N.E. Lockwood Creek Road – North Parcel

WETLAND DELINEATION & ASSESSMENT
CRITICAL AREAS REPORT

Prepared for:
La Center School District
725 Highland Road
La Center, WA 98629

Prepared by:
Olson Environmental, LLC
222 E. Evergreen Blvd.
Vancouver, WA 98660
(360) 693-4555

September 28, 2018

OLSON ENVIRONMENTAL LLC
ENVIRONMENTAL SERVICES • GIS • HABITAT RESTORATION

TABLE OF CONTENTS

FIGURES

APPENDICES

WETLAND DELINEATION AND ASSESSMENT

Project:	**NE Lockwood Creek Road Properties – North Parcel**
Applicant:	**La Center School District**
Location:	**South of NE Lockwood Creek Road, La Center, Washington**
Legal Description:	**NE ¼ of Sec. 02, T04N, R01E, W. M., Clark County**
Serial Number(s):	**209064-000**
Study Area Size:	**1.9 acres**
Jurisdiction:	**City of La Center, WA**
Watershed:	**East Fork of the Lewis River**
Zoning:	**LDR-7.5**
ComPlan:	**UL**
Assessment by:	**Kevin Grosz, PWS; Ryan Thiele**
Site Visit(s):	**September 20, 2018**
Report Date:	**September 28, 2018**

1.0 INTRODUCTION

This report details the results of a wetland delineation and assessment conducted by Olson Environmental, LLC (OE) for the La Center School District. The study area is located immediately adjacent and south of NE Lockwood Creek Road on the east edge of La Center, Washington (Fig. 1). This report identifies the extent of any wetlands and associated buffers found within the study area as defined and regulated by the US Army Corps of Engineers (USACE) and the Washington Department of Ecology (Ecology) under sections 401 and 404 of the Clean Water Act, and locally by the City of La Center under the City's Critical Areas Ordinance (18.300.090(6) – Wetlands).

Currently, the 1.9-acre study area is vacant land that appears to be used for domestic livestock grazing and/or hay land. A narrow strip of shrubs interspersed with trees separates the grassland portion of the site from NE Lockwood Creek Road to the north. Generally, the site is gently sloped from north to south (Fig. 2). Photographs of the study area and wetlands are provided in Photo-Sheet 1.

2.0 WETLAND DELINEATION AND ASSESSMENT METHODS

The wetland delineation was conducted according to the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (USACE, 2010.) hereafter, referred to as the manual. According to the manual, jurisdictional wetlands are defined as:

> *Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life*

in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Prior to the on-site investigations, a review of existing information related to determination of wetland boundaries was conducted. This review included the Clark County LiDAR topographic data (Fig. 2), National Wetland Inventory (NWI) data and Clark County Wetland Inventory (LWI) data (Fig. 3), NRCS Clark County Soil Survey data (Fig. 4), and aerial photographs.

The manual uses three parameters in making wetland determinations: hydrophytic vegetation, hydric soils, and wetland hydrology. Except in certain situations defined in the manual, evidence of a minimum of one positive indicator from each parameter (hydrology, soil, and vegetation) must be found in order to make a positive wetland determination.

Hydrophytic vegetation are plants that due to morphological, physiological, and/or reproductive adaptations, have the ability to grow, effectively compete, reproduce, and/or persist in anaerobic soil conditions. Hydrophytic vegetation is present when more than 50 percent of the dominant species have an indicator status of OBL, FACW, and/or FAC. Wetland indicator status ratings and their ordinal rating categories, based on ecological descriptions:

Indicator Status (abbreviation) Ecological Description*
Obligate (OBL) Almost always is a hydrophyte, rarely in uplands
Facultative Wetland (FACW) Usually is a hydrophyte but occasionally found in uplands
Facultative (FAC) Commonly occurs as either a hydrophyte or nonhydrophyte
Facultative Upland (FACU) Occasionally is a hydrophyte, but usually occurs in uplands
Upland (UPL) Rarely is a hydrophyte, almost always in uplands.
*Source: Lichvar and Minkin (2008)

Hydric soils are soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation. The presence or absence of hydric soils is determined in the field by digging soil pits to a depth of a minimum of 16 inches and examining the soil for hydric soil indicators. Organic soils such as peats and mucks are considered hydric soils. Mineral hydric soils are generally either gleyed or have redox concentrations and/or low matrix chroma immediately below the A-horizon or 10 inches (whichever is shallower). Soil colors are determined using the Munsell Soil Color Chart (Munsell Color System 2009).

Wetland hydrology is present when an area is inundated or saturated to the surface for at least 5 percent of the growing season. The growing season is defined as the portion of the year when soil temperature at 19.7 inches below the soil surface is greater than biological zero (5 degrees C). The site was examined for standing water and/or saturated soils, which serve as primary indicators of wetland hydrology. The area was also checked for

other wetland hydrologic characteristics such as watermarks, wetland drainage patterns, and morphological plant adaptations.

3.0 SITE SPECIFIC METHODS

OE conducted the onsite wetland delineation and assessment on September 20, 2018, using the methodology found in the Regional Supplement to the Manual (USACE 2010). In addition, applicable guidance and any supporting technical guidance documents issued by the USACE, Ecology, and Clark County GIS were also utilized.

The entire site was first traversed by foot to observe any visible wetland conditions. Once the general locations of the wetland boundaries were identified, paired data plots were taken in areas that represented the conditions of the uplands and wetlands, respectively. One (1) and ten (10) meter radius plots were chosen in a uniform topographic position that was representative of a single plant community. The paired plots were located approximately 5 - 10 feet apart to minimize the margin of error. Soils at each sample plot are typically inspected to a depth of 16 inches (or more) to determine the presence or absence of hydric soil characteristics and/or wetland hydrology. Data sheets for the sample plots are attached in Appendix A.

The wetland boundaries were determined based on the presence of hydric soils (i.e. redox concentrations in the soil matrix), the presence of wetland hydrology (i.e. oxidized rhizospheres along living roots, soil saturation), and a dominance of hydrophytic vegetation. It should be noted that only paired plots were recorded in the field, however, numerous unrecorded plots were dug to confirm wetland boundaries. The on-site wetlands were classified according the USFWS classification system (Cowardin et al. 1979) and the Hydrogeomorphic (HGM) classification system (Adamus et al. 2001).

4.0 RESULTS AND DISCUSSION

According to the NWI/LWI wetlands map (Fig. 3), wetlands are not projected or modeled within the project area. It should be noted that these maps are created through aerial photograph and topographic map interpretation and are not intended to represent the extent of jurisdictional wetlands. There may be unmapped wetland and waters subject to regulation and all wetlands and waters boundary mapping is approximate. In all cases, actual field conditions determine the presence, absence and boundaries of wetlands and waters.

Four soil types are mapped on the site (Fig. 4):

Gee Silt Loam, 0 to 8 percent slopes (GeB). Gee soils are deep, moderately well drained soils formed in the old alluvium deposited by the Columbia River. They are moderately permeable in the surface layer and very slow in the subsurface. Surface runoff is slow and the erosion hazard is slight. In a typical profile, these soils are a very dark grayish brown (10YR 3/2) silt loam in the upper 9 inches. Below this to a depth of 14 inches they are a

dark grayish brown (10YR 4/2) silt loam with yellowish brown (10YR 5/6) redox concentrations. It is listed as a **non-hydric** soil.

Gee silt loam, 8 to 20 percent slopes (GeD). This soil is similar to Gee silt loam, 0 to 8 percent slopes, except that the surface layer is 1 to 3 inches thinner. Sidehill seeps are common on these slopes in winter and spring. Surface runoff is medium, and the erosion hazard is moderate. It is listed as a **non-hydric** soil.

Hillsboro silt loam, 8 to 15 percent slopes (HoC). This soil was formed in mixed, silty and loamy old alluvium. It is well drained, has moderate permeability, surface runoff is slow to medium, and the erosion hazard is moderate. In a typical profile, soils are dark brown (10YR 3/3) loam or silt loam to a depth of 15 inches. It is listed as a **non-hydric** soil.

Odne silt loam, 0 to 5 percent slopes (OdB). This soil generally occurs in concave areas in drainageways or depressions within areas of Gee soils. In most places the slope is 1 to 2 percent. In a typical profile, the surface layer is about 10 inches thick. It is mottled, dark-gray heavy silt loam in the upper part. The subsurface layer is firm, mottled, gray silt loam about nine inches thick. The next eight inches is very firm, mottled, dark-gray silty clay loam that overlies six inches of firm, mottled, dark-gray clay loam. This soil is poorly drained and very slowly permeable. A high water-table is common in winter. It is classified as a **hydric soil** according to the Clark County hydric soils list.

4.1 WETLANDS (FIG. 5)

Three (3) wetlands were identified and delineated within the study area as shown in Figure 5. A description of each of these wetlands are as follows:

Wetland D-N (1,541 sq. ft.)
Wetland D-N is characterized as a palustrine, emergent wetland and is located in the southwestern portion of the study area along the western property boundary (Fig. 5). It appears this wetland is predominately sustained by runoff from a ditch along the western property boundary. This wetland is classified as a slope HGM class. Table 1 outlines the functional assessment for this wetland.

The vegetation is predominantly colonial bent grass (*Agrostis capillaris* – FAC), reed canary grass (*Phalaris arundinacea* – FACW) and Himalayan blackberry (*Rubus armeniacus* – FAC). Hydric soil indicators included a reduced matrix. Soils from 0 to 12 inches are a very dark grayish brown (10YR 3/2) silt loam with brown (7.5YR 4/4) redox concentrations and turn very dark gray (10YR 3/1) from 12 to 16 inches with similar redox concentrations. Wetland hydrology was indicated by drainage patterns and geomorphic position.

Wetland E-N (1,048 sq. ft.)
Wetland E-N is characterized as a palustrine, scrub-shrub wetland and is located in the northern portion of the property adjacent to NE Lockwood Creek Road (Fig 5). It appears

that the wetland is predominately sustained by a culvert from the road that drains into the scrub/shrub portion of the study area along the roadside. This wetland is classified as a slope HGM class wetland. Table 1 outlines the functional assessment for this wetland.

Vegetation in Wetland E-N consists of snowberry (*Symphoricarpos albus* – FACU), Scouler's willow (*Salix scouleriana* – FAC), and meadowsweet (*Spiraea douglasii* – FACW) in the shrub layer. Reed canary grass dominates the herbaceous layer, with Himalayan blackberry interspersed. Hydric Soil indicators included a reduced matrix with. Soils from 0 to 5 inches are a very dark grayish brown (10YR 3/2) silt loam and turn very dark gray (10YR 3/1) from 5 to 16 inches with dark brown (7.5YR 3/4) redox concentrations. Wetland hydrology was indicated by oxidized rhizospheres along living roots, drainage patterns and geomorphic position.

Wetland F-N (2,647 sq. ft.)
Wetland F-N is characterized as a palustrine, forested/scrub-shrub wetland and is located in the northeastern portion of the property adjacent to NE Lockwood Creek Road (Fig 5). This wetland appears to be predominately sustained by a road culvert that drains into this of the study area and may contain drain tile that is artificially draining this portion of the study area. This wetland is classified as a depressional HGM class wetland. Table 1 outlines the functional assessment for this wetland.

Vegetation in Wetland F-N is dominated by black cottonwood (*Populus balsamifera* – FAC) and Nootka rose (*Rosa nutkana* – FAC) in the tree and shrub canopies, with soft rush (*Juncus effusus* – FACW) and colonial bent grass in the herbaceous layer. Hydric soil indicators included a reduced matrix. Soils from 0 to 16 inches are a very dark grayish brown (10YR 3/2) clayey silt loam with brown (7.5YR 4/4) redox concentrations. Wetland hydrology was indicated by oxidized rhizospheres along living roots, drainage patterns and geomorphic position.

