CRITICAL AREAS REPORT

March 24, 2021

Lockwood Meadows Subdivision

La Center, Washington

Prepared for

PLS Engineering

604 W. Evergreen Blvd.

Vancouver, Washington 98660

(360) 944-6519

Prepared by

Ecological Land Services

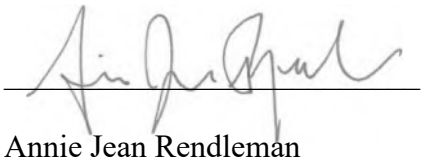
1157 3rd Avenue, Suite 220A • Longview, WA 98632

(360) 578-1371 • Project Number 2245.14

NWS-2020-1015

SIGNATURE PAGE

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



Annie Jean Rendleman
Biologist

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INTRODUCTION

Ecological Land Services, Inc. (ELS) has completed this critical areas report on behalf of PLS Engineering for the purpose of constructing a residential subdivision. The project site consists of Clark County Parcel 209113-000 located at 2000 NE Lockwood Creek Road in La Center, Washington. The site is located within the southeast portion of Section 10, Township 3 North, and Range 2 East of the Willamette Meridian (Sheet 1). This report discusses onsite critical areas in accordance with *La Center Municipal Code (LCMC) Title 18 Development Code* (December 2020).

Project History

- ELS conducted a broad-scope assessment of the site March of 2020.
- ELS delineated wetlands and mapped critical areas September 8, 2020.
- During a site visit with Miranda Adams (Department of Ecology) on November 10, 2020, the Wetland A boundary was confirmed. Five additional test plots were taken near Wetland A to further support the delineation (TPs AA – AE). The pond area was also re-delineated (Wetland B), encompassing a larger area than what was originally outlined. Three additional test plots were taken to support the Wetland B delineation.
- ELS collected additional data from test plots made during the November site visit with Ecology, as well as TP-6, on February 24, 2021.

SITE DESCRIPTION

The project site can be accessed from the southwest via NE Lockwood Creek Road. The 20-acre site is zoned Urban Holding (UH-10) and currently has a single-family residence, barn, and existing well. NE Lockwood Creek Road abuts the southeastern portion of the site and NE 24th Avenue abuts the site to the east. The site is surrounded by high-density subdivision lots to the north and west, and low-density single-family parcels to the south (Sheet 2).

The majority of the site consists of mowed field grasses with scattered trees, including Oregon white oaks (*Quercus garryana*). The eastern portion of the site is a decommissioned Christmas tree farm. The site contains two Category IV wetlands and one priority habitat Oregon white oak (Sheet 2).

Site History

General

The property has been used as both a hobby and commercial farm operation for several decades that included agricultural activities such as livestock, hay, and Christmas tree production, as well as rental pasture and barn stalls for horses. The Christmas trees were grown on a third-party lease arrangement and the last selective tree harvest occurred during the winter of 2020/2021. Site feature and recent maintenance activities performed in the past two years are discussed below.

Ditch Maintenance

The ditch along the north property boundary appears to have been installed circa 2005, according to aerial imagery (Clark County GIS). The owner at that time was concerned about future development activities upslope releasing uncontrolled stormwater onto the property. The ditch

funneled seasonal flow (only in winter) to a swale underlaid by a 4-inch perforated flex pipe (drain tile shown on Sheet 2). The tile drains south to Wetland B, which was excavated to serve as a livestock water pond between 2000 and 2002. In the past two years, the property line ditch was cleaned to original depth and the swale had minor maintenance performed by cleaning deposited silt. As the 4-inch pipe below the swale was plugged in places, it was replaced with a 6-inch flex pipe. The increased pipe size was intended to account for stormwater discharge volumes from upslope developments. Care was taken to daylight the downstream end of the pipe in the Wetland B area (pond) in a flat spot to avoid erosive flows during high rainfall events.

Well Maintenance

An existing hand-dug well, approximately three feet in diameter with a partial brick well casing, is located northeast of Wetland B. The well was a potential falling hazard, as it was previously unmarked. The well perked water to the surface during high ground water events and saturated the immediate downslope area making it further hazardous, as the well casing could slough. As part of the recent maintenance work, the farm contractor filled the well and collapsed the vertical sides to prevent cave-ins and for the site's overall safety. A 4-inch drainpipe was installed downslope of the well to ensure that water no longer saturated the surface area during high groundwater events. The pipe also drains to Wetland B.

Blackberry Removal on Dam

The old pond (Wetland B) was originally constructed by building an earthen dam across the swale before it exited the property toward the south. The dam was overgrown with Himalayan blackberries (*Rubus armeniacus*) and there was evidence of erosion on the downstream side of the dam where the old pond drainpipe went through the dam. This risked a complete dam failure and subsequent downstream damage to a neighboring home and property. The farm contractor removed the blackberries on the dam, removed the pipe, and cut an overflow swale that is open and has gradual grades, to allow water to exit the pond. This prevents high water events from flooding the pond and threatening downstream properties with a dam blow-out.

Noxious Weed Removal

The western portion of the site previously had internal fences. Recent maintenance in this area included removal the internal fences as well as some tree removal, in order to aid in annual mowing, either for hay production or, at minimum, for weed mowing. After horses were removed, there was an infestation of County-listed noxious weeds Canada thistle (*Cirsium arvense*) and tansy ragwort (*Jacobaea vulgaris*) that has since and is currently being routinely maintained with mowing and spraying.

METHODOLOGY

Wetlands

The wetland delineation followed the Routine Determination Method according to the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (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 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 ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands are regulated as "Waters of the United States" by the Corps, as "Waters of the State" by the Washington Department of Ecology (Ecology), and locally by the City of La Center.

ELS biologists completed fieldwork on September 8, 2020 and February 24, 2021 to determine the presence or absence of critical areas and if present, to map their approximate locations. Prior to conducting the initial fieldwork, an ELS biologist reviewed current and historic aerial photographs dating back to 1955 and reviewed the Clark County GIS database (2020) for information regarding soils, topography, wetlands, and habitat conservation areas. ELS biologists collected vegetation, soil, and hydrology information from 18 test plots to determine the presence or absence of wetlands onsite (Sheet 2). Test plot locations were determined based on changes in elevation, vegetation, the presence of hydrology, and according to potential wetland signatures based on an interpretation of aerial imagery. ELS biologists flagged the test plots and wetland boundaries in the field and recorded the locations with a hand-held GPS unit with sub meter accuracy under ideal conditions.

Wetland signatures were observed on aerial imagery within the tree farm area. Wetland A was delineated within a wet signature area in September, and the delineation was supported with several additional test plots in the vicinity during the site visit with Ecology. Wetland A was delineated primarily using vegetation: Pennyroyal (*Mentha pulegium*, OBL), creeping St. John's wort (*Hypericum anagalloides*, OBL), and soft rush (*Juncus effusus*, FACW) were observed within the wetland boundary. Additionally, oxeye daisy (*Leucanthemum vulgare*, FACU) and Himalayan blackberry (FAC) were observed outside of the wetland. Black cottonwood (*Populus balsamifera*, FAC) trees and shrubs are established within Wetland A as well as the area southeast of the wetland. Several test plots were taken in the signature southeast of the wetland (Sheet 2). These test plots contained similar vegetation as Wetland A, but soils were not hydric. Additionally, during the February site visit, standing water was not observed in these areas, but was observed within the wetland.

Wetland B was delineated with Ecology based on changes in vegetation, soils, and hydrology. The permanently ponded portion of the wetland is dominated by black cottonwood and Scouler's willow (*Salix scouleriana*, FAC) and the remainder of the wetland is dominated by creeping buttercup (*Ranunculus repens*, FAC) and mowed grass with some Himalayan blackberry. Hydric soils were observed within Wetland B, including the hydric soil indicator Hydrogen Sulfide (A4). Soils in the wetland buffer contained depleted matrices relatively deeper in the soil with little to no redoximorphic features (1 percent or less). During the follow-up fieldwork in February, less than an inch of standing water was observed at TP-BB, but not outside the wetland boundary.

VEGETATION

The indicator status, following the scientific names indicate the likelihood of a plant species to be established in wetlands. Listed from most likely to least likely, 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.

Wetlands

Wetland A is a forested slope located within the decommissioned tree farm in the eastern portion of the site. Wetland B is forested depressional wetland located in the central southern portion of the site. Wetland A is dominated by **grasses**: sweet vernal grass (*Anthoxanthum odoratum*, FACU), velvet grass (*Holcus lanatus*, FAC), and soft rush (FACW); and **trees**: black cottonwood (FAC) and planted Nordmann fir (*Abies nordmanniana*, assumed to be FACU).

Wetland B is dominated by **herbs**: chickweed (*Stellaria media*, FACU), marsh cudweed (*Gnaphalium uliginosum*, FAC), marsh willowherb (*Epilobium palustre*, OBL), and creeping buttercup (FAC); and **trees**: black cottonwood and Scouler's willow (FAC).

Uplands

Onsite uplands within the field areas were dominated by **herbs and grasses**: sweet vernal grass, colonial bentgrass (*Agrostis capillaris*, FAC), tall fescue (*Schedonorus arundinaceus*, FAC), orchard grass (*Dactylis glomerata*, FACU), and English plantain (*Plantago lanceolata*, FACU); with scattered **shrubs**: Himalayan blackberry and **trees**: Oregon white oak and black cottonwood. The tree farm portion of the site is dominated by **grasses**: sweet vernal grass and colonial bentgrass; and **trees**: Nordmann fir and black cottonwood (Wetland A vicinity only). Regularly mowed Himalayan blackberry is also scattered throughout the tree farm area.

SOILS

Soil onsite is mapped as:

- Gee silt loam, 0 to 8 percent slopes (GeB),
- Gee silt loam, 8 to 20 percent slopes (GeD),
- Hillsboro silt loam, 0 to 3 percent slopes (HoA),
- Hillsboro silt loam, 8 to 15 percent slopes (HoC), and
- Odne silty clay loam, 0 to 3 percent slopes (OdB),

as referenced on the Natural Resources Conservation Service (NRCS) website (2020; Sheet 4).

Gee silt loam, 0 to 8 percent slopes and Gee silt loam, 8 to 20 percent slopes are characterized as moderately well-drained soils with an approximate depth to water table of about 24 to 48 inches

below ground surface (BGS). These soils are generally found on terraces. A typical profile consists of silt loam from 0 to 22 and silty clay loam from 22 to 60 inches BGS.

Hillsboro silt loam, 0 to 3 percent slopes and Hillsboro silt loam, 8 to 15 percent slopes are characterized as well-drained soils with an approximate depth to water table of more than 80 inches BGS. These soils are generally found on terraces. A typical profile consists of silt loam from 0 to 60 inches BGS.

Odne silty clay loam, 0 to 3 percent slopes is characterized as a poorly-drained soil with an approximate depth to water table of about 0 to 18 inches BGS. This soil is generally found on terraces and drainageways. A typical profile consists of ashy silt loam from 0 to 5, silt loam from 5 to 33, and loam from 33 to 60 inches BGS. Odne silty clay loam, 0 to 3 percent slopes is listed as a hydric soil on the *Washington State Hydric Soils List* (NRCS 2019).

Wetland test plots met primary hydric soil indicators Hydrogen Sulfide (A4), Depleted Below Dark Surface (A11), and Depleted Matrix (F3). Soil data from the test plots can be found in Appendix A.

HYDROLOGY

Precipitation data were gathered from the Battle Ground WETS Station and are summarized in the table below from data in Appendix C. Rainfall was below the 30-year monthly average in July and October and was above the 30-year monthly average in June, September, January, and February. In August, November, and December, rainfall did not deviate from the 30-year monthly average. February received 88 percent of its normal rainfall by the day of the site visit on February 24th.

Table 1. Precipitation Data.

Field-work Dates	Precipitation (inches)						
	Prior 14 Day Total	3 Months Prior		30 Year Monthly Average	Deviation from 30 Year Monthly Average	30% Below	30% Above
		Month	Monthly Total				
2/24/21	3.19	02/2021	6.69	5.36	+1.33	3.65	6.40
		01/2021	9.70	7.31	+2.39	5.70	8.45
		12/2020	7.10	7.98	-0.88	6.33	9.18
11/10/20	2.19	11/2020	8.51	7.67	+0.84	5.50	9.06
		10/2020	2.59	4.81	-2.22	3.29	5.74
		09/2020	2.69	2.20	+0.49	1.12	2.65
9/8/2020	0.00	08/2020	0.44	0.80	-0.36	0.37	0.94

Field-work Dates	Precipitation (inches)						
	Prior 14 Day Total	3 Months Prior		30 Year Monthly Average	Deviation from 30 Year Monthly Average	30% Below	30% Above
		Month	Monthly Total				
		07/2020	0.18	0.63	-0.45	0.23	0.70
		06/2019	3.88	2.31	+1.57	1.61	2.75

Oxidized Rhizospheres on Livings Roots (C3) were observed within Wetland A test plots in September and November, and Surface Water (A1), High Water Table (A2), and Saturation (A3) were observed within Wetland A in February. The secondary hydrology indicator Saturation Visible on Aerial Imagery (C9) was also noted during September fieldwork, due to the wet signatures discussed in the *Methodology* section above.

Oxidized Rhizospheres on Livings Roots (C3) were observed within Wetland B test plots during each site visit, and Surface Water (A1), High Water Table (A2), Saturation (A3), and Hydrogen Sulfide Odor (C1) were observed within Wetland B in February. The recorded hydrological data from test plots are in Appendix A.

According to the Washington Department of Natural Resources Stream Type Map (WDNR 2020), a Type Ns stream is mapped onsite, flowing south through the center of the site (Sheets 5 and 6). The Type Ns stream is mapped originating approximately 700 feet offsite to the north, through the center of the site, and continuing offsite southwesterly for another 975 feet before a water type break (Sheet 6). From there, the Type F stream continues southwest for approximately 0.5 miles before reaching a wetland adjacent to East Fork Lewis River. The site lies within Water Resource Inventory Area (WRIA) 27 Lewis and Hydrologic Unit Code (HUC) 170800020507 Lockwood Creek – East Fork Lewis River.

ELS biologists did not observed flowing water, nor any signs of a waterbody in the onsite mapped area onsite. According to *LCMC 18.300.030 Definitions*, "streams" are defined as "those areas where surface waters produce a defined channel or bed excluding streams and lakes regulated under the State Shorelines Management Act." The presence of a stream can be indicated by either hydraulically sorted sediments or by the removal of vegetation from the action of moving water. Photos 7 and 8 show the onsite mapped area, which does not feature a channel, bed, bank, or signs of regular water flow, seasonal or otherwise. An ordinary high water mark (OHWM) could not be delineated because, although slight changes in topography were present, the area does not exhibit changes in vegetation or sediment. Test plots located along the mapped riparian area (TPs 3, 4, and 6) did not contain hydric soils, nor hydrologic indicators. Therefore, ELS has determined that the mapped stream does not meet stream criteria.

WETLAND INVENTORY

The National Wetlands Inventory (NWI 2020) shows a palustrine wetland in the vicinity of Wetland A, and Wetland B is not mapped (Sheet 7). The NWI and Clark County Inventory (Clark

County GIS 2020) show an offsite wetland north of the site, aligned with the Type Ns stream mapping. ELS findings differ somewhat from the mapped critical areas, as an additional wetland was delineated in the southern portion of the site (Wetland B). Wetland inventory maps 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

Wetlands

Two wetlands (Wetlands A and B) were delineated onsite based on topography and soil, vegetative, and hydrologic indicators. The wetland determination data forms are in Appendix A and the wetland rating forms are in Appendix B. Table 2 summarizes the onsite wetlands. All wetland buffers were designated assuming high land use intensity.

Wetland A

Wetland A is a Category IV forested, slope wetland located near the center of the decommissioned tree farm, totaling 0.05 acres (Sheet 2). Wetland A receives most of its hydrology from a seasonally high groundwater table, precipitation, and surface runoff from surrounding uplands. The wetland is saturated only and functions to recharge groundwater. According to the *Washington State Wetland Rating System for Western Washington: 2014 Update* (rating system), Wetland A is a Category IV wetland scoring 5 points for water quality functions, 5 points for hydrologic functions, and 4 points for habitat functions with a total of 14 points. According to *LCMC 18.300.090(5)(d) Exempted Wetlands*, Wetland A is exempted from La Center buffer regulations.

Wetland B

Wetland B is a Category IV emergent and forested, depressional wetland located in the central southern portion of the site, totaling 0.08 acres (Sheet 2). The wetland receives it hydrology from groundwater and precipitation. Wetland B is permanently flooded and saturated only and functions to recharge groundwater. According to the rating system, Wetland B is a Category IV wetland scoring 5 points for water quality functions, 6 points for hydrologic functions, and 4 points for habitat functions with a total of 15 points. The designated buffer width for a Category IV wetland with a habitat score of 4 is 50 feet, as listed in *LCMC Table 18.300.090(5)(i)(i)-1*.

Table 2. Wetland Summary.

Wetland	Category[1]	HGM Class[2]	Cowardin Class[3]	Habitat Score	Wetland Area (ac.)	Buffer[4] (ft.)
A	IV	Slope	Forested	4	0.05	Exempted[5]
B	IV	Depressional	Emergent, Forested	4	0.08	50

[1] *Hruby 2014*
[2] *NRCS 2008*
[3] *Cowardin et al. 1979*
[4] *LCMC Table 18.300.090(5)(i)(i)-1*
[5] *LCMC 18.300.090(5)(d)*

Oregon White Oaks

According to *LCMC 18.300.090(2) Fish and Wildlife Conservation Areas*, oaks are considered a priority habitat by the Washington Department of Fish and Wildlife (WDFW) and locally by the City of La Center. In urban or urbanizing areas west of the Cascades, WDFW defines priority oak habitat as single oaks, or stands of pure oak, or oak/conifer associations, 1 acre or greater in size (2008). WDFW may also consider individual Oregon white oak trees a priority habitat when found to be particularly valuable to wildlife (i.e., contains many cavities, has a large diameter at breast height (DBH), is used by priority species, or has a large canopy) (Larsen and Morgan, 1998). WDFW recommendation is that in urban and urbanizing areas, single trees should be maintained if they are deemed important to species highly associated with Oregon white oak. Oaks and their associated floras comprise distinct woodland ecosystems with various plant communities providing valuable habitat that contributes to wildlife diversity; Oak woodlands provide a mix of feeding, resting, and breeding habitat for many wildlife species (Larsen and Morgan, 1998). WDFW considers oak trees with a DBH of greater than 20 inches to be large and greater than 12 inches to be medium.

Fifteen small oaks were observed onsite with DBHs ranging from 2 to 8 inches (Photo 12). An additional oak in the southwestern corner of the site has a DBH of 40 inches and is considered priority habitat. The priority oak canopy is approximately 0.10 acres (Sheet 2). *LCMC Table 18.300.090(2)(a)* states that nonriparian priority habitats and species require a buffer of 300 feet or a threshold based upon consultation with WDFW. Appendix D shows email correspondence with WDFW Habitat Specialist, Isaac Holowatz, stating that the dripline is adequate to protect the priority oak tree (February 17, 2021).

CONCLUSION

One depressional wetland and one slope wetland were delineated onsite. The wetland boundaries were confirmed by Ecology on November 10, 2020. One priority habitat Oregon white oak is located in the southwestern corner of the site. The mapped Type Ns stream was not observed onsite, as no channel, bed, bank, or signs of regular water flow were observed onsite. Upon the forthcoming site plan design for a residential subdivision development, a mitigation plan will be submitted to satisfy any necessary critical areas impacts.

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.

