Monthly Total			Value	Weight	Total
6/1/23 0.00	0.07	6/1/23	0.61	1.11	2.65	1	3	3
		5/2/23	4.67	1.98	3.67	3	2	6
		4/2/23	5.74	2.81	5.69	3	1	3
Rainfall 3 months prior was: drier than normal (sum 6-9), normal (sum 10-14), wetter (sum 15-18).								12
Year to Date Mean Rainfall ² : 39.89								
Year to Date Actual Rainfall ² : 39.41								

¹ Based on 2003-2023 data from the NOAA Regional Climate Centers *Cowlitz County, Washington (WETS Station: Mayfield Power Plant)*

² Based on 2003-2023 data from the NOAA Regional Climate Centers *Washington County, Oregon (WETS Station: Dilley 2 S)*

³ Based on The Army Corps of Engineers Antecedent Precipitation Tool (APT) for coordinates 45.8518269 -122.6992257

⁴ Direct Antecedent Rainfall Evaluation Methods (Sumner et al 2009)

CRITICAL AREA INVENTORIES

NATIONAL WETLANDS INVENTORY

The National Wetlands Inventory (NWI) mapping does not indicate the presence of wetlands on or adjacent to the site (Figure 4). ELS does not agree with the NWI mapping, as one slope wetland was observed offsite to the south (Figure 2).

LOCAL CRITICAL AREAS INVENTORY

The Clark County Critical Areas (CCCA) map indicates the presence of hydric soils at the northwestern corner of the parcel and does not indicate the presence of wetlands or riparian habitat areas on or adjacent to the site (Figure 5). However, ELS disagrees with the CCCA mapping, as hydric soils were not found in the northwest portion of the parcel (Figure 2).

PRIORITY HABITAT AND SPECIES

The Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) website does not indicate the presence of priority habitat or species onsite (Figure 6). ELS agrees with the PHS mapping.

Mapping from the NWI, CCCA, and WDFW PHS should be used with discretion as they are typically used to gather wetland information about a region and, because of the large scale necessary for regional mapping, are limited in accuracy for localized analyses.

CRITICAL AREAS SUMMARY

WETLAND A

Wetland A is a Category IV emergent, slope wetland located approximately 30 feet south of the site that totals approximately 0.10 acres. The wetland/upland boundary is characterized by an obvious change in vegetation and in elevation. The wetland vegetation is dominated by reed canarygrass, various grass species, and Himalayan blackberry. Wetland hydrology is likely supported by precipitation and runoff from upslope areas. Hydroperiods of the wetland include, saturated only. According to the *Washington State Wetland Rating System for Western Washington: 2014 Update* (Rating System), Wetland A is a Category IV wetland with 15 points; scoring 5 points for water quality functions, 4 points for hydrologic functions, and 6 points for habitat functions. Appendix B contains the wetland rating form.

WETLAND BUFFER

Standard wetland buffers are determined based on the wetland category and the habitat score from the Rating System to assess wildlife function (LCMC 18.300.090). Wetland A is classified as a Category IV wetland with a habitat score of 6 points. According to *Table 18.300.090(5)(i)(i)-1 Buffers Required to Protect Habitat Functions in Category IV Wetlands*, Category IV for high-intensity land use require a 50-foot buffer.

Table 3. Wetland Summary

Name	Size Onsite	Hydrogeomorphic Classification ¹	Cowardin Class ² /Hydroperiod ²	Habitat Score ¹	Category ¹	Buffer Width ³
A	0.10 acres	Slope	Emergent/Seasonally flooded, saturated only, seasonally flowing stream	6	IV	50 feet

¹Hruby 2014, ²FGDC 2013, ³LCMC Table 18.300.090(5)(i)(i)-2

STREAM A

Stream A is a Type Ns (non-fish-bearing) seasonal stream located in the southeastern corner of the site. The stream channel onsite is approximately 6 inches to 2 feet wide and had 2 to 4 inches of water flowing during the February 9 site visit. The streambed is composed of a silty substrate with minimal pea-sized gravel. Banks onsite slope steeply, dropping approximately 15 feet, and are undercut with overhanging vegetation.

STREAM BUFFER

According to *LCMC Table 18.300.090(2)(f) - Riparian Areas*, Type Ns streams within defined channels require a 75-foot riparian buffer. Additionally, *LCMC 18.300.090(2)(l)* states that Type Ns stream buffers may be reduced by no more than 50 percent (37.5 feet) of the required buffer width if specific requirements are met. Table 4 provides a summary of the stream onsite.

Table 4. Summary of Stream Onsite.

Name	DNR Water Type	Stream Buffer Width
Stream A	Type Ns (non-fish-bearing, seasonal)	75 ft.

²LCMC Table 18.300.090(2)(f)

LIMITATIONS

ELS bases this report's determinations on standard scientific methodology and best professional judgment. In our opinion, local, state, and federal regulatory agencies should agree with our determinations. However, the information contained in this report should be considered preliminary and used at your own risk until it has been approved in writing by the appropriate regulatory agencies. ELS is not responsible for the impacts of any changes in environmental standards, practices, or regulations after the date of this report.

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FIGURES AND PHOTOPLATES

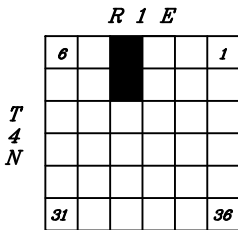
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WASHINGTON



45.8519° Latitude
-122.6987° Longitude

LOCATION MAP



NOTE:

Quadrangle topographic map from USGS.

PROJECT VICINITY MAP

0 52
SCALE IN MILES



SITE

Figure 1

VICINITY MAP

La Center Exit Delineation

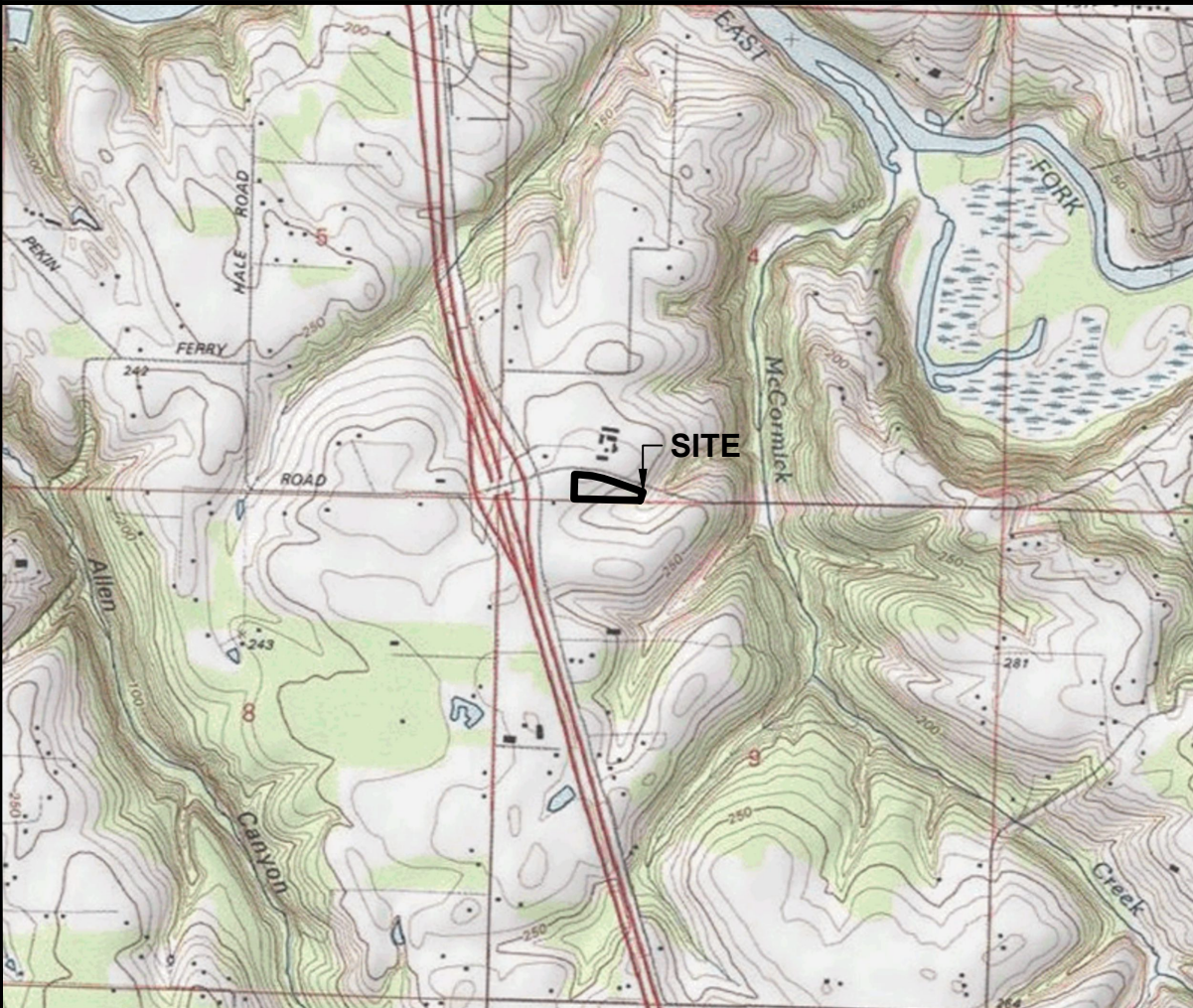
Timberland Inc.