4.2 WETLAND FUNCTIONAL ASSESSMENT

The delineated wetlands have been assessed using the Washington State Wetland Rating System for Western Washington (Hruby Update 2014). The system was designed to differentiate between wetlands based on their sensitivity to disturbance, their significance, their rarity, our ability to replace them, and the functions they provide. Through a series of questions, the wetland rating system generates a number for water quality functions, hydrologic functions, and habitat function, which creates as overall wetland function score. Based on the total score, the wetland is categorized as a Category I, II, III, or IV wetland. Table 1 below summarizes the wetland type, total score for functions, and category of wetlands identified within the study area.

Table 1. Wetland Function Rating

Wetland	Wetland Type	Water Quality Functions	Hydrologic Functions	Habitat Functions	Total Score	Wetland Category
D-N	Slope	6	3	5	14	IV
E-N	Slope	6	3	4	13	IV
F-N	Slope	6	4	4	14	IV

4.3 NON-WETLANDS

The non-wetland portions in the project area are primarily open grassland that appears to be used primarily as hay land and may also be used to graze domestic livestock. In addition, there are two areas with mixed shrub and tree cover. Vegetation in the grassland area is more than likely a pasture seed mixture that has been sown for the pasture/hay uses. This area consists tall sweet vernal grass (*Anthoxanthum odoratum* – FACU), false rye grass (*Schedonorus arundinaceus* - FAC), colonial bent grass, and spreading bent grass (*A. stolonifera* – FAC), velvet grass (*Holcus lanatus* – FAC). Vegetation in the upland areas to the north along the roadside consists of black cottonwood, cascara (*Frangula pershiana* – FAC), Nootka rose, Himalayan blackberry, trailing blackberry (*R. ursinus* – FACU) and reed canary grass. A shrub patch in the southwest corner is primarily bitter cherry (*Prunus emarginata*) and Nootka rose. No wetland hydrology or soil indicators were observed in these ares of the study site.

5.0 REGULATORY ISSUES

Through the course of the wetland delineation and assessment, three wetlands were identified on the property as shown in Figures 5 and 6. The subsequent wetland buffers are based on the guidelines of LMC 18.300.090(6). This section of the LMC provides for the protection of wetlands within the City's jurisdiction. The ordinance establishes protective buffers associated with wetlands and specifies that certain permits or approvals be obtained for projects containing wetlands or their respective buffers.

As shown in Table 1, Wetland D-N, Wetland E-N, and Wetland F-N are HGM slope class Category IV wetlands with low habitat scores. According to LMC Table 18.300.090(h)(i)-1, wetlands in a proposed high intensity land use with a low habitat score are protected by a 50-foot buffer (Fig. 6) to maintain hydrologic functions. N.E. Lockwood Creek Road forms the northern portion of the study area. Buffers along the road are functionally isolated since the roadway provides no protection to the wetlands.

In addition, LMC 18.300.090(6), jurisdictional wetlands are also regulated at the federal and state levels by the USACE and Ecology under Sections 404 and 401 of the Clean Water Act, respectively. Any impacts to the wetlands will require notification and approval from the USACE and Ecology. It is recommended that the USACE and Ecology be contacted regarding current permit requirements before proceeding with any development activities that would impact wetlands on this site.

The wetland boundaries and classifications shown in this report have been determined using the most appropriate field techniques and best professional judgment of the environmental scientist. It should be noted that USACE and City of La Center have the final authority in determining the wetland boundaries and categories under their respective jurisdictions. It is recommended that this delineation report be submitted to these agencies for concurrence prior to starting any development or planning activities that would affect wetlands or buffers on this site.

6.0 LITERATURE CITED

Adamus, et al. 2001. Guidebook for Hydrogeomorphic (HGM) Based Assessments of Oregon Wetlands and Riparian Sites. Statewide Classification and Profiles. Oregon State Department of State Lands, Salem, Oregon.

Cowardin, L.M., V. Carter, F.C. Bolet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Services Biological Services Program FWS/OBS-79/31. Superintendent of Documents, U.S. Government Printing Office, Washington, D.C.

Department of the Army. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.

Hruby, T. 2014. Washington State Wetland Rating System for Western Washington – 2014 Update. Washington State Department of Ecology Publication # 14-06-29. http://www.ecy.wa.gov/pubs/0406025.pdf

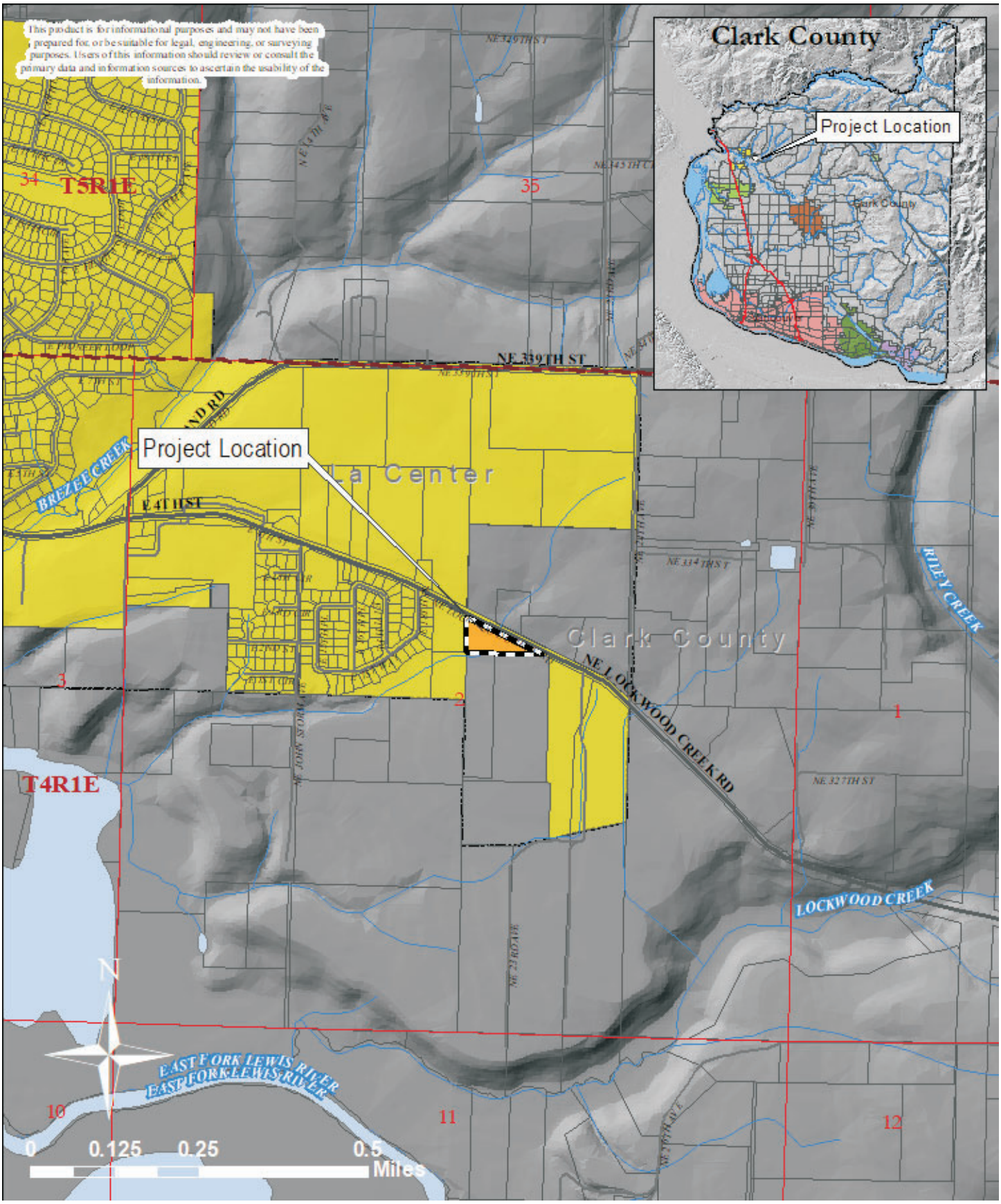
Munsell Color System. 2009. Munsell Soil Color Charts. Produced by x-rite. 4300 44th Street, Grand Rapids, MI 49512.

Lichvar, R.W. 2012. The National Wetland Plant List – Western Mountains, Valleys, and Coast 2012 Final Regional Wetland Plant List. ERDC/CRREL TR-12-11. Hanover, NW: U.S. Army Corps of Engineers, Cold Region Research and Engineering Laboratory.

U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region. ERDC/EL TR-10-3, Vicksburg MS.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/. Accessed 8/5/2015.

FIGURES



APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

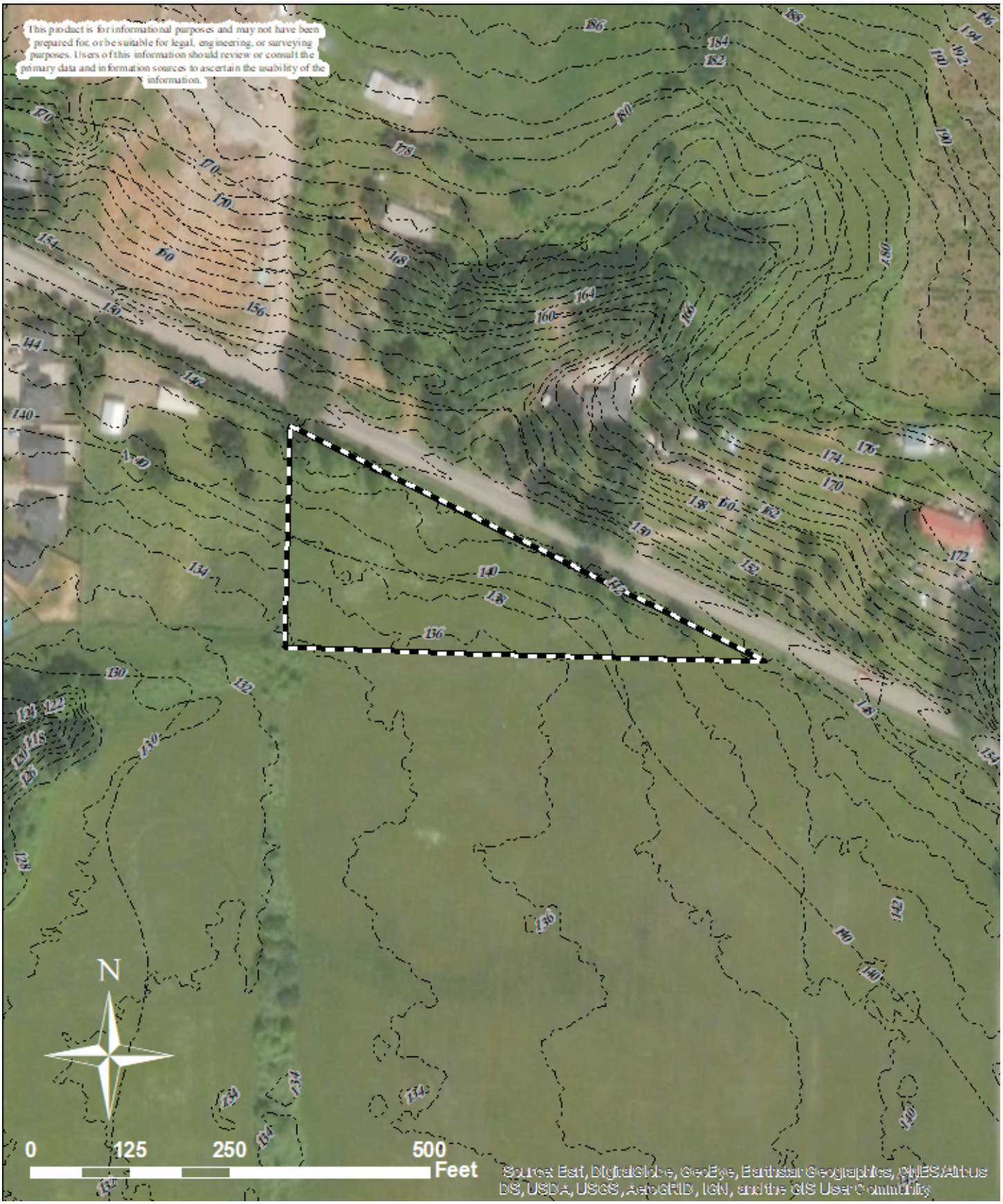
PURPOSE: Wetland Delineation & Assessment