REFERENCES

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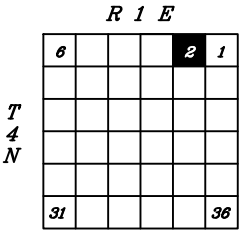
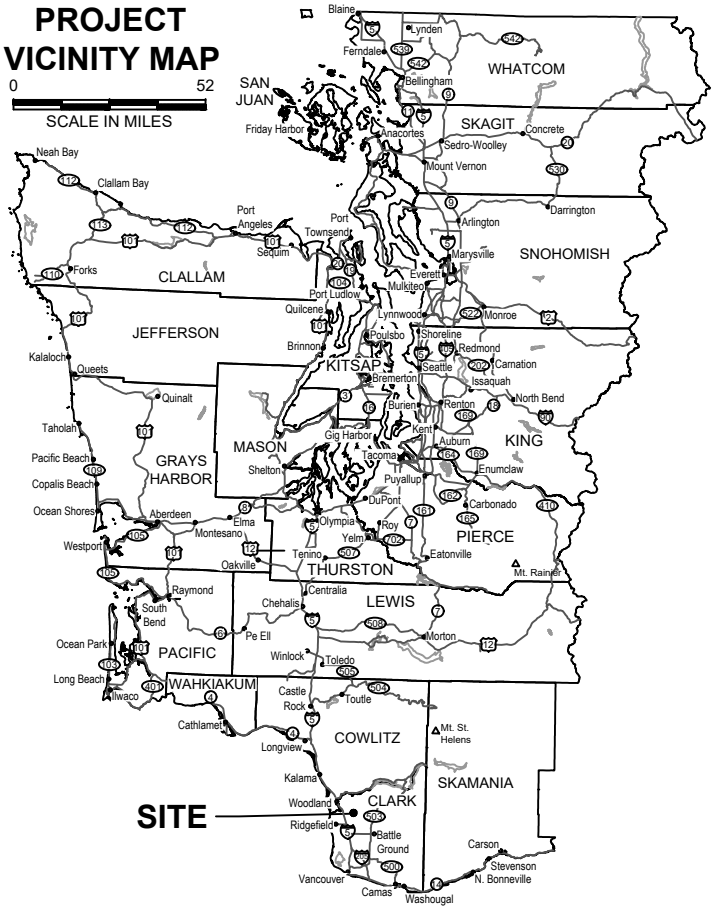
SHEET SET & PHOTOPLATES

Latitude: 45.8620°
Longitude: -122.6487°

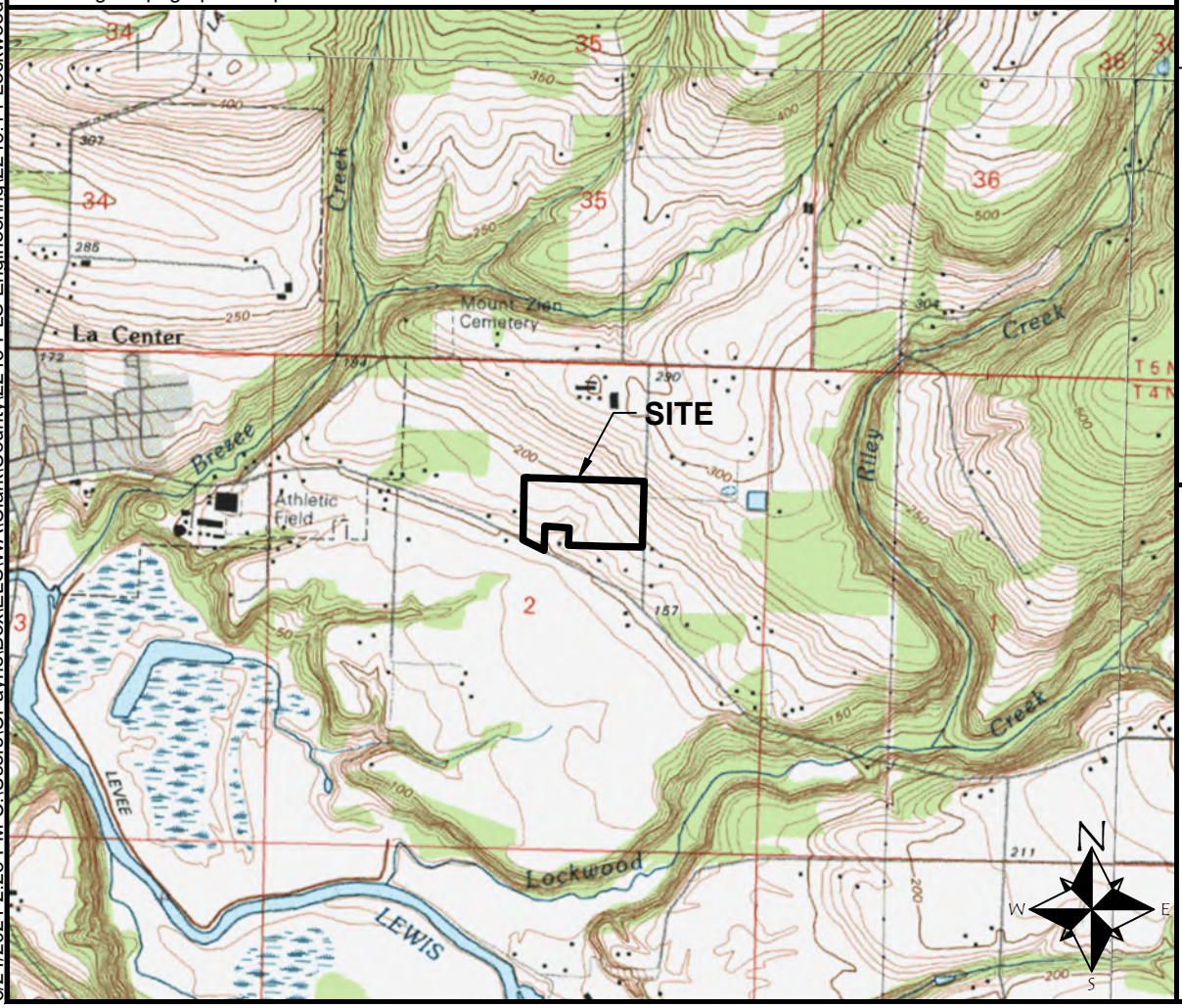
LOCATION MAP



PROJECT VICINITY MAP



NOTE:
Quadrangle topographic map from USGS.



PROPOSED: Residential subdivision
IN Wetland
NEAR: La Center
COUNTY: Clark **STATE:** WA
SHEET 1 **OF** 10
DATE: 3/24/21

VICINITY MAP
APPLICANT: PLS Engeneering
PROJECT NAME: Lockwood Meadows Subdivision
REFERENCE #: NWS-2020-1015
SITE LOCATION ADDRESS:
2000 NE Lockwood Creek Road,
La Center WA 98629

PURPOSE: Wetland Fill
DATUM: NAD83
ADJACENT PROPERTY OWNERS: See JARPA

SCALE IN FEET
0 2000 4000

1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

Ecological Land Services

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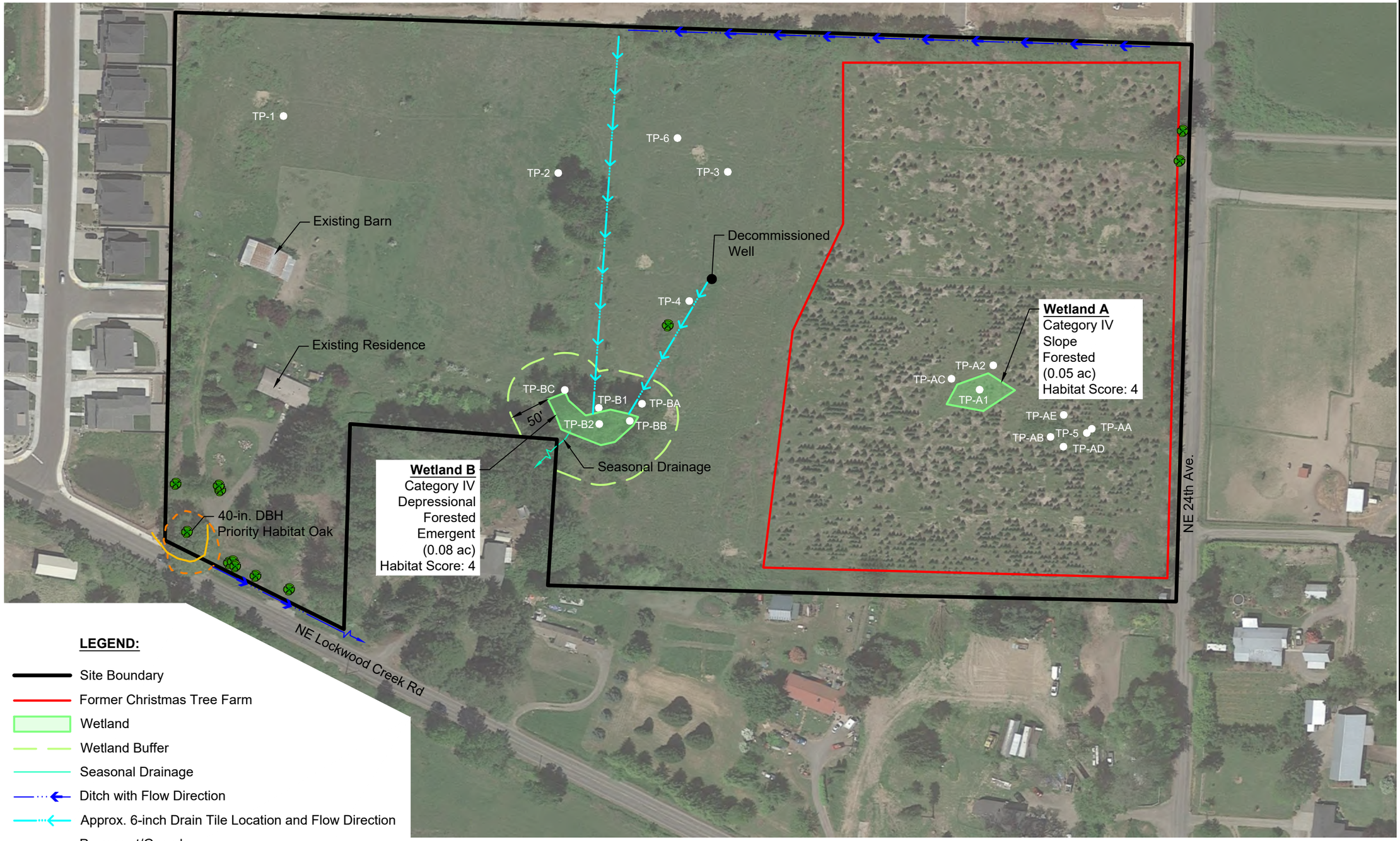


LEGEND:

- Site Boundary
- Former Christmas Tree Farm
- Wetland
- Wetland Buffer
- Seasonal Drainage
- Ditch with Flow Direction
- Approx. 6-inch Drain Tile Location and Flow Direction
- Pavement/Gravel
- Oak Tree
- Oak Tree Dripline (0.10 ac)
- TP-1 Test Plot Location
- Continues Offsite

NOTE(S):

1. Aerial from May 2019 Google Earth™.
2. Wetlands, test plots, and oak trees were mapped by an ELS Biologist using a hand-held GPS unit with submeter accuracy.
3. Wetland A is exempted from La Center buffers per LCMC 18.300.090(5)(d) Exempted Wetlands.

N W E S

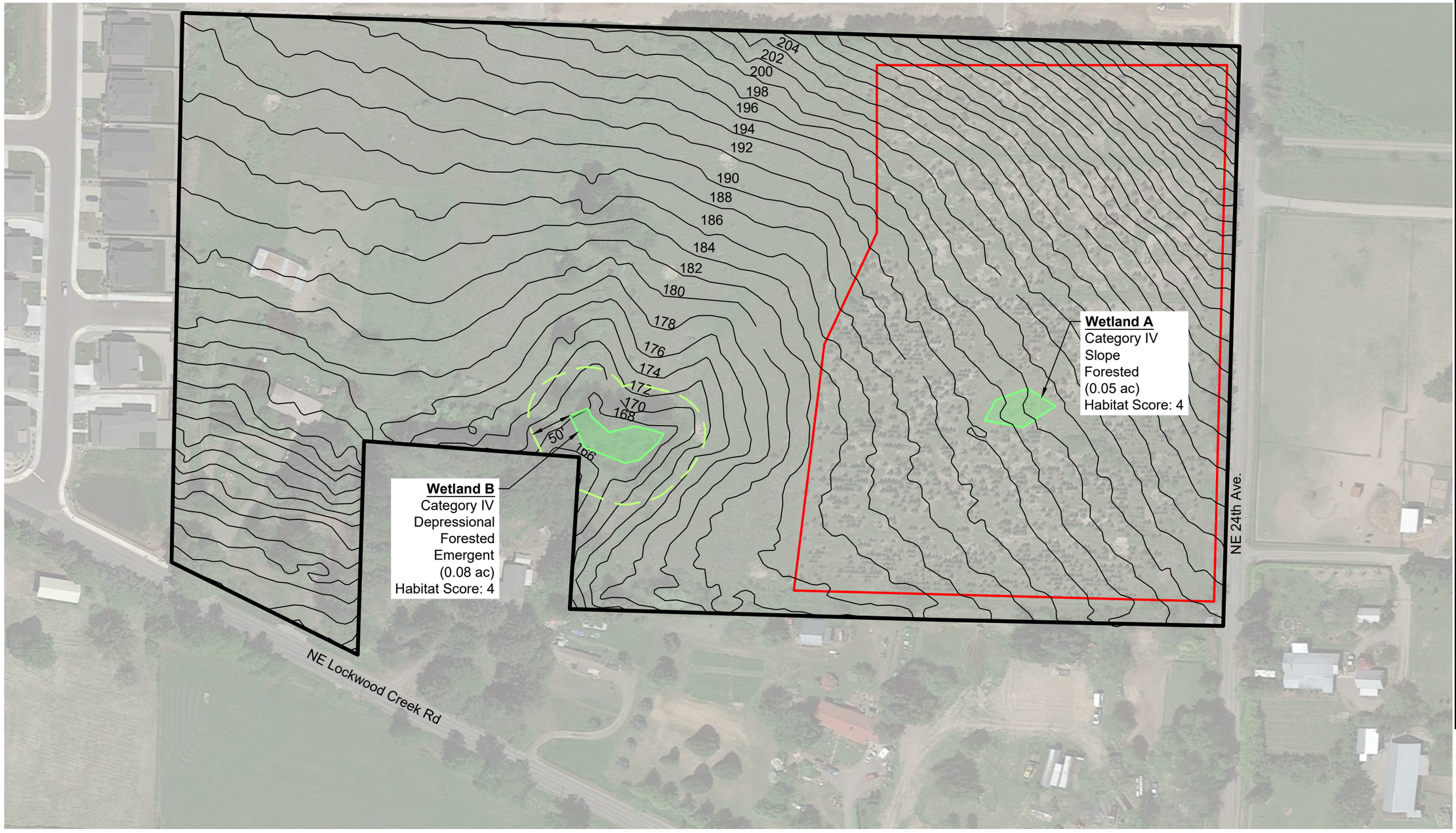
SCALE IN FEET 0 120 240

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

SITE MAP
APPLICANT: PLS Engeneering
PROJECT NAME: Lockwood Meadows Subdivision
REFERENCE #: NWS-2020-1015
SITE LOCATION ADDRESS: 2000 NE Lockwood Creek Road, La Center WA 98629

PROPOSED: Residential subdivision
IN Wetland
NEAR: La Center **STATE:** WA
COUNTY: Clark
SHEET 2 **OF** 10
DATE: 3/24/21

PURPOSE: Wetland Fill
DATUM: NAD83
ADJACENT PROPERTY OWNERS: See JARPA



LEGEND:

- Site Boundary
- Former Christmas Tree Farm
- Wetland
- Wetland Buffer

NOTE(S):

1. Aerial from May 2019 Google Earth™.
2. Wetlands, test plots, and oak trees were mapped by an ELS Biologist using a hand-held GPS unit with submeter accuracy.
3. Wetland A is exempted from La Center buffers per LCMC 18.300.090(5)(d) Exempted Wetlands.

N W E S

0 120 240
SCALE IN FEET

1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

Ecological Land Services

AERIAL WITH TOPO

APPLICANT: PLS Engeneering
PROJECT NAME: Lockwood Meadows Subdivision
REFERENCE #: NWS-2020-1015
SITE LOCATION ADDRESS: 2000 NE Lockwood Creek Road, La Center WA 98629

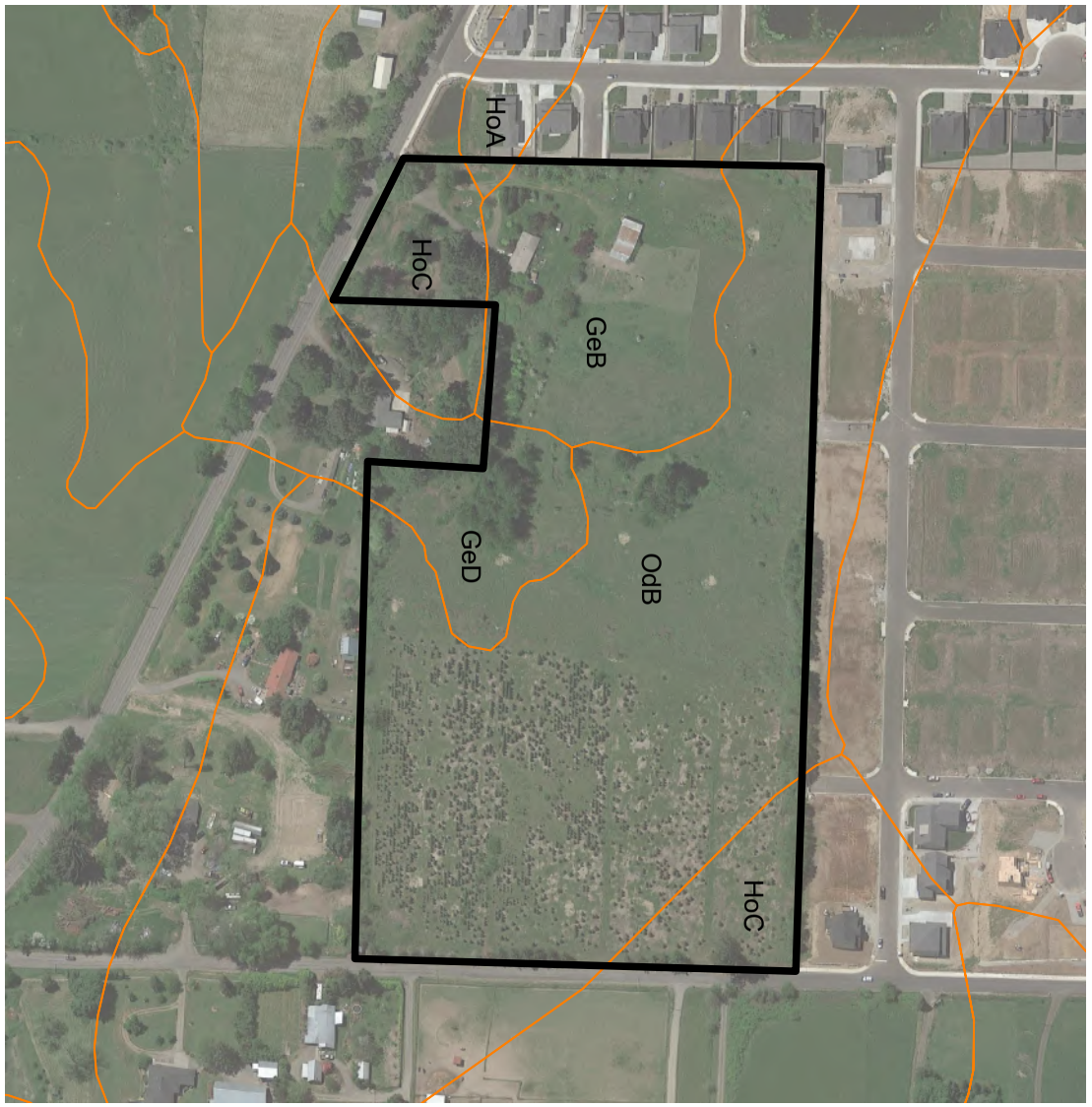
PURPOSE: Wetland Fill

DATUM: NAD83

ADJACENT PROPERTY OWNERS: See JARPA

PROPOSED: Residential subdivision

IN Wetland
NEAR: La Center **STATE:** WA
COUNTY: Clark
SHEET 3 **OF** 10
DATE: 3/24/21



LEGEND:

Site Boundary

GeB Gee silt loam, 0 to 8 percent slopes. Not hydric.

