La Center Middle School Wetland Delineation and Assessment - Revised La Center, Washington



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

October 29, 2019



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REVISED WETLAND DELINEATION AND ASSESSMENT

Project: NE Lockwood Creek Road Properties

Applicant: La Center School District

Location: South of NE Lockwood Creek Road, La Center,

Washington

Legal Description: NE & SE 1/4s of Sec. 02, T04N, R01E, W. M., Clark County Serial Number(s): 209118-000 (7.39 ac.), 209120-000 (9.78 ac.) & 209064-000

(1.9 ac.)

Study Area Size: 19.07 acres

Jurisdiction: City of La Center

Watershed: East Fork of the Lewis River

WRIA: Lewis (27)

Zoning: R1-75/LDR-7.5)

ComPlan: UL

Assessment by: Kevin Grosz, PWS; Ryan Thiele

Site Visit(s): November 20, 2017; September 20, 2018; &

December 6 & 7, 2018

Revised

Report Date: October 29, 2019

1.0 <u>INTRODUCTION</u>

This report details the results of a revised wetland delineation and assessment conducted by Olson Environmental, LLC (OE) for the La Center School District. Two main study areas were investigated independently. The initial field investigations for the southern study site (parcels 209118-000 & 209120-000) occurred on November 20, 2017, with revisions following field investigations on December 6 & 7, 2018. The field investigation for the northern study site (parcel 209064-000) occurred on September 20, 2018. Both study areas were investigated by the US Army Corps of Engineers (USACE) on January 11, 2019 and identified wetland boundaries within both study areas were subsequently revised. This revised report incorporates comments received from the USACE and Washington Department of Ecology (Ecology).

The combined study area is located 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 USACE and 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 combined study area is approximately 19 acres of vacant land. The study area appears to have been used for hay land. Generally, the site is relatively flat and gently slopes from north to south (Fig. 2).

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.

<u>Hydrophytic vegetation</u> 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 occur in wetlands.

Facultative Wetland (FACW) Usually occur in wetlands, but may occur in non-wetlands. Facultative (FAC) Occur in wetlands and non-wetlands.

Facultative Upland (FACU) Usually occur in non-wetlands, but may occur in wetlands. Upland (UPL) Almost never occur in wetlands.

*Source: Lichvar and Gillrich (2011)

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, drift lines, wetland drainage patterns, and morphological plant adaptations.

3.0 SITE-SPECIFIC METHODS

OE conducted the onsite wetland delineation and assessment on November 20, 2017, September 20, 2018, and December 6 & 7, 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. As part of the approval process, the USACE conducted a field investigation on January 11, 2019, following the submittal of initial findings.

Study areas were 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. Sample plots were chosen in a uniform topographic position that was representative of a single plant community. The paired plots were located approximately three meters apart to minimize the margin of error. Soils at each sample plot were generally 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 all three wetland parameters including hydric soils, 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).

The entire study area shown in this report was initially assessed as two separate areas, due to circumstances of landownership and project development. Following the consolidation of property ownership, the projects were combined into the same study area. Both assessments were initially conducted at a time of year when hydrology would typically be low and identifying primary indicators of wetland hydrology would be difficult. The field investigation by the USACE in January 2019 occurred at a time when wetland hydrologic conditions were more evident. Previously identified boundaries were

assessed at this time and were subsequently refined based on more relevant hydrologic conditions.

4.0 RESULTS AND DISCUSSION

According to the NWI/LWI wetlands map (Fig. 3) no wetlands have been previously identified or projected to be within the study 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 nine 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) 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

Over the course of field studies, eight (8) wetlands were identified and delineated within the study area as shown in Figures 5 and Figure 6. Each wetland name (A-F) is followed by identifier that denotes the original study site in which it was identified, i.e. North (N) or South (S). Descriptions of each wetlands are as follows:

Wetland A-S (27,200 sq. ft.)