Project Location Map
NE Lockwood Creek Road - North Parcel
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: September 26, 2018

Figure 1



APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

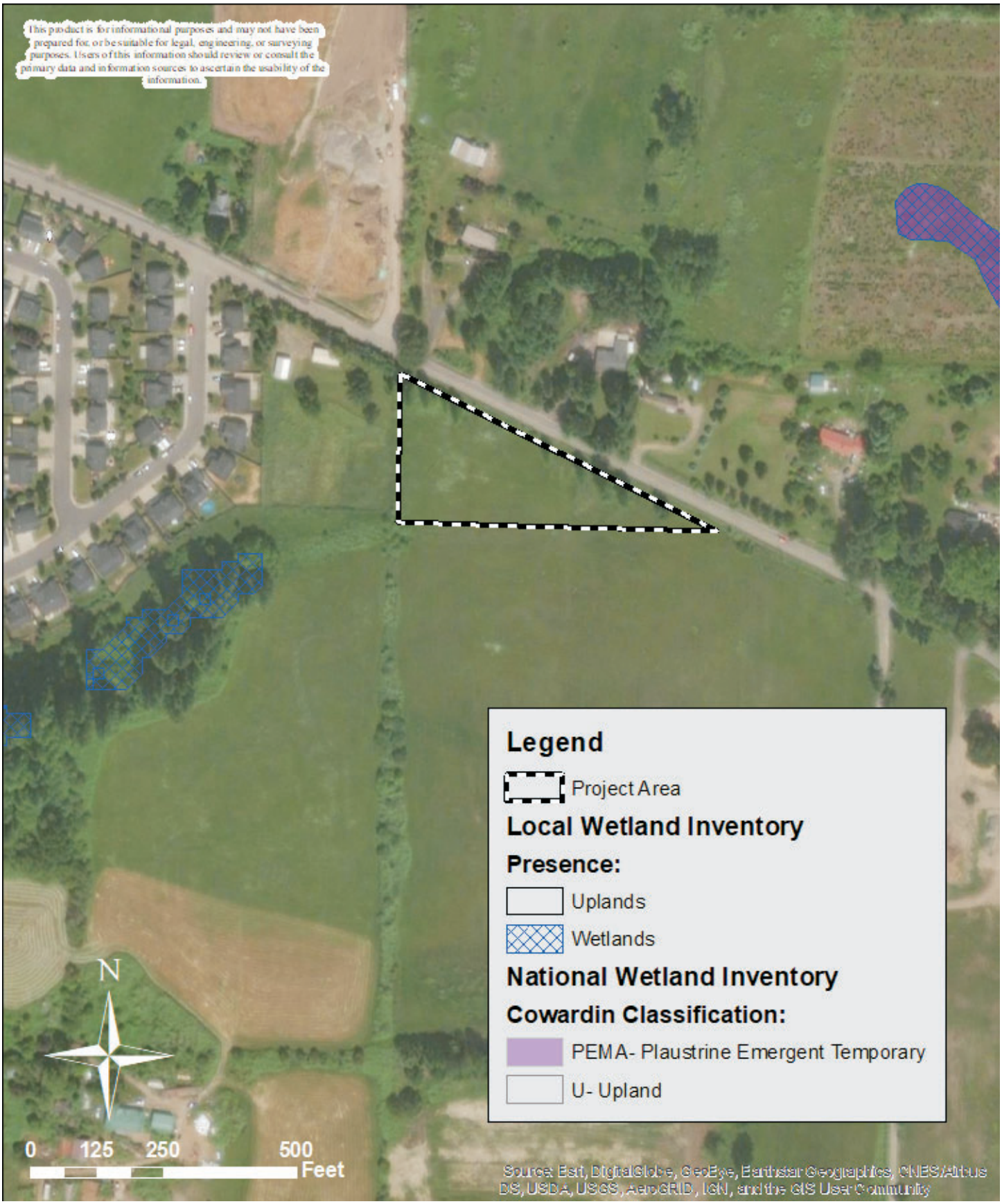
PURPOSE: Wetland Delineation & Assessment

Topography Map
NE Lockwood Creek Road - North Parcel
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: September 26, 2018

Figure 2



APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

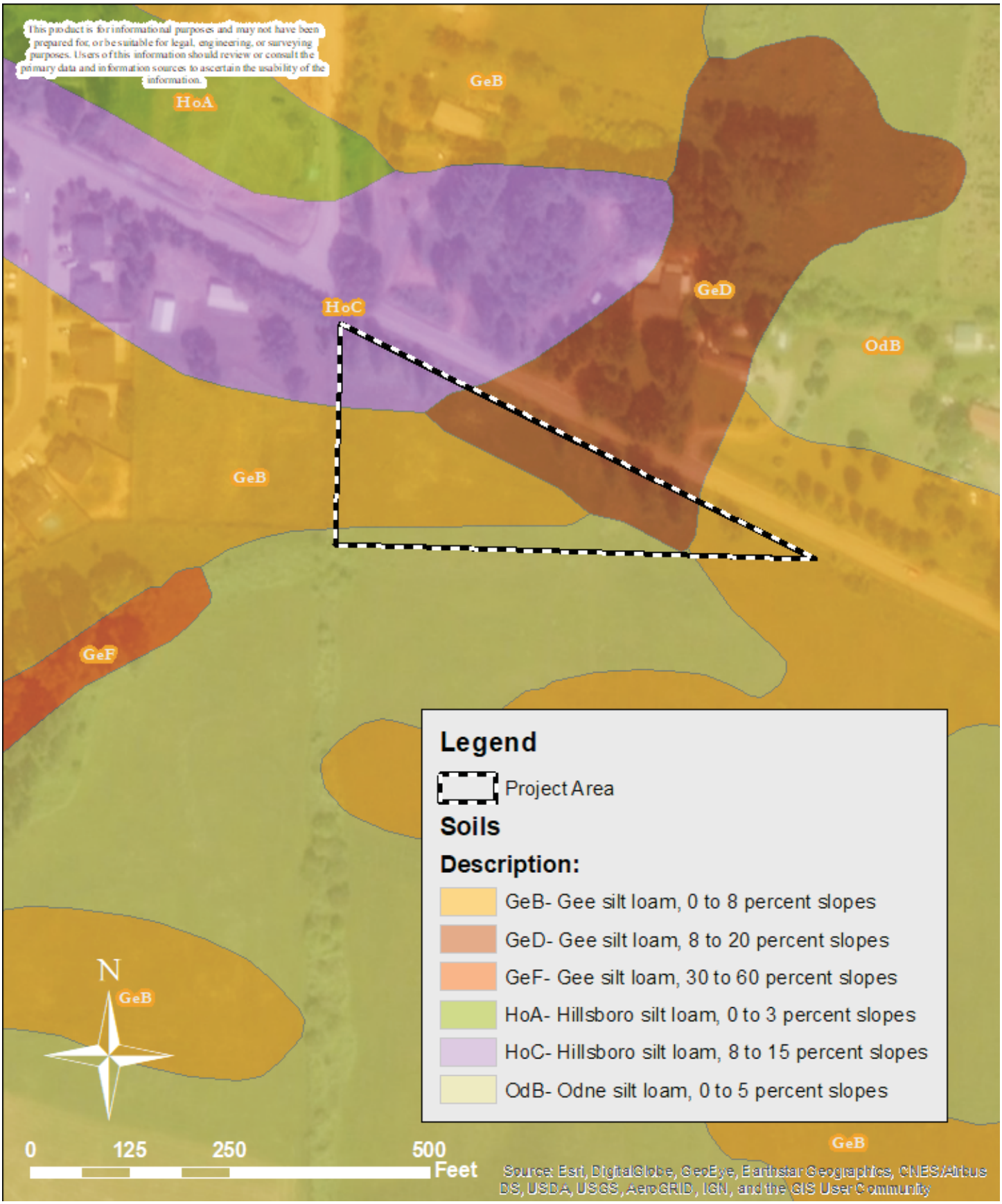
PURPOSE: Wetland Delineation & Assessment

Local and National Wetland Inventories
NE Lockwood Creek Road - North Parcel
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: September 26, 2018

Figure 3



APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

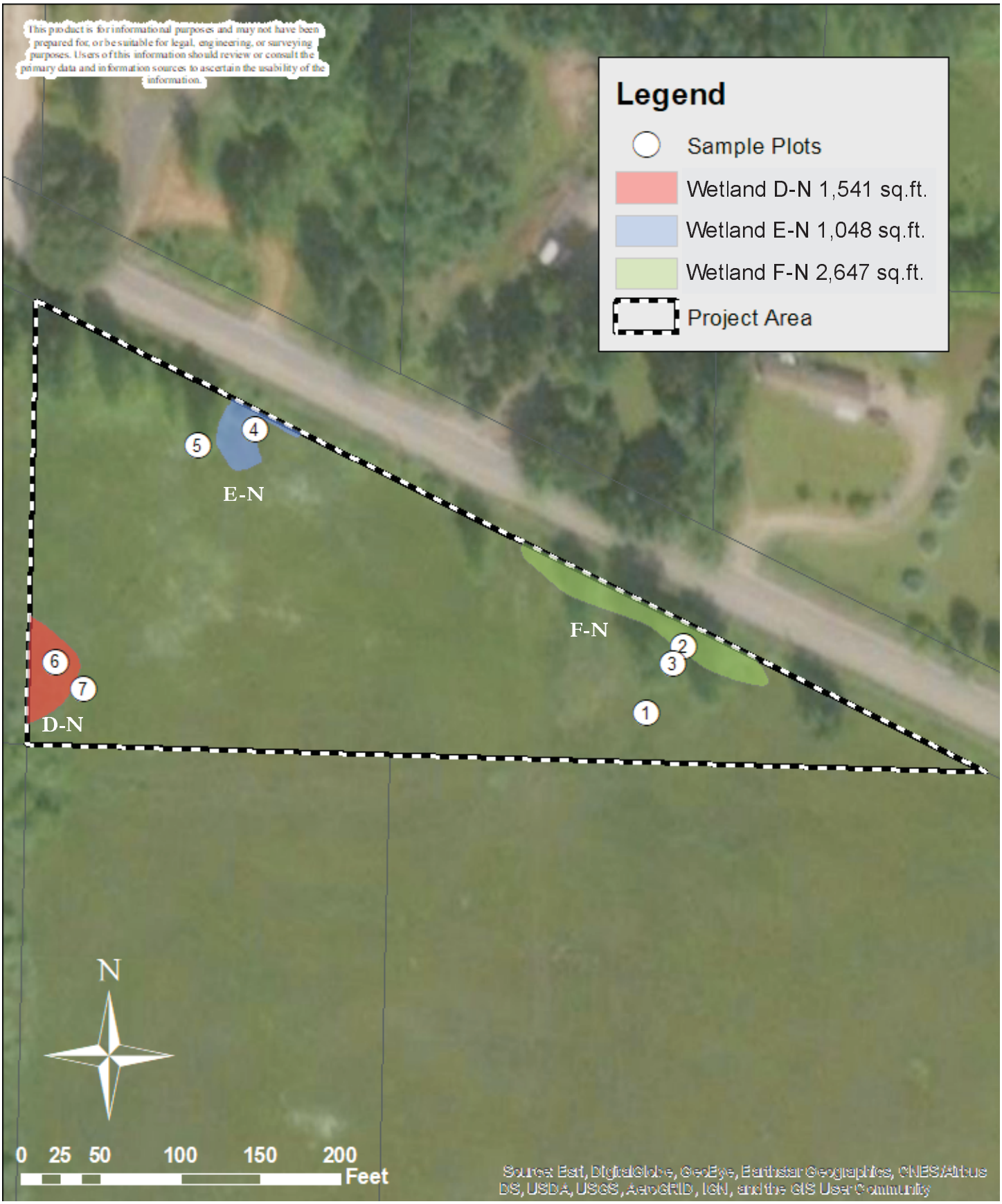
PURPOSE: Wetland Delineation & Assessment