GeD Gee silt loam, 8 to 20 percent slopes. Not hydric.

HoA Hillsboro silt loam, 0 to 3 percent slopes. Not hydric.

HoC Hillsboro silt loam, 8 to 15 percent slopes. Not hydric.

OdB Odne silty clay loam, 0 to 3 percent slopes. **Hydric.**

NOTE(S):

1. Map provided online by NRCS at web address: *https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey*

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Phone: (360) 578-1371

PURPOSE: Wetland Fill

DATUM: NAD83

ADJACENT PROPERTY OWNERS:

See JARPA

NRCS SOIL SURVEY MAP

APPLICANT: PLS Engeneering

PROJECT NAME: Lockwood Meadows Subdivision

REFERENCE #: NWS-2020-1015

SITE LOCATION ADDRESS:
2000 NE Lockwood Creek Road,
La Center WA 98629

PROPOSED: Residential subdivision

IN Wetland

NEAR: La Center

COUNTY: Clark **STATE:** WA

SHEET 4 **OF** 10

DATE: 3/24/21

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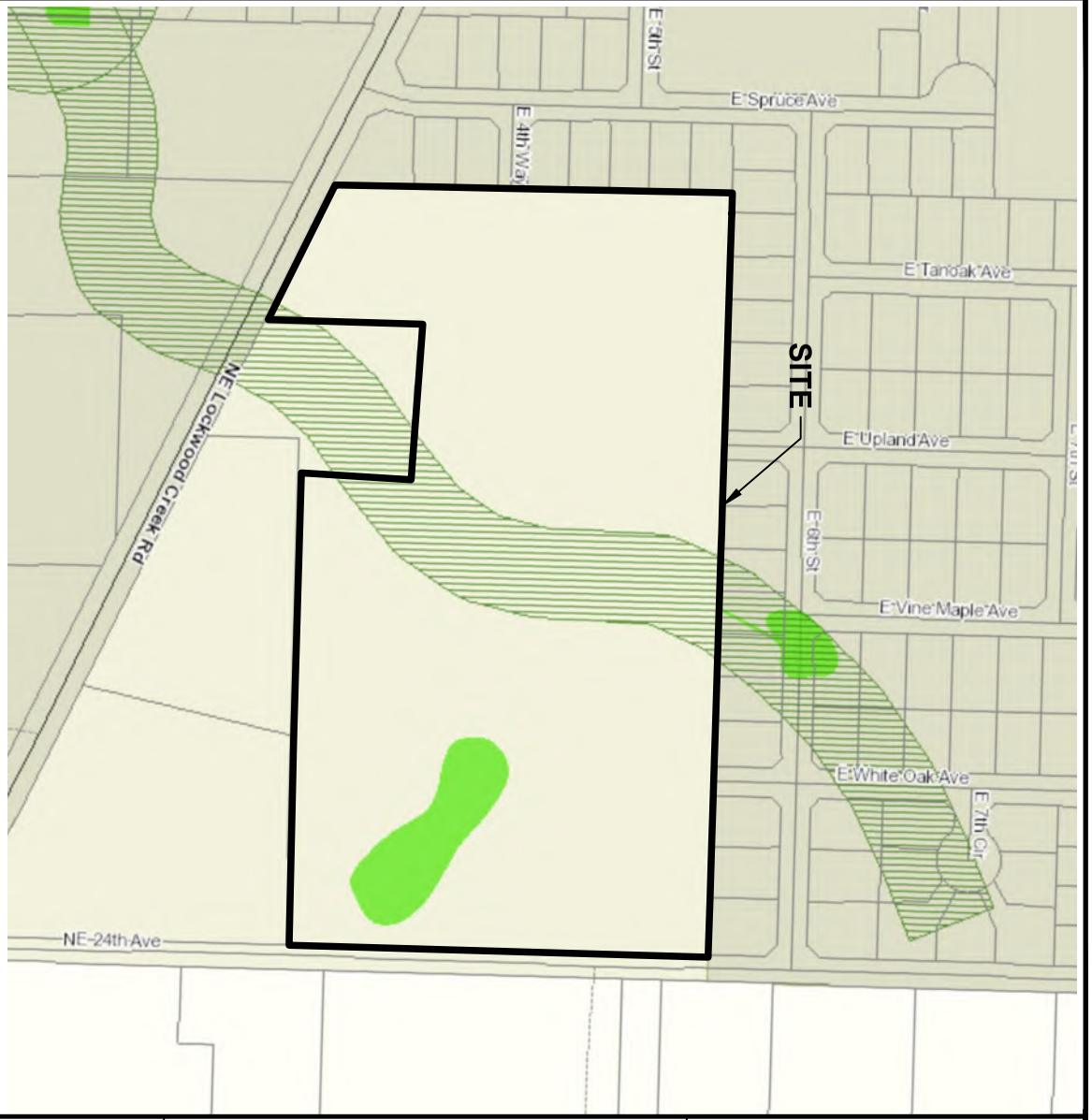

Site Boundary

Environmental

Priority Habitats and Species Group

Species

Species Area

Adjacent to Species Area

Habitat

Habitat Area

Adjacent to Habitat Area

Riparian Habitat

Riparian Habitat Area

Location generalized due to sensitivity

Species Area

Habitat Area

Wetlands Presence - Component

NOTE: Map provided online by Clark County, Washington at web address:
https://gis.clark.wa.gov/mapsonline/

W N S E

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Phone: (360) 578-1371

PURPOSE: Wetland Fill

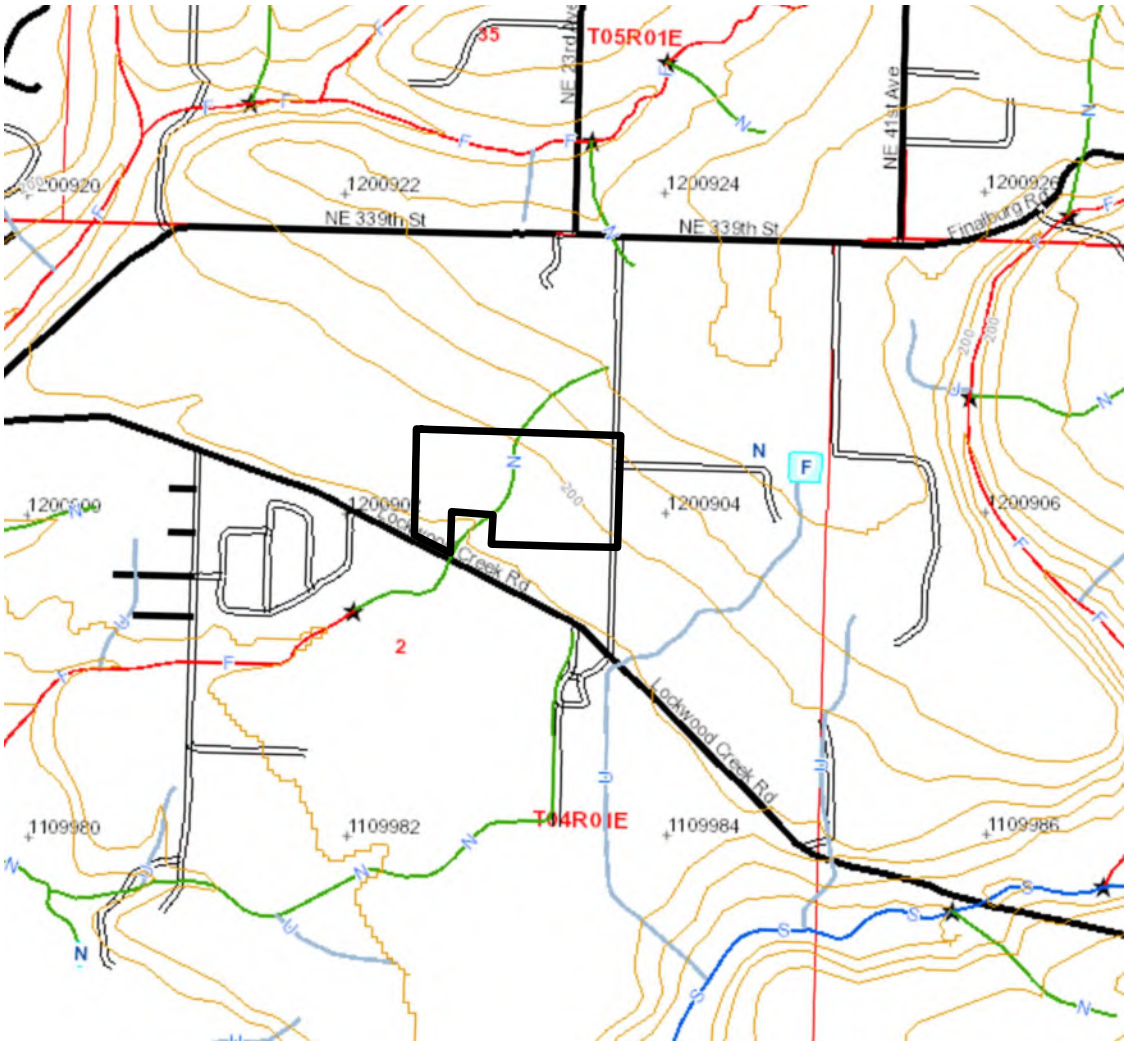
DATUM: NAD83
ADJACENT PROPERTY OWNERS:

See JARPA

CLARK COUNTY ENVIROMENTAL CONSTRAINTS
APPLICANT: PLS Engeneering
PROJECT NAME: Lockwood Meadows Subdivision
REFERENCE #: NWS-2020-1015
SITE LOCATION ADDRESS:
2000 NE Lockwood Creek Road,
La Center WA 98629

PROPOSED: Residential subdivision

IN Wetland
NEAR: La Center
COUNTY: Clark **STATE:** WA
SHEET 5 **OF** 10
DATE: 3/24/21



Mapped streams indicated onsite by the Washington State Department of Natural Resources (DNR).

LEGEND:

Site Boundary

Water Bodies (FP)

Water Bodies (FP)

- Other Impoundments
- Open Freshwater
- Subject to Inundation
- Glacier / Snowfield
- Wet Area
- Open Saltwater
- Artificial Feature

Water Courses (FP)

Water Courses (FP)

- Type S
- Type F
- Type N, Np, Ns
- U, unknown
- X, non-typed per WAC 222-16

NOTE: Map provided online by Washington State Department of Natural Resources at web address: *https://fortress.wa.gov/dnr/protectiongis/fpamt/index.html*

N W E S

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DNR WATER TYPE MAP

APPLICANT: PLS Engeneering
PROJECT NAME: Lockwood Meadows Subdivision
REFERENCE #: NWS-2020-1015
SITE LOCATION ADDRESS: 2000 NE Lockwood Creek Road, La Center WA 98629

PURPOSE: Wetland Fill

DATUM: NAD83

ADJACENT PROPERTY OWNERS: See JARPA

PROPOSED: Residential subdivision

IN Wetland
NEAR: La Center
COUNTY: Clark **STATE:** WA
SHEET 6 **OF** 10
DATE: 3/24/21

Mapped wetlands indicated onsite by US Fish & Wildlife Service.

LEGEND:

Site Boundary

Freshwater Emergent Wetland

PEM1A Palustrine, emergent, persistent, temporarily flooded.

PEM1Ad Palustrine, emergent, persistent, temporarily flooded, partially drained/ditched.

NOTE(S):

1. Map provided online by US Fish & Wildlife Service at web address: *https://www.fws.gov/wetlands/data/Mapper.html*

PROPOSED: Residential subdivision

IN Wetland
NEAR: La Center
COUNTY: Clark **STATE:** WA
SHEET 7 **OF** 10
DATE: 3/24/21

NATIONAL WETLAND INVENTORY MAP
APPLICANT: PLS Engineering
PROJECT NAME: Lockwood Meadows Subdivision
REFERENCE #: NWS-2020-1015
SITE LOCATION ADDRESS:
2000 NE Lockwood Creek Road,
La Center WA 98629

PURPOSE: Wetland Fill

DATUM: NAD83
ADJACENT PROPERTY OWNERS:
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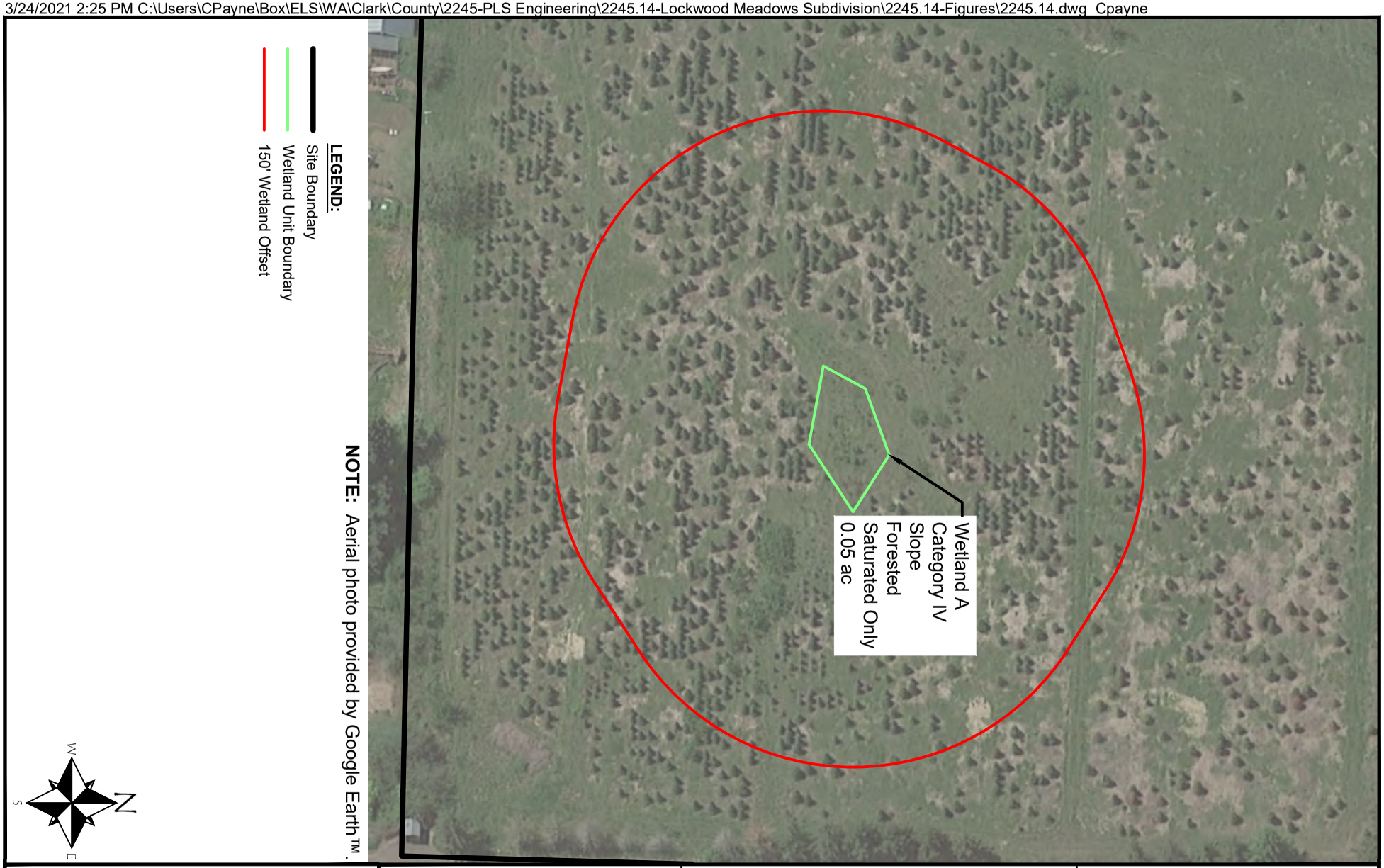

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Phone: (360) 578-1371

PURPOSE: Wetland Fill

DATUM: NAD83
ADJACENT PROPERTY OWNERS:

See JARPA

150' OFFSET WETLAND A RATING FIGURE
APPLICANT: PLS Engeneering
PROJECT NAME: Lockwood Meadows Subdivision
REFERENCE #: NWS-2020-1015
SITE LOCATION ADDRESS:
2000 NE Lockwood Creek Road,
La Center WA 98629

PROPOSED: Residential subdivision

IN Wetland
NEAR: La Center
COUNTY: Clark **STATE:** WA
SHEET 8A **OF** 10
DATE: 3/24/21

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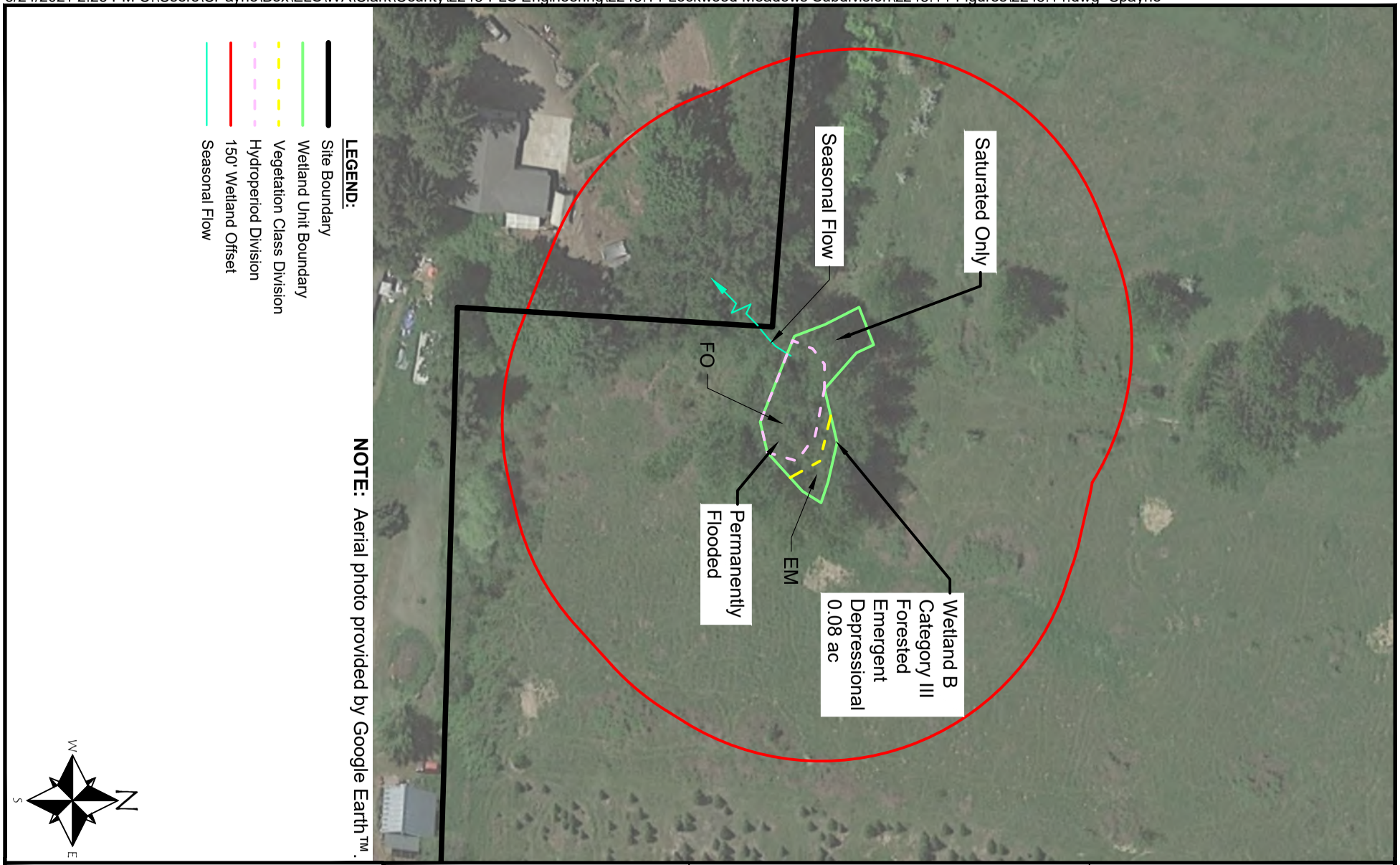