Wetland A-S exists in the southwestern portion of the study area (Fig. 5). The wetland is an open grassland plant community that was more than likely seeded with a pasture/hay mixture. The wetland plant community is predominantly colonial bent grass (*Agrostis capillaris* - FAC), spreading bent grass (*A. stolonifera* – FAC), velvet grass (*Holcus lanatus* – FAC), reed canary grass (*Phalaris arundinacea* – FACW), tall false rye grass (*Schedonorus arundinaceus* - FAC), and sweet vernal grass (*Anthoxanthum odoratum* – FACU). Soils from 0 to 5 inches area a very dark grayish brown (10YR 3/2) silt loam. Below this to a depth of >16 inches the soil is a very dark gray (10YR 3/1) silty clay loam with dark reddish brown (5YR 3/3) concentrations. Wetland hydrology was indicated by the presence of surface water (1" depth) and soil saturation to the surface. The wetland is a depressional HGM class wetland.

Wetland B-S (3,770 sq. ft.)

Wetland B-S is located in the northern portion of the property (Fig 5). Vegetation in this area consists of reed canary grass, spreading bent grass, colonial bent grass, velvet grass, and soft rush (*Juncus effusus* – FACW). Soils are a dark gray (10YR 4/1) silt loam with dark reddish brown (10YR 3/3) concentrations to a depth of >16 inches. Wetland hydrology was indicated by water and soil saturation at the surface. It appears that portions of this part of the study area may contain drain tile that are artificially draining the area. This is a slope HGM class wetland.

Wetland C-S (3,315 sq. ft.)

Wetland C-S is located in the south of Wetland B-S (Fig 5). Vegetation in this area consists of spreading bent grass, colonial bent grass, tall false rye grass, cat's ear (*Hypochaeris radicata* – FACU), and creeping buttercup (*Ranunculus repens* – FAC). Soils are a dark grayish brown (10YR 4/2) silt loam/clayey silt loam in the upper 10 inches with dark brown (7.5YR 3/3) concentrations in the bottom half of this layer. From 10 to 16 inches below the surface the soil is a dark gray (7.5YR 4/1) clay loam with dark yellowish brown (10YR 4/6) concentrations. No ponding or saturation was observed at the time of initial assessment however, wetland hydrology is assumed based on the presence of oxidized rhizospheres, saturation visible on aerial imagery and geomorphic position. This is a depressional HGM class wetland.

Wetland D-S (74,740 sq. ft.)

Wetland D-S is located near the center of the site (Fig 5). Vegetation in this area is predominantly spreading bent grass, velvet grass, tall false rye grass, cat's ear, and

creeping buttercup. Soils to a depth of nine inches are a brown (7.5YR 4/2) silt loam with dark brown (7.5YR 3/2) concentrations in the bottom half of this layer. Below nine inches the soil is a brown (7.5YR 4/2) clayey silt loam with dark brown (7.5YR 3/3) concentrations. No ponding or saturation was observed at the time of initial assessment however, wetland hydrology is assumed based on the presence of oxidized rhizospheres, saturation visible on aerial imagery and geomorphic position. This is a slope HGM class wetland. Table 1 outlines the functional assessment for this wetland.

Wetland E-S (19,960 sq. ft.)

Wetland E-S is located in the southeast corner of the site (Fig 5). Vegetation in this area consists of spreading bent grass, velvet grass, tall false rye grass, cat's ear, soft rush, and perennial rye grass (*Lolium perenne* – FAC). The top four inches of the soil is a dark grayish brown (10YR 4/2) silt loam. From 4-12 inches the soil is a dark gray (10YR 4/1) clayey silt loam with dark brown (7.5YR 3/3) concentrations. Below this to a depth of 16 inches the soil is a gray (10YR 5/1) clayey silt loam with brown (7.5YR 4/4) concentrations. No ponding or saturation was observed at the time of initial assessment, wetland hydrology is assumed based on the presence of oxidized rhizospheres, saturation visible on aerial imagery and geomorphic position. This is a depressional HGM class wetland.

Wetland D-N (290 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.