La Center, Clark County, WA

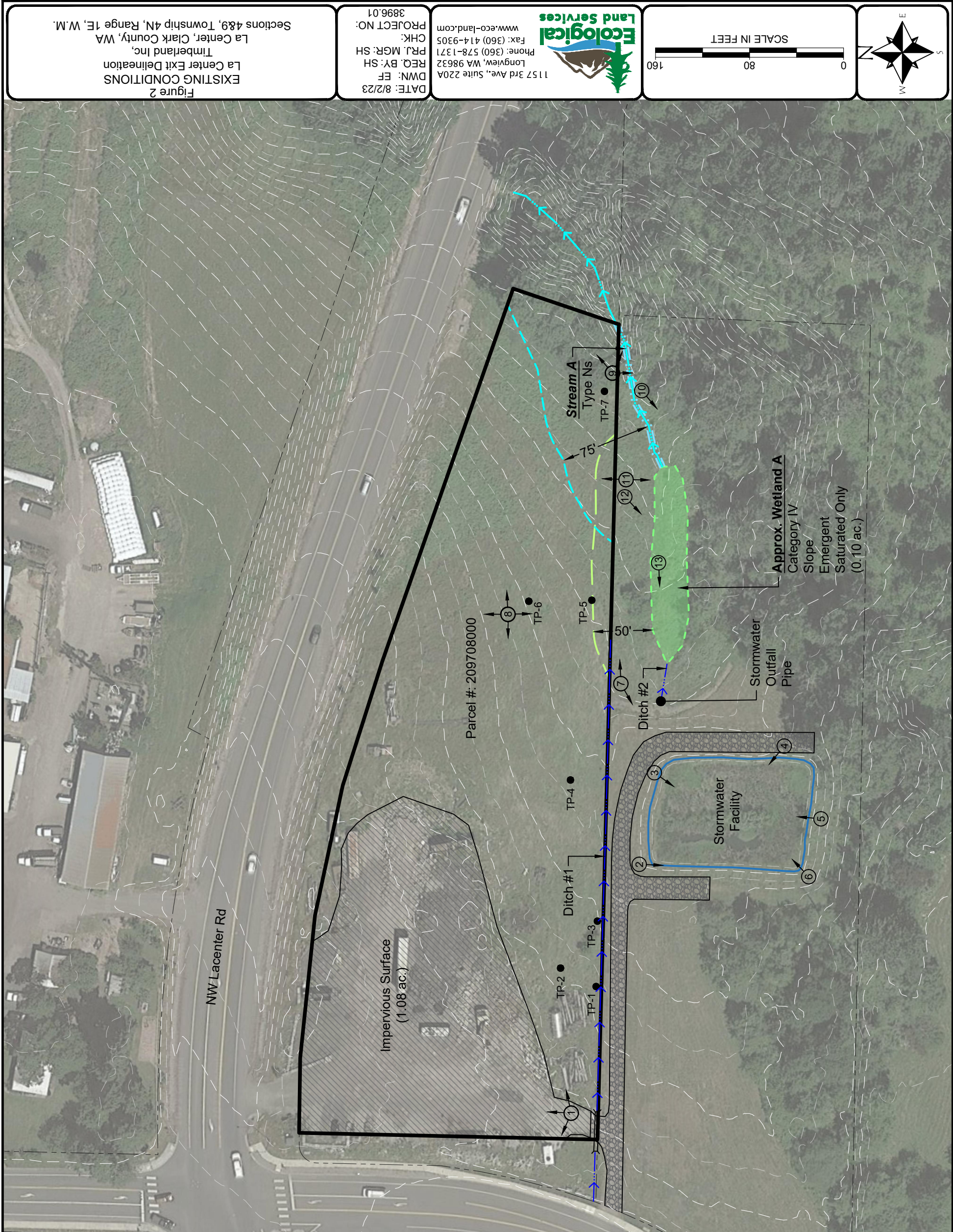
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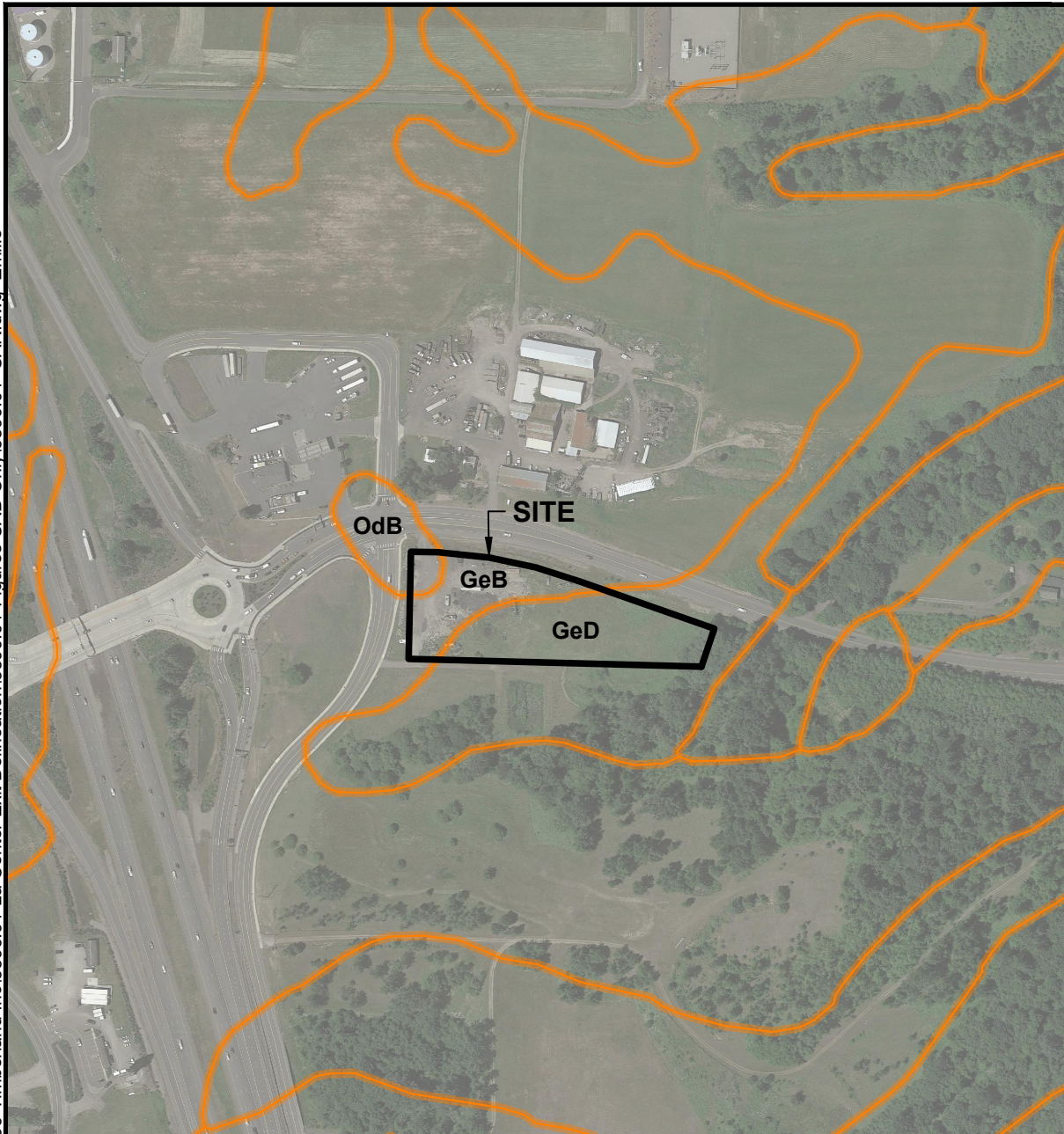
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REQ. BY: SH
PRJ. MGR: SH
CHK:
PROJECT NO:
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1. Aerial from Google Earth™ (6/9/2023).
2. OHWM and test plots located using handheld GPS capable of submeter accuracy.
3. Parcel data from Clark County GIS.
4. LIDAR provided by WDNr at web address: <https://lidarportal.dnr.wa.gov/>



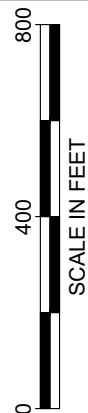
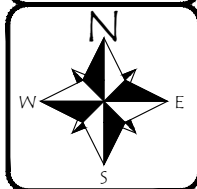


LEGEND:

-  Site Boundary
-  NRCS Soil Boundary
- GeB** Gee silt loam, 0 to 8 percent slopes. Not hydric.
- GeD** Gee silt loam, 8 to 20 percent slopes. Not hydric.
- OdB** Odne silt loam, 0 to 5 percent slopes. **Hydric.**

NOTE(S):

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



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Figure 3

NRCS SOIL SURVEY

La Center Exit Delineation

Timberland Inc.

La Center, Clark County, WA

Sections 4&9, Township 4N, Range 1E, W.M.



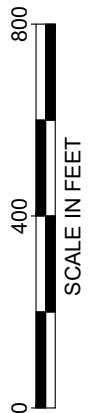
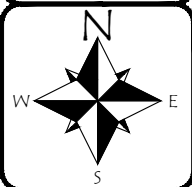
No mapped wetlands indicated onsite by US Fish & Wildlife Service.

LEGEND:

-  Site Boundary
-  Wetlands
-  Riverine

NOTE(S):

1. Map provided on-line by US Fish & Wildlife Service at web address:
<https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper>



SCALE IN FEET



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Figure 4

USFWS NATIONAL WETLANDS INVENTORY
La Center Exit Delineation
Timberland Inc,
La Center, Clark County, WA
Sections 4&9, Township 4N, Range 1E, W.M.

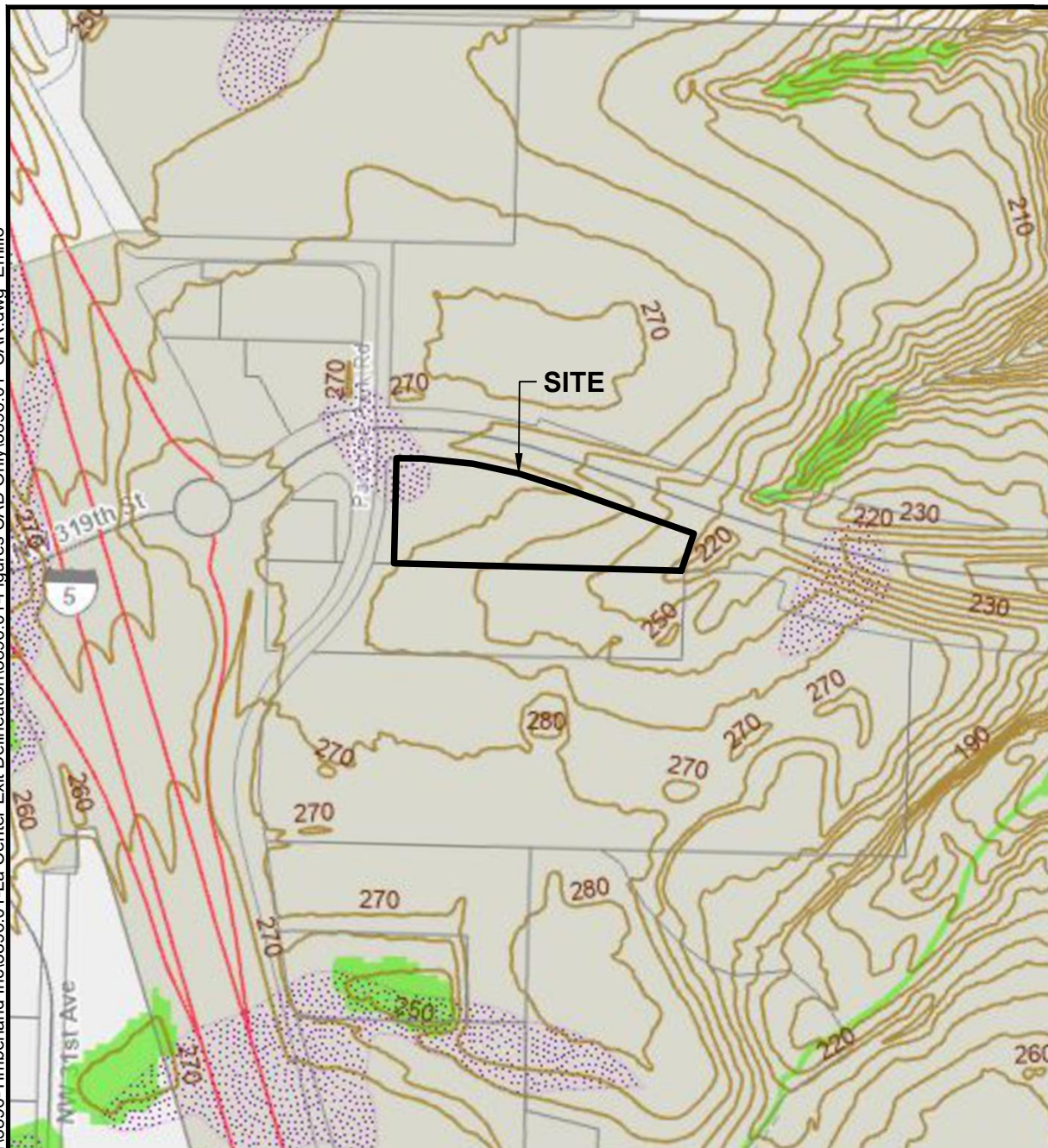


Figure 5
CLARK COUNTY CRITICAL AREAS
La Center Exit Delineation

Timberland Inc.
La Center, Clark County, WA
Sections 4&9, Township 4N, Range 1E, W.M.