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Phone: (360) 578-1371

PURPOSE: Wetland Fill

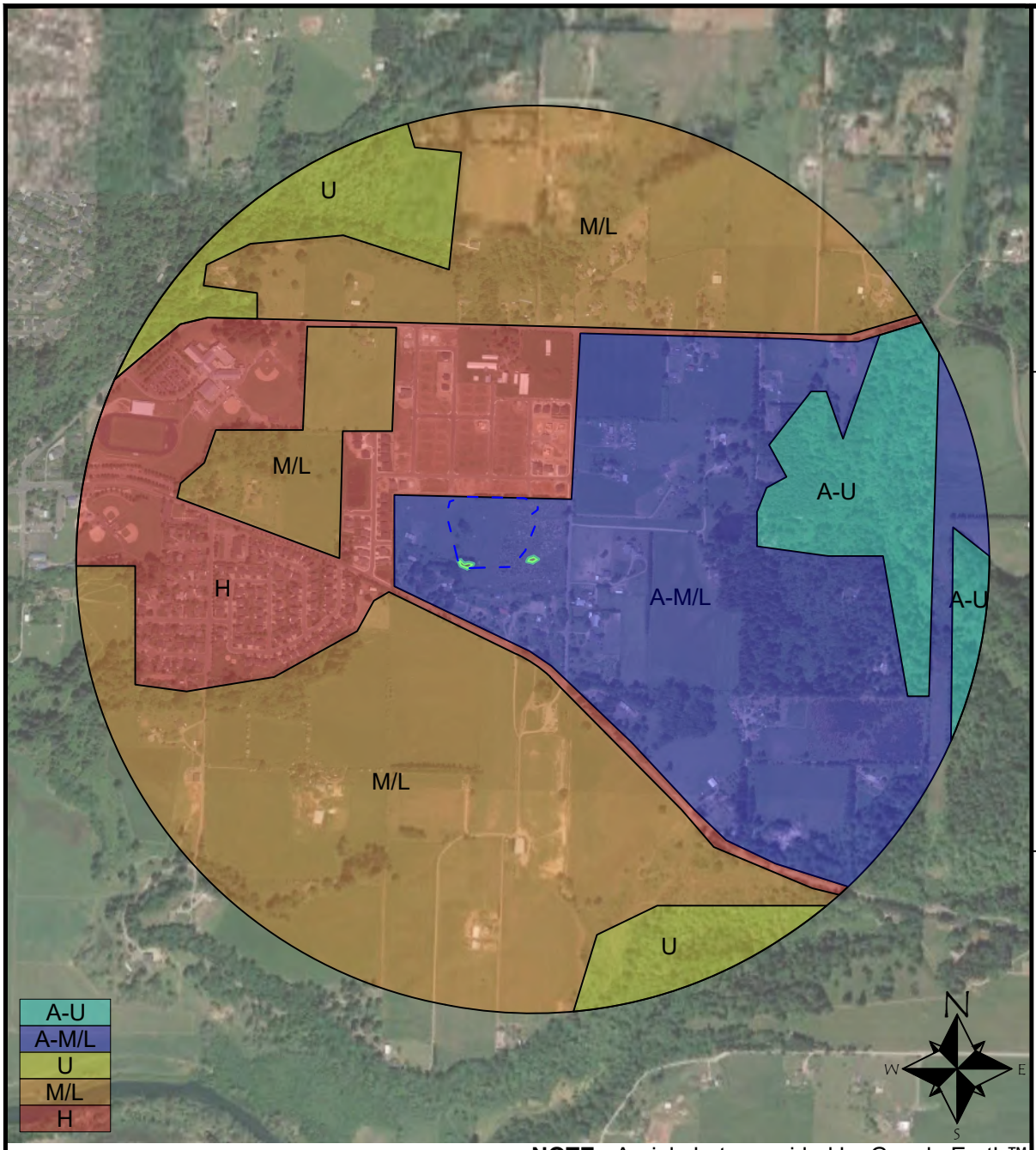
DATUM: NAD83
ADJACENT PROPERTY OWNERS:

See JARPA

150' OFFSET WETLAND B RATING FIGURE
APPLICANT: PLS Engeneering
PROJECT NAME: Lockwood Meadows Subdivision
REFERENCE #: NWS-2020-1015
SITE LOCATION ADDRESS:
2000 NE Lockwood Creek Road,
La Center WA 98629

PROPOSED: Residential subdivision

IN Wetland
NEAR: La Center
COUNTY: Clark **STATE:** WA
SHEET 8B **OF** 10
DATE: 3/24/21



NOTE: Aerial photo provided by Google Earth™

LEGEND:

Wetland Unit Boundary

Contributing Basin (10-100x area of Wetland B)

H2.1 Accessible Habitat

- A-U: A-U (6%)
- A-M/L: A-M/L (26%)

H2.2 Undisturbed Habitat

- U: U (6%)
- M/L: M/L (44%)

H2.3 Land Use Intensity

- H: H (18%)

H 2.1. Accessible Habitat Equation

6% A-U habitat + [(**26%** A-M/L intensity land uses)/2] **13%** = **19%**

H 2.2. Total Undisturbed Habitat Equation

6% A-U + **6%** U habitat + [(**26%** A-M/L + **44%** M/L land uses)/2] **35%** = **47%**

PROPOSED: Residential subdivision

IN Wetland

NEAR: La Center **STATE:** WA

COUNTY: Clark

SHEET 9 **OF** 10

DATE: 3/24/21

1KM OFFSET WETLAND RATING FIGURE

APPLICANT: PLS Engeneering

PROJECT NAME: Lockwood Meadows Subdivision

REFERENCE #: NWS-2020-1015

SITE LOCATION ADDRESS: 2000 NE Lockwood Creek Road, La Center WA 98629

ADJACENT PROPERTY OWNERS: See JARPA

DATUM: NAD83

PURPOSE: Wetland Fill

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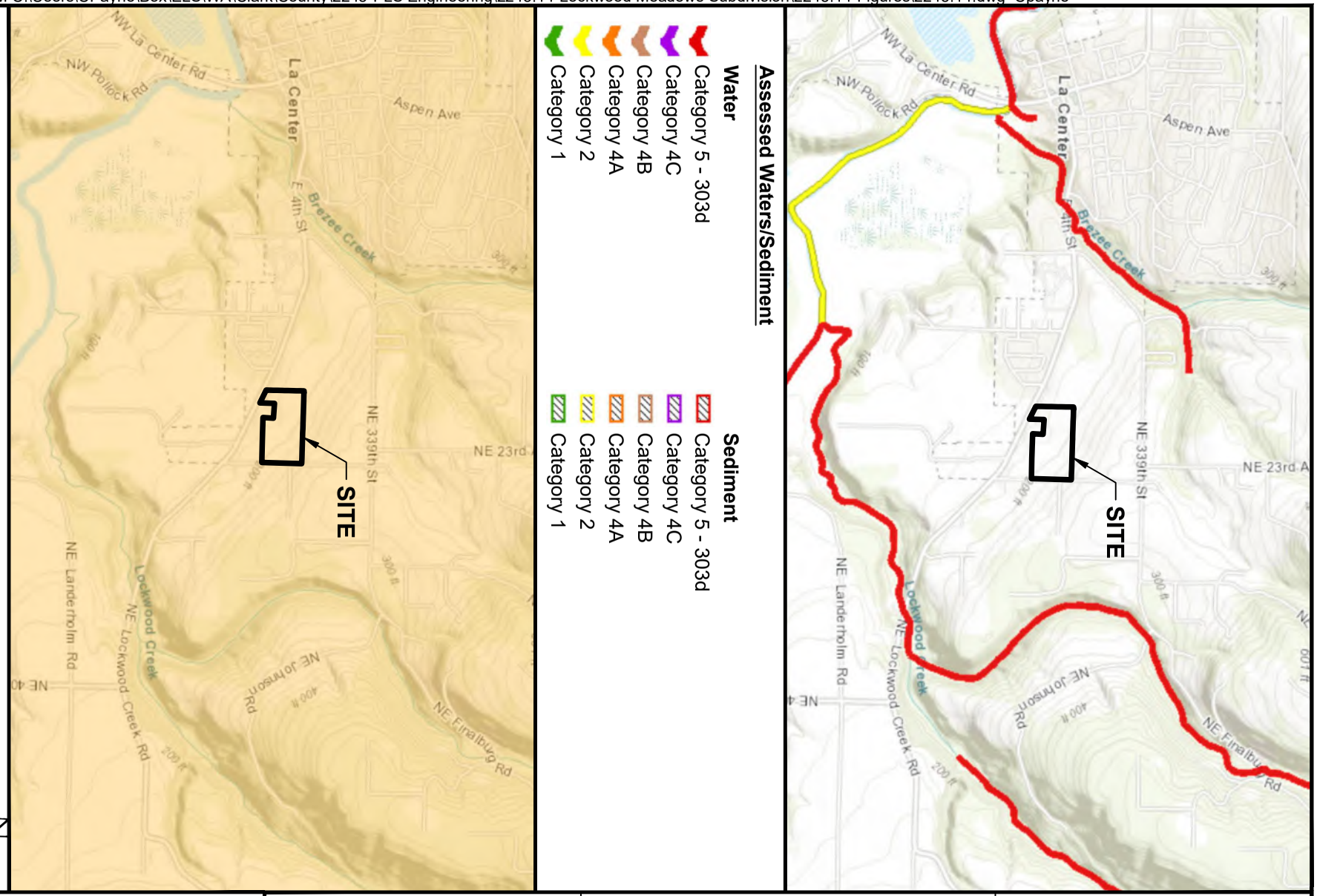

NOTE(S):

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

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PURPOSE: Wetland Fill

DATUM: NAD83

ADJACENT PROPERTY OWNERS:

See JARPA

303(D) LISTED WATERS AND TMDLS

APPLICANT: PLS Engeneering

PROJECT NAME: Lockwood Meadows Subdivision

REFERENCE #: NWS-2020-1015

SITE LOCATION ADDRESS:
2000 NE Lockwood Creek Road,
La Center WA 98629

PROPOSED: Residential subdivision

IN Wetland

NEAR: La Center

COUNTY: Clark **STATE:** WA

SHEET 10 **OF** 10

DATE: 3/24/21

Photo 1. Mowed grass portion of the site that was previously used for livestock, facing south. Photo taken September 2020.

Photo 2. View facing south from TP-2. Photo taken September 2020.

Photo 3. View facing SW from the NE corner of the site. Nordmann firs from the tree farm can be seen. Photo taken September 2020.

Photo 4. Cottonwood trees growing in the decommissioned tree farm area, near Wetland A. Photo taken September 2020.

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Longview, WA 98632
Phone: (360) 578-1371
Fax: (360) 414-9305

DATE: 3/24/2021
DWN: AJR
PRJ. MGR: AJR
PROJ #: 2245.14
NWS-2020-1015

Photoplate 1
Site Photos
Lockwood Meadows Subdivision
PLS Engineering
La Center, Washington
Section 2, Township 4N, Range 1E, W.M.

Photo 5. View facing southwest near TP-A1, within Wetland A. Nordmann firs can be seen outside the wetland boundary in background. Photo taken February 2021.

Photo 6. Cottonwood patch southeast of Wetland A. Photo taken February 2021.

Photo 7. View facing north of tile location where Type Ns stream is mapped. Photo taken September 2020.

Photo 8. View facing south of tile location where Type Ns stream is mapped. Photo taken February 2021.

Ecological Land Services

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Phone: (360) 578-1371
Fax: (360) 414-9305

DATE: 3/24/2021
DWN: AJR
PRJ. MGR: AJR
PROJ #: 2245.14
NWS-2020-1015

Photoplate 2
Site Photos
Lockwood Meadows Subdivision
PLS Engineering
La Center, Washington
Section 2, Township 4N, Range 1E, W.M.

Photo 9. View of Wetland B facing south. Photo taken September 2020.

Photo 10. Vegetation within the ponded portion of Wetland B. Photo taken September 2020.

Photo 11. Seasonal drainage south of Wetland B. Arrow shows drainage path through blackberry bushes offsite. Photo taken September 2020.

Photo 12. Small, non-priority oaks located in the southwestern portion of the site. Photo taken February 2021.

Ecological Land Services

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Longview, WA 98632
Phone: (360) 578-1371
Fax: (360) 414-9305

DATE: 3/24/2021
DWN: AJR
PRJ. MGR: AJR
PROJ #: 2245.14
NWS-2020-1015

Photoplate 3
Site Photos
Lockwood Meadows Subdivision
PLS Engineering
La Center, Washington
Section 2, Township 4N, Range 1E, W.M.

APPENDIX A: WETLAND DETERMINATION DATA FORMS

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

Project/Site: Lockwood Meadows Subdivision City/County: La Center/Clark Sampling Date: 9/8/2020
Applicant/Owner: PLS Engeneering State: WA Sampling Point: TP1
Investigator(s): Naglich, Francis; Rendleman, Annie Jean Section, Township, Range: S2, T4N, R1E
Landform (hillslope, terrace, etc.): Terraces Local relief: (concave, convex, none): None Slope (%): 0-8%
Subregion (LRR): A Lat: 45.862444 Long: -122.650711 Datum: NAD83
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 ☒ No ☐	**Is the Sampled Area within a Wetland?** **Yes☐ No☒**
Hydric Soils Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	

Remarks: This test plot is located in the northwest portion of Clark County Tax Parcel 209113000. TP1 only met one of the three wetland parameters; therefore, it is not considered to be within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	%		
2.	%		
3.	%		
4.	%		
50% = ___ 20% = ___	%	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Rubus armeniacus*	30%	yes	FAC
2.	%		
3.	%		
4.	%		
5.	%		
50% = 15 20% = 6	30%	=Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Anthoxanthum odoratum*	25%	yes	FACU
2. *Agrostis capillaris*	25%	yes	FAC
3. *Leucanthemum vulgare*	10%	no	FACU
4. *Asclepias syriaca*	5%	no	FACU
5. *Lotus corniculatus*	5%	no	FAC
6.	%		
7.	%		
8.	%		
9.	%		
10.	%		
11.	%		
50% = 35 20% = 14	70%	=Total Cover	
Woody Vine Stratum (Plot size: 15 ft radius)			
1.	%		
2.	%		
50% = ___ 20% = ___	%	=Total Cover	

% Bare Ground in Herb Stratum 30%

Dominance Test Worksheet

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC 66 (A/B)

Prevalence Index worksheet

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

Prevalence Index = B/A=

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes☒ No☐**

Remarks:The hydrophytic vegetation criterion is met due to greater than 50% of the dominant vegetation within the test plot having FAC indicator statuses.

Sampling Point: TP1

SOIL

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 3/3	100%		%			Silt loam	
7-16	10YR 4/3	99%	10YR 4/6	1%	C	M	Silt loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

- ☐ Histosal (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)

Indicators for Problematic Hydric Soils

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

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

Restrictive Layer (if present):

Type: ____
Depth (inches):

Hydric Soil Present? **Yes**☐ **No**☒

Remarks: Soil was very dry and compact. No hydric soil indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ 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:Hydrology was not present and there were no indicators of wetland hydrology.

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

Project/Site: Lockwood Meadows Subdivision City/County: La Center/Clark Sampling Date: 9/8/2020
Applicant/Owner: PLS Engeneering State: WA Sampling Point: TP2
Investigator(s): Naglich, Francis; Rendleman, Annie Jean Section, Township, Range: S2, T4N, R1E
Landform (hillslope, terrace, etc.): Drainageways, Terraces Local relief: (concave, convex, none): None Slope (%): 0-3%
Subregion (LRR): A Lat: 45.862269 Long: -122.649359 Datum: NAD83
Soil Map Unit Name: Odne silty clay loam, 0 to 3 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 ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes☐ No☒
Hydric Soils Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	

Remarks: This test plot is located within the north-central portion of Clark County Tax Parcel 209113000, near a DNR mapped Type N stream. This test plot only met one of the three wetland parameters; therefore, TP2 is not considered to be within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus balsamifera*	45%	yes	FAC
2.	%		
3.	%		
4.	%		
50% = 22 20% = 9	45%	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Rubus armeniacus*	20%	yes	FAC
2.	%		
3.	%		
4.	%		
5.	%		
50% = 10 20% = 5	20%	=Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Agrostis capillaris*	25%	yes	FAC
2. *Ranunculus repens*	25%	yes	FAC
3. *Holcus lanatus*	5%	no	FAC
4. *Cirsium arvense*	5%	no	FAC
5.	%		
6.	%		
7.	%		
8.	%		
9.	%		
10.	%		
11.	%		
50% = 30 20% = 12	60%	=Total Cover	
Woody Vine Stratum (Plot size: 15 ft radius)			
1.	%		
2.	%		
50% = ___ 20% = ___	%	=Total Cover	

% Bare Ground in Herb Stratum 40%

Dominance Test Worksheet

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC 100 (A/B)

Prevalence Index worksheet

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

Prevalence Index = B/A=

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes☒ No☐

Remarks:The hydrophytic vegetation criterion is met due to greater than 50% of the dominant vegetation within the test plot having FAC indicator statuses.

SOIL

Sampling Point: TP2

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

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

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

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

- ☐ Histosal (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)

Indicators for Problematic Hydric Soils

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

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

Restrictive Layer (if present):

Type: ____
Depth (inches):

Hydric Soil Present? **Yes☐ No☒**

Remarks: No hydric soil indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ 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:Hydrology was not present and there were no indicators of wetland hydrology.

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

Project/Site: Lockwood Meadows Subdivision City/County: La Center/Clark Sampling Date: 9/8/2020
Applicant/Owner: PLS Engeneering State: WA Sampling Point: TP3
Investigator(s): Naglich, Francis; Rendleman, Annie Jean Section, Township, Range: S2, T4N, R1E
Landform (hillslope, terrace, etc.): Drainageways, Terraces Local relief: (concave, convex, none): None Slope (%): 0-3%
Subregion (LRR): A Lat: 45.862305 Long: -122.648575 Datum: NAD83
Soil Map Unit Name: Odne silty clay loam, 0 to 3 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 ☒ No ☐	**Is the Sampled Area within a Wetland?** **Yes☐ No☒**
Hydric Soils Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	

Remarks: This test plot is located within the north-central portion of Clark County Tax Parcel 209113000, east of a DNR mapped Type N stream. This test plot only met one of the three wetland parameters; therefore, TP3 is not considered to be within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	%		
2.	%		
3.	%		
4.	%		
50% = ___ 20% = ___	%	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Rubus armeniacus*	5%	yes	FAC
2.	%		
3.	%		
4.	%		
5.	%		
50% = 2 20% = 1	5%	=Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Agrostis capillaris*	40%	yes	FAC
2. *Dactylis glomerata*	40%	yes	FACU
3. *Leucanthemum vulgare*	10%	no	FACU
4. *Cirsium arvense*	10%	no	FAC
5. *Rumex crispus*	5%	no	FAC
6.	%		
7.	%		
8.	%		
9.	%		
10.	%		
11.	%		
50% = 52 20% = 21	105%	=Total Cover	
Woody Vine Stratum (Plot size: 15 ft radius)			
1.	%		
2.	%		
50% = ___ 20% = ___	%	=Total Cover	

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC 66 (A/B)

Prevalence Index worksheet

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

Prevalence Index = B/A=

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes☒ No☐**

Remarks:The hydrophytic vegetation criterion is met due to greater than 50% of the dominant vegetation within the test plot having FAC indicator statuses.