The vegetation is predominantly colonial bent grass, reed canary grass 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 at the time of initial assessment was indicated by drainage patterns and geomorphic position.

Wetland E-N (1,050 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 this 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.

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 (2,650 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.

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 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 Functional Rating

Wetland	Wetland Type	Wetland Quality Functions Fu		Habitat Functions	Total Score	Wetland Category
A-S	Depressional	5	4	5	14	IV
B-S	Slope	6	5	5	16	III
C-S	Depressional	5	4	5	14	IV
D-S	Slope	5	4	5	14	IV
E-S	Depressional	5	4	5	14	IV
D-N	Slope	5	4	5	14	IV
E-N	Slope	6	4	5	15	IV
F-N	Slope	6	5	5	16	III

4.3 NON-WETLANDS

The non-wetland portions of the property are primarily open grassland that appears to be used primarily as hay land. Vegetation in the upland areas is similar to the wetland vegetation and is more than likely a pasture seed mixture that has been sown for the pasture/hay uses. 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, false rye grass, colonial bent grass, and spreading bent grass, velvet grass. In addition, there are two areas with mixed shrub and tree cover. 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 row along the western property line is primarily Himalayan blackberry, with small patches of Oregon ash, bitter cherry (*Prunus emarginata*) and Nootka rose. No wetland hydrology or soil indicators were observed in these areas of the study site.

Photographs of the study area and wetlands are provided in Photo-Sheet 1.

5.0 REGULATORY ISSUES

Through the course of the wetland delineation and assessment eight (8) wetlands were identified on the property as shown in Figures 5 and 6. The 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, wetlands A-S, C-S, D-S, E-S D-N, E-N, and F-N are characterized as Category IV wetlands with a low habitat scores, and Wetland B-S is considered a Category III wetland with a low habitat score. According to LMC Table 18.300.090(h)(i)(1), Category III wetlands in a proposed high-intensity land use with a low habitat score are protected by an 80-foot buffer (Fig. 6) in effort to maintain hydrologic functions. Similarly, Category IV wetlands are protected by a 50-foot buffer (Fig. 6). Buffer areas that extend into the roadway to the north are considered functionally isolated, as the roadway does not maintain functions and provides no protection to the wetlands.

In addition to 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. Impacts to the wetlands may require notification and approval from the USACE and Ecology. The wetland boundaries depicted in this report have been field verified by the USACE on January 11, 2019.

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

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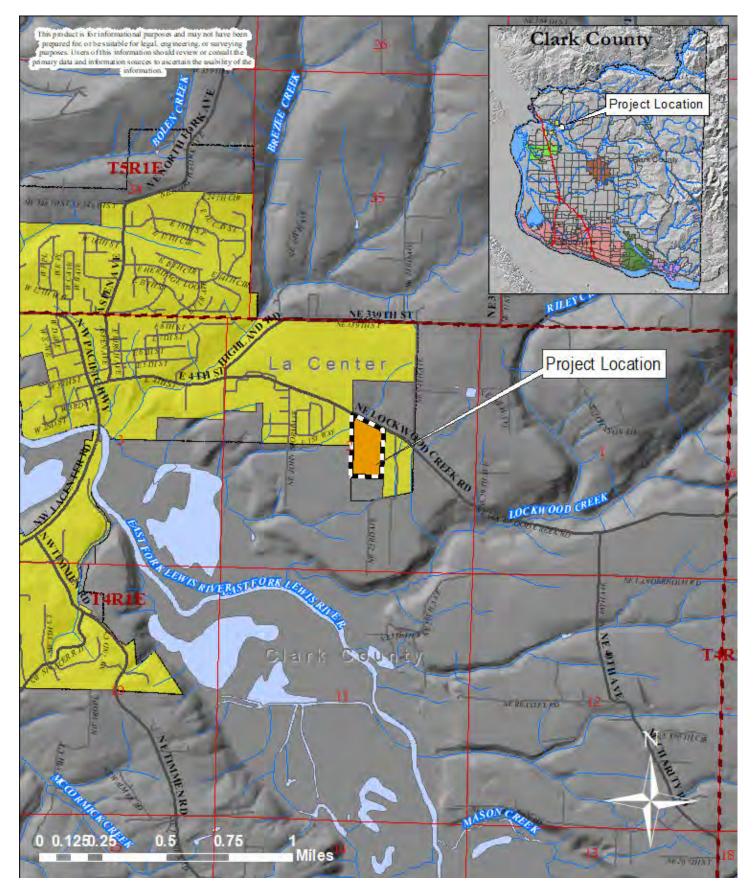
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La Center School District 725 Northeast Highland Avenue La Center, WA 98629