DATE: 8/2/23
DWN: EF
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PRJ. MGR: SH
CHK:
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LEGEND:

— Site Boundary

Environmental

Priority Habitats and Species Group

Riparian Habitat

▨ Riparian Habitat Area

Slopes and Geologic Hazards Group

Contour Lines

— Contour Lines - 10 ft

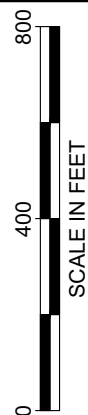
Soils and Wetlands Inventory

▨ Hydric Soils

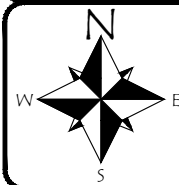
▨ Potential Wetlands Presence

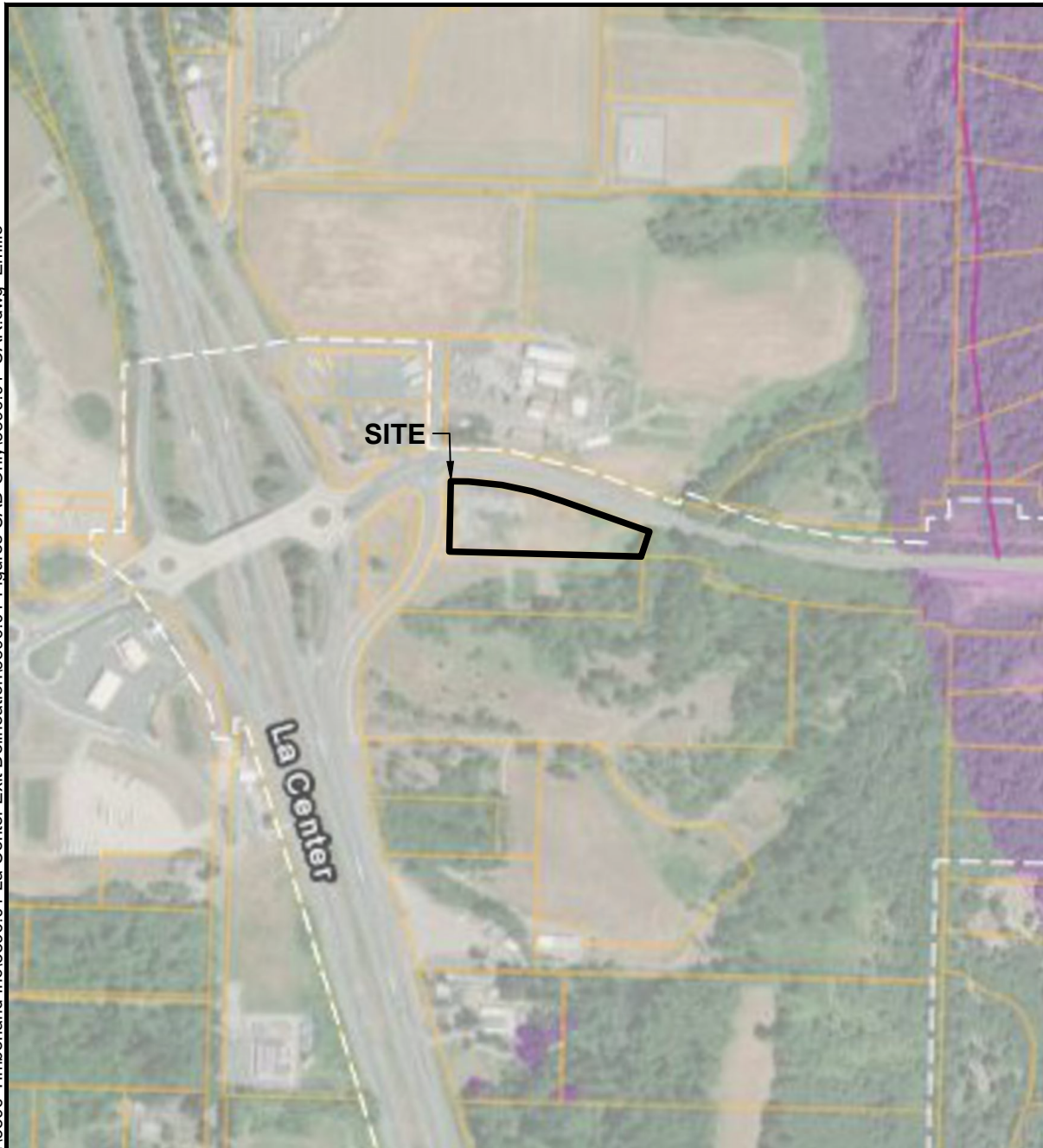
NOTE(S):

1. Map provided on-line by Clark County at web address: <https://gis.clark.wa.gov/maponline/index.cfm?site=Environmental>



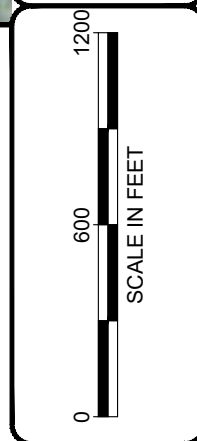
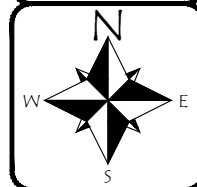
SCALE IN FEET





- LEGEND:**
- Site Boundary
 - Parcel Boundary
 - Coho - Occurrence
 - Rainbow Trout - Occurrence/Migration
 - Summer Steelhead - Occurrence/Migration
 - Winter Steelhead - Occurrence/Migration
 - Fall Chum - Occurrence/Migration
 - Oak Woodland
 - Biodiversity Areas and Corridor
- By Township:**
- Little Brown Bat
 - Yuma myotis

NOTE: Map provided on-line by Washington State Department of Fish & Wildlife at web address:
<http://apps.wdfw.wa.gov/phsontheweb/>



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 PRJ. MGR: SH
 CHK:
 PROJECT NO:
 3896.01

Figure 6
WDFW PRIORITY HABITATS AND SPECIES
 La Center Exit Delineation
 Timberland Inc,
 La Center, Clark County, WA
 Section 4&9, Township 4N, Range 1E, W.M.

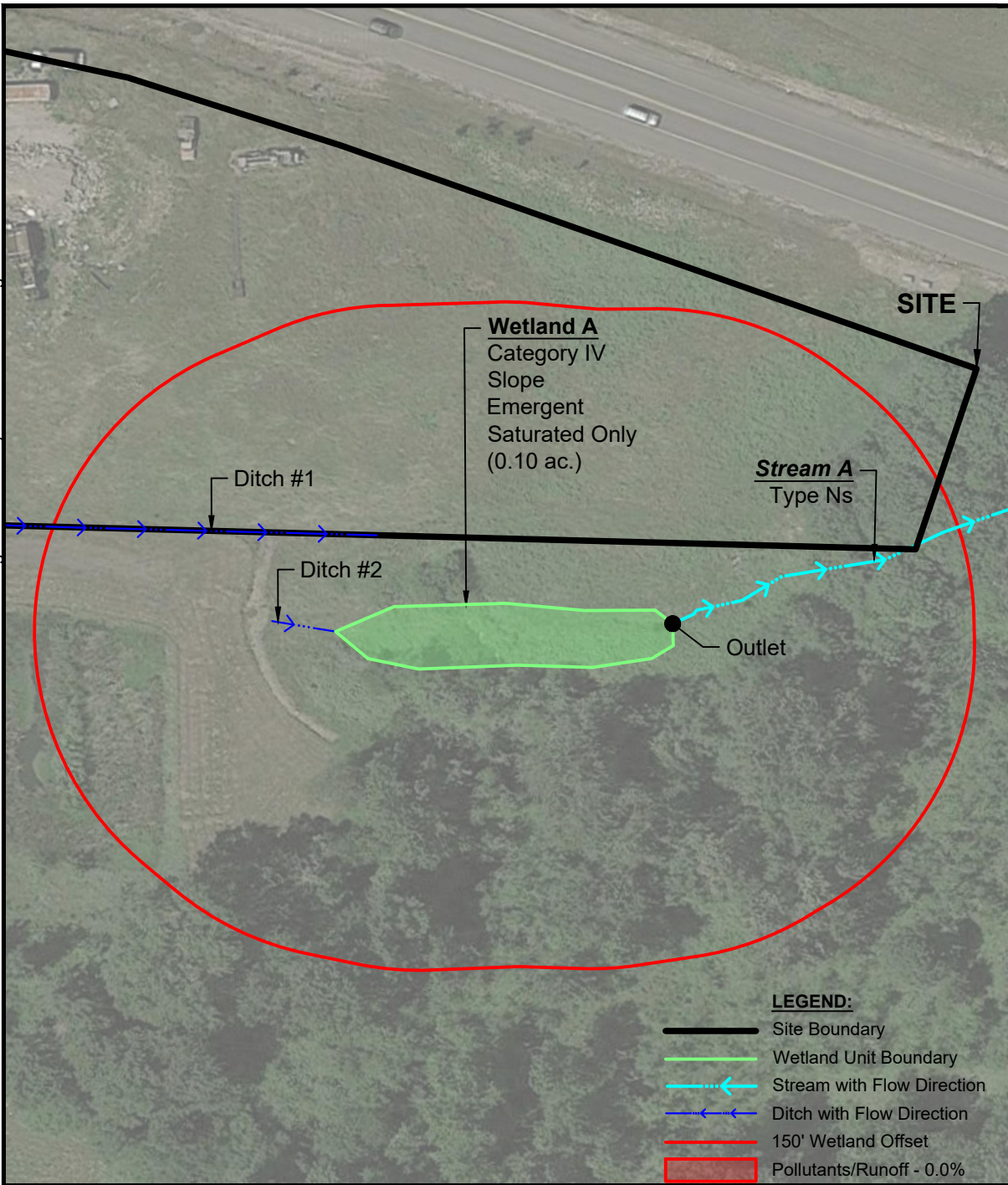


Figure 7

WETLAND RATING FORM-150' OFFSET

La Center Exit Delineation

Timberland Inc,

La Center, Clark County, WA

Sections 4&9, Township 4N, Range 1E, W.M.

DATE: 8/2/23

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**Ecological
Land Services**

Rating Question #

Description

Wetland A Sloping

S 1.3 Plant cover of trees, shrubs, and herbs

S 2.1 Boundary of area w/in 150' of the wetland-land uses that generate pollutants

S 4.1 Characteristics of slowing water flow

S 5.1 Boundary of area w/in 150' of the wetland-land uses or cover that generate excess runoff