NRCS Clark County Soils Map
NE Lockwood Creek Road - North Parcel
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: September 26, 2018

Figure 4



APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

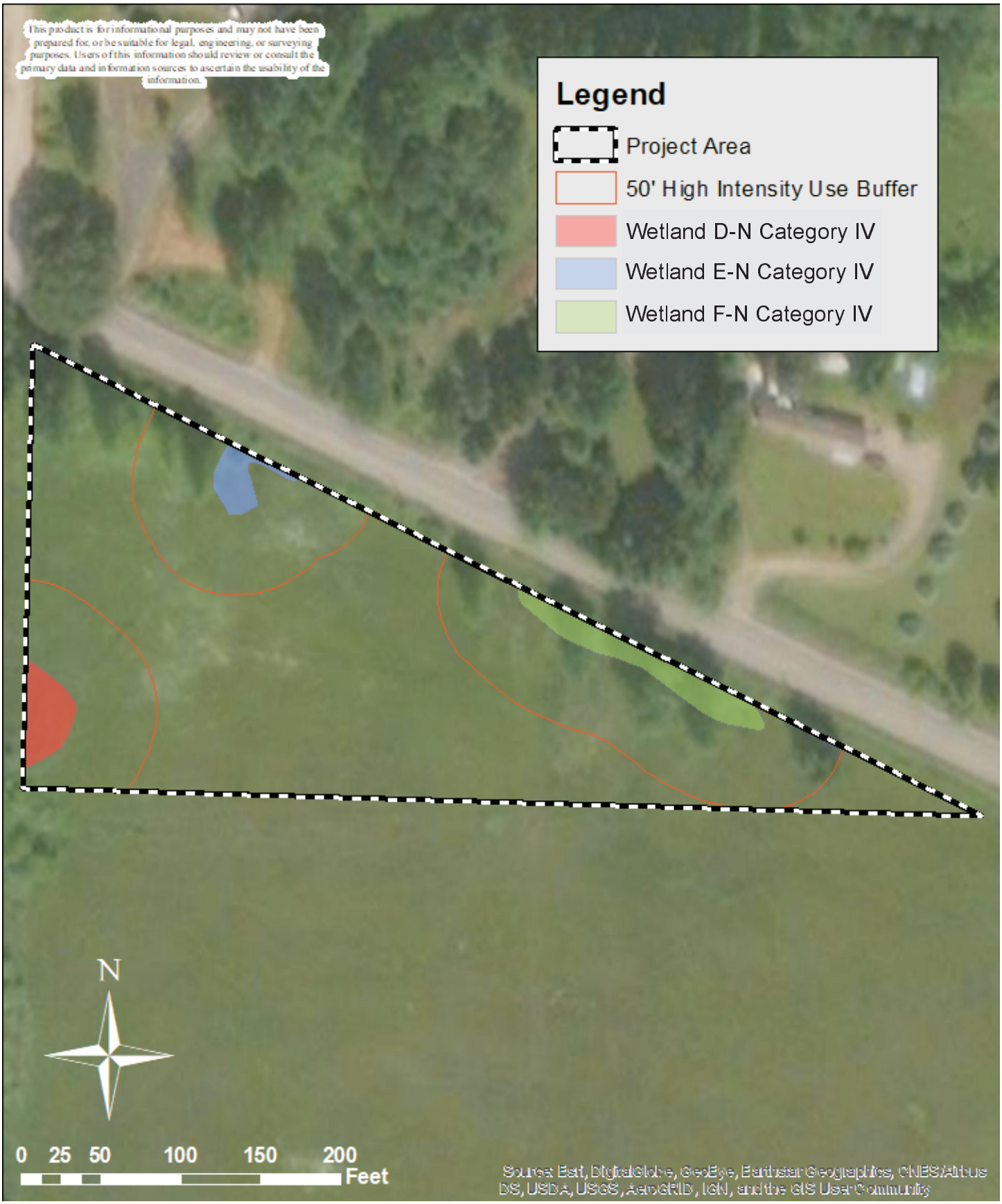
PURPOSE: Wetland Delineation & Assessment

Wetland Boundary and Sample Plots
NE Lockwood Creek Road - North Parcel
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: September 26, 2018

Figure 5



APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

PURPOSE: Wetland Delineation & Assessment

Wetland Categories and Buffers
NE Lockwood Creek Road - North Parcel
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: September 26, 2018

Figure 6

APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

PURPOSE: Wetland Delineation & Assessment

Study Area Photographs
NE Lockwood Creek Road - North Parcel
La Center, Washington

OLSON ENVIRONMENTAL LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: September 26, 2018

Photo-Sheet 1

APPENDIX A

WETLAND DETERMINATION DATA FORMS

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

Project/Site: La Center School District/NE Lockwood Creek Rd City/County: La Center/Clark Sampling Date: 09/20/2018
Applicant/Owner: La Center School District State: WA Sampling Point: 1
Investigator(s): Kevin Grosz, Ryan Thiele Section, Township, Range: 02, T4N, R1E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 8-20%
Subregion (LRR): Northwest Forests & Coast (LRR A) Lat: 45.86010680 Long: -122.64972330 Datum: WGS84
Soil Map Unit Name: Gee silt loam NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
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 Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland?** No
Remarks:	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 10 meter)			
1.			
2.			
3.			
4.			
Total Cover =0			
Sapling/Shrub Stratum (Plot size: 10 meter)			
1.			
2.			
3.			
4.			
5.			
Total Cover =0			
Herb Stratum (Plot size: 1 meter)			
1. Schedonorus arundinaceus	60	Yes	FAC
2. Holcus lanatus	20	Yes	FAC
3. Anthoxanthum odoratum	10	No	FACU
4. Agrostis capillaris	5	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
Total Cover =95			
Woody Vine Stratum (Plot size: 10 meter)			
1.			
2.			
Total Cover =0			
% 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: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	85	x 3 =	255
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	95 (A)		295 (B)

Prevalence Index = B/A = 3.11

Hydrophytic Vegetation Indicators:
___ 1 –Rapid Test for Hydrophytic Vegetation
X 2 – Dominance Test >50%
___ 3 - Prevalence Index is ≤ 3.0[1]
___ 4 - Morphological Adaptions[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

Remarks:

SOIL Sampling Point: New Point 1

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

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

___Histosol (A1)
___Histic Epipedon (A2)
___Black Histic (A3)
___Hydrogen Sulfide (A4)
___Depleted Below Dark Surface (A11)
___Thick Dark Surface (A12)
___Sandy Mucky Mineral (S1)
___Sandy Gleyed Matrix (S4)
___Sandy Redox (S5)
___Stripped Matrix (S6)
___Loamy Mucky Mineral (F1) (**except MLRA 1**)
___Loamy Gleyed Matrix (F2)
___Depleted Matrix (F3)
___Redox Dark Surface (F6)
___Depleted Dark Surface (F7)
___Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

___2 cm Muck (A10)
___Red Parent Material (TF2)
___Very Shallow Dark Surface (TF12)
___Other (Explain in Remarks)

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___Surface Water (A1)
___High Water Table (A2)
___Saturation (A3)
___Water Marks (B1)
___Sediment Deposits (B2)
___Drift Deposits (B3)
___Algal Mat or Crust (B4)
___Iron Deposits (B5)
___Surface Soil Cracks (B6)
___Inundation Visible on Aerial Imagery (B7)
___Sparsely Vegetated Concave Surface (B8)
___Water-Stained Leaves (B9) (**except MLRA 1,2,4A, and 4B**)
___Salt Crust (B11)
___Aquatic Invertebrates (B13)
___Hydrogen Sulfide Odor (C1)
___Oxidized Rhizospheres along Living Roots (C3)
___Presence of Reduced Iron (C4)
___Recent Iron Reduction in Tilled Soils (C6)
___Stunted or Stressed Plants (D1)(**LRR A**)
___Other (Explain in Remarks)

Secondary Indicators (two or more required)

___Water-Stained Leaves (B9)(**MLRA 1,2,4A,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? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

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

Remarks:

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

Project/Site: La Center School District/NE Lockwood Creek Rd City/County: La Center/Clark Sampling Date: 09/20/2018
Applicant/Owner: La Center School District State: WA Sampling Point: 2
Investigator(s): Kevin Grosz Section, Township, Range: 02, T4N, R1E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 8-20%
Subregion (LRR): Northwest Forests & Coast (LRR A) Lat: 45.86022250 Long: -122.64963640 Datum: WGS84
Soil Map Unit Name: Gee silt loam NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
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 Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks:	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 10 meter)			
1. Populus balsamifera	40	Yes	FAC
2.			
3.			
4.			
Total Cover =40			
Sapling/Shrub Stratum (Plot size: 10 meter)			
1. Rosa nutkana	20	Yes	FAC
2. Corylus cornuta	2	No	FACU
3.			
4.			
5.			
Total Cover =22			
Herb Stratum (Plot size: 1 meter)			
1. Juncus effusus	20	Yes	FACW
2. Rubus ursinus	15	No	FACU
3. Phalaris arundinacea	15	No	FACW
4. Schedonorus arundinaceus	5	No	FAC
5. Anthoxanthum odoratum	2	No	FACU
6. Phleum pratense	5	No	FAC
7. Agrostis capillaris	20	Yes	FAC
8.			
9.			
10.			
11.			
Total Cover =82			
Woody Vine Stratum (Plot size: 1 meter)			
1.			
2.			
Total Cover =0			
% Bare Ground in Herb Stratum: 18			

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	0	x 1 =	0
FACW species	35	x 2 =	70
FAC species	90	x 3 =	270
FACU species	19	x 4 =	76
UPL species	0	x 5 =	0
Column Totals:	144 (A)		416 (B)

Prevalence Index = B/A = 2.89

Hydrophytic Vegetation Indicators:
___ 1 –Rapid Test for Hydrophytic Vegetation
X 2 – Dominance Test >50%
X 3 - Prevalence Index is ≤ 3.0[1]
___ 4 - Morphological Adaptions[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

Remarks:

SOIL Sampling Point: New Point 2

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

	Matrix		Redox Features					
Depth (inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	80	7.5YR 4/4	20	C	M	Clayey 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.)

___Histosol (A1)
___Histic Epipedon (A2)
___Black Histic (A3)
___Hydrogen Sulfide (A4)
___Depleted Below Dark Surface (A11)
___Thick Dark Surface (A12)
___Sandy Mucky Mineral (S1)
___Sandy Gleyed Matrix (S4)
___Sandy Redox (S5)
___Stripped Matrix (S6)
___Loamy Mucky Mineral (F1) (**except MLRA 1**)
___Loamy Gleyed Matrix (F2)
___Depleted Matrix (F3)
_X_Redox Dark Surface (F6)
___Depleted Dark Surface (F7)
___Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

___2 cm Muck (A10)
___Red Parent Material (TF2)
___Very Shallow Dark Surface (TF12)
___Other (Explain in Remarks)

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___Surface Water (A1)
___High Water Table (A2)
___Saturation (A3)
___Water Marks (B1)
___Sediment Deposits (B2)
___Drift Deposits (B3)
___Algal Mat or Crust (B4)
___Iron Deposits (B5)
___Surface Soil Cracks (B6)
___Inundation Visible on Aerial Imagery (B7)
___Sparsely Vegetated Concave Surface (B8)
___Water-Stained Leaves (B9) (**except MLRA 1,2,4A, and 4B**)
___Salt Crust (B11)
___Aquatic Invertebrates (B13)
___Hydrogen Sulfide Odor (C1)
_X_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 (two or more required)

___Water-Stained Leaves (B9)(**MLRA 1,2,4A,4B**)
_X_Drainage Patterns (B10)
___Dry-Season Water Table (C2)
___Saturation Visible on Aerial Imagery (C9)
_X_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? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

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

Remarks:

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

Project/Site: La Center School District/NE Lockwood Creek Rd City/County: La Center/Clark Sampling Date: 09/20/2018
Applicant/Owner: La Center School District State: WA Sampling Point: 3
Investigator(s): Kevin Grosz, Ryan Thiele Section, Township, Range: 02, T4N, R1E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 8-20%
Subregion (LRR): Northwest Forests & Coast (LRR A) Lat: 45.86019240 Long: -122.64966090 Datum: WGS84
Soil Map Unit Name: Gee silt loam NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
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? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland?** No
Remarks:	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 10 meter)			
1.			
2.			
3.			
4.			
Total Cover =0			
Sapling/Shrub Stratum (Plot size: 10 meter)			
1.			
2.			
3.			
4.			
5.			
Total Cover =0			
Herb Stratum (Plot size: 1 meter)			
1. Anthoxanthum odoratum	20	Yes	FACU
2. Agrostis capillaris	20	Yes	FAC
3. Schedonorus arundinaceus	15	Yes	FAC
5. Holcus lanatus	10	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
Total Cover =65			
Woody Vine Stratum (Plot size: 1 meter)			
1. Rubus ursinus	15	Yes	FACU
2.			
Total Cover =15			
% Bare Ground in Herb Stratum: 35			

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	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	45	x 3 =	135
FACU species	35	x 4 =	140
UPL species	0	x 5 =	0
Column Totals:	80 (A)		275 (B)

Prevalence Index = B/A = 3.44

Hydrophytic Vegetation Indicators:
___ 1 –Rapid Test for Hydrophytic Vegetation
___ 2 – Dominance Test >50%
___ 3 - Prevalence Index is ≤ 3.0[1]
___ 4 - Morphological Adaptions[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? No

Remarks:

SOIL Sampling Point: 3

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

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

___Histosol (A1)
___Histic Epipedon (A2)
___Black Histic (A3)
___Hydrogen Sulfide (A4)
___Depleted Below Dark Surface (A11)
___Thick Dark Surface (A12)
___Sandy Mucky Mineral (S1)
___Sandy Gleyed Matrix (S4)
___Sandy Redox (S5)
___Stripped Matrix (S6)
___Loamy Mucky Mineral (F1) (**except MLRA 1**)
___Loamy Gleyed Matrix (F2)
___Depleted Matrix (F3)
___Redox Dark Surface (F6)
___Depleted Dark Surface (F7)
___Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

___2 cm Muck (A10)
___Red Parent Material (TF2)
___Very Shallow Dark Surface (TF12)
___Other (Explain in Remarks)

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___Surface Water (A1)
___High Water Table (A2)
___Saturation (A3)
___Water Marks (B1)
___Sediment Deposits (B2)
___Drift Deposits (B3)
___Algal Mat or Crust (B4)
___Iron Deposits (B5)
___Surface Soil Cracks (B6)
___Inundation Visible on Aerial Imagery (B7)
___Sparsely Vegetated Concave Surface (B8)
___Water-Stained Leaves (B9) (**except MLRA 1,2,4A, and 4B**)
___Salt Crust (B11)
___Aquatic Invertebrates (B13)
___Hydrogen Sulfide Odor (C1)
___Oxidized Rhizospheres along Living Roots (C3)
___Presence of Reduced Iron (C4)
___Recent Iron Reduction in Tilled Soils (C6)
___Stunted or Stressed Plants (D1)(**LRR A**)
___Other (Explain in Remarks)

Secondary Indicators (two or more required)

___Water-Stained Leaves (B9)(**MLRA 1,2,4A,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? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

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

Remarks:

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

Project/Site: La Center School District/NE Lockwood Creek Rd City/County: La Center/Clark Sampling Date: 09/20/2018
Applicant/Owner: La Center School District State: WA Sampling Point: 4
Investigator(s): Kevin Grosz, Ryan Thiele Section, Township, Range: 02, T4N, R1E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 8-15%
Subregion (LRR): Northwest Forests & Coast (LRR A) Lat: 45.86057640 Long: -122.65070310 Datum: WGS84
Soil Map Unit Name: Hillsboro silt loam NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
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 Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland?** Yes
Remarks:	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 10 meter) 1. 2. 3. 4. Total Cover =0			
Sapling/Shrub Stratum (Plot size: 10 meter) 1. Symphoricarpos albus 2. Salix scouleriana 3. Spiraea douglasii 4. 5. Total Cover =20	 10 5 5	 Yes Yes Yes	 FACU FAC FACW
Herb Stratum (Plot size: 1 meter) 1. Phalaris arundinacea 2. Juncus effusus 3. Schedonorus arundinaceus 4. 5. 6. 7. 8. 9. 10. 11. Total Cover =90	 75 10 5	 Yes No No	 FACW FACW FAC
Woody Vine Stratum (Plot size: 1 meter) 1. Rubus armeniacus 2. Total Cover =15 % Bare Ground in Herb Stratum: 10	 15	 Yes	 FAC

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	90	x 2 =	180
FAC species	25	x 3 =	75
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	125 (A)		295 (B)

Prevalence Index = B/A = 2.36

Hydrophytic Vegetation Indicators:
___ 1 –Rapid Test for Hydrophytic Vegetation
X 2 – Dominance Test >50%
X 3 - Prevalence Index is ≤ 3.0[1]
___ 4 - Morphological Adaptions[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

Remarks:

SOIL Sampling Point: 4

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

	Matrix		Redox Features					
Depth (inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/2	100		0			Silt Loam	
5-16	10YR 3/1	85	7.5YR 3/4	15	C	M	Clayey 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.)

___Histosol (A1)
___Histic Epipedon (A2)
___Black Histic (A3)
___Hydrogen Sulfide (A4)
___Depleted Below Dark Surface (A11)
___Thick Dark Surface (A12)
___Sandy Mucky Mineral (S1)
___Sandy Gleyed Matrix (S4)
___Sandy Redox (S5)
___Stripped Matrix (S6)
___Loamy Mucky Mineral (F1) (**except MLRA 1**)
___Loamy Gleyed Matrix (F2)
___Depleted Matrix (F3)
_X_Redox Dark Surface (F6)
___Depleted Dark Surface (F7)
___Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

___2 cm Muck (A10)
___Red Parent Material (TF2)
___Very Shallow Dark Surface (TF12)
___Other (Explain in Remarks)

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___Surface Water (A1)
___High Water Table (A2)
___Saturation (A3)
___Water Marks (B1)
___Sediment Deposits (B2)
___Drift Deposits (B3)
___Algal Mat or Crust (B4)
___Iron Deposits (B5)
___Surface Soil Cracks (B6)
___Inundation Visible on Aerial Imagery (B7)
___Sparsely Vegetated Concave Surface (B8)
___Water-Stained Leaves (B9) (**except MLRA 1,2,4A, and 4B**)
___Salt Crust (B11)
___Aquatic Invertebrates (B13)
___Hydrogen Sulfide Odor (C1)
_X_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 (two or more required)

___Water-Stained Leaves (B9)(**MLRA 1,2,4A,4B**)
_X_Drainage Patterns (B10)
___Dry-Season Water Table (C2)
___Saturation Visible on Aerial Imagery (C9)
_X_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? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

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

Remarks:

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

Project/Site: La Center School District/NE Lockwood Creek Rd City/County: La Center/Clark Sampling Date: 09/20/2018
Applicant/Owner: La Center School District State: WA Sampling Point: 5
Investigator(s): Kevin Grosz, Ryan Thiele Section, Township, Range: 02, T4N, R1E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 8-15%
Subregion (LRR): Northwest Forests & Coast (LRR A) Lat: 45.86019240 Long: -122.64966090 Datum: WGS84
Soil Map Unit Name: Hillsboro silt loam NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
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 Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland?** No
Remarks:	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 10 meter) 1. 2. 3. 4. Total Cover =0			
Sapling/Shrub Stratum (Plot size: 10 meter) 1. 2. 3. 4. 5. Total Cover =0			
Herb Stratum (Plot size: 1 meter) 1. Agrostis capillaris 2. Schedonorus arundinaceus 3. Anthoxanthum odoratum 5. Holcus lanatus 6. 7. 8. 9. 10. 11. Total Cover =75	25 20 20 10	Yes Yes Yes No	FAC FAC FACU FAC
Woody Vine Stratum (Plot size: 1 meter) 1. 2. Total Cover =0 % Bare Ground in Herb Stratum: 25			

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	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	55	x 3 =	165
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals:	75 (A)		275 (B)

Prevalence Index = B/A = 3.26

Hydrophytic Vegetation Indicators:
___ 1 –Rapid Test for Hydrophytic Vegetation
_X_ 2 – Dominance Test >50%
___ 3 - Prevalence Index is ≤ 3.0[1]
___ 4 - Morphological Adaptions[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

Remarks:

SOIL Sampling Point: 5

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

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

___Histosol (A1)
___Histic Epipedon (A2)
___Black Histic (A3)
___Hydrogen Sulfide (A4)
___Depleted Below Dark Surface (A11)
___Thick Dark Surface (A12)
___Sandy Mucky Mineral (S1)
___Sandy Gleyed Matrix (S4)
___Sandy Redox (S5)
___Stripped Matrix (S6)
___Loamy Mucky Mineral (F1) (**except MLRA 1**)
___Loamy Gleyed Matrix (F2)
___Depleted Matrix (F3)
___Redox Dark Surface (F6)
___Depleted Dark Surface (F7)
___Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

___2 cm Muck (A10)
___Red Parent Material (TF2)
___Very Shallow Dark Surface (TF12)
___Other (Explain in Remarks)

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___Surface Water (A1)
___High Water Table (A2)
___Saturation (A3)
___Water Marks (B1)
___Sediment Deposits (B2)
___Drift Deposits (B3)
___Algal Mat or Crust (B4)
___Iron Deposits (B5)
___Surface Soil Cracks (B6)
___Inundation Visible on Aerial Imagery (B7)
___Sparsely Vegetated Concave Surface (B8)
___Water-Stained Leaves (B9) (**except MLRA 1,2,4A, and 4B**)
___Salt Crust (B11)
___Aquatic Invertebrates (B13)
___Hydrogen Sulfide Odor (C1)
___Oxidized Rhizospheres along Living Roots (C3)
___Presence of Reduced Iron (C4)
___Recent Iron Reduction in Tilled Soils (C6)
___Stunted or Stressed Plants (D1)(**LRR A**)
___Other (Explain in Remarks)

Secondary Indicators (two or more required)

___Water-Stained Leaves (B9)(**MLRA 1,2,4A,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? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

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

Remarks:

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

Project/Site La Center School District/NE Lockwood Creek Rd City/County: La Center/Clark Sampling Date: 09/20/2018
Applicant/Owner: La Center School District State: WA Sampling Point: 6
Investigator(s): Kevin Grosz, Ryan Thiele Section, Township, Range: 02, T4N, R1E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 0-8%
Subregion (LRR): Northwest Forests & Coast (LRR A) Lat: 45.86016740 Long: -122.65118000 Datum: WGS84
Soil Map Unit Name: Gee silt loam NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
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 Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland?** Yes
Remarks:	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 10 meter) 1. 2. 3. 4. Total Cover =0			
Sapling/Shrub Stratum (Plot size: 10 meter) 1. 2. 3. 4. 5. Total Cover =0			
Herb Stratum (Plot size: 1 meter) 1. Agrostis capillaris 2. Phalaris arundinacea 3. Lupinus polyphyllus 4. Holcus lanatus 5. 6. 7. 8. 9. 10. 11. Total Cover =81	60 15 1 5	Yes No No No	FAC FACW FAC FAC
Woody Vine Stratum (Plot size: 1 meter) 1. Rubus armeniacus 2. Total Cover =2 % Bare Ground in Herb Stratum: 19	2	Yes	FAC

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	68	x 3 =	204
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	83 (A)		234 (B)

Prevalence Index = B/A = 2.82

Hydrophytic Vegetation Indicators:
___ 1 –Rapid Test for Hydrophytic Vegetation
X 2 – Dominance Test >50%
X 3 - Prevalence Index is ≤ 3.0[1]
___ 4 - Morphological Adaptions[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

Remarks:

SOIL Sampling Point: 6

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

	Matrix		Redox Features					
Depth (inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/2	90	7.5YR 4/4	10	C	M	Silt Loam	
12-16	10YR 3/1	80	7.5YR 4/4	20	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.)