PURPOSE: Revised Wetland Delineation & Assessment

Project Location Map N.E. Lockwood Creek Road La Center, Washington



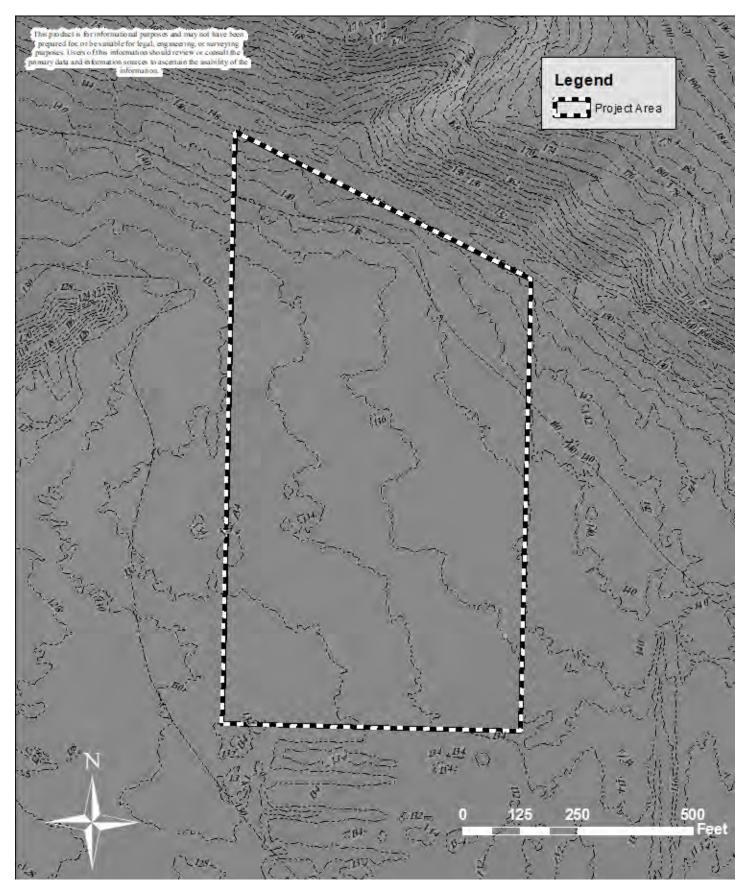
PROPOSED ACTIVITIES IN:

East Fork of the Lewis River

LEGAL: SE 1/4 & NE 1/4 of Section 02,

T4N, R1E, W. M.