H 1.1 Cowardin Plant Classes

H 1.2 Hydroperiods

H 1.4 Interspersion of habitats

Dense, uncut, woody plants > 1/4 of the area

<10% of the area within 150' in land uses that generate pollutants

<90% dense, uncut, rigid plant cover

<25% of area within 150 feet upslope in land uses that generates excess runoff

Emergent

Saturated only

No interspersion of habitat

160

80

0

SCALE IN FEET

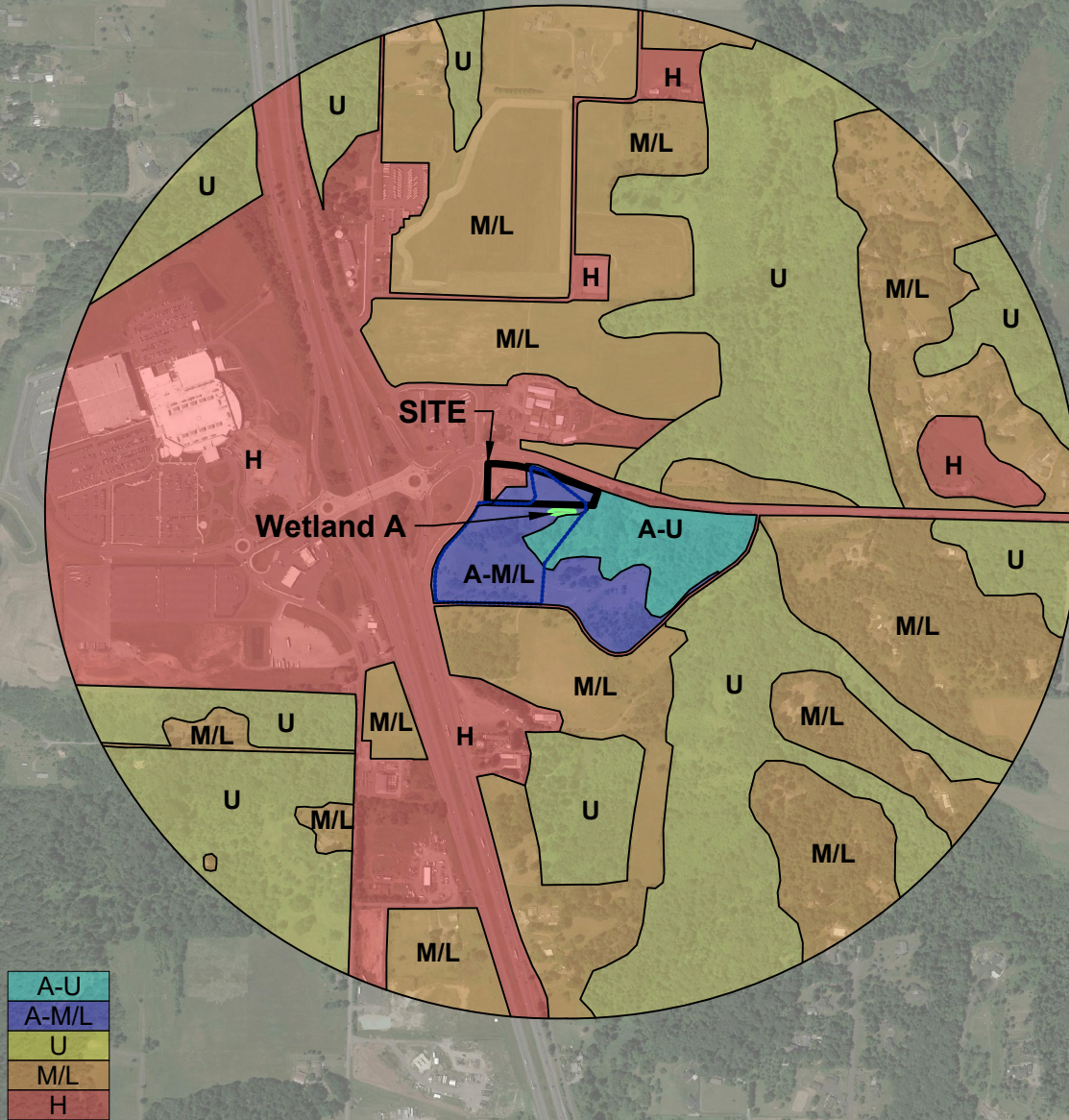
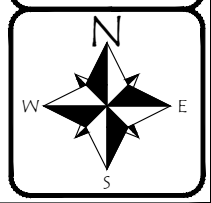
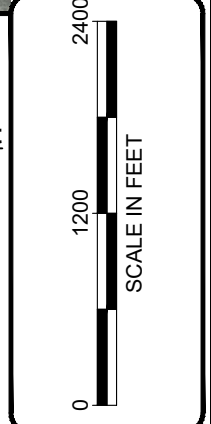


Figure 8
WETLAND RATING FORM-1 km OFFSET
 La Center Exit Delineation
 Timberland Inc.
 La Center, Clark County, WA
 Sections 4&9, Township 4N, Range 1E, W.M.

DATE: 8/2/23
 DWN: EF
 REQ. BY: SH
 PRJ. MGR: SH
 CHK:
 PROJECT NO:
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Ecological Land Services



LEGEND:

- Site Boundary
- Wetland Unit Boundary
- Contributing Basin
113x area of Wetland A

H2.1 Accessible Habitat

A-U	A-U (1.7%)
A-M/L	A-M/L (2.3%)

H2.2 Undisturbed Habitat

U	U (29.3%)
M/L	M/L (35.1%)

H2.3 Land Use Intensity

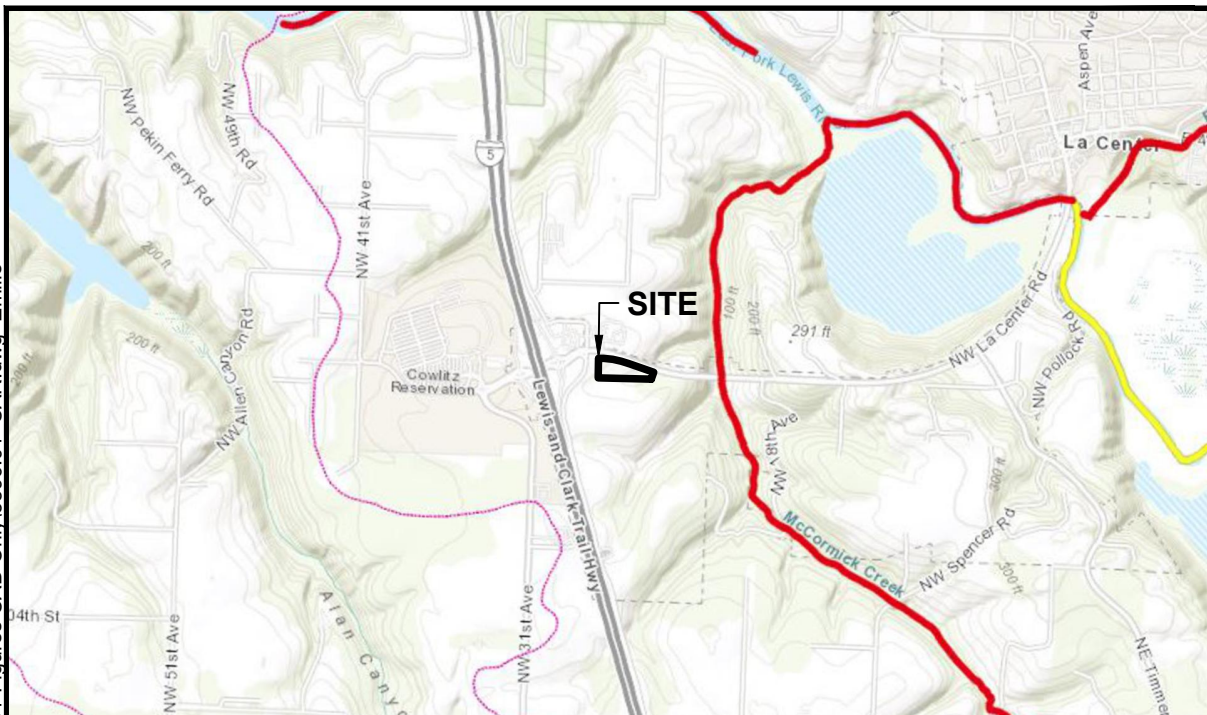
H	H (31.5%)
---	-----------

H 2.1. Accessible Habitat Equation

$$\% \text{ [A-U] habitat } 1.7\% + [(\% \text{ [A-M/L] intensity land uses})/2] 1.2\% = 2.9\%$$

H 2.2. Total Undisturbed Habitat Equation

$$\% \text{ [A-U] } + \% \text{ [U] habitat } 31.0\% + [(\% \text{ [A-M/L] } + \% \text{ [M/L] land uses})/2] 18.7\% = 49.7\%$$



Assessed Waters/Sediment

Water

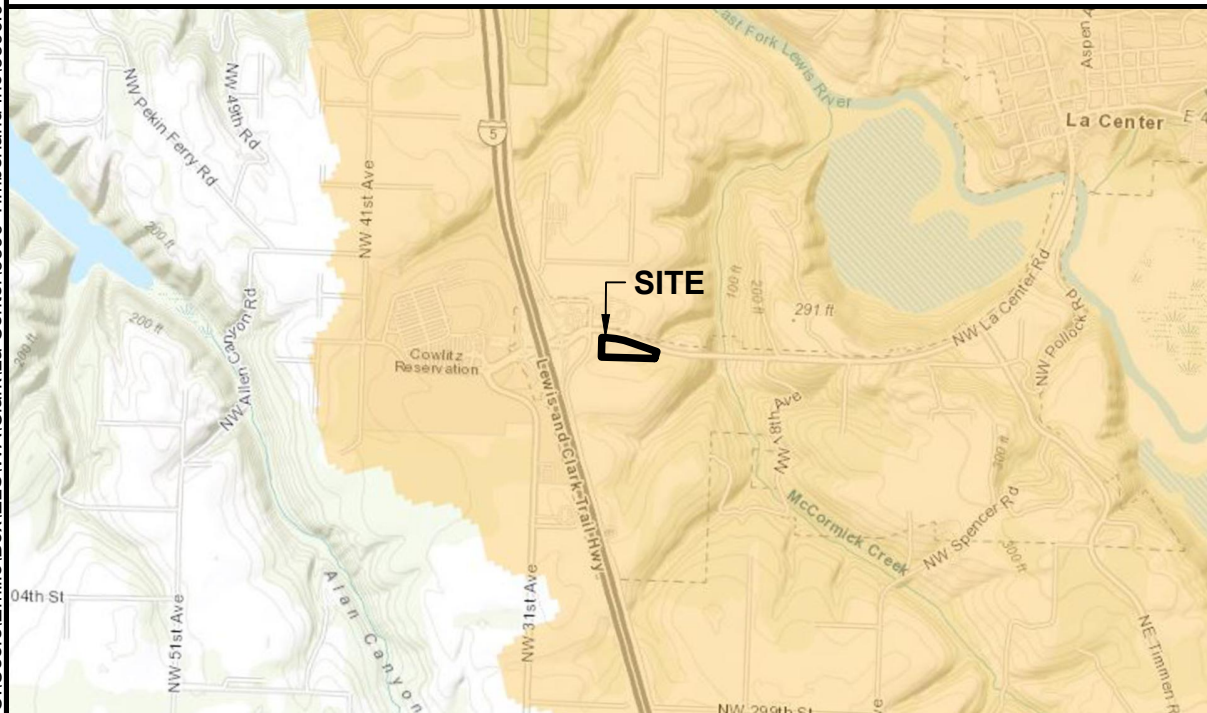
- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

Sediment

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

Subbasins

- 12 Digit HUC Boundary



WQ Improvement Projects

- Approved
- In Development

NOTE(S):

1. Map provided on-line by Washington State Department of Ecology at web address: <https://fortress.wa.gov/ecy/waterqualityatlas/map.aspx?>

Figure 9

WETLAND RATING FORM-303(d) and TMDLs

La Center Exit Delineation

Timberland Inc.

La Center, Clark County, WA

Sections 4&9, Township 4N, Range 1E, W.M.

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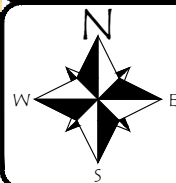
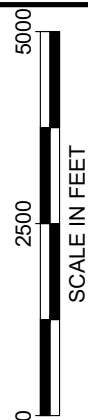




Photo Point 1. View north of equipment storage area.



Photo Point 1. View northeast of equipment storage area.