SOIL

Sampling Point: TP3

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 4/3	100%		%			Silt loam	
10-16	10YR 3/2	100%		%			Silt loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

- ☐ Histosal (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)

Indicators for Problematic Hydric Soils

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

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

Restrictive Layer (if present):

Type: ____
Depth (inches):

Hydric Soil Present? **Yes**☐ **No**☒

Remarks: No hydric soil indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

Wetland Hydrology Present? **Yes** ☐ **No** ☒

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

Remarks:Hydrology was not present and there were no indicators of wetland hydrology.

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

Project/Site: Lockwood Meadows Subdivision | City/County: La Center/Clark | Sampling Date: 9/8/2020
Applicant/Owner: PLS Engeneering | State: WA | Sampling Point: TP4
Investigator(s): Naglich, Francis; Rendleman, Annie Jean | Section, Township, Range: S2, T4N, R1E
Landform (hillslope, terrace, etc.): Terraces | Local relief: (concave, convex, none): None | Slope (%): 8-20%
Subregion (LRR): A | Lat: 45.861826 | Long: -122.648692 | Datum: NAD83
Soil Map Unit Name: Gee silt loam, 8 to 20 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 ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes☐ No☒
Hydric Soils Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	

Remarks: This test plot is located in the central portion of Clark County Tax Parcel 209113000, south of the existing well. This test plot only met one of the three wetland parameters; therefore, TP4 is not considered to be within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	%		
2.	%		
3.	%		
4.	%		
50% = ___ 20% = ___	%	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Rubus armeniacus*	5%	yes	FAC
2.	%		
3.	%		
4.	%		
5.	%		
50% = 2 20% = 1	5%	=Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Schedonorus arundinaceus*	20%	yes	FAC
2. *Agrostis capillaris*	20%	yes	FAC
3. *Plantago lanceolata*	20%	yes	FACU
4. *Asclepias syriaca*	15%	no	FACU
5. *Cirsium arvense*	10%	no	FAC
6. *Leucanthemum vulgare*	10%	no	FACU
7.	%		
8.	%		
9.	%		
10.	%		
11.	%		
50% = 47 20% = 19	95%	=Total Cover	
Woody Vine Stratum (Plot size: 15 ft radius)			
1.	%		
2.	%		
50% = ___ 20% = ___	%	=Total Cover	

% Bare Ground in Herb Stratum 5%

Dominance Test Worksheet

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet

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

Prevalence Index = B/A=

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes☒ No☐

Remarks:The hydrophytic vegetation criterion is met due to greater than 50% of the dominant vegetation within the test plot having FAC indicator statuses.

SOIL

Sampling Point: TP4

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 3/2	100%		%			Silt loam	
9-16	10YR 4/3	100%		%			Silt loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

- ☐ Histosal (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)

Indicators for Problematic Hydric Soils

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

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

Restrictive Layer (if present):

Type: ____
Depth (inches):

Hydric Soil Present? **Yes**☐ **No**☒

Remarks: No hydric soil indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

Wetland Hydrology Present? **Yes** ☐ **No** ☒

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

Remarks:Hydrology was not present and there were no indicators of wetland hydrology.

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

Project/Site: Lockwood Meadows Subdivision City/County: La Center/Clark Sampling Date: 9/8/2020
Applicant/Owner: PLS Engeneering State: WA Sampling Point: TP5
Investigator(s): Naglich, Francis; Rendleman, Annie Jean Section, Township, Range: S2, T4N, R1E
Landform (hillslope, terrace, etc.): Drainageways, Terraces Local relief: (concave, convex, none): None Slope (%): 0-3%
Subregion (LRR): A Lat: 45.862305 Long: -122.648575 Datum: NAD83
Soil Map Unit Name: Odne silty clay loam, 0 to 3 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 ☒ No ☐	**Is the Sampled Area within a Wetland?** **Yes☐ No☒**
Hydric Soils Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	

Remarks: This test plot is located within the southeast portion of Clark County Tax Parcel 209113000, southeast of Wetland A. This test plot only met one of the three wetland parameters; therefore, TP5 is not considered to be within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus balsamifera*	15%	yes	FAC
2. **Abies nordmanniana*	5%	yes	FACU
3.	%		
4.	%		
50% = 10 20% = 4	20%	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Rubus armeniacus*	10%	yes	FAC
2.	%		
3.	%		
4.	%		
5.	%		
50% = 5 20% = 2	10%	=Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Anthoxanthum odoratum*	40%	yes	FACU
2. *Agrostis capillaris*	30%	yes	FAC
3. *Holcus lanatus*	20%	yes	FAC
4. *Cirsium arvense*	5%	no	FAC
5.	%		
6.	%		
7.	%		
8.	%		
9.	%		
10.	%		
11.	%		
50% = 47 20% = 19	95%	=Total Cover	
Woody Vine Stratum (Plot size: 15 ft radius)			
1.	%		
2.	%		
50% = ___ 20% = ___	%	=Total Cover	

% Bare Ground in Herb Stratum 5%

Dominance Test Worksheet

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC 66 (A/B)

Prevalence Index worksheet

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

Prevalence Index = B/A=

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes☒ No☐**

Remarks:*Abies nordmanniana is assumed to be FACU. The hydrophytic vegetation criterion is met due to greater than 50% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.

SOIL

Sampling Point: TP5

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/2	100%		%			Silt loam	
8-16	10YR 3/2	100%		%			Silt loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

- ☐ Histosal (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)

Indicators for Problematic Hydric Soils

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

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

Restrictive Layer (if present):

Type: ____
Depth (inches):

Hydric Soil Present? **Yes**☐ **No**☒

Remarks: No hydric soil indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

Wetland Hydrology Present? **Yes** ☐ **No** ☒

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

Remarks:Hydrology was not present and there were no indicators of wetland hydrology.

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

Project/Site: Lockwood Meadows Subdivision City/County: La Center/Clark Sampling Date: 2/24/2021
Applicant/Owner: PLS Engeneering State: WA Sampling Point: TP6
Investigator(s): Naglich, Francis; Rendleman, Annie Jean Section, Township, Range: S2, T4N, R1E
Landform (hillslope, terrace, etc.): Drainageways, Terraces Local relief: (concave, convex, none): Convex Slope (%): 0-3%
Subregion (LRR): A Lat: 45.8624002 Long: -122.6487743 Datum: NAD83
Soil Map Unit Name: Odne silty clay loam, 0 to 3 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 ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes☐ No☒
Hydric Soils Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	

Remarks: This test plot is located in the northern central portion of the site, along the DNR mapped Type N stream. Because all three wetland indicators were not met, TP-6 was considered to be in uplands.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.	%		
2.	%		
3.	%		
4.	%		
50% = ___ 20% = ___	%	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1.	%		
2.	%		
3.	%		
4.	%		
5.	%		
50% = ___ 20% = ___	%	=Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. **Poa sp.*	90%	yes	FAC
2. *Rumex acetosella*	10%	no	FACU
3.	%		
4.	%		
5.	%		
6.	%		
7.	%		
8.	%		
9.	%		
10.	%		
11.	%		
50% = 50 20% = 20	100%	=Total Cover	
Woody Vine Stratum (Plot size: 15 ft radius)			
1.	%		
2.	%		
50% = ___ 20% = ___	%	=Total Cover	

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC 100 (A/B)

Prevalence Index worksheet

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

Prevalence Index = B/A=

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes☒ No☐

Remarks:*Poa sp. assumed to be FAC. The hydrophytic vegetation criterion is met due to greater than 50% of the dominant vegetation within the test plot having FAC indicator statuses.

SOIL

Sampling Point: TP6

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

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

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

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

- ☐ Histosal (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)

Indicators for Problematic Hydric Soils

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

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

Restrictive Layer (if present):

Type: ____
Depth (inches):

Hydric Soil Present? **Yes☐ No☒**

Remarks: No indicators of hydric soil were observed in the test plot during the site visit.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ 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:No indicators of hydrology were observed in the test plot during the site visit.

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

Project/Site: Lockwood Meadows Subdivision City/County: La Center/Clark Sampling Date: 9/8/2020
Applicant/Owner: PLS Engeneering State: WA Sampling Point: TPA1
Investigator(s): Naglich, Francis; Rendleman, Annie Jean Section, Township, Range: S2, T4N, R1E
Landform (hillslope, terrace, etc.): Drainageways, Terraces Local relief: (concave, convex, none): Concave Slope (%): 0-3%
Subregion (LRR): A Lat: 45.861598 Long: -122.647313 Datum: NAD83
Soil Map Unit Name: Odne silty clay loam, 0 to 3 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 ☒ No ☐	**Is the Sampled Area within a Wetland?** **Yes☒ No☐**
Hydric Soils Present?	Yes ☒ No ☐	
Wetland Hydrology Present?	Yes ☒ No ☐	

Remarks: This test plot is located within the southeast portion of Clark County Tax Parcel 209113000, within Wetland A. This test plot met all three wetland parameters; therefore, TPA1 is considered to be within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus balsamifera*	30%	yes	FAC
2.	%		
3.	%		
4.	%		
50% = 15 20% = 6	30%	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1.	%		
2.	%		
3.	%		
4.	%		
5.	%		
50% = ___ 20% = ___	%	=Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Holcus lanatus*	60%	yes	FAC
2. *Anthoxanthum odoratum*	20%	yes	FACU
3. *Juncus effusus*	20%	yes	FACW
4. *Mentha pulegium*	15%	no	OBL
5. *Hypericum anagalloides*	10%	no	OBL
6.	%		
7.	%		
8.	%		
9.	%		
10.	%		
11.	%		
50% = 62 20% = 25	125%	=Total Cover	
Woody Vine Stratum (Plot size: 15 ft radius)			
1.	%		
2.	%		
50% = ___ 20% = ___	%	=Total Cover	

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC 75 (A/B)

Prevalence Index worksheet

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

Prevalence Index = B/A=___

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes☒ No☐**

Remarks:The hydrophytic vegetation criterion is met due to greater than 50% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.

SOIL

Sampling Point: TPA1

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

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

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

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

- ☐ Histosal (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)

Indicators for Problematic Hydric Soils

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

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

Restrictive Layer (if present):

Type: ____
Depth (inches):

Hydric Soil Present? **Yes** ☒ **No** ☐

Remarks: The hydric soil indicator Depleted Matrix (F3) was met.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ 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 hydrology indicator Oxidized Rhizospheres along Living Roots (C3) and secondary indicator Saturation Visible on Aerial Imagery (C9) were met.

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

Project/Site: Lockwood Meadows Subdivision City/County: La Center/Clark Sampling Date: 9/8/2020
Applicant/Owner: PLS Engeneering State: WA Sampling Point: TPA2
Investigator(s): Naglich, Francis; Rendleman, Annie Jean Section, Township, Range: S2, T4N, R1E
Landform (hillslope, terrace, etc.): Drainageways, Terraces Local relief: (concave, convex, none): None Slope (%): 0-3%
Subregion (LRR): A Lat: 45.861677 Long: -122.647211 Datum: NAD83
Soil Map Unit Name: Odne silty clay loam, 0 to 3 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 ☒ No ☐	**Is the Sampled Area within a Wetland?** **Yes☐ No☒**
Hydric Soils Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	

Remarks: This test plot is located within the southeast portion of Clark County Tax Parcel 209113000, just north of Wetland A. This test plot only met one of the three wetland parameters; therefore, TPA2 is not considered to be within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus balsamifera*	20%	yes	FAC
2. **Abies nordmanniana*	10%	yes	FACU
3.	%		
4.	%		
50% = 15 20% = 6	30%	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Rubus armeniacus*	10%	yes	FAC
2.	%		
3.	%		
4.	%		
5.	%		
50% = 5 20% = 2	10%	=Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Holcus lanatus*	30%	yes	FAC
2. *Anthoxanthum odoratum*	30%	yes	FACU
3. *Cirsium arvense*	20%	no	FAC
4. *Mentha pulegium*	10%	no	OBL
5. *Leucanthemum vulgare*	10%	no	FAC
6. *Hypochaeris radicata*	5%	no	FACU
7.	%		
8.	%		
9.	%		
10.	%		
11.	%		
50% = 52 20% = 21	105%	=Total Cover	
Woody Vine Stratum (Plot size: 15 ft radius)			
1.	%		
2.	%		
50% = ___ 20% = ___	%	=Total Cover	

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC 60 (A/B)

Prevalence Index worksheet

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

Prevalence Index = B/A=

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes☒ No☐**

Remarks:*Abies nordmanniana is assumed to be FACU. The hydrophytic vegetation criterion is met due to greater than 50% of the dominant vegetation within the test plot having FAC indicator statuses.

SOIL

Sampling Point: TPA2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 4/2	99%	10YR 4/6	1%	C	M	Silt loam	
11-16	10YR 4/2	95%	10YR 4/6	5%	C	M	Silt loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

- ☐ Histosal (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)

Indicators for Problematic Hydric Soils

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

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

Restrictive Layer (if present):

Type: ____
Depth (inches):

Hydric Soil Present? **Yes**☐ **No**☒

Remarks: No hydric soil indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ 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 hydrology secondary indicator Saturation Visible on Aerial Imagery (C9) was met; however wetland hydrology criteria was not met due to only one secondary indicator being met and there were no other indicators of wetland hydrology observed.

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

Project/Site: Lockwood Meadows Subdivision | City/County: La Center/Clark | Sampling Date: 2/24/2021
Applicant/Owner: PLS Engeneering | State: WA | Sampling Point: TPAA
Investigator(s): Rendleman, Annie Jean | Section, Township, Range: S2, T4N, R1E
Landform (hillslope, terrace, etc.): Drainageways, Terraces | Local relief: (concave, convex, none): Convex | Slope (%): 0-3%
Subregion (LRR): A | Lat: 45.861438 | Long: -122.646694 | Datum: NAD83
Soil Map Unit Name: Odne silty clay loam, 0 to 3 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 ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes☐ No☒
Hydric Soils Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	

Remarks: This test plot is located southeast of Wetland A in an area where Cottonwood saplings are established. Because all three wetland indicators were not met, TP-AA was considered to be in uplands.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. **Abies nordmanniana*	25%	yes	FACU
2.	%		
3.	%		
4.	%		
50% = 13 20% = 5	25%	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Rubus armeniacus*	10%	yes	FAC
2. *Populus balsamifera*	8%	yes	FAC
3.	%		
4.	%		
5.	%		
50% = 9 20% = 4	18%	=Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Holcus lanatus*	70%	yes	FAC
2. *Anthoxanthum odoratum*	30%	yes	FACU
3.	%		
4.	%		
5.	%		
6.	%		
7.	%		
8.	%		
9.	%		
10.	%		
11.	%		
50% = 50 20% = 20	100%	=Total Cover	
Woody Vine Stratum (Plot size: 15 ft radius)			
1.	%		
2.	%		
50% = ___ 20% = ___	%	=Total Cover	

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC 60 (A/B)

Prevalence Index worksheet

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

Prevalence Index = B/A=

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes☒ No☐

Remarks:*Abies nordmanniana assumed to be FACU. The hydrophytic vegetation criterion is met due to greater than 50% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.

SOIL

Sampling Point: TPAA

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

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

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

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

- ☐ Histosal (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)

Indicators for Problematic Hydric Soils

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

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

Restrictive Layer (if present):

Type: ____
Depth (inches):

Hydric Soil Present? **Yes**☐ **No**☒

Remarks: No indicators of hydric soil were observed in the test plot during the site visit.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ 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:No indicators of hydrology were observed in the test plot during the site visit. The soil was moist from recent rainfall, but not saturated. Standing water was not observed at this test plot, but was observed within Wetland A.

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

Project/Site: Lockwood Meadows Subdivision City/County: La Center/Clark Sampling Date: 2/24/2021
Applicant/Owner: PLS Engeneering State: WA Sampling Point: TPAB
Investigator(s): Rendleman, Annie Jean Section, Township, Range: S2, T4N, R1E
Landform (hillslope, terrace, etc.): Drainageways, Terraces Local relief: (concave, convex, none): Convex Slope (%): 0-3%
Subregion (LRR): A Lat: 45.861406 Long: -122.646896 Datum: NAD83
Soil Map Unit Name: Odne silty clay loam, 0 to 3 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 ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes☐ No☒
Hydric Soils Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	

Remarks: This test plot is located southeast of Wetland A in an area where Cottonwood saplings are established. Because all three wetland indicators were not met, TP-AB was considered to be in uplands.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Abies grandis*	10%	yes	FACU
2. **Abies nordmanniana*	10%	yes	FACU
3.	%		
4.	%		
50% = 10 20% = 4	20%	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Populus balsamifera*	60%	yes	FAC
2.	%		
3.	%		
4.	%		
5.	%		
50% = 30 20% = 12	60%	=Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Holcus lanatus*	80%	yes	FAC
2. *Anthoxanthum odoratum*	20%	yes	FACU
3.	%		
4.	%		
5.	%		
6.	%		
7.	%		
8.	%		
9.	%		
10.	%		
11.	%		
50% = 50 20% = 20	100%	=Total Cover	
Woody Vine Stratum (Plot size: 15 ft radius)			
1.	%		
2.	%		
50% = ___ 20% = ___	%	=Total Cover	

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC 40 (A/B)

Prevalence Index worksheet

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

Prevalence Index = B/A=

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes☐ No☒

Remarks:*Abies nordmanniana assumed to be FACU. The hydrophytic vegetation criterion is not met due to less than 50% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.

SOIL

Sampling Point: TPAB

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 3/2	100%		%			Clay loam	
9-16	10YR 3/2	99%	10YR 4/6	1%	C	M	Clay loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

- ☐ Histosal (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)

Indicators for Problematic Hydric Soils

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

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

Restrictive Layer (if present):

Type: ____
Depth (inches):

Hydric Soil Present? **Yes**☐ **No**☒

Remarks: No indicators of hydric soil were observed in the test plot during the site visit.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ 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:No indicators of hydrology were observed in the test plot during the site visit. The soil was moist from recent rainfall, but not saturated. Standing water was not observed at this test plot, but was observed within Wetland A.

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

Project/Site: Lockwood Meadows Subdivision City/County: La Center/Clark Sampling Date: 2/24/2021
Applicant/Owner: PLS Engeneering State: WA Sampling Point: TPAC
Investigator(s): Rendleman, Annie Jean Section, Township, Range: S2, T4N, R1E
Landform (hillslope, terrace, etc.): Drainageways, Terraces Local relief: (concave, convex, none): Convex Slope (%): 0-3%
Subregion (LRR): A Lat: 45.861597 Long: -122.647392 Datum: NAD83
Soil Map Unit Name: Odne silty clay loam, 0 to 3 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☐ No☒ Hydric Soils Present? Yes☐ No☒ Wetland Hydrology Present? Yes☐ No☒	**Is the Sampled Area within a Wetland?**	**Yes☐ No☒**

Remarks: This test plot is located northwest of Wetland A. Because all three wetland indicators were not met, TP-AC was considered to be in uplands.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. **Abies nordmanniana*	10%	yes	FACU
2. *Abies grandis*	10%	yes	FACU
3.	%		
4.	%		
50% = 10 20% = 4	20%	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Populus balsamifera*	25%	yes	FAC
2. *Rubus armeniacus*	15%	yes	FAC
3.	%		
4.	%		
5.	%		
50% = 20 20% = 8	40%	=Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Holcus lanatus*	70%	yes	FAC
2. *Anthoxanthum odoratum*	20%	yes	FACU
3. *Leucanthemum vulgare*	10%	no	FACU
4.	%		
5.	%		
6.	%		
7.	%		
8.	%		
9.	%		
10.	%		
11.	%		
50% = 50 20% = 20	100%	=Total Cover	
Woody Vine Stratum (Plot size: 15 ft radius)			
1.	%		
2.	%		
50% = ___ 20% = ___	%	=Total Cover	

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC 50 (A/B)

Prevalence Index worksheet

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

Prevalence Index = B/A=

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes☐ No☒**

Remarks:*Abies nordmanniana assumed to be FACU. The hydrophytic vegetation criterion is not met due to 50% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.