NEAR: La Center, Washington COUNTY: Clark County DATE: October 29, 2019



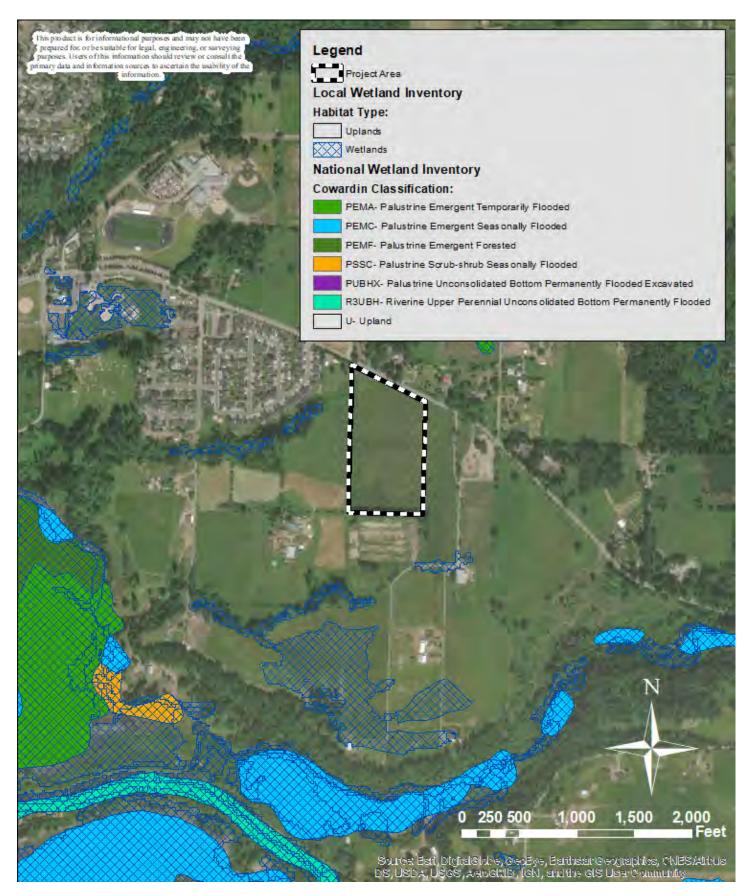
APPLICANT: La Center School District 725 Northeast Highland Avenue La Center, WA 98629

PURPOSE: Revised Wetland Delineation & Assessment

Clark County LiDAR Topographic Map N.E. Lockwood Creek Road La Center, Washington



PROPOSED ACTIVITIES IN:
East Fork of the Lewis River
LEGAL: SE ¼ & NE ¼ of Section 02,
T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: October 29, 2019



La Center School District 725 Northeast Highland Avenue La Center, WA 98629

PURPOSE: Revised Wetland Delineation & Assessment

LWI/NWI Wetland Map N.E. Lockwood Creek Road La Center, Washington



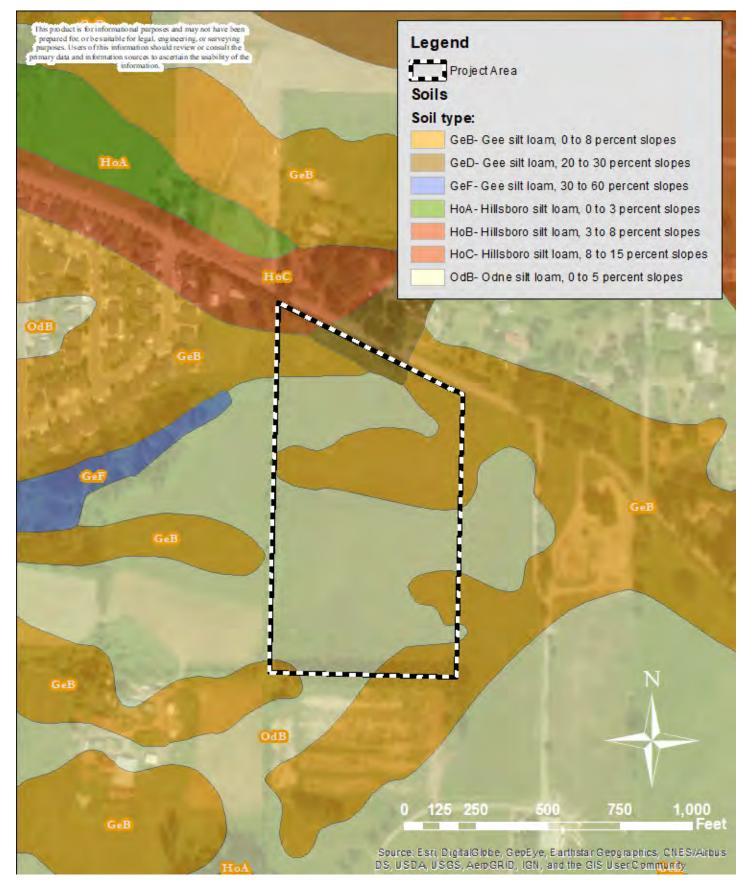
PROPOSED ACTIVITIES IN:

East Fork of the Lewis River

LEGAL: SE 1/4 & NE 1/4 of Section 02,

T4N, R1E, W. M.