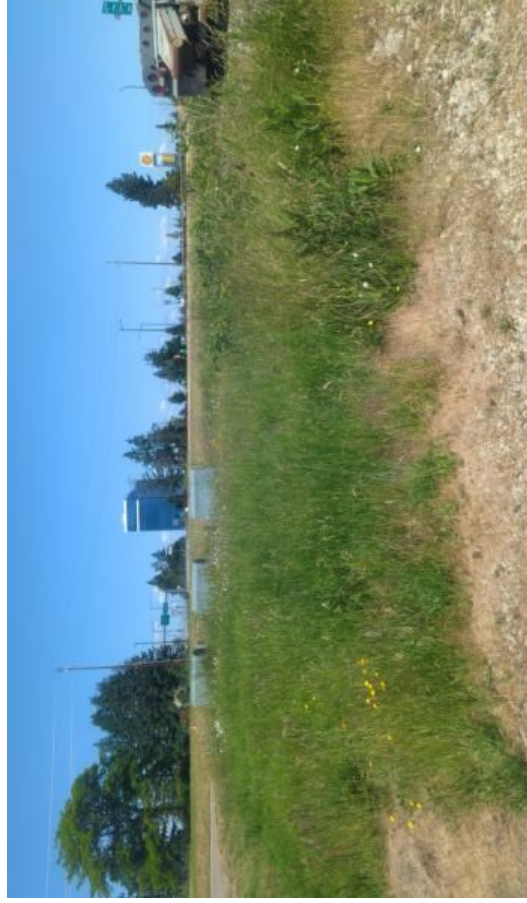


Photo Point 1. View northwest of equipment storage area.



Photo Point 2. View south of offsite stormwater facility taken from northeast corner.



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Photoplate #1
Site Photos
La Center Exit Delineation
Clark County, WA
Section 4, Township 4N, Range 1E, W.M.



Photo Point 3. View southwest of offsite stormwater facility taken from northwest corner.



Photo Point 4. View northwest of offsite stormwater facility taken from the southeast corner.



Photo Point 5. View north of offsite stormwater facility taken from the south.



Photo Point 6. View northeast of offsite stormwater facility taken from southwest corner.



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**Photoplate #2
Site Photos**

La Center Exit Delineation
Clark County, WA
Section 4, Township 4N, Range 1E, W.M.

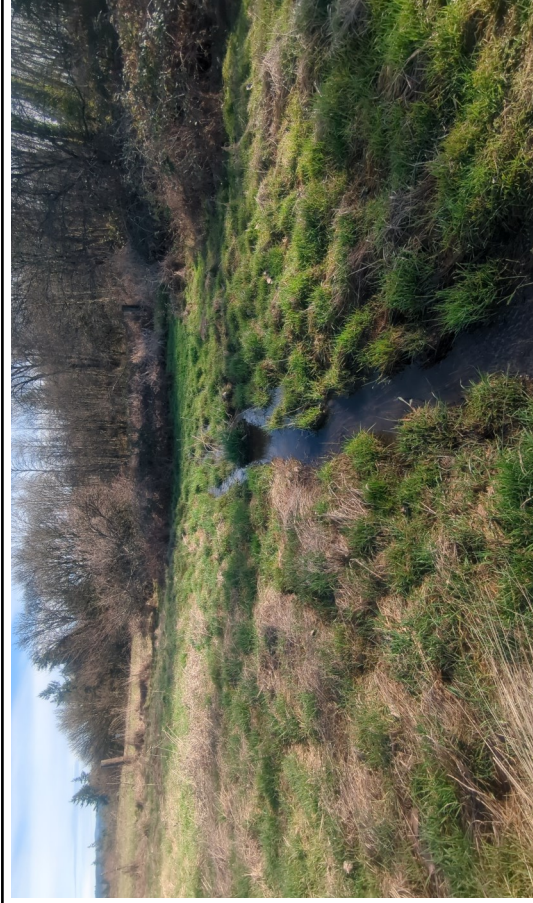


Photo Point 7. View east of unmaintained offsite Ditch 2 leading from stormwater outfall to Wetland A.



Photo Point 7. View southwest of offsite stormwater outfall and Ditch



Photo Point 8. View east of pasture grasses, toward Stream A ravine.



Photo Point 8. View north of pasture grasses and equipment storage at top left.



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**Photoplate #3
Site Photos**

La Center Exit Delineation
Clark County, WA
Section 4, Township 4N, Range 1E, W.M.



Photo Point 8. View south of pasture grasses and offsite Wetland A at top left.



Photo Point 8. View west of pasture grasses and equipment storage at top right.



Photo Point 9. View south of Stream A ravine.



Photo Point 9. View southeast of Stream A ravine.



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**Photoplate #4
Site Photos**
La Center Exit Delineation
Clark County, WA
Section 4, Township 4N, Range 1E, W.M.



Photo Point 10. View of Stream A from the top of the steep bank, taken 2/9/2023.



Photo Point 11. View north of field with pasture grasses, taken 6/1/2023.



Photo Point 11. View south of offsite Wetland A and riparian habitat, taken 6/1/2023.



Photo Point 12. View southwest of offsite Wetland A and riparian habitat, taken 6/1/2023.



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**Photoplate #5
Site Photos**

La Center Exit Delineation
Clark County, WA

Section 4, Township 4N, Range 1E, W.M.



Photo Point 13. View west of off-site Wetland A.



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**Photoplate #6
Site Photos**

La Center Exit Delineation
Clark County, WA

Section 4, Township 4N, Range 1E, W.M.

APPENDIX A

WETLAND DETERMINATION DATA SHEETS

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

Project/Site: La Center Exit Delineation City/County: La Center/Clark Sampling Date: 2/9/23
 Applicant/Owner: Timberland Inc. State: WA Sampling Point: TP-1
 Investigator(s): Blake, J.; Hastings, S. Section, Township, Range: S9, T4N, R1E
 Landform (hillslope, terrace, etc.): Terraces Local relief: (concave, convex, none): Convex Slope (%): 8-20%
 Subregion (LRR): LRRA Lat: 45.8518269 Long: -122.6992257 Datum: 83
 Soil Map Unit Name: Gee silt loam, 0 to 8 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soils Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: This test plot (TP-1) was located within parcel 209708000, in the southwestern portion of the site. TP-1 only met one wetland indicator; therefore, TP-1 is not located within a wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u> ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet
1. _____	%			Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	%			
3. _____	%			
4. _____	%			
50% = ____ 20% = ____	%	=Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u> ft. radius)				Prevalence Index worksheet Total % Cover of: _____ Multiply by: _____
1. _____	%			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: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. _____	%			
3. _____	%			
4. _____	%			
5. _____	%			
50% = ____ 20% = ____	%	=Total Cover		
Herb Stratum (Plot size: <u>5</u> ft radius)				
1. <i>Poa sp.*</i>	35%	yes	FAC	
2. <i>Schedonorus arundinaceus</i>	35%	yes	FAC	
3. <i>Vicia americana</i>	25%	yes	FAC	
4. <i>Plantago major</i>	5%	no	FAC	
5. _____	%			
6. _____	%			
7. _____	%			
8. _____	%			
9. _____	%			
10. _____	%			
11. _____	%			
50% = <u>50</u> 20% = <u>20</u>	100%	=Total Cover		
Woody Vine Stratum (Plot size: <u>15</u> ft radius)				
1. _____	%			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	%			
50% = ____ 20% = ____	%	=Total Cover		
% Bare Ground in Herb Stratum <u>0%</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: <i>Poa sp.*</i> indicator assumed FAC.				

SOIL

Sampling Point: TP-1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-14	10YR 3/3	100%		%			Loam	
14-16	10YR 3/3	98%	10YR 5/6	2%	C	M	Loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

Indicators for Problematic Hydric Soils

☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Minerals (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)

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

³Indicators 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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

☐ 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)

☐ 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
Water Table Present? Yes No
Saturation Present? Yes No
(Includes Capillary fringe)

Depth (Inches):
Depth (Inches):
Depth (Inches):

Wetland Hydrology Present? Yes No

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: La Center Exit Delineation City/County: La Center/Clark Sampling Date: 6/1/23
 Applicant/Owner: Timberlan Inc. State: WA Sampling Point: TP-2
 Investigator(s): Hastings, S.; Naglich, F. Section, Township, Range: S9, T5N, R1E
 Landform (hillslope, terrace, etc.): Terraces Local relief: (concave, convex, none): Convex Slope (%): 8-20%
 Subregion (LRR): LRRa Lat: 45.851911 Long: -122.6991675 Datum: 83
 Soil Map Unit Name: Gee silt loam, 0 to 8 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soils Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: This test plot (TP-2) was located within parcel 209708000, in the southwestern portion of the site. TP-2 only met one wetland indicator; therefore, TP-2 is not located within a wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u> ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet
1. _____	%			Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	%			
3. _____	%			
4. _____	%			
50% = ____ 20% = ____	%	=Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u> ft. radius)				Prevalence Index worksheet Total % Cover of: _____ Multiply by: _____
1. _____	%			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: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. _____	%			
3. _____	%			
4. _____	%			
5. _____	%			
50% = ____ 20% = ____	%	=Total Cover		
Herb Stratum (Plot size: <u>5</u> ft radius)				
1. <i>Phleum pratense</i>	70%	yes	FAC	
2. <i>Holcus lanatus</i>	20%	no	FAC	
3. <i>Schedonorus arundinaceus</i>	5%	no	FAC	
4. <i>Vicia americana</i>	5%	no	FAC	
5. <i>Anthoxanthum odoratum</i>	5%	no	FACU	
6. _____	%			
7. _____	%			
8. _____	%			
9. _____	%			
10. _____	%			
11. _____	%			
50% = <u>53</u> 20% = <u>21</u>	105%	=Total Cover		
Woody Vine Stratum (Plot size: <u>15</u> ft radius)				
1. _____	%			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	%			
50% = ____ 20% = ____	%	=Total Cover		
% Bare Ground in Herb Stratum <u>0</u>%				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:				

SOIL

Sampling Point: TP-2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-13	10YR 4/3	100%		%			Silt Loam	
13-16	10YR 4/2	85%	10YR 3/6	15%	C	M	Silt Clay Loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

Indicators for Problematic Hydric Soils

☐ Histosol (A1)

☐ Histic Epipedon (A2)

☐ Black Histic (A3)

☐ Hydrogen Sulfide (A4)

☐ Depleted Below Dark Surface (A11)

☐ Thick Dark Surface (A12)

☐ Sandy Mucky Minerals (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)

☐ 2 cm Muck (A10)

☐ Red Parent Material (TF2)

☐ Very Shallow Dark Surface (TF12)

☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and Wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type:

Depth (inches):

Remarks:

Hydric Soil Present? Yes ☐ No ☒

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

☐ 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)

☐ 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 ☒ Depth (Inches):

Water Table Present? Yes ☐ No ☒ Depth (Inches):

Saturation Present? Yes ☐ No ☒ Depth (Inches):

(Includes Capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

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: La Center Exit Delineation City/County: La Center/Clark Sampling Date: 2/9/23
 Applicant/Owner: Timberland Inc. State: WA Sampling Point: TP-3
 Investigator(s): Blake, J.; Hastings, S. Section, Township, Range: S9, T4N, R1E
 Landform (hillslope, terrace, etc.): Terraces Local relief: (concave, convex, none): Convex Slope (%): 8-20%
 Subregion (LRR): LRRa Lat: 45.8518282 Long: -122.6990075 Datum: 83
 Soil Map Unit Name: Gee silt loam, 0 to 8 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soils Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: This test plot (TP-3) was located within parcel 209708000, in the southwestern portion of the site just east of TP-1. TP-3 only met one wetland indicator; therefore, TP-3 is not located within a wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u> ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet
1. _____	%			Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	%			
3. _____	%			
4. _____	%			
50% = ____ 20% = ____	%	=Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u> ft. radius)				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= _____
1. _____	%			
2. _____	%			
3. _____	%			
4. _____	%			
5. _____	%			
50% = ____ 20% = ____	%	=Total Cover		
Herb Stratum (Plot size: <u>5</u> ft radius)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <i>Poa sp.*</i>	40%	yes	FAC	
2. <i>Schedonorus arundinaceus</i>	40%	yes	FAC	
3. <i>Rubus ursinus</i>	10%	no	FACU	
4. <i>Galium aparine</i>	10%	no	FACU	
5. _____	%			
6. _____	%			
7. _____	%			
8. _____	%			
9. _____	%			
10. _____	%			
11. _____	%			
50% = <u>50</u> 20% = <u>20</u>	100%	=Total Cover		
Woody Vine Stratum (Plot size: <u>15</u> ft radius)				
1. _____	%			
2. _____	%			
50% = ____ 20% = ____	%	=Total Cover		
% Bare Ground in Herb Stratum <u>0%</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: <i>Poa sp.*</i> indicator assumed FAC.				