SOIL

Sampling Point: TPAC

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	100%		%			Clay loam	
10-16	10YR 3/2	93%	10YR 4/6	7%	C	M	Clay loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

- ☐ Histosal (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)

Indicators for Problematic Hydric Soils

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

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

Restrictive Layer (if present):

Type: ____
Depth (inches):

Hydric Soil Present? **Yes☐ No☒**

Remarks: No indicators of hydric soil were observed in the test plot during the site visit.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ 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:No indicators of hydrology were observed in the test plot during the site visit. The soil was moist from recent rainfall, but not saturated. Standing water was not observed at this test plot, but was observed within Wetland A.

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

Project/Site: Lockwood Meadows Subdivision City/County: La Center/Clark Sampling Date: 2/24/2021
Applicant/Owner: PLS Engeneering State: WA Sampling Point: TPAD
Investigator(s): Rendleman, Annie Jean Section, Township, Range: S2, T4N, R1E
Landform (hillslope, terrace, etc.): Drainageways, Terraces Local relief: (concave, convex, none): Convex Slope (%): 0-3%
Subregion (LRR): A Lat: 45.861438 Long: -122.646694 Datum: NAD83
Soil Map Unit Name: Odne silty clay loam, 0 to 3 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 ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes☐ No☒
Hydric Soils Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	

Remarks: This test plot is located southeast of Wetland A in an area where Cottonwood saplings are established. Because all three wetland indicators were not met, TP-AD was considered to be in uplands.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. **Abies nordmanniana*	30%	yes	FACU
2. *Abies grandis*	5%	no	FACU
3.	%		
4.	%		
50% = 18 20% = 7	35%	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Populus balsamifera*	15%	yes	FAC
2.	%		
3.	%		
4.	%		
5.	%		
50% = 8 20% = 3	15%	=Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Holcus lanatus*	80%	yes	FAC
2. *Anthoxanthum odoratum*	20%	yes	FACU
3.	%		
4.	%		
5.	%		
6.	%		
7.	%		
8.	%		
9.	%		
10.	%		
11.	%		
50% = 50 20% = 20	100%	=Total Cover	
Woody Vine Stratum (Plot size: 15 ft radius)			
1.	%		
2.	%		
50% = ___ 20% = ___	%	=Total Cover	

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC 50 (A/B)

Prevalence Index worksheet

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

Prevalence Index = B/A=

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes☐ No☒

Remarks:*Abies nordmanniana assumed to be FACU. The hydrophytic vegetation criterion is not met due to 50% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.

SOIL

Sampling Point: TPAD

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

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

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

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

- ☐ Histosal (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)

Indicators for Problematic Hydric Soils

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

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

Restrictive Layer (if present):

Type: ____
Depth (inches):

Hydric Soil Present? **Yes**☐ **No**☒

Remarks: No indicators of hydric soil were observed in the test plot during the site visit.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ 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:No indicators of hydrology were observed in the test plot during the site visit. The soil was moist from recent rainfall, but not saturated. Standing water was not observed at this test plot, but was observed within Wetland A.

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

Project/Site: Lockwood Meadows Subdivision | City/County: La Center/Clark | Sampling Date: 2/24/2021
Applicant/Owner: PLS Engeneering | State: WA | Sampling Point: TPAE
Investigator(s): Rendleman, Annie Jean | Section, Township, Range: S2, T4N, R1E
Landform (hillslope, terrace, etc.): Drainageways, Terraces | Local relief: (concave, convex, none): Convex | Slope (%): 0-3%
Subregion (LRR): A | Lat: 45.861483 | Long: -122.646834 | Datum: NAD83
Soil Map Unit Name: Odne silty clay loam, 0 to 3 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 ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes☐ No☒
Hydric Soils Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	

Remarks: This test plot is located southeast of Wetland A in an area where Cottonwood saplings are established. Because all three wetland indicators were not met, TP-AE was considered to be in uplands.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. **Abies nordmanniana*	25%	yes	FACU
2. *Abies grandis*	5%	no	FACU
3.	%		
4.	%		
50% = 15 20% = 6	30%	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Rubus armeniacus*	10%	yes	FAC
2. *Populus balsamifera*	5%	yes	FAC
3.	%		
4.	%		
5.	%		
50% = 8 20% = 3	15%	=Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Holcus lanatus*	80%	yes	FAC
2. *Anthoxanthum odoratum*	20%	yes	FACU
3.	%		
4.	%		
5.	%		
6.	%		
7.	%		
8.	%		
9.	%		
10.	%		
11.	%		
50% = 50 20% = 20	100%	=Total Cover	
Woody Vine Stratum (Plot size: 15 ft radius)			
1.	%		
2.	%		
50% = ___ 20% = ___	%	=Total Cover	

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)

Prevalence Index worksheet

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

Prevalence Index = B/A=

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes☒ No☐

Remarks:*Abies nordmanniana assumed to be FACU. The hydrophytic vegetation criterion is met due to greater than 50% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.

SOIL

Sampling Point: TPAE

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

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

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

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

- ☐ Histosal (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)

Indicators for Problematic Hydric Soils

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

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

Restrictive Layer (if present):

Type: ____
Depth (inches):

Hydric Soil Present? **Yes☐ No☒**

Remarks: No indicators of hydric soil were observed in the test plot during the site visit.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ 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:No indicators of hydrology were observed in the test plot during the site visit. The soil was moist from recent rainfall, but not saturated. Standing water was not observed at this test plot, but was observed within Wetland A.

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

Project/Site: Lockwood Meadows Subdivision City/County: La Center/Clark Sampling Date: 9/8/2020
Applicant/Owner: PLS Engeneering State: WA Sampling Point: TPB1
Investigator(s): Naglich, Francis; Rendleman, Annie Jean Section, Township, Range: S2, T4N, R1E
Landform (hillslope, terrace, etc.): Terraces Local relief: (concave, convex, none): None Slope (%): 8-20%
Subregion (LRR): A Lat: 45.861468 Long: -122.649143 Datum: NAD83
Soil Map Unit Name: Gee silt loam, 8 to 20 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 ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes☐ No☒
Hydric Soils Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	

Remarks: This test plot is located in the south-central portion of Clark County Tax Parcel 209113000, north of Wetland B. This test plot only met one of the three wetland parameters; therefore, TP-B1 is not considered to be within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus balsamifera*	60%	yes	FAC
2.	%		
3.	%		
4.	%		
50% = 30 20% = 12	60%	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Salix scouleriana*	20%	yes	FAC
2. *Rubus armeniacus*	5%	yes	FAC
3.	%		
4.	%		
5.	%		
50% = 12 20% = 5	25%	=Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Dactylis glomerata*	15%	yes	FACU
2. *Gnaphalium uliginosum*	10%	yes	FAC
3. *Vicia sativa*	10%	yes	UPL
4.	%		
5.	%		
6.	%		
7.	%		
8.	%		
9.	%		
10.	%		
11.	%		
50% = 17 20% = 7	35%	=Total Cover	
Woody Vine Stratum (Plot size: 15 ft radius)			
1.	%		
2.	%		
50% = ___ 20% = ___	%	=Total Cover	

% Bare Ground in Herb Stratum 65%

Dominance Test Worksheet

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC 66 (A/B)

Prevalence Index worksheet

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

Prevalence Index = B/A=

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes☒ No☐

Remarks:The hydrophytic vegetation criterion is met due to greater than 50% of the dominant vegetation within the test plot having FAC indicator statuses.

SOIL

Sampling Point: TPB1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 4/4	100%		%			Silty clay loam	
10-16	10YR 4/3	100%		%			Silty clay loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

- ☐ Histosal (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)

Indicators for Problematic Hydric Soils

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

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

Restrictive Layer (if present):

Type: ____
Depth (inches):

Hydric Soil Present? **Yes**☐ **No**☒

Remarks: No hydric soil indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

Wetland Hydrology Present? **Yes** ☐ **No** ☒

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

Remarks:Hydrology was not present and there were no indicators of wetland hydrology.

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

Project/Site: Lockwood Meadows Subdivision City/County: La Center/Clark Sampling Date: 9/8/2020
Applicant/Owner: PLS Engeneering State: WA Sampling Point: TPB2
Investigator(s): Naglich, Francis; Rendleman, Annie Jean Section, Township, Range: S2, T4N, R1E
Landform (hillslope, terrace, etc.): Terraces Local relief: (concave, convex, none): Concave Slope (%): 8-20%
Subregion (LRR): A Lat: 45.861385 Long: -122.649159 Datum: NAD83
Soil Map Unit Name: Gee silt loam, 8 to 20 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 ☒ No ☐	**Is the Sampled Area within a Wetland?** **Yes☒ No☐**
Hydric Soils Present?	Yes ☒ No ☐	
Wetland Hydrology Present?	Yes ☒ No ☐	

Remarks: This test plot is located in the south-central portion of Clark County Tax Parcel 209113000, within Wetland B. Because all three wetland parameters were met, TP-B2 is considered a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus balsamifera*	90%	yes	FAC
2. *Salix scouleriana*	10%	no	FAC
3.	%		
4.	%		
50% = 50 20% = 20	100%	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1.	%		
2.	%		
3.	%		
4.	%		
5.	%		
50% = ___ 20% = ___	%	=Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Stellaria media*	20%	yes	FACU
2. *Gnaphalium uliginosum*	20%	yes	FAC
3. *Epilobium palustre*	10%	yes	OBL
4.	%		
5.	%		
6.	%		
7.	%		
8.	%		
9.	%		
10.	%		
11.	%		
50% = 25 20% = 10	50%	=Total Cover	
Woody Vine Stratum (Plot size: 15 ft radius)			
1.	%		
2.	%		
50% = ___ 20% = ___	%	=Total Cover	

% Bare Ground in Herb Stratum 50%

Dominance Test Worksheet

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC 75 (A/B)

Prevalence Index worksheet

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

Prevalence Index = B/A=

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes☒ No☐**

Remarks:The hydrophytic vegetation criterion is met due to greater than 50% of the dominant vegetation within the test plot having either FAC and OBL indicator statuses.

SOIL

Sampling Point: TPB2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/2	100%		%			Silty clay loam	
4-16	10YR 4/1	60%	10YR 4/6	40%	C	M	Silty clay loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

- ☐ Histosal (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)

Indicators for Problematic Hydric Soils

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

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

Restrictive Layer (if present):

Type: ____
Depth (inches):

Hydric Soil Present? **Yes☒ No☐**

Remarks: The hydric soil indicators Depleted Below Dark Surface (A11) and Depleted Matrix (F3) were met.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ 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 hydrology indicator Oxidized Rhizospheres along Living Roots (C3) was met.

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

Project/Site: Lockwood Meadows Subdivision City/County: La Center/Clark Sampling Date: 2/24/2021
Applicant/Owner: PLS Engeneering State: WA Sampling Point: TPBA
Investigator(s): Rendleman, Annie Jean Section, Township, Range: S2, T4N, R1E
Landform (hillslope, terrace, etc.): Terraces Local relief: (concave, convex, none): Convex Slope (%): 8-20%
Subregion (LRR): A Lat: 45.861482 Long: -122.648913 Datum: NAD83
Soil Map Unit Name: Gee silt loam, 8 to 20 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 ☒ No ☐	**Is the Sampled Area within a Wetland?** **Yes☐ No☒**
Hydric Soils Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	

Remarks: This test plot is located northeast of Wetland B. Because all three wetland indicators were not met, TP-BA was considered to be in uplands.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus balsamifera*	10%	yes	FAC
2.	%		
3.	%		
4.	%		
50% = 5 20% = 2	10%	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1.	%		
2.	%		
3.	%		
4.	%		
5.	%		
50% = ___ 20% = ___	%	=Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. **Poa sp.*	80%	yes	FAC
2. *Ranunculus repens*	20%	yes	FAC
3.	%		
4.	%		
5.	%		
6.	%		
7.	%		
8.	%		
9.	%		
10.	%		
11.	%		
50% = 50 20% = 20	100%	=Total Cover	
Woody Vine Stratum (Plot size: 15 ft radius)			
1.	%		
2.	%		
50% = ___ 20% = ___	%	=Total Cover	

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC 100 (A/B)

Prevalence Index worksheet

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

Prevalence Index = B/A= ___

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes☒ No☐**

Remarks:*Poa sp. assumed to be FAC. The hydrophytic vegetation criterion is met due to greater than 50% of the dominant vegetation within the test plot having either FAC and OBL indicator statuses.

SOIL

Sampling Point: TPBA

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	100%		%			Clay loam	
8-16	10YR 4/2	99%	10YR 4/6	1%	C	M	Clay loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

- ☐ Histosal (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)

Indicators for Problematic Hydric Soils

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

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

Restrictive Layer (if present):

Type: ____
Depth (inches):

Hydric Soil Present? **Yes**☐ **No**☒

Remarks: No indicators of hydric soil were observed in the test plot during the site visit.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ 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:The soil was moist from recent rainfall, but not saturated. No indicators of hydrology were observed in the test plot during the site visit.

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

Project/Site: Lockwood Meadows Subdivision City/County: La Center/Clark Sampling Date: 2/24/2021
Applicant/Owner: PLS Engeneering State: WA Sampling Point: TPBB
Investigator(s): Rendleman, Annie Jean Section, Township, Range: S2, T4N, R1E
Landform (hillslope, terrace, etc.): Terraces Local relief: (concave, convex, none): Concave Slope (%): 8-20%
Subregion (LRR): A Lat: 45.861437 Long: -122.648925 Datum: NAD83
Soil Map Unit Name: Gee silt loam, 8 to 20 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 ☒ No ☐	**Is the Sampled Area within a Wetland?** **Yes☒ No☐**
Hydric Soils Present?	Yes ☒ No ☐	
Wetland Hydrology Present?	Yes ☒ No ☐	

Remarks: This test plot is located in the easternmost portion of Wetland B. Because all three wetland parameters were met, TP-BB is considered a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus balsamifera*	50%	yes	FAC
2. *Salix scouleriana*	5%	no	FAC
3.	%		
4.	%		
50% = 28 20% = 11	55%	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1.	%		
2.	%		
3.	%		
4.	%		
5.	%		
50% = ___ 20% = ___	%	=Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. **Poa sp.*	60%	yes	FAC
2. *Stellaria media*	20%	yes	FACU
3. *Gnaphalium uliginosum*	10%	no	FAC
4. *Epilobium palustre*	5%	no	OBL
5.	%		
6.	%		
7.	%		
8.	%		
9.	%		
10.	%		
11.	%		
50% = 48 20% = 19	95%	=Total Cover	
Woody Vine Stratum (Plot size: 15 ft radius)			
1.	%		
2.	%		
50% = ___ 20% = ___	%	=Total Cover	

% Bare Ground in Herb Stratum 5%

Dominance Test Worksheet

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC 67 (A/B)

Prevalence Index worksheet

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

Prevalence Index = B/A=

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes☒ No☐**

Remarks:*Poa sp. assumed to be FAC. The hydrophytic vegetation criterion is met due to greater than 50% of the dominant vegetation within the test plot having either FAC and OBL indicator statuses.

SOIL

Sampling Point: TPBB

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/2	100%		%			Clay loam	
5-16	10YR 4/1	80%	10YR 4/6	20%	C	M	Clay loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

- ☐ Histosal (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)

Indicators for Problematic Hydric Soils

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

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

Restrictive Layer (if present):

Type: ____
Depth (inches):

Hydric Soil Present? **Yes☒ No☐**

Remarks: The hydric soil indicators Depleted Below Dark Surface (A11), Depleted Matrix (F3), and Hydrogen Sulfide (A4) were met due to a matrix value of 4, chroma of 1, and redoximorphic features from 5-16 inches below the surface.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ☒	No ☐	Depth (Inches): 0.5
Water Table Present?	Yes ☒	No ☐	Depth (Inches): 8
Saturation Present? (Includes Capillary fringe)	Yes ☒	No ☐	Depth (Inches): 0

Wetland Hydrology Present? **Yes ☒ No ☐**

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

Remarks:The wetland hydrology indicators Surface Water (A1), High Water Table (A2), Saturation (A3), and Hydrogen Sulfide Odor (C1) were met.

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

Project/Site: Lockwood Meadows Subdivision City/County: La Center/Clark Sampling Date: 2/24/2021
Applicant/Owner: PLS Engeneering State: WA Sampling Point: TPBC
Investigator(s): Rendleman, Annie Jean Section, Township, Range: S2, T4N, R1E
Landform (hillslope, terrace, etc.): Terraces Local relief: (concave, convex, none): Convex Slope (%): 8-20%
Subregion (LRR): A Lat: 45.861519 Long: -122.649297 Datum: NAD83
Soil Map Unit Name: Gee silt loam, 8 to 20 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 ☒ No ☐	**Is the Sampled Area within a Wetland?** **Yes☐ No☒**
Hydric Soils Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☒ No ☐	

Remarks: This test plot is located north of Wetland B. Because all three wetland indicators were not met, TP-BC was considered to be in uplands.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1. *Populus balsamifera*	15%	yes	FAC
2.	%		
3.	%		
4.	%		
50% = 8 20% = 3	15%	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Rubus armeniacus*	15%	yes	FAC
2.	%		
3.	%		
4.	%		
5.	%		
50% = 8 20% = 3	15%	=Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. **Poa sp.*	50%	yes	FAC
2. *Ranunculus repens*	50%	yes	FAC
3.	%		
4.	%		
5.	%		
6.	%		
7.	%		
8.	%		
9.	%		
10.	%		
11.	%		
50% = 50 20% = 20	100%	=Total Cover	
Woody Vine Stratum (Plot size: 15 ft radius)			
1.	%		
2.	%		
50% = ___ 20% = ___	%	=Total Cover	

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC 100 (A/B)

Prevalence Index worksheet

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

Prevalence Index = B/A=

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes☒ No☐**

Remarks:*Poa sp. assumed to be FAC. The hydrophytic vegetation criterion is met due to greater than 50% of the dominant vegetation within the test plot having either FAC and OBL indicator statuses.

SOIL

Sampling Point: TPBC

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/2	100%		%			Clay loam	
5-16	10YR 4/1	100%		%			Clay loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

- ☐ Histosal (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)

Indicators for Problematic Hydric Soils

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

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

Restrictive Layer (if present):

Type: ____
Depth (inches):

Hydric Soil Present? **Yes**☐ **No**☒

Remarks: No indicators of hydric soil were observed in the test plot during the site visit.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ☐	No ☒	Depth (Inches): ____
Water Table Present?	Yes ☒	No ☐	Depth (Inches): 8
Saturation Present? (Includes Capillary fringe)	Yes ☒	No ☐	Depth (Inches): 5

Wetland Hydrology Present? **Yes** ☒ **No** ☐

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

Remarks:The hydrology indicators High Water Table (A2) and Saturation (A3) were met within the test plot.