___Histosol (A1)
___Histic Epipedon (A2)
___Black Histic (A3)
___Hydrogen Sulfide (A4)
___Depleted Below Dark Surface (A11)
___Thick Dark Surface (A12)
___Sandy Mucky Mineral (S1)
___Sandy Gleyed Matrix (S4)
___Sandy Redox (S5)
___Stripped Matrix (S6)
___Loamy Mucky Mineral (F1) (**except MLRA 1**)
___Loamy Gleyed Matrix (F2)
___Depleted Matrix (F3)
_X_Redox Dark Surface (F6)
___Depleted Dark Surface (F7)
___Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

___2 cm Muck (A10)
___Red Parent Material (TF2)
___Very Shallow Dark Surface (TF12)
___Other (Explain in Remarks)

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___Surface Water (A1)
___High Water Table (A2)
___Saturation (A3)
___Water Marks (B1)
___Sediment Deposits (B2)
___Drift Deposits (B3)
___Algal Mat or Crust (B4)
___Iron Deposits (B5)
___Surface Soil Cracks (B6)
___Inundation Visible on Aerial Imagery (B7)
___Sparsely Vegetated Concave Surface (B8)
___Water-Stained Leaves (B9) (**except MLRA 1,2,4A, and 4B**)
___Salt Crust (B11)
___Aquatic Invertebrates (B13)
___Hydrogen Sulfide Odor (C1)
___Oxidized Rhizospheres along Living Roots (C3)
___Presence of Reduced Iron (C4)
___Recent Iron Reduction in Tilled Soils (C6)
___Stunted or Stressed Plants (D1)(**LRR A**)
___Other (Explain in Remarks)

Secondary Indicators (two or more required)

___Water-Stained Leaves (B9)(**MLRA 1,2,4A,4B**)
_X_Drainage Patterns (B10)
___Dry-Season Water Table (C2)
___Saturation Visible on Aerial Imagery (C9)
_X_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? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

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

Remarks:

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

Project/Site: La Center School District/NE Lockwood Creek Rd City/County: La Center/Clark Sampling Date: 09/20/2018
Applicant/Owner: La Center School District State: WA Sampling Point: 7
Investigator(s): Kevin Grosz, Ryan Thiele Section, Township, Range: 02, T4N, R1E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 0-8%
Subregion (LRR): Northwest Forests & Coast (LRR A) Lat: 45.86012280 Long: -122.65110680 Datum: WGS84
Soil Map Unit Name: Gee silt loam NWI classification: N/A
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (if no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
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? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland?** No
Remarks:	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 10 meter) 1. 2. 3. 4. Total Cover = 0			
Sapling/Shrub Stratum (Plot size: 10 meter) 1. 2. 3. 4. 5. Total Cover = 0			
Herb Stratum (Plot size: 1 meter) 1. Phalaris arundinacea 2. Agrostis capillaris 3. Anthoxanthum odoratum 4. Schedonorus arundinaceus 5. 6. 7. 8. 9. 10. 11. Total Cover = 90	10 40 20 20	No Yes Yes Yes	FACW FAC FACU FAC
Woody Vine Stratum (Plot size: 10 meter) 1. 2. Total Cover = 0 % Bare Ground in Herb Stratum: 10			

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	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	60	x 3 =	180
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals:	90 (A)		280 (B)

Prevalence Index = B/A = 3.11

Hydrophytic Vegetation Indicators:
___ 1 –Rapid Test for Hydrophytic Vegetation
X 2 – Dominance Test >50%
___ 3 - Prevalence Index is ≤ 3.0[1]
___ 4 - Morphological Adaptions[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? No

Remarks:

SOIL Sampling Point: 5

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

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

___Histosol (A1)
___Histic Epipedon (A2)
___Black Histic (A3)
___Hydrogen Sulfide (A4)
___Depleted Below Dark Surface (A11)
___Thick Dark Surface (A12)
___Sandy Mucky Mineral (S1)
___Sandy Gleyed Matrix (S4)
___Sandy Redox (S5)
___Stripped Matrix (S6)
___Loamy Mucky Mineral (F1) (**except MLRA 1**)
___Loamy Gleyed Matrix (F2)
___Depleted Matrix (F3)
___Redox Dark Surface (F6)
___Depleted Dark Surface (F7)
___Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

___2 cm Muck (A10)
___Red Parent Material (TF2)
___Very Shallow Dark Surface (TF12)
___Other (Explain in Remarks)

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

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___Surface Water (A1)
___High Water Table (A2)
___Saturation (A3)
___Water Marks (B1)
___Sediment Deposits (B2)
___Drift Deposits (B3)
___Algal Mat or Crust (B4)
___Iron Deposits (B5)
___Surface Soil Cracks (B6)
___Inundation Visible on Aerial Imagery (B7)
___Sparsely Vegetated Concave Surface (B8)
___Water-Stained Leaves (B9) (**except MLRA 1,2,4A, and 4B**)
___Salt Crust (B11)
___Aquatic Invertebrates (B13)
___Hydrogen Sulfide Odor (C1)
___Oxidized Rhizospheres along Living Roots (C3)
___Presence of Reduced Iron (C4)
___Recent Iron Reduction in Tilled Soils (C6)
___Stunted or Stressed Plants (D1)(**LRR A**)
___Other (Explain in Remarks)

Secondary Indicators (two or more required)

___Water-Stained Leaves (B9)(**MLRA 1,2,4A,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? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

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

Remarks:

APPENDIX B

WETLAND RATING FORMS FOR WESTERN WASHINGTON & FIGURES

Wetland name or number D-N

RATING SUMMARY – Western Washington

Name of wetland (or ID #):NE Lockwood Creek Rd. - Wetland D-N Date of site visit: 9/20/18

Rated by Alex Sherman Trained by Ecology? x Yes ___No Date of training 9/18/17

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 ArcGIS World Imagery Basemap

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	**6**	**3**	**5**	**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	Not Applicable

Wetland name or number D-N

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	B1
Hydroperiods	H 1.2	B2
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	B3
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants (*can be added to figure above)*	S 4.1	B3
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	B2
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	B4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	B8
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	B7

Wetland name or number D-N

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 _D-N_

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*) 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	3
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	0
Total for S 1 Add the points in the boxes above	3

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

S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
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	1
Total for S 2 Add the points in the boxes above	2

Rating of Landscape Potential If score is: X **1-2 = M** ___**0 = L** *Record the rating on the first page*

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	1
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? *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	4

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 _D-N __

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	

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	0
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	0

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

NOTES and FIELD OBSERVATIONS:

Wetland name or number _D-N__

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
____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
_x__Seasonally flooded or inundated	3 types present: points = 2
____Occasionally flooded or inundated	2 types present: points = 1
____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.

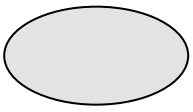
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. ***Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***

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

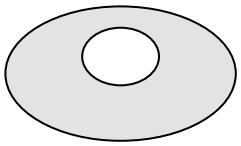
0

H 1.4. Interspersion of habitats

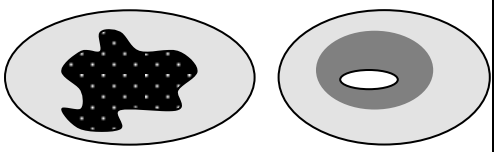
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always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



None = 0 points

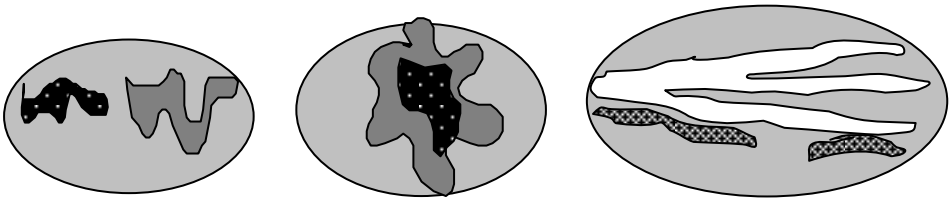


Low = 1 point



Moderate = 2 points

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



0

Wetland name or number _D-N__

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)* _X__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)* ____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	1

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 13 **+** [(% moderate and low intensity land uses)/2] 13 **=** 26 % 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	2
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* % undisturbed habitat 27 **+** [(% moderate and low intensity land uses)/2] 24 **=** 51 % 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	3
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	5

Rating of Landscape Potential If score is:_X__**4-6 = H** ___**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

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

Wetland name or number _D-N__

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 D-N__

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 D-N__

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	NA

Wetland name or number E-N

RATING SUMMARY – Western Washington

Name of wetland (or ID #): NE Lockwood Creek Rd/North - Wetland E-N Date of site visit: 9/20/18

Rated by Alex Sherman Trained by Ecology? x Yes ___No Date of training 9/18/17

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 ArcGIS World Imagery

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	**6**	**3**	**4**	**13**

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	Not Applicable

Wetland name or number _E-N__

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	B1
Hydroperiods	H 1.2	B2
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	B3
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants (*can be added to figure above)*	S 4.1	B3
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	B1
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	B5
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	B8
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	B7

Wetland name or number __E-N__

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 _E-N

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*) 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	3
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	0
Total for S 1 Add the points in the boxes above	3

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

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

Rating of Landscape Potential If score is: _X_**1-2 = M** ___**0 = L** *Record the rating on the first page*

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	1
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? *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	4

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 _ E-N ___

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	1

Rating of Landscape Potential If score is: _x_ **1 = M** ___**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	0
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	0

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

NOTES and FIELD OBSERVATIONS:

Wetland name or number E-N___

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
_X_Scrub-shrub (areas where shrubs have > 30% cover)	2 structures: points = 1
____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

1

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
_X_Seasonally flooded or inundated	3 types present: points = 2
____Occasionally flooded or inundated	2 types present: points = 1
____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.

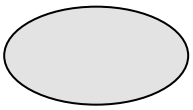
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. ***Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***

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

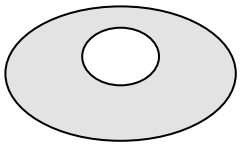
1

H 1.4. Interspersion of habitats

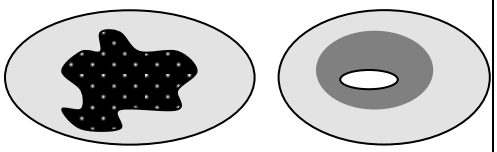
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always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



None = 0 points

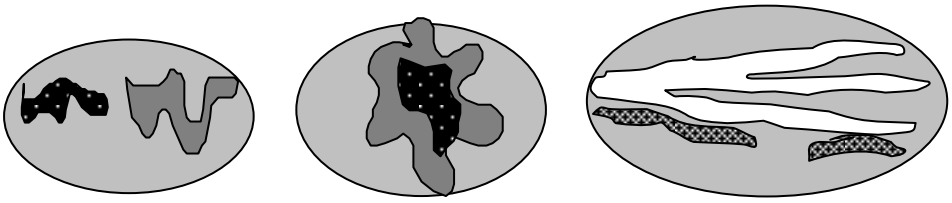


Low = 1 point



Moderate = 2 points

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



1

Wetland name or number E-N __

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	4

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 12 **+** [(% moderate and low intensity land uses)/2] 13 **=** 25 % 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	2
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* % undisturbed habitat 25 **+** [(% moderate and low intensity land uses)/2] 25 **=** 50 % 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	3

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

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

Wetland name or number _E-N__

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 _E-N_

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 E-N __

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	NA

Wetland name or number F-N

RATING SUMMARY – Western Washington

Name of wetland (or ID #): NE Lockwood Creek Rd/North - Wetland F-N Date of site visit: 9/20/18

Rated by Alex Sherman Trained by Ecology? x Yes ___No Date of training 9/18/17

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 ArcMap World Imagery

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	**6**	**4**	**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	Not Applicable

Wetland name or number F-N

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	B1
Hydroperiods	H 1.2	B2
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	B3
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants (*can be added to figure above)*	S 4.1	B3
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	B1
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	B6
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	B8
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	B7