SOIL

Sampling Point: TP-3

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-13	10YR 3/3	100%		%			Silt Clay Loam	
13-16	10YR 3/3	98%	5YR 3/4	2%	C	M	Silt Clay Loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

Indicators for Problematic Hydric Soils

☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Minerals (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)

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

³Indicators 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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

☐ 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)

☐ 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 Depth (Inches):
Water Table Present? Yes No Depth (Inches):
Saturation Present? Yes No Depth (Inches):
(Includes Capillary fringe)

Wetland Hydrology Present? Yes No

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: La Center Exit Delineation City/County: La Center/Clark Sampling Date: 6/1/23
 Applicant/Owner: Timberlan Inc. State: WA Sampling Point: TP-4
 Investigator(s): Hastings, S.; Naglich, F. Section, Township, Range: S9, T5N, R1E
 Landform (hillslope, terrace, etc.): Terraces Local relief: (concave, convex, none): Convex Slope (%): 8-20%
 Subregion (LRR): LRRa Lat: 45.8519001 Long: -122.6985392 Datum: 83
 Soil Map Unit Name: Gee silt loam, 0 to 8 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soils Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: This test plot (TP-4) was located within parcel 209708000, in the south-central portion of the site. TP-4 only met one wetland indicator; therefore, TP-4 is not located within a wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u> ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet
1. <u>Frangula purshiana</u>	5%	yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	%			
3. _____	%			
4. _____	%			
50% = <u>3</u> 20% = <u>1</u>	5%	=Total Cover		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= _____
Sapling/Shrub Stratum (Plot size: <u>15</u> ft. radius)				
1. _____	%			
2. _____	%			
3. _____	%			
4. _____	%			
5. _____	%			
50% = _____ 20% = _____	%	=Total Cover		
Herb Stratum (Plot size: <u>5</u> ft radius)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Phleum pratense</u>	60%	yes	FAC	
2. <u>Dactylis glomerata</u>	20%	no	FACU	
3. <u>Vicia americana</u>	5%	no	FAC	
4. <u>Anthoxanthum odoratum</u>	5%	no	FACU	
5. <u>Schedonorus arundinaceus</u>	5%	no	FAC	
6. <u>Rubus ursinus</u>	5%	no	FACU	
7. <u>Leucanthemum vulgare</u>	5%	no	FACU	
8. _____	%			
9. _____	%			
10. _____	%			
11. _____	%			
50% = <u>53</u> 20% = <u>21</u>	105%	=Total Cover		
Woody Vine Stratum (Plot size: <u>15</u> ft radius)				
1. _____	%			
2. _____	%			
50% = _____ 20% = _____	%	=Total Cover		
% Bare Ground in Herb Stratum <u>0</u>%				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:				

SOIL

Sampling Point: TP-4

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 4/2	100%		%			Silt Clay Loam	
12-16	10YR 5/2	95%	10YR 4/6	5%	C	M	Silt Clay Loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

Indicators for Problematic Hydric Soils

☐ Histosol (A1)

☐ Histic Epipedon (A2)

☐ Black Histic (A3)

☐ Hydrogen Sulfide (A4)

☐ Depleted Below Dark Surface (A11)

☐ Thick Dark Surface (A12)

☐ Sandy Mucky Minerals (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)

☐ 2 cm Muck (A10)

☐ Red Parent Material (TF2)

☐ Very Shallow Dark Surface (TF12)

☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and Wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type:

Depth (inches):

Remarks:

Hydric Soil Present?

Yes☐ No☒

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

☐ 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)

☐ 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☒ Depth (Inches):

Water Table Present? Yes☐ No☒ Depth (Inches):

Saturation Present? Yes☐ No☒ Depth (Inches):

(Includes Capillary fringe)

Wetland Hydrology Present?

Yes☐ No☒

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: La Center Exit Delineation City/County: La Center/Clark Sampling Date: 6/1/23
 Applicant/Owner: Timberlan Inc. State: WA Sampling Point: TP-5
 Investigator(s): Hastings, S.; Naglich, F. Section, Township, Range: S9, T5N, R1E
 Landform (hillslope, terrace, etc.): Terraces Local relief: (concave, convex, none): Convex Slope (%): 8-20%
 Subregion (LRR): LRRa Lat: 45.851862 Long: -122.6979377 Datum: 83
 Soil Map Unit Name: Gee silt loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soils Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: This test plot (TP-5) was located within parcel 209708000, in the southern portion of the site downslope of TP-6. TP-5 only met one wetland indicator; therefore, TP-5 is not located within a wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u> ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet
1. _____	%	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	%	_____	_____	
3. _____	%	_____	_____	
4. _____	%	_____	_____	
50% = ____ 20% = ____	%	=Total Cover		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= _____
Sapling/Shrub Stratum (Plot size: <u>15</u> ft. radius)				
1. _____	%	_____	_____	
2. _____	%	_____	_____	
3. _____	%	_____	_____	
4. _____	%	_____	_____	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____	%	_____	_____	
50% = ____ 20% = ____	%	=Total Cover		
Herb Stratum (Plot size: <u>5</u> ft radius)				
1. <i>Phleum pratense</i>	50%	yes	FAC	
2. <i>Dactylis glomerata</i>	20%	no	FACU	
3. <i>Schedonorus arundinaceus</i>	20%	no	FAC	
4. <i>Anthoxanthum odoratum</i>	10%	no	FACU	
5. _____	%	_____	_____	
6. _____	%	_____	_____	
7. _____	%	_____	_____	
8. _____	%	_____	_____	
9. _____	%	_____	_____	
10. _____	%	_____	_____	
11. _____	%	_____	_____	
50% = <u>50</u> 20% = <u>20</u>	100%	=Total Cover		
Woody Vine Stratum (Plot size: <u>15</u> ft radius)				
1. _____	%	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	%	_____	_____	
50% = ____ 20% = ____	%	=Total Cover		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
% Bare Ground in Herb Stratum <u>0%</u>				
Remarks:				

SOIL

Sampling Point: TP-5

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/3	100%		%			Silt Loam	
12-16	10YR 3/2	100%		%			Silt Loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

Indicators for Problematic Hydric Soils

☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Minerals (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)

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

³Indicators 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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

☐ 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)

☐ 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 Depth (Inches):
Water Table Present? Yes No Depth (Inches):
Saturation Present? Yes No Depth (Inches):
(Includes Capillary fringe)

Wetland Hydrology Present? Yes No

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: La Center Exit Delineation City/County: La Center/Clark Sampling Date: 2/9/23
 Applicant/Owner: Timberland Inc. State: WA Sampling Point: TP-6
 Investigator(s): Blake, J.; Hastings, S. Section, Township, Range: S9, T4N, R1E
 Landform (hillslope, terrace, etc.): Terraces Local relief: (concave, convex, none): Convex Slope (%): 8-20%
 Subregion (LRR): LRRa Lat: 45.8520088 Long: -122.6979469 Datum: 83
 Soil Map Unit Name: Gee silt loam, 0 to 8 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soils Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: This test plot (TP-6) was located within parcel 209708000, in the central portion of the site just north of TP-5. TP-6 only met one wetland indicator; therefore, TP-6 is not located in a wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u> ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet
1. _____	%			Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67</u> (A/B)
2. _____	%			
3. _____	%			
4. _____	%			
50% = ____ 20% = ____	%	=Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u> ft. radius)				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= _____
1. _____	%			
2. _____	%			
3. _____	%			
4. _____	%			
5. _____	%			
50% = ____ 20% = ____	%	=Total Cover		
Herb Stratum (Plot size: <u>5</u> ft radius)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Poa sp.*</u>	35%	yes	FAC	
2. <u>Schedonorus arundinaceus</u>	35%	yes	FAC	
3. <u>Jacobaea vulgaris</u>	20%	yes	FACU	
4. <u>Geranium mole</u>	5%	no	UPL	
5. <u>Plantago major</u>	5%	no	FAC	
6. _____	%			
7. _____	%			
8. _____	%			
9. _____	%			
10. _____	%			
11. _____	%			
50% = <u>50</u> 20% = <u>20</u>	100%	=Total Cover		
Woody Vine Stratum (Plot size: <u>15</u> ft radius)				
1. _____	%			
2. _____	%			
50% = ____ 20% = ____	%	=Total Cover		
% Bare Ground in Herb Stratum <u>0%</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: <u>Poa sp.*</u> indicator assumed FAC.				

SOIL

Sampling Point: TP-6

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-13	10YR 3/3	100%		%			Silt Clay Loam	
13-16	10YR 3/3	99%	5YR 3/4	1%	C	M	Silt Clay Loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

Indicators for Problematic Hydric Soils

☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Minerals (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)

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

³Indicators 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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

☐ 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)

☐ 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
Water Table Present? Yes No
Saturation Present? Yes No
(Includes Capillary fringe)

Depth (Inches):
Depth (Inches):
Depth (Inches):

Wetland Hydrology Present? Yes No

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

Remarks:

US Army Corps of Engineers

Western Mountains, Valleys and Coast – FINAL Version 2.0

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

Project/Site: La Center Exit Delineation City/County: La Center/Clark Sampling Date: 2/9/23
 Applicant/Owner: Timberlan Inc. State: WA Sampling Point: TP-7
 Investigator(s): Blake, J.; Hastings, S. Section, Township, Range: S9, T5N, R1E
 Landform (hillslope, terrace, etc.): Terraces Local relief: (concave, convex, none): Convex Slope (%): 8-20%
 Subregion (LRR): LRRa Lat: 45.851846 Long: -122.6972398 Datum: 83
 Soil Map Unit Name: Gee silt loam, 0 to 8 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soils Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: This test plot (TP-7) was located within parcel 209708000, in the southeastern portion of the site. TP-7 only met one wetland indicator; therefore, TP-7 is not located within a wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet
1. <u>Acer macrophyllum</u>	50%	yes	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60</u> (A/B)
2. _____	%			
3. _____	%			
4. _____	%			
50% = <u>25</u> 20% = <u>10</u>	50%	=Total Cover		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 = _____
Sapling/Shrub Stratum (Plot size: 15 ft. radius)				
1. _____	%			
2. _____	%			
3. _____	%			
4. _____	%			
5. _____	%			
50% = _____ 20% = _____	%	=Total Cover		
Herb Stratum (Plot size: 5 ft radius)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Leucanthemum vulgare</u>	25%	yes	FACU	
2. <u>Schedonorus arundinaceus</u>	20%	yes	FAC	
3. <u>Poa sp.*</u>	20%	yes	FAC	
4. <u>Lactuca serriola</u>	10%	no	FACU	
5. <u>Tellima grandiflora</u>	10%	no	FACU	
6. <u>Galium aparine</u>	5%	no	FACU	
7. <u>Polystichum munitum</u>	5%	no	FACU	
8. <u>Rumex crispus</u>	5%	no	FAC	
9. _____	%			
10. _____	%			
11. _____	%			
50% = <u>50</u> 20% = <u>20</u>	100%	=Total Cover		
Woody Vine Stratum (Plot size: 15 ft radius)				
1. <u>Rubus armeniacus</u>	40%	yes	FAC	
2. _____	%			
50% = <u>20</u> 20% = <u>8</u>	40%	=Total Cover		
% Bare Ground in Herb Stratum <u>0%</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: <u>Poa sp.*</u> indicator assumed FAC.				