APPENDIX B: WETLAND RATING FORMS

Wetland name or number A

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland A Date of site visit: 9/8/2020

Rated by AJ Rendleman Trained by Ecology? Yes X No Date of training 11/2020

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 Earth

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)	TOTAL
Score Based on Ratings	5	5	4	14

Score for each function based on three ratings *(order of ratings is not important)*

9 = H,H,H
8 = H,H,M
7 = H,H,L
7 = H,M,M
6 = H,M,L
6 = M,M,M
5 = H,L,L
5 = M,M,L
4 = M,L,L
3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	**I II**
Wetland of High Conservation Value	**I**
Bog	**I**
Mature Forest	**I**
Old Growth Forest	**I**
Coastal Lagoon	**I II**
Interdunal	**I II III IV**
None of the above	(N/A)

Wetland name or number 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 (*can be added to map of hydroperiods)*	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	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 *(can be added to another figure)*	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream *(can be added to another figure)*	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	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 *(can be added to another figure)*	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	8A
Hydroperiods	H 1.2	8A
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	8A
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants (*can be added to figure above)*	S 4.1	8A
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	8A
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	9
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	10
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	10

Wetland name or number A

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?
   x The wetland is on a slope (*slope can be very gradual*),
   x 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,
   x 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 name or number A

NO – go to 6 **YES** – The wetland class is **Riverine**

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

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

NO – go to 7 **YES** – The wetland class is **Depressional**

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

NO – go to 8 **YES** – The wetland class is **Depressional**

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

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

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

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

Wetland name or number 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: *(a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance*) 4 / 88 = 4.5% (See 2-ft contours on Sheet 3). 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. *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.* 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	3
Total for S 1 Add the points in the boxes above	4

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? The tree farm is no longer in use (not sprayed or mowed). 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	0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? *At least one aquatic resource in the basin is on the 303(d) list*. 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? *Answer YES if there is a TMDL for the basin in which unit is found.* Yes = 2 No = 0	2
Total for S 3 Add the points in the boxes above	3

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

Wetland name or number 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 > 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

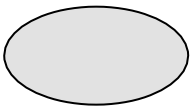
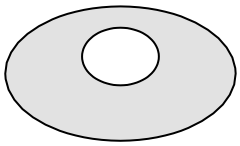
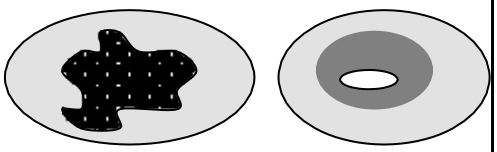
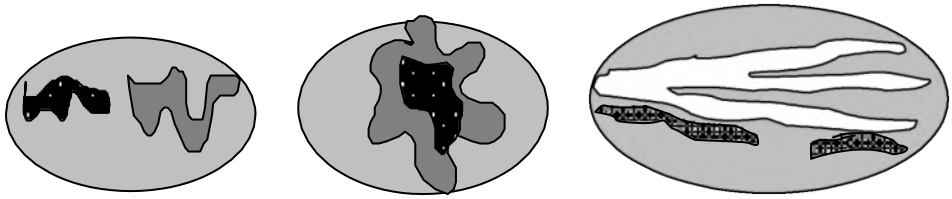
Rating of Landscape Potential If score is: ___**1 = M** __**x**__**0 = L** *Record the rating on the first page*

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	2
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	2

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

NOTES and FIELD OBSERVATIONS:

Wetland name or number 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.* ____Aquatic bed — 4 structures or more: points = 4 ____Emergent — 3 structures: points = 2 ____Scrub-shrub (areas where shrubs have > 30% cover) — 2 structures: points = 1 __x__Forested (areas where trees have > 30% cover) — 1 structure: points = 0 *If the unit has a Forested class, check if:* ____The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon	0
H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*). ____Permanently flooded or inundated — 4 or more types present: points = 3 ____Seasonally flooded or inundated — 3 types present: points = 2 ____Occasionally flooded or inundated — 2 types present: points = 1 __x__Saturated only — 1 type present: points = 0 ____Permanently flowing stream or river in, or adjacent to, the wetland ____Seasonally flowing stream in, or adjacent to, the wetland ____**Lake Fringe wetland** — **2 points** ____**Freshwater tidal wetland** — **2 points**	0
H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft^2. *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 5 - 19 species — points = 1 < 5 species — points = 0	1
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 All three diagrams in this row are **HIGH** = 3points 	0

Wetland name or number A

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

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?	
H 2.1. Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* % undisturbed habitat 6 **+** [(% moderate and low intensity land uses)/2] 13 **= 19** % If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1 km Polygon points = 2 10-19% of 1 km Polygon points = 1 < 10% of 1 km Polygon points = 0	1
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* % undisturbed habitat 12 **+** [(% moderate and low intensity land uses)/2] 44 **= 47** % Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10-50% and in 1-3 patches points = 2 Undisturbed habitat 10-50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0	1
H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (- 2) ≤ 50% of 1 km Polygon is high intensity points = 0	0
Total for H 2 Add the points in the boxes above	2

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

Rating of Value If score is:___**2 = H** ___**1 = M** __**x**__**0 = L** *Record the rating on the first page*

Wetland name or number A

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.

Wetland name or number A

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type *Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.*	**Category**
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 *Spartina*, 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 un-mowed 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? *Use the key below.* ***If you answer YES you will still need to rate the wetland based on its functions.*** SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? Yes – Go to **SC 3.3** (No – Go to **SC 3.2**) SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to **SC 3.3** (No = **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 name or number A

SC 4.0. Forested Wetlands Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? ***If you answer YES you will still need to rate the wetland based on its functions.*** — **Old-growth forests** (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more. — **Mature forests** (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm). Yes = **Category I** No = **Not a forested wetland for this section**	**Cat. I**
SC 5.0. Wetlands in Coastal Lagoons Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom)* Yes – Go to **SC 5.1** No = **Not a wetland in a coastal lagoon** SC 5.1. Does the wetland meet all of the following three conditions? — 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 ft^2) Yes = **Category I** No = **Category II**	**Cat. I** **Cat. II**
SC 6.0. Interdunal Wetlands Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.*** In practical terms that means the following geographic areas: — Long Beach Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 Yes – Go to **SC 6.1** No = **not an interdunal wetland for rating** 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** SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = **Category II** No – Go to **SC 6.3** SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? Yes = **Category III** No = **Category IV**	**Cat I** **Cat. II** **Cat. III** **Cat. IV**
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	

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Wetland name or number B

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland B Date of site visit: 9/8/2020

Rated by AJ Rendleman Trained by Ecology? Yes X No Date of training 11/2020

HGM Class used for rating Depressional 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 Earth

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)	TOTAL
Score Based on Ratings	5	6	4	15

Score for each function based on three ratings *(order of ratings is not important)*

9 = H,H,H
8 = H,H,M
7 = H,H,L
7 = H,M,M
6 = H,M,L
6 = M,M,M
5 = H,L,L
5 = M,M,L
4 = M,L,L
3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	**I** **II**
Wetland of High Conservation Value	**I**
Bog	**I**
Mature Forest	**I**
Old Growth Forest	**I**
Coastal Lagoon	**I** **II**
Interdunal	**I** **II** **III** **IV**
None of the above	(N/A)

Wetland name or number B

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	8B
Hydroperiods	D 1.4, H 1.2	8B
Location of outlet (*can be added to map of hydroperiods)*	D 1.1, D 4.1	8B
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	D 2.2, D 5.2	8B
Map of the contributing basin	D 4.3, D 5.3	9
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	9
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	10
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	10

Riverine Wetlands

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

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	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 *(can be added to another figure)*	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

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

Wetland name or number B

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 name or number B

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 name or number B

DEPRESSIONAL AND FLATS WETLANDS

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

D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	2
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic *(use NRCS definitions)*. Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area points = 5 Wetland has persistent, ungrazed, plants > ½ of area points = 3 Wetland has persistent, ungrazed plants > 1/10 of area points = 1 Wetland has persistent, ungrazed plants < 1/10 of area points = 0	3
D 1.4. Characteristics of seasonal ponding or inundation: *This is the area that is ponded for at least 2 months. See description in manual.* Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0	0
Total for D 1 Add the points in the boxes above	5

Rating of Site Potential If score is: ___**12-16 = H** ___**6-11 = M** __**x**__**0-5 = L** *Record the rating on the first page*

D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	0
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source Yes = 1 No = 0	0
Total for D 2 Add the points in the boxes above	0

Rating of Landscape Potential If score is: ___**3 or 4 = H** ___**1 or 2 = M** __**x**__**0 = L** *Record the rating on the first page*

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

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

Wetland name or number B

DEPRESSIONAL AND FLATS WETLANDS

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

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

D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet points = 2 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch points = 1 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	2
D 4.2. Depth of storage during wet periods: *Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.* Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 The wetland is a "headwater" wetland points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in) points = 0	3
D 4.3. Contribution of the wetland to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire wetland is in the Flats class points = 5	3
Total for D 4 Add the points in the boxes above	8

Rating of Site Potential If score is: ___ **12-16 = H** __x__ **6-11 = M** ___ **0-5 = L** *Record the rating on the first page*

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

D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	0
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	0
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0	0
Total for D 5 Add the points in the boxes above	0

Rating of Landscape Potential If score is: ___ **3 = H** ___ **1 or 2 = M** __x__ **0 = L** *Record the rating on the first page*

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

D 6.1. The unit is in a landscape that has flooding problems. *Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.* The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): • Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 • Surface flooding problems are in a sub-basin farther down-gradient. points = 1 Flooding from groundwater is an issue in the sub-basin. points = 1 The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. *Explain why* _____ points = 0 There are no problems with flooding downstream of the wetland. points = 0	2
D 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 D 6 Add the points in the boxes above	2

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

Wetland name or number B

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.*

____	Aquatic bed	4 structures or more: points = 4
_x_	Emergent	3 structures: points = 2
____	Scrub-shrub (areas where shrubs have > 30% cover)	2 structures: points = 1
_x_	Forested (areas where trees have > 30% cover)	1 structure: points = 0

If the unit has a Forested class, check if:

____ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon

2

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*).

_x_	Permanently flooded or inundated	4 or more types present: points = 3
____	Seasonally flooded or inundated	3 types present: points = 2
____	Occasionally flooded or inundated	2 types present: points = 1
_x_	Saturated only	1 type present: points = 0
____	Permanently flowing stream or river in, or adjacent to, the wetland	
____	Seasonally flowing stream in, or adjacent to, the wetland	
____	**Lake Fringe wetland**	**2 points**
____	**Freshwater tidal wetland**	**2 points**

1

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft^2.

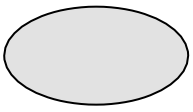
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. ***Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***

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

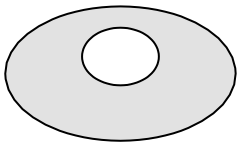
1

H 1.4. Interspersion of habitats

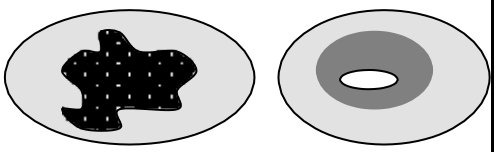
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always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



None = 0 points

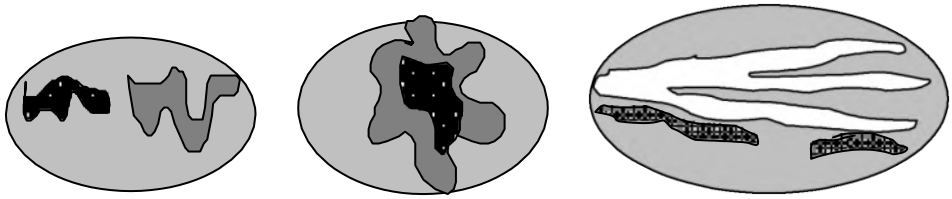


Low = 1 point



Moderate = 2 points

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



1

Wetland name or number B

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

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?	
H 2.1. Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* % undisturbed habitat 6 **+** [(% moderate and low intensity land uses)/2] 13 **= 19** % If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1 km Polygon points = 2 10-19% of 1 km Polygon points = 1 < 10% of 1 km Polygon points = 0	1
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* % undisturbed habitat 12 **+** [(% moderate and low intensity land uses)/2] 44 **= 47** % Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10-50% and in 1-3 patches points = 2 Undisturbed habitat 10-50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0	1
H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (- 2) ≤ 50% of 1 km Polygon is high intensity points = 0	0
Total for H 2 Add the points in the boxes above	2

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

Rating of Value If score is:___**2 = H** ___**1 = M** __**x**__**0 = L** *Record the rating on the first page*

Wetland name or number B

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.

Wetland name or number B

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type *Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.*	**Category**
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 *Spartina*, 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 un-mowed 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? *Use the key below.* ***If you answer YES you will still need to rate the wetland based on its functions.*** SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? Yes – Go to **SC 3.3** (No – Go to **SC 3.2**) SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to **SC 3.3** (No = **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 name or number B

SC 4.0. Forested Wetlands Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? ***If you answer YES you will still need to rate the wetland based on its functions.*** — **Old-growth forests** (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more. — **Mature forests** (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm). Yes = **Category I** No = **Not a forested wetland for this section**	**Cat. I**
SC 5.0. Wetlands in Coastal Lagoons Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom)* Yes – Go to **SC 5.1** No = **Not a wetland in a coastal lagoon** SC 5.1. Does the wetland meet all of the following three conditions? — 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 ft^2) Yes = **Category I** No = **Category II**	**Cat. I** **Cat. II**
SC 6.0. Interdunal Wetlands Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.*** In practical terms that means the following geographic areas: — Long Beach Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 Yes – Go to **SC 6.1** No = **not an interdunal wetland for rating** 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** SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = **Category II** No – Go to **SC 6.3** SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? Yes = **Category III** No = **Category IV**	**Cat I** **Cat II** **Cat. III** **Cat. IV**
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	

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APPENDIX C: PRECIPITATION DATA

WETS Station: BATTLE GROUND, WA

Requested years: 1991 - 2021

Month	Temperature (°F)			Precipitation (inches)				
	Avg daily max	Avg daily min	Avg daily mean	Avg	30% chance will have		Avg number of days with 0.10 inch or more	Average total snowfall
					less than	more than		
Jan	46.4	33.0	39.7	7.31	5.70	8.45	15	1.2
Feb	50.4	32.8	41.6	5.36	3.65	6.40	13	1.1
Mar	55.0	35.6	45.3	5.59	4.26	6.50	14	0.4
Apr	59.9	38.9	49.4	4.54	3.32	5.34	12	0.0
May	66.7	44.4	55.6	3.31	2.00	4.01	9	0.0
Jun	71.4	48.4	59.9	2.31	1.61	2.75	6	0.0
Jul	78.9	51.7	65.3	0.63	0.23	0.70	2	0.0
Aug	79.9	51.2	65.6	0.80	0.37	0.94	2	0.0
Sep	74.7	46.7	60.7	2.20	1.12	2.65	5	0.0
Oct	62.7	40.9	51.8	4.81	3.29	5.74	10	0.0
Nov	51.9	36.6	44.2	7.67	5.50	9.06	14	0.1
Dec	45.3	32.8	39.1	7.98	6.33	9.18	15	0.4
Annual:					47.35	56.14		
Average	61.9	41.1	51.5	-	-	-	-	-
Total	-	-	-	52.51			118	3.3

Climatological Data for BATTLE GROUND, WA - February 2021

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2021-02-01	54	45	49.5	10	0	0.27	M	M
2021-02-02	49	43	46.0	6	0	0.46	M	M
2021-02-03	48	37	42.5	3	0	0.57	M	M
2021-02-04	42	35	38.5	0	0	0.05	M	M
2021-02-05	42	37	39.5	0	0	0.53	M	M
2021-02-06	49	37	43.0	3	0	0.18	M	M
2021-02-07	44	37	40.5	1	0	0.45	M	M
2021-02-08	46	34	40.0	0	0	0.02	M	M
2021-02-09	43	25	34.0	0	0	0.00	M	M
2021-02-10	45	25	35.0	0	0	0.00	M	M
2021-02-11	44	31	37.5	0	0	0.03	M	M
2021-02-12	36	26	31.0	0	0	0.15	M	M
2021-02-13	28	22	25.0	0	0	0.90	11.0	M
2021-02-14	31	25	28.0	0	0	0.21	1.0	M
2021-02-15	32	31	31.5	0	0	0.55	M	M
2021-02-16	43	31	37.0	0	0	0.10	M	M
2021-02-17	45	34	39.5	0	0	0.04	M	M
2021-02-18	46	31	38.5	0	0	0.03	M	M
2021-02-19	40	32	36.0	0	0	0.23	M	M
2021-02-20	47	35	41.0	1	0	0.05	M	M
2021-02-21	47	38	42.5	3	0	0.17	M	M
2021-02-22	47	40	43.5	4	0	0.22	M	M
2021-02-23	48	35	41.5	2	0	0.51	M	M
2021-02-24	46	32	39.0	0	0	0.15	M	M
2021-02-25	48	32	40.0	0	0	0.13	M	M
2021-02-26	45	37	41.0	1	0	0.54	M	M
2021-02-27	47	37	42.0	2	0	0.15	M	M
2021-02-28	49	36	42.5	3	0	0.00	M	M
Average|Sum	44.0	33.6	38.8	39	0	6.69	12.0	M

Climatological Data for BATTLE GROUND, WA - January 2021

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2021-01-01	51	44	47.5	8	0	0.15	0.0	0
2021-01-02	55	45	50.0	10	0	0.46	0.0	0
2021-01-03	49	40	44.5	5	0	1.73	0.0	0
2021-01-04	52	40	46.0	6	0	0.48	0.0	0
2021-01-05	50	41	45.5	6	0	0.54	0.0	0
2021-01-06	51	41	46.0	6	0	0.37	0.0	0
2021-01-07	47	43	45.0	5	0	0.40	0.0	0
2021-01-08	54	40	47.0	7	0	0.15	0.0	0
2021-01-09	48	30	39.0	0	0	0.19	0.0	0
2021-01-10	44	31	37.5	0	0	0.10	0.0	0
2021-01-11	45	38	41.5	2	0	0.03	0.0	0
2021-01-12	52	39	45.5	6	0	1.39	0.0	0
2021-01-13	57	44	50.5	11	1	1.50	0.0	0
2021-01-14	53	34	43.5	4	0	0.40	0.0	0
2021-01-15	54	35	44.5	5	0	0.25	0.0	0
2021-01-16	48	38	43.0	3	0	0.05	0.0	0
2021-01-17	45	38	41.5	2	0	0.10	0.0	0
2021-01-18	50	34	42.0	2	0	0.00	0.0	0
2021-01-19	51	28	39.5	0	0	0.00	0.0	0
2021-01-20	53	27	40.0	0	0	0.00	0.0	0
2021-01-21	45	27	36.0	0	0	0.19	0.0	0
2021-01-22	44	36	40.0	0	0	0.00	0.0	0
2021-01-23	51	25	38.0	0	0	0.00	0.0	0
2021-01-24	45	24	34.5	0	0	0.00	0.0	0
2021-01-25	38	34	36.0	0	0	0.42	0.0	0
2021-01-26	39	34	36.5	0	0	0.04	0.0	0
2021-01-27	41	33	37.0	0	0	0.17	0.0	0
2021-01-28	43	35	39.0	0	0	0.15	0.0	0
2021-01-29	45	39	42.0	2	0	0.04	0.0	0
2021-01-30	44	39	41.5	2	0	0.28	0.0	0
2021-01-31	51	41	46.0	6	0	0.12	0.0	0
Average|Sum	48.2	36.0	42.1	98	1	9.70	0.0	0.0