Wetland name or number F-N __

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 _F-N

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*) 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	3
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	1
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? Yes = 1 No = 0	1
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other sources oil, heavy metals Yes = 1 No = 0	1
Total for S 2 Add the points in the boxes above	2

Rating of Landscape Potential If score is: X **1-2 = M** ___**0 = L** *Record the rating on the first page*

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	1
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? *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	4

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 _F_-N__

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	0
All other conditions points = 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	1

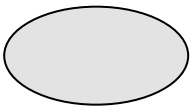
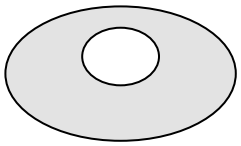
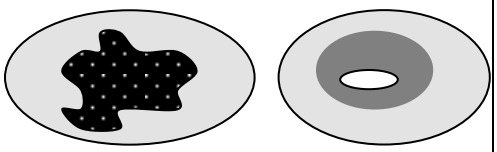
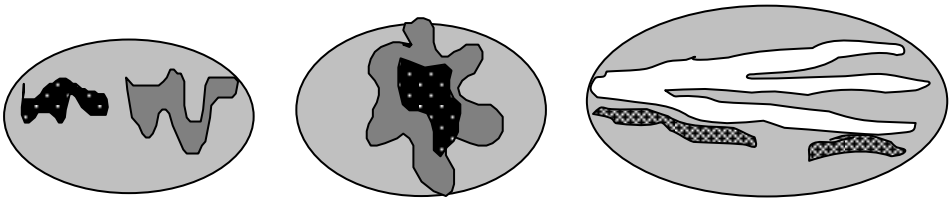
Rating of Landscape Potential If score is: _X_**1 = M** ___**0 = L** *Record the rating on the first page*

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	0
No flooding problems anywhere downstream points = 0	
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	0

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

NOTES and FIELD OBSERVATIONS:

Wetland name or number __F-N__

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 _x__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	1
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 _x__Seasonally flooded or inundated — 3 types present: points = 2 ____Occasionally flooded or inundated — 2 types present: points = 1 ____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 	1

Wetland name or number _F-N

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	4

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 13 **+** [(% moderate and low intensity land uses)/2] 13 **=** 26 % 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	2
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* % undisturbed habitat 26 **+** [(% moderate and low intensity land uses)/2] 24 **=** 50 % 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	3

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

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

Wetland name or number F-N _

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 _F-N

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

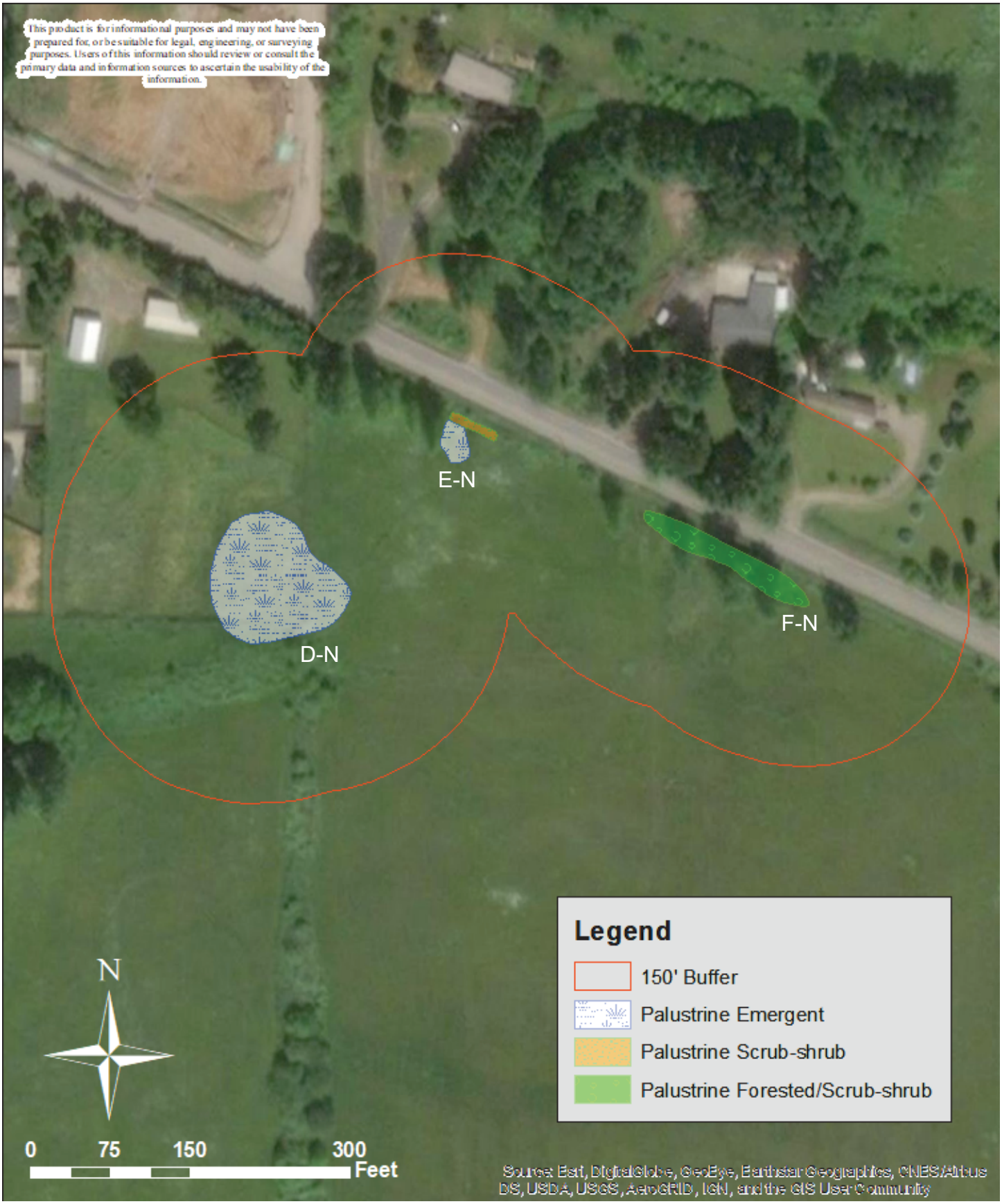
Wetland Type *Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.*	**Category**
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity 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 F-N __

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	NA

APPENDIX B

WETLAND RATING FIGURES



APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

PURPOSE: Wetland Delineation & Assessment

Cowardin Vegetation Map
NE Lockwood Creek Road - North Parcel
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: September 26, 2018

Figure B1

APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

PURPOSE: Wetland Delineation & Assessment

Hydro-Period Map
NE Lockwood Creek Road - North Parcel
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: September 26, 2018

Figure B2

APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

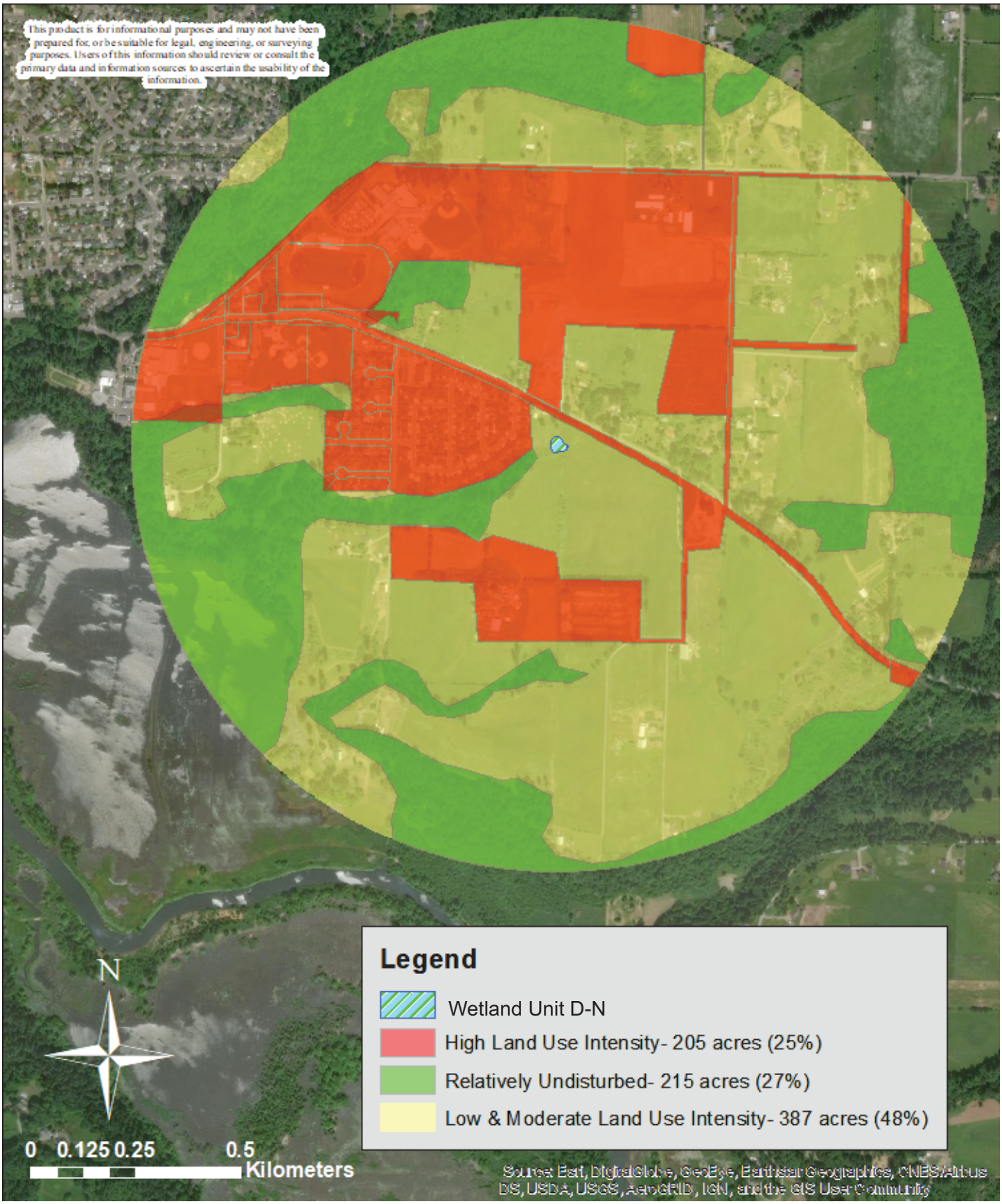
PURPOSE: Wetland Delineation & Assessment

Plant Cover Map
NE Lockwood Creek Road - North Parcel
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: September 26, 2018