SOIL

Sampling Point: TP-7

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-13	10YR 3/3	100%		%			Silt Clay Loam	
13-16	10YR 3/3	99%	5YR 3/4	1%	C	M	Silt Clay Loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

Indicators for Problematic Hydric Soils

☐ Histosol (A1)

☐ Histic Epipedon (A2)

☐ Black Histic (A3)

☐ Hydrogen Sulfide (A4)

☐ Depleted Below Dark Surface (A11)

☐ Thick Dark Surface (A12)

☐ Sandy Mucky Minerals (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)

☐ 2 cm Muck (A10)

☐ Red Parent Material (TF2)

☐ Very Shallow Dark Surface (TF12)

☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and Wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type:

Depth (inches):

Remarks:

Hydric Soil Present?

Yes☐ No☒

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

☐ 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)

☐ 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☒ Depth (Inches):

Water Table Present? Yes☐ No☒ Depth (Inches):

Saturation Present? Yes☐ No☒ Depth (Inches):

(Includes Capillary fringe)

Wetland Hydrology Present?

Yes☐ No☒

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

Remarks:

APPENDIX B

WETLAND RATING FORM

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland A Date of site visit: 6/1/2023

Rated by Sara Hastings Trained by Ecology? Yes ☐ No ☐ Date of training: 6/2022

HGM Class used for rating Slope Wetland has multiple HGM classes? ☐ Y ☒ X ☐ N

NOTE: Form is not complete without the figures requested (figures can be combined).

Source of base aerial photo/map Google

OVERALL WETLAND CATEGORY IV (based on functions X or special characteristics)

1. Category of wetland based on FUNCTIONS

 Category I – Total score = 23 – 27

 Category II – Total score = 20 – 22

 Category III – Total score = 16 – 19

 X Category IV – Total score = 9 – 15

FUNCTION	Improving Water Quality			Hydrologic			Habitat			
Circle the appropriate ratings										
Site Potential	H	M	L	H	M	L	H	M	L	
Landscape Potential	H	M	L	H	M	L	H	M	L	
Value	H	M	L	H	M	L	H	M	L	
Score Based on Ratings	5			4			6			TOTAL 15

Wetland A

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	7
Hydroperiods	H 1.2	7
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	7
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to figure above</i>)	S 4.1	7
Boundary of 150 ft buffer (<i>can be added to another figure</i>)	S 2.1, S 5.1	7
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	8
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	9
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	9

HGM Classification of Wetlands in Western Washington

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

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

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

NO – go to 2

YES – the wetland class is **Tidal Fringe** – go to 1.1

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

NO – Saltwater Tidal Fringe (Estuarine)

YES – Freshwater Tidal Fringe

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

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

NO – go to 3

YES – The wetland class is **Flats**

*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

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

- ☐ The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;
☐ At least 30% of the open water area is deeper than 6.6 ft (2 m).

NO – go to 4

YES – The wetland class is **Lake Fringe** (Lacustrine Fringe)

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

- ☒ The wetland is on a slope (*slope can be very gradual*),
☒ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,
☒ The water leaves the wetland **without being impounded**.

NO – go to 5

YES – The wetland class is **Slope**

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

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

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

Wetland A

NO – go to 6

YES – The wetland class is **Riverine** **NOTE:**

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

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

NO – go to 7

YES – The wetland class is **Depressional**

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

NO – go to 8

YES – The wetland class is **Depressional**

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

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

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

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

Wetland A

SLOPE WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

S 1.0. Does the site have the potential to improve water quality?		
S 1.1. Characteristics of the average slope of the wetland: <i>(a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)</i> Slope is 1% or less points = 3 Slope is > 1%-2% points = 2 Slope is > 2%-5% points = 1 Slope is greater than 5% points = 0		1
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions): Yes = 3 No = 0		0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. <i>Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.</i> Dense, uncut, herbaceous plants > 90% of the wetland area points = 6 Dense, uncut, herbaceous plants > ½ of area points = 3 Dense, woody, plants > ½ of area points = 2 Dense, uncut, herbaceous plants > ¼ of area points = 1 Does not meet any of the criteria above for plants points = 0		1
Total for S 1 Add the points in the boxes above		2

Rating of Site Potential If score is: 12 = H 6-11 = M X 0-5 = L

Record the rating on the first page

S 2.0. Does the landscape have the potential to support the water quality function of the site?		
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? Yes = 1 No = 0		0
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other sources Yes = 1 No = 0		0
Total for S 2 Add the points in the boxes above		0

Rating of Landscape Potential If score is: 1-2 = M X 0 = L

Record the rating on the first page

S 3.0. Is the water quality improvement provided by the site valuable to society?		
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0		1
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? <i>At least one aquatic resource in the basin is on the 303(d) list.</i> Yes = 1 No = 0		1
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? <i>Answer YES if there is a TMDL for the basin in which unit is found.</i> Yes = 2 No = 0		2
Total for S 3 Add the points in the boxes above		4

Rating of Value If score is: X 2-4 = H 1 = M 0 = L

Record the rating on the first page

Wetland A

SLOPE WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion

S 4.0. Does the site have the potential to reduce flooding and stream erosion?

S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. *Stems of plants should be thick enough (usually > $\frac{1}{8}$ in), or dense enough, to remain erect during surface flows.*

Dense, uncut, **rigid** plants cover > 90% of the area of the wetland points = 1

All other conditions points = 0

0

Rating of Site Potential If score is: 1 = M X 0 = L

Record the rating on the first page

S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?

S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff? Yes = 1 No = 0

0

Rating of Landscape Potential If score is: 1 = M X 0 = L

Record the rating on the first page

S 6.0. Are the hydrologic functions provided by the site valuable to society?

S 6.1. Distance to the nearest areas downstream that have flooding problems:

The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) points = 2

Surface flooding problems are in a sub-basin farther down-gradient points = 1

No flooding problems anywhere downstream points = 0

1

S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0

0

Total for S 6 Add the points in the boxes above

1

Rating of Value If score is: 2-4 = H X 1 = M 0 = L

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

Wetland A

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

H 1.0. Does the site have the potential to provide habitat?

H 1.1. Structure of plant community: *Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.*

- | | | |
|---|----------------------------------|----------|
| <input type="checkbox"/> Aquatic bed | 4 structures or more: points = 4 | 0 |
| <input checked="" type="checkbox"/> Emergent | 3 structures: points = 2 | |
| <input type="checkbox"/> Scrub-shrub (areas where shrubs have > 30% cover) | 2 structures: points = 1 | |
| <input type="checkbox"/> Forested (areas where trees have > 30% cover) | 1 structure: points = 0 | |
| <i>If the unit has a Forested class, check if:</i> | | |
| <input type="checkbox"/> The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon | | |

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*).

- | | | |
|--|-------------------------------------|----------|
| <input type="checkbox"/> Permanently flooded or inundated | 4 or more types present: points = 3 | 0 |
| <input type="checkbox"/> Seasonally flooded or inundated | 3 types present: points = 2 | |
| <input type="checkbox"/> Occasionally flooded or inundated | 2 types present: points = 1 | |
| <input checked="" type="checkbox"/> Saturated only | 1 type present: points = 0 | |
| <input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland | | |
| <input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland | | |
| <input type="checkbox"/> Lake Fringe wetland | 2 points | |
| <input type="checkbox"/> Freshwater tidal wetland | 2 points | |

H 1.3. Richness of plant species

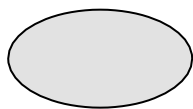
Count the number of plant species in the wetland that cover at least 10 ft².

*Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. **Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***

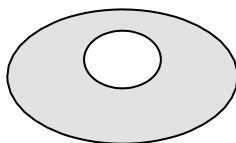
- | | | |
|------------------------------|------------|----------|
| If you counted: > 19 species | points = 2 | 1 |
| 5 - 19 species | points = 1 | |
| < 5 species | points = 0 | |

H 1.4. Interspersion of habitats

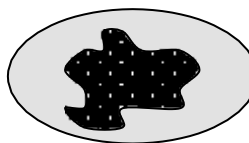
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always high.*



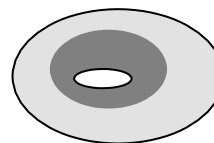
None = 0 points



Low = 1 point

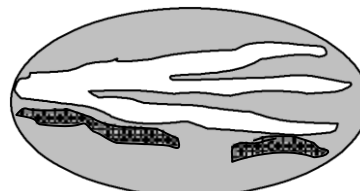
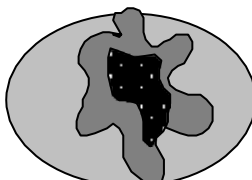
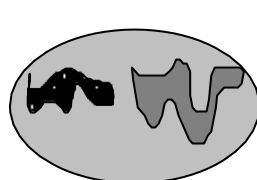


Moderate = 2 points



0

All three diagrams in this row are **HIGH** = 3points



Wetland A

<p>H 1.5. Special habitat features:</p> <p>Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <p><input type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).</p> <p><input type="checkbox"/> Standing snags (dbh > 4 in) within the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)</p> <p><input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)</p> <p><input type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>)</p> <p><input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)</p>	0
<p>Total for H 1</p>	<p>Add the points in the boxes above</p> <p>1</p>

Rating of Site Potential If score is: 15-18 = H 7-14 = M X 0-6 = L

Record the rating on the first page

H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
<p>H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>).</p> <p>Calculate: % undisturbed habitat <u>1.7</u> + [(% moderate and low intensity land uses)/2] <u>1.2</u> = <u>2.9</u>% If</p> <p>total accessible habitat is:</p> <p>> 1/3 (33.3%) of 1 km Polygon points = 3</p> <p>20-33% of 1 km Polygon points = 2</p> <p>10-19% of 1 km Polygon points = 1</p> <p>< 10% of 1 km Polygon points = 0</p>	0
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p>Calculate: % undisturbed habitat <u>31</u> + [(% moderate and low intensity land uses)/2] <u>18.7</u> = <u>49.7</u>%</p> <p>Undisturbed habitat > 50% of Polygon points = 3</p> <p>Undisturbed habitat 10-50% and in 1-3 patches points = 2</p> <p>Undisturbed habitat 10-50% and > 3 patches points = 1</p> <p>Undisturbed habitat < 10% of 1 km Polygon points = 0</p>	1
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p>> 50% of 1 km Polygon is high intensity land use points = (- 2)</p> <p>≤ 50% of 1 km Polygon is high intensity points = 0</p>	0
<p>Total for H 2</p>	<p>Add the points in the boxes above</p> <p>1</p>

Rating of Landscape Potential If score is: 4-6 = H X 1-3 = M < 1 = L

Record the rating on the first page

H 3.0. Is the habitat provided by the site valuable to society?	
<p>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the highest score that applies to the wetland being rated.</i></p> <p>Site meets ANY of the following criteria: points = 2</p> <p><input checked="" type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page)</p> <p><input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</p> <p><input type="checkbox"/> It is mapped as a location for an individual WDFW priority species</p> <p><input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</p> <p><input type="checkbox"/> It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan</p> <p>Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1</p> <p>Site does not meet any of the criteria above points = 0</p>	2