Climatological Data for BATTLE GROUND, WA - December 2020

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2020-12-01	48	28	38.0	0	0	0.27	0.0	0
2020-12-02	50	27	38.5	0	0	0.05	0.0	0
2020-12-03	56	29	42.5	3	0	0.00	0.0	0
2020-12-04	47	27	37.0	0	0	0.00	0.0	0
2020-12-05	53	26	39.5	0	0	0.00	0.0	0
2020-12-06	52	27	39.5	0	0	0.16	0.0	0
2020-12-07	46	37	41.5	2	0	0.00	0.0	0
2020-12-08	48	33	40.5	1	0	0.00	0.0	0
2020-12-09	54	33	43.5	4	0	0.34	0.0	0
2020-12-10	51	32	41.5	2	0	0.04	0.0	0
2020-12-11	41	35	38.0	0	0	0.20	0.0	0
2020-12-12	41	32	36.5	0	0	0.42	0.0	0
2020-12-13	43	32	37.5	0	0	0.15	0.0	0
2020-12-14	41	37	39.0	0	0	0.21	0.0	0
2020-12-15	45	39	42.0	2	0	0.05	0.0	0
2020-12-16	47	40	43.5	4	0	0.20	0.0	0
2020-12-17	51	39	45.0	5	0	0.47	0.0	0
2020-12-18	48	40	44.0	4	0	0.06	0.0	0
2020-12-19	51	43	47.0	7	0	0.31	0.0	0
2020-12-20	50	49	49.5	10	0	1.91	0.0	0
2020-12-21	50	44	47.0	7	0	0.51	0.0	0
2020-12-22	57	38	47.5	8	0	0.30	0.0	0
2020-12-23	46	29	37.5	0	0	0.00	0.0	0
2020-12-24	41	25	33.0	0	0	0.00	0.0	0
2020-12-25	46	23	34.5	0	0	0.08	0.0	0
2020-12-26	45	31	38.0	0	0	0.55	0.0	0
2020-12-27	49	40	44.5	5	0	0.18	0.0	0
2020-12-28	50	26	38.0	0	0	0.00	0.0	0
2020-12-29	45	25	35.0	0	0	0.00	0.0	0
2020-12-30	37	29	33.0	0	0	0.13	0.0	0
2020-12-31	45	37	41.0	1	0	0.51	0.0	0
Average|Sum	47.5	33.3	40.4	65	0	7.10	0.0	0.0

Climatological Data for BATTLE GROUND, WA - November 2020

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2020-11-01	59	30	44.5	5	0	0.00	0.0	0
2020-11-02	68	30	49.0	9	0	0.00	0.0	0
2020-11-03	65	31	48.0	8	0	0.00	0.0	0
2020-11-04	59	36	47.5	8	0	0.40	0.0	0
2020-11-05	64	57	60.5	21	11	0.01	0.0	0
2020-11-06	57	47	52.0	12	2	1.28	0.0	0
2020-11-07	48	34	41.0	1	0	0.39	0.0	0
2020-11-08	44	28	36.0	0	0	0.09	0.0	0
2020-11-09	46	25	35.5	0	0	0.00	0.0	0
2020-11-10	41	28	34.5	0	0	0.33	0.0	0
2020-11-11	47	36	41.5	2	0	0.17	0.0	0
2020-11-12	50	28	39.0	0	0	0.01	0.0	0
2020-11-13	47	30	38.5	0	0	1.30	0.0	0
2020-11-14	49	38	43.5	4	0	0.31	0.0	0
2020-11-15	47	39	43.0	3	0	1.06	0.0	0
2020-11-16	53	42	47.5	8	0	0.14	0.0	0
2020-11-17	52	40	46.0	6	0	0.20	0.0	0
2020-11-18	56	40	48.0	8	0	0.54	0.0	0
2020-11-19	46	41	43.5	4	0	0.55	0.0	0
2020-11-20	49	37	43.0	3	0	0.02	0.0	0
2020-11-21	43	31	37.0	0	0	0.01	0.0	0
2020-11-22	39	37	38.0	0	0	0.00	0.0	0
2020-11-23	42	28	35.0	0	0	0.36	0.0	0
2020-11-24	50	35	42.5	3	0	0.20	0.0	0
2020-11-25	48	38	43.0	3	0	0.60	0.0	0
2020-11-26	46	40	43.0	3	0	0.12	0.0	0
2020-11-27	47	37	42.0	2	0	0.01	0.0	0
2020-11-28	44	34	39.0	0	0	0.11	0.0	0
2020-11-29	43	35	39.0	0	0	0.04	0.0	0
2020-11-30	50	31	40.5	1	0	0.26	0.0	0
Average|Sum	50.0	35.4	42.7	114	13	8.51	0.0	0.0

Climatological Data for BATTLE GROUND, WA - October 2020

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2020-10-01	81	48	64.5	25	15	0.00	0.0	0
2020-10-02	76	52	64.0	24	14	0.01	0.0	0
2020-10-03	79	52	65.5	26	16	0.01	0.0	0
2020-10-04	76	51	63.5	24	14	0.00	0.0	0
2020-10-05	66	47	56.5	17	7	0.00	0.0	0
2020-10-06	72	47	59.5	20	10	0.00	0.0	0
2020-10-07	77	47	62.0	22	12	0.00	0.0	0
2020-10-08	73	48	60.5	21	11	0.00	0.0	0
2020-10-09	60	53	56.5	17	7	0.00	0.0	0
2020-10-10	73	53	63.0	23	13	0.84	0.0	0
2020-10-11	61	49	55.0	15	5	0.40	0.0	0
2020-10-12	56	50	53.0	13	3	0.61	0.0	0
2020-10-13	61	49	55.0	15	5	0.10	0.0	0
2020-10-14	61	45	53.0	13	3	0.39	0.0	0
2020-10-15	61	36	48.5	9	0	0.01	0.0	0
2020-10-16	63	35	49.0	9	0	0.00	0.0	0
2020-10-17	61	44	52.5	13	3	0.02	0.0	0
2020-10-18	63	49	56.0	16	6	0.00	0.0	0
2020-10-19	63	52	57.5	18	8	0.01	0.0	0
2020-10-20	61	44	52.5	13	3	0.00	0.0	0
2020-10-21	62	43	52.5	13	3	0.00	0.0	0
2020-10-22	58	30	44.0	4	0	0.00	0.0	0
2020-10-23	56	29	42.5	3	0	0.00	0.0	0
2020-10-24	51	30	40.5	1	0	0.02	0.0	0
2020-10-25	48	36	42.0	2	0	0.00	0.0	0
2020-10-26	46	25	35.5	0	0	0.00	0.0	0
2020-10-27	53	26	39.5	0	0	0.00	0.0	0
2020-10-28	57	26	41.5	2	0	0.00	0.0	0
2020-10-29	65	31	48.0	8	0	0.00	0.0	0
2020-10-30	58	36	47.0	7	0	0.00	0.0	0
2020-10-31	60	31	45.5	6	0	0.17	0.0	0
Average|Sum	63.2	41.7	52.5	399	158	2.59	0.0	0.0

Climatological Data for BATTLE GROUND, WA - September 2020

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2020-09-01	73	49	61.0	21	11	0.00	0.0	0
2020-09-02	86	48	67.0	27	17	0.00	0.0	0
2020-09-03	88	52	70.0	30	20	0.00	0.0	0
2020-09-04	93	53	73.0	33	23	0.00	0.0	0
2020-09-05	84	55	69.5	30	20	0.00	0.0	0
2020-09-06	73	49	61.0	21	11	0.00	0.0	0
2020-09-07	87	48	67.5	28	18	0.00	0.0	0
2020-09-08	89	52	70.5	31	21	0.00	0.0	0
2020-09-09	80	50	65.0	25	15	0.00	0.0	0
2020-09-10	88	49	68.5	29	19	0.00	0.0	0
2020-09-11	87	50	68.5	29	19	0.00	0.0	0
2020-09-12	62	45	53.5	14	4	0.00	0.0	0
2020-09-13	63	44	53.5	14	4	0.00	0.0	0
2020-09-14	62	43	52.5	13	3	0.00	0.0	0
2020-09-15	70	51	60.5	21	11	0.00	0.0	0
2020-09-16	74	50	62.0	22	12	0.00	0.0	0
2020-09-17	68	49	58.5	19	9	0.00	0.0	0
2020-09-18	71	49	60.0	20	10	0.21	0.0	0
2020-09-19	64	56	60.0	20	10	0.34	0.0	0
2020-09-20	68	53	60.5	21	11	0.15	0.0	0
2020-09-21	74	50	62.0	22	12	0.00	0.0	0
2020-09-22	73	49	61.0	21	11	0.04	0.0	0
2020-09-23	72	57	64.5	25	15	0.16	0.0	0
2020-09-24	63	56	59.5	20	10	1.22	0.0	0
2020-09-25	69	56	62.5	23	13	0.12	0.0	0
2020-09-26	61	48	54.5	15	5	0.44	0.0	0
2020-09-27	67	49	58.0	18	8	0.01	0.0	0
2020-09-28	72	44	58.0	18	8	0.00	0.0	0
2020-09-29	87	43	65.0	25	15	0.00	0.0	0
2020-09-30	87	45	66.0	26	16	0.00	0.0	0
Average|Sum	75.2	49.7	62.5	681	381	2.69	0.0	0.0

Climatological Data for BATTLE GROUND, WA - August 2020

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2020-08-01	86	55	70.5	31	21	0.00	0.0	0
2020-08-02	78	54	66.0	26	16	0.00	0.0	0
2020-08-03	82	54	68.0	28	18	0.00	0.0	0
2020-08-04	82	53	67.5	28	18	0.00	0.0	0
2020-08-05	84	53	68.5	29	19	0.00	0.0	0
2020-08-06	81	54	67.5	28	18	0.00	0.0	0
2020-08-07	70	47	58.5	19	9	0.20	0.0	0
2020-08-08	75	46	60.5	21	11	0.00	0.0	0
2020-08-09	75	48	61.5	22	12	0.00	0.0	0
2020-08-10	82	47	64.5	25	15	0.00	0.0	0
2020-08-11	86	46	66.0	26	16	0.00	0.0	0
2020-08-12	76	46	61.0	21	11	0.00	0.0	0
2020-08-13	70	42	56.0	16	6	0.00	0.0	0
2020-08-14	75	42	58.5	19	9	0.00	0.0	0
2020-08-15	85	46	65.5	26	16	0.00	0.0	0
2020-08-16	96	52	74.0	34	24	0.00	0.0	0
2020-08-17	93	59	76.0	36	26	0.00	0.0	0
2020-08-18	90	59	74.5	35	25	0.00	0.0	0
2020-08-19	82	53	67.5	28	18	0.00	0.0	0
2020-08-20	83	53	68.0	28	18	0.00	0.0	0
2020-08-21	81	58	69.5	30	20	0.15	0.0	0
2020-08-22	74	56	65.0	25	15	0.09	0.0	0
2020-08-23	78	51	64.5	25	15	0.00	0.0	0
2020-08-24	80	49	64.5	25	15	0.00	0.0	0
2020-08-25	77	48	62.5	23	13	0.00	0.0	0
2020-08-26	78	48	63.0	23	13	0.00	0.0	0
2020-08-27	80	47	63.5	24	14	0.00	0.0	0
2020-08-28	81	47	64.0	24	14	0.00	0.0	0
2020-08-29	81	49	65.0	25	15	0.00	0.0	0
2020-08-30	73	43	58.0	18	8	0.00	0.0	0
2020-08-31	74	42	58.0	18	8	0.00	0.0	0
Average|Sum	80.3	49.9	65.1	786	476	0.44	0.0	0.0

Climatological Data for BATTLE GROUND, WA - July 2020

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2020-07-01	68	51	59.5	20	10	0.04	0.0	0
2020-07-02	62	51	56.5	17	7	0.06	0.0	0
2020-07-03	68	48	58.0	18	8	0.01	0.0	0
2020-07-04	68	49	58.5	19	9	0.00	0.0	0
2020-07-05	71	49	60.0	20	10	0.00	0.0	0
2020-07-06	72	49	60.5	21	11	0.00	0.0	0
2020-07-07	66	50	58.0	18	8	0.00	0.0	0
2020-07-08	64	53	58.5	19	9	0.07	0.0	0
2020-07-09	71	49	60.0	20	10	0.00	0.0	0
2020-07-10	73	50	61.5	22	12	0.00	0.0	0
2020-07-11	77	49	63.0	23	13	0.00	0.0	0
2020-07-12	73	49	61.0	21	11	0.00	0.0	0
2020-07-13	74	46	60.0	20	10	0.00	0.0	0
2020-07-14	78	46	62.0	22	12	0.00	0.0	0
2020-07-15	83	47	65.0	25	15	0.00	0.0	0
2020-07-16	83	50	66.5	27	17	0.00	0.0	0
2020-07-17	80	55	67.5	28	18	0.00	0.0	0
2020-07-18	70	46	58.0	18	8	0.00	0.0	0
2020-07-19	84	46	65.0	25	15	0.00	0.0	0
2020-07-20	87	52	69.5	30	20	0.00	0.0	0
2020-07-21	90	56	73.0	33	23	0.00	0.0	0
2020-07-22	84	57	70.5	31	21	0.00	0.0	0
2020-07-23	77	57	67.0	27	17	0.00	0.0	0
2020-07-24	72	51	61.5	22	12	0.00	0.0	0
2020-07-25	69	45	57.0	17	7	0.00	0.0	0
2020-07-26	80	45	62.5	23	13	0.00	0.0	0
2020-07-27	98	49	73.5	34	24	0.00	0.0	0
2020-07-28	96	56	76.0	36	26	0.00	0.0	0
2020-07-29	85	54	69.5	30	20	0.00	0.0	0
2020-07-30	88	53	70.5	31	21	0.00	0.0	0
2020-07-31	91	56	73.5	34	24	0.00	0.0	0
Average|Sum	77.5	50.5	64.0	751	441	0.18	0.0	0.0

Climatological Data for BATTLE GROUND, WA - June 2020

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2020-06-01	62	39	50.5	11	1	0.02	0.0	0
2020-06-02	69	39	54.0	14	4	0.00	0.0	0
2020-06-03	75	42	58.5	19	9	0.00	0.0	0
2020-06-04	71	46	58.5	19	9	0.00	0.0	0
2020-06-05	70	47	58.5	19	9	0.00	0.0	0
2020-06-06	67	48	57.5	18	8	0.01	0.0	0
2020-06-07	59	46	52.5	13	3	0.61	0.0	0
2020-06-08	57	46	51.5	12	2	0.16	0.0	0
2020-06-09	62	48	55.0	15	5	0.80	0.0	0
2020-06-10	62	49	55.5	16	6	0.21	0.0	0
2020-06-11	77	55	66.0	26	16	0.00	0.0	0
2020-06-12	73	55	64.0	24	14	0.00	0.0	0
2020-06-13	57	50	53.5	14	4	0.17	0.0	0
2020-06-14	58	46	52.0	12	2	0.42	0.0	0
2020-06-15	65	46	55.5	16	6	0.45	0.0	0
2020-06-16	62	49	55.5	16	6	0.30	0.0	0
2020-06-17	63	46	54.5	15	5	0.47	0.0	0
2020-06-18	71	46	58.5	19	9	0.00	0.0	0
2020-06-19	79	50	64.5	25	15	0.00	0.0	0
2020-06-20	84	50	67.0	27	17	0.00	0.0	0
2020-06-21	68	57	62.5	23	13	0.21	0.0	0
2020-06-22	72	48	60.0	20	10	0.00	0.0	0
2020-06-23	83	48	65.5	26	16	0.00	0.0	0
2020-06-24	90	56	73.0	33	23	0.00	0.0	0
2020-06-25	76	53	64.5	25	15	0.00	0.0	0
2020-06-26	82	55	68.5	29	19	0.00	0.0	0
2020-06-27	83	55	69.0	29	19	0.00	0.0	0
2020-06-28	66	52	59.0	19	9	0.01	0.0	0
2020-06-29	66	51	58.5	19	9	0.00	0.0	0
2020-06-30	70	53	61.5	22	12	0.04	0.0	0
Average|Sum	70.0	49.0	59.5	595	295	3.88	0.0	0.0

APPENDIX D: EMAIL COMMUNICATION WITH WDFW

Annie Jean Rendleman

From: Holowatz, Isaac T (DFW) <Isaac.Holowatz@dfw.wa.gov>
Sent: Wednesday, February 17, 2021 5:03 PM
To: Annie Jean Rendleman
Subject: RE: Oregon white oak protection- La Center

Annie Jean,
It was great talking with you earlier today. Thank you for the Picture … what a beautiful Oak tree.
Yes, I think that dripline would cover the adequate amount of space to protect the Oak Tree.
If you have any further questions please let me know.
Thank you,

Isaac Holowatz
Habitat Biologist
Washington Department of Fish and Wildlife
Cell: 360.773.8943

From: Annie Jean Rendleman <AnnieJean@eco-land.com>
Sent: Tuesday, February 16, 2021 5:00 PM
To: Holowatz, Isaac T (DFW) <Isaac.Holowatz@dfw.wa.gov>
Subject: Oregon white oak protection- La Center

External Email

Hi Isaac,

I'm working on a project in the City of La Center on Clark County parcel 209113000 with a large white oak tree (40-inch DBH). The City code says to consult with WDFW on an appropriate buffer for priority oaks. I have never dealt with a buffer off of an oak, other than the dripline. Is this something you would need to make a site visit for? I plan to go out next week and could take more photos for you, if that's preferable.

Feel free to forward this on if I should be reaching out to someone else!

Thanks,

Please note: I am no longer working on Fridays. Please call our office at the number below if you need immediate assistance.

Annie-Jean Rendleman | Biologist
Port of Camas/Washougal Satellite Office
3805 Truman Road, Suite 2, Washougal, WA 98671
P: 360-835-9082 ext 1104
Longview Office
1157 3rd Avenue, Suite 220A Longview, WA 98632
P: 360-578-1371 ext 1104 | F: 360-414-9305
www.eco-land.com | AnnieJean@eco-land.com

From: Spoo, Ethan <ethan.spoo@wsp.com>
Sent: Tuesday, February 16, 2021 11:21 AM
To: Annie Jean Rendleman <AnnieJean@eco-land.com>; Sarah Dollar <sdollar@ci.lacenter.wa.us>
Cc: Anthony Cooper <acooper@ci.lacenter.wa.us>; Matt Jenkins <mjenkins@ci.lacenter.wa.us>
Subject: RE: Hung Annexation - ELS - Wetland Boundary

Hi Annie,

Please take a look at Table 18.300.090(2)(a) which requires a standard buffer of 300 feet around non-riparian PHS point sites *or as recommended in consultation with WDFW.* Assuming this is priority oak habitat we are talking about, please reach out to WDFW and come to concurrence with them about what buffer would protect the oak since I'm assuming you won't want to use 300 feet. In the past WDFW requires priority oak habitat be protected to the driplines. Once you come to an agreement with WDFW, please submit a letter or email from them stating what they require the buffer to be.

Let me know if you have any other questions.

Thanks,
Ethan

From: Annie Jean Rendleman <AnnieJean@eco-land.com>
Sent: Tuesday, February 16, 2021 9:27 AM
To: Sarah Dollar <sdollar@ci.lacenter.wa.us>
Cc: Anthony Cooper <acooper@ci.lacenter.wa.us>; Matt Jenkins <mjenkins@ci.lacenter.wa.us>; Spoo, Ethan <ethan.spoo@wsp.com>
Subject: RE: Hung Annexation - ELS - Wetland Boundary

Good morning,

I'm working on the critical areas report for the Hung parcel. In looking at the La Center code (18.300.090(2) Fish and Wildlife Conservation Areas), I noticed it mentions a buffer non-riparian priority habitat and species. I've completed many permitting projects with priority oaks, but never seen a buffer for them. I looked through the WDFW Management

Recommendations and didn't see anything regarding setbacks or buffers. Could you clarify what the City requires for oak buffers?

Thanks so much,
Annie Jean

Please note: I am no longer working on Fridays. Please call our office at the number below if you need immediate assistance.

Annie-Jean Rendleman | Biologist

Port of Camas/Washougal Satellite Office
3805 Truman Road, Suite 2, Washougal, WA 98671
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