Figure B3



APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

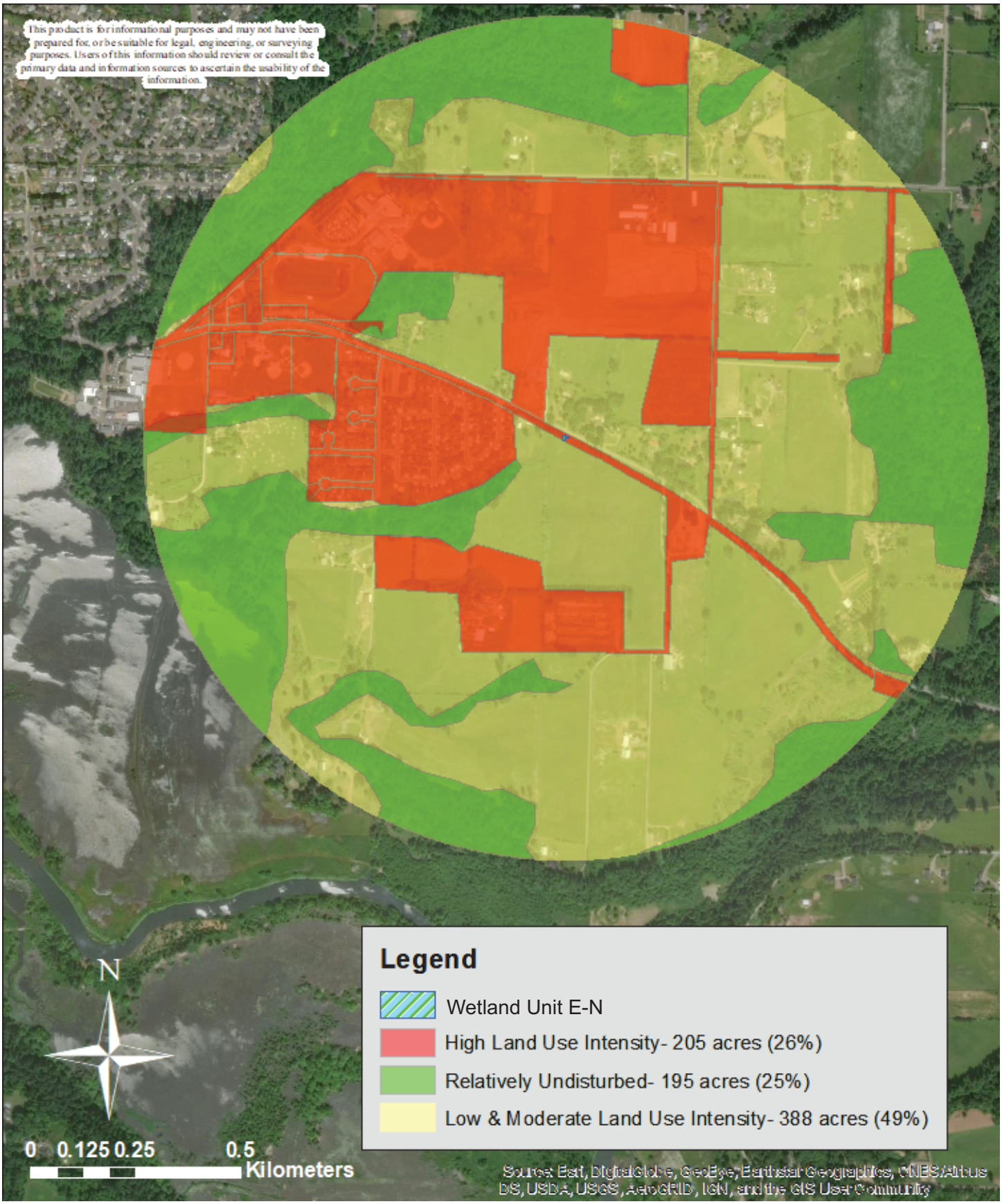
PURPOSE: Wetland Delineation & Assessment

Wetland D-N - Land Use Intensity Map
NE Lockwood Creek Road - North Parcel
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: September 26, 2018

Figure B4



APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

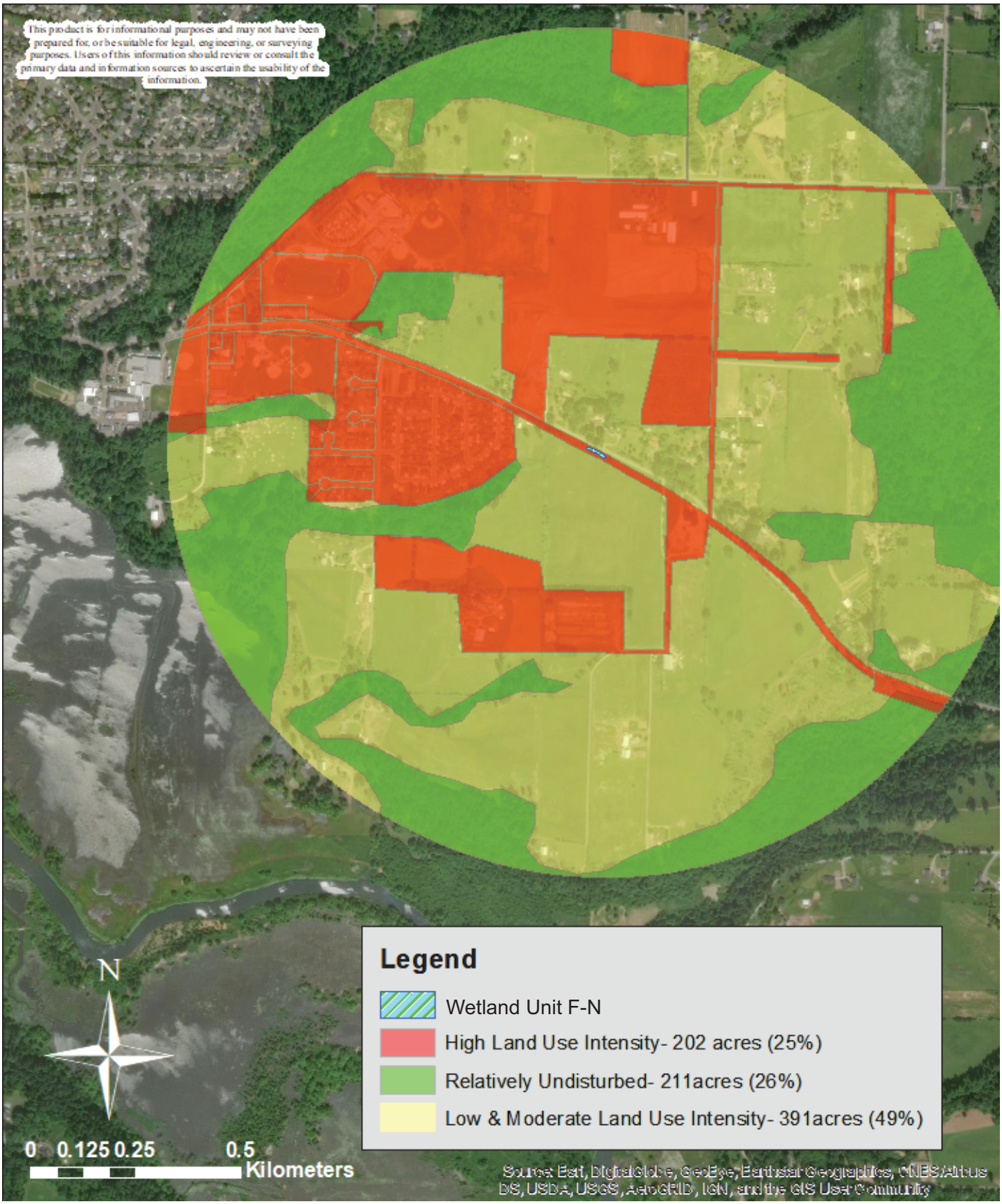
PURPOSE: Wetland Delineation & Assessment

Wetland E-N - Land Use Intensity Map
NE Lockwood Creek Road - North Parcel
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: September 26, 2018

Figure B5



APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

PURPOSE: Wetland Delineation & Assessment

Wetland F-N - Land Use Intensity Map
NE Lockwood Creek Road - North Parcel
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: September 26, 2018

Figure B6

DEPARTMENT OF ECOLOGY
State of Washington

Washington State Water Quality Assessment
303(d)/305(b) List

Assessment WQ Search Tool | Contact Us | WQ Atlas

New Search | Refine Search | Export to File

4 Matched Listings

The 303(d) List contains only Category 5 Listings.

View	ListingID	Assessment Unit ID	Medium	Parameter	Current Category	Waterbody Name	WRIA	WQ Improvement Project	WQ Atlas Map Link
View	7819	1708002000336	Water	Bacteria	5	LOCKWOOD CREEK	27 - Lewis		7819
View	7820	1708002000336	Water	Temperature	5	LOCKWOOD CREEK	27 - Lewis		7820
View	46224	1708002000338	Water	Bacteria	5	LOCKWOOD CREEK	27 - Lewis		46224
View	70061	1708002000336	Other	Bioassessment	5	LOCKWOOD CREEK	27 - Lewis		70061

New Search | Refine Search | Export to File

Ecology Home Page | Disclaimer | Privacy Notice | Accessibility | Release Notes
Approved WQA Version: 1.0.7

APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

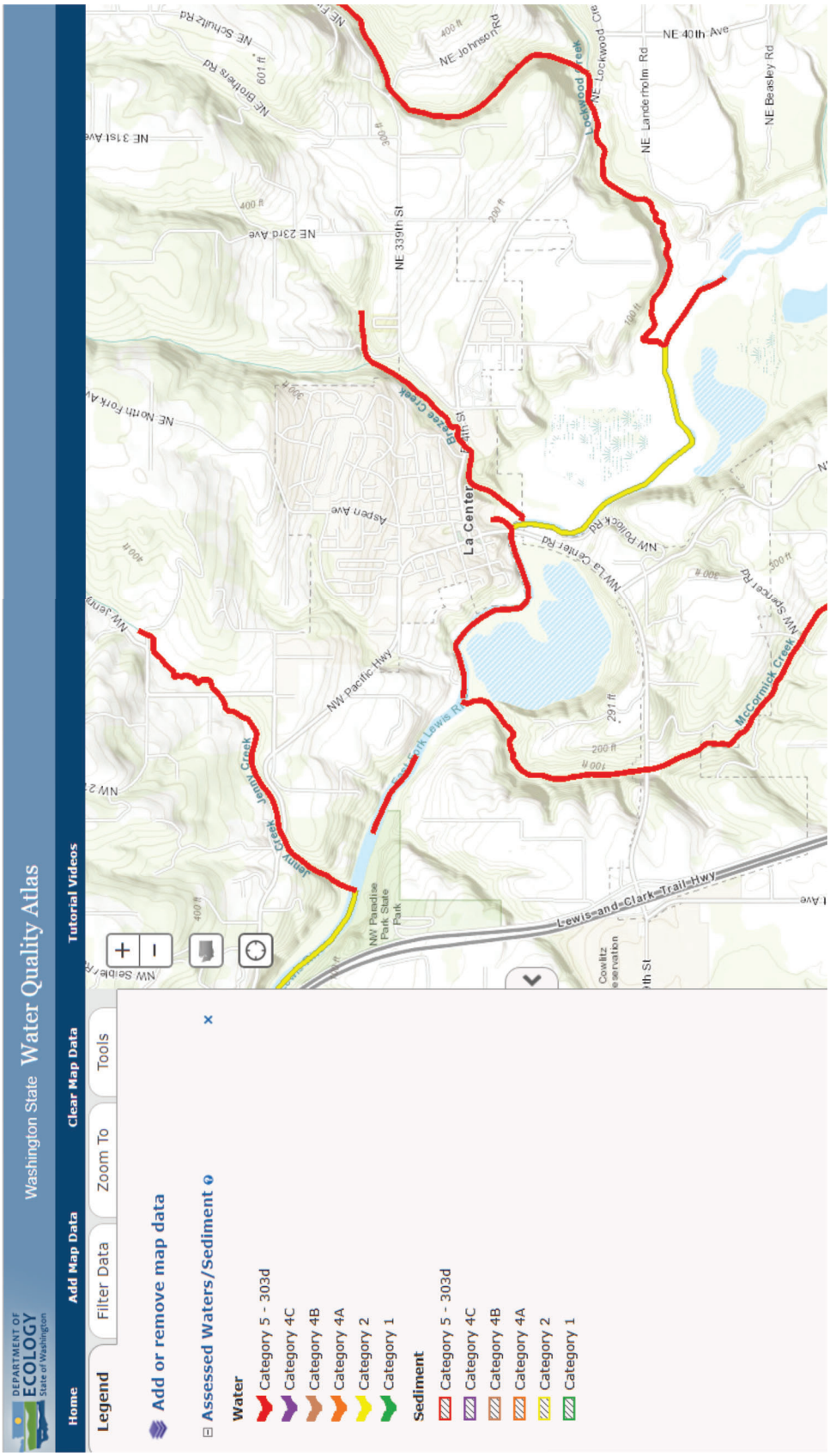
PURPOSE: Wetland Delineation & Assessment

TMDL List
NE Lockwood Creek Road - North Parcel
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: September 26, 2018

Figure B7



APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

PURPOSE: Wetland Delineation & Assessment

Watershed 303(d) Listing Map
NE Lockwood Creek Road - North Parcel
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: September 26, 2018

Figure B8