Rating of Value If score is: X 2 = H 1 = M 0 = L

Record the rating on the first page

WDFW Priority Habitats

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

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

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

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

Wetland A

<p>SC 4.0. Forested Wetlands</p> <p>Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i></p> <ul style="list-style-type: none"> — Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more. — Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm). <p>Yes = Category I No = Not a forested wetland for this section</p>	<p>Cat. I</p>
<p>SC 5.0. Wetlands in Coastal Lagoons</p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <ul style="list-style-type: none"> — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be measured near the bottom</i>) <p>Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon</p> <p>SC 5.1. Does the wetland meet all of the following three conditions?</p> <ul style="list-style-type: none"> — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland is larger than 1/10 ac (4350 ft²) <p>Yes = Category I No = Category II</p>	<p>Cat. I</p> <p>Cat. II</p>
<p>SC 6.0. Interdunal Wetlands</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer yes you will still need to rate the wetland based on its habitat functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> — Long Beach Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 <p>Yes – Go to SC 6.1 No = not an interdunal wetland for rating</p> <p>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = Category I No – Go to SC 6.2</p> <p>SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = Category II No – Go to SC 6.3</p> <p>SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? Yes = Category III No = Category IV</p>	<p>Cat I</p> <p>Cat. II</p> <p>Cat. III</p> <p>Cat. IV</p>
<p>Category of wetland based on Special Characteristics</p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	<p>N/A</p>

Wetland A

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APPENDIX C

ROUTINE DETERMINATION METHOD AND PLANT INDICATOR RATING DEFINITIONS

ROUTINE DETERMINATION METHOD

The Routine Determination Method is defined according to the U.S. Army Corps of Engineers' 1987 *Wetland Delineation Manual* and the *Regional Supplement to the Corps of Engineers' Wetland Delineation Manual* (Environmental Laboratory 1987); *Western Mountains, Valleys, and Coast Region (Version 2.0)* (Corps 2010). The Routine Determination Method examines three parameters – vegetation, soils, and hydrology – to determine if wetlands exist in a given area. Hydrology is critical in determining what is a wetland, but is often difficult to assess because hydrologic conditions can change periodically (hourly, daily, or seasonally). Consequently, it is necessary to determine if hydrophytic vegetation and hydric soils are present, which would indicate that water is present for a long enough duration to support a wetland plant community. By definition, wetlands are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

VEGETATION INDICATOR STATUS

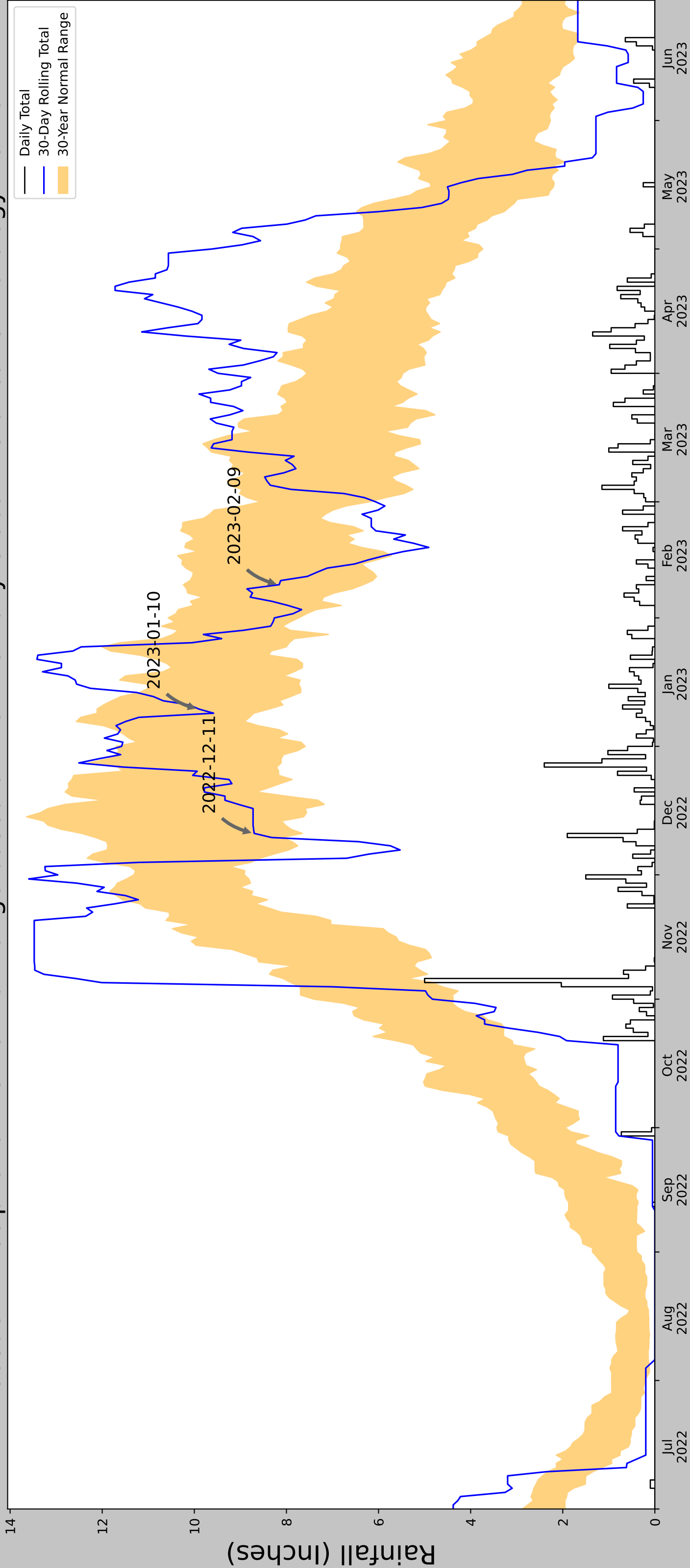
The indicator status, following the scientific names of plant species, indicates the likelihood of the species to be found in wetlands according to the *National Wetland Plant List Indicator Rating Definitions* (Corps 2012). Listed from most likely to least likely to be found in wetlands, the indicator status categories are:

- **OBL** (obligate wetland) - occur almost always under natural conditions in wetlands.
- **FACW** (facultative wetland) - usually occur in wetlands, but occasionally found in non-wetlands.
- **FAC** (facultative) - equally likely to occur in wetlands or non-wetlands.
- **FACU** (facultative upland) - usually occur in non-wetlands, but occasionally found in wetlands.
- **UPL** (obligate upland) - occur almost always under natural conditions in non-wetlands.
- **NI** (no indicator) - insufficient data to assign to an indicator category.

APPENDIX D

APPENDIX D – USACE ANTECEDENT PRECIPITATION TOOL DATA

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	45.85182269, -122.69922257
Observation Date	2023-02-09
Elevation (ft)	254.776
Drought Index (PDSI)	Moderate drought
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-02-09	6.334252	10.237796	8.157481	Normal	2	3	6
2023-01-10	8.379528	12.111811	9.901575	Normal	2	2	4
2022-12-11	7.654725	12.443701	8.700788	Normal	2	1	2
Result							Normal Conditions - 12

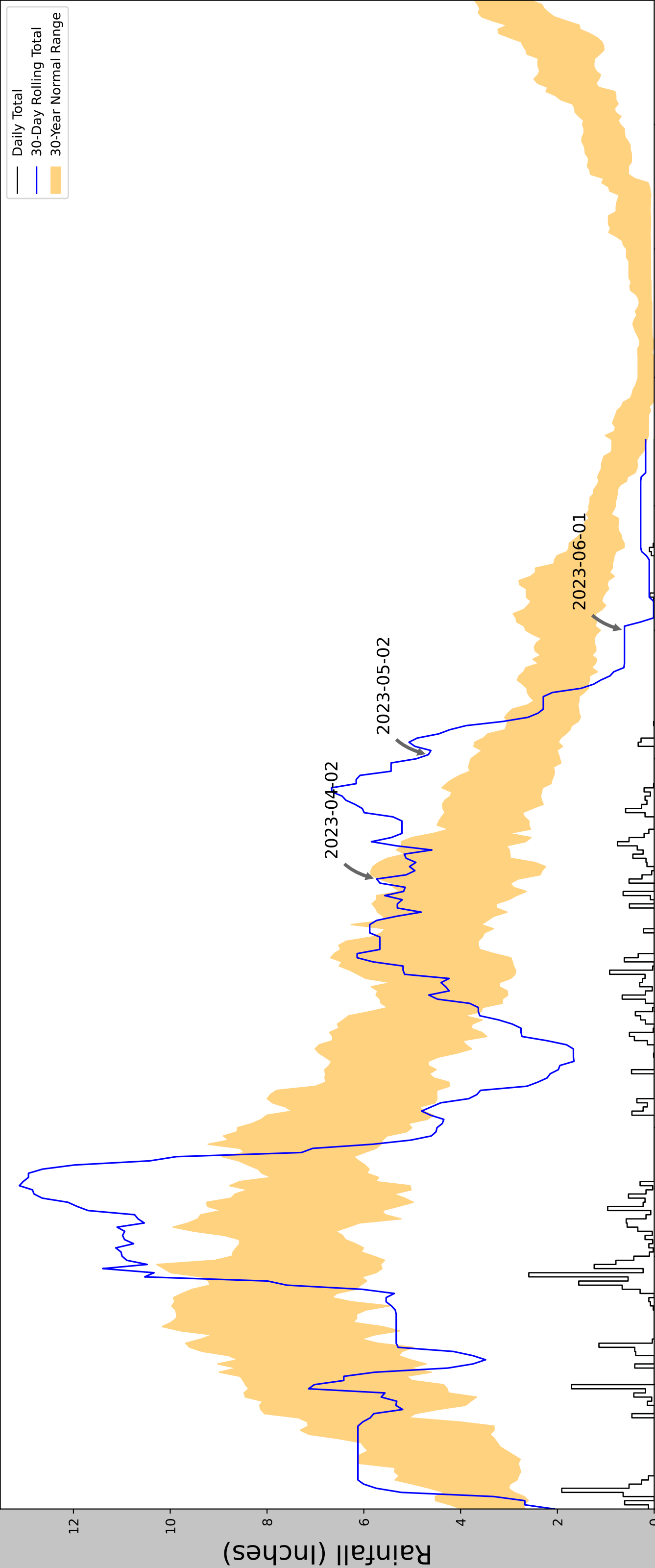


Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
MERWIN DAM	45.955, -122.5625	224.081	9.697	30.695	4.661	10953	85
LA CENTER 4.8 NE	45.9101, -122.5914	828.084	3.399	604.003	3.583	0	5
KALAMA FALLS HATCHERY	46.0158, -122.7325	235.892	9.179	11.811	4.239	366	0
YACOLT 9.0 N	45.9967, -122.3988	458.005	8.372	233.924	5.726	31	0
BATTLE GROUND	45.7717, -122.5286	284.121	12.769	60.04	6.513	3	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	45.8518269, -122.6992257
Observation Date	2023-06-01
Elevation (ft)	254.776
Drought Index (PDSI)	Moderate drought
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-06-01	1.111024	2.653543	0.614173	Dry	1	3	3
2023-05-02	1.976772	3.672441	4.665354	Wet	3	2	6
2023-04-02	2.807087	5.687402	5.736221	Wet	3	1	3
Result							Normal Conditions - 12



Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

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Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
DILLEY 2 S	45.4633, -123.1136	193.898	33.482	60.878	17.105	11251	90
FOREST GROVE	45.5247, -123.1025	180.118	4.276	13.78	1.983	81	0
FOREST GROVE 0.6 N	45.5317, -123.1041	172.9	4.748	20.998	2.236	20	0
GASTON 3.2 SW	45.4, -123.183	294.948	5.518	101.05	3.041	1	0