NEAR: La Center, Washington COUNTY: Clark County DATE: October 29, 2019



La Center School District 725 Northeast Highland Avenue La Center, WA 98629

PURPOSE: Revised Wetland Delineation & Assessment

NRCS Clark County Soil Survey Map N.E. Lockwood Creek Road La Center, Washington



PROPOSED ACTIVITIES IN:

East Fork of the Lewis River

LEGAL: SE 1/4 & NE 1/4 of Section 02,

T4N, R1E, W. M.

NEAR: La Center, Washington COUNTY: Clark County DATE: October 29, 2019



La Center School District 725 Northeast Highland Avenue La Center, WA 98629

PURPOSE: Revised Wetland Delineation & Assessment

Delineated Wetland Boundaries/Sample Plots N.E. Lockwood Creek Road La Center, Washington



PROPOSED ACTIVITIES IN:

East Fork of the Lewis River

LEGAL: SE 1/4 & NE 1/4 of Section 02,

T4N, R1E, W. M.

NEAR: La Center, Washington COUNTY: Clark County DATE: October 29, 2019



La Center School District 725 Northeast Highland Avenue La Center, WA 98629

PURPOSE: Revised Wetland **Delineation & Assessment**

Delineated Wetland Boundaries/Buffers N.E. Lockwood Creek Road La Center, Washington



PROPOSED ACTIVITIES IN:

East Fork of the Lewis River

LEGAL: SE 1/4 & NE 1/4 of Section 02,

T4N, R1E, W. M.

NEAR: La Center, Washington **COUNTY:** Clark County **DATE:** October 29, 2019













APPLICANT: La Center School District 725 Northeast Highland Avenue La Center, WA 98629

PURPOSE: Revised Wetland Delineation & Assessment

Study Area Photographs N.E. Lockwood Creek Road La Center, Washington



PROPOSED ACTIVITIES IN:

PROPOSED ACTIVITIES IN:
East Fork of the Lewis River
LEGAL: SE ¼ & NE ¼ of Section 02,
T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: October 29, 2019 Photo-Sheet 1

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

APPENDIX A

WETLAND DETERMINATION DATA FORMS

Applicant/Owner: <u>La Center School District</u> State: <u>W</u> Investigator(s): <u>Kevin Grosz</u> Section, Towns Landform (hillslope, terrace, etc.): <u>Plain</u> Local Subregion (LRR): <u>Northwest Forests & Coast (LRR A)</u>	thip, Range: <u>02/4N</u> relief (concave, concave, concave, concave, concave) relief (concave, concave) relief (concave) relief (N1E nvex, none): <u>Noted</u> 45.85753780 ne ? <u>Yes</u> (if no, exp	Long: <u>-122.6</u> Dlain in Rema Are "Normal (if needed, e transects, i	rks.) Circumstances" present? <u>Yes</u> xplain any answers in Remarks.)
VEGETATION – Use scientific names of plants.	Absolute %	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>0</u>)	Cover	Species?	Status	Number of Dominant Species
1. 2.				That Are OBL, FACW, or FAC: $\underline{1}$ (A)
3.				Total Number of Dominant
4.				Species Across All Strata: <u>1</u> (B)
Total Cover = <u>0</u>				Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 0)				That Are OBL, FACW, or FAC: $\underline{0}$ (A/B)
1. 2.				Prevalence Index worksheet:
3.				Total % Cover of:Multiply by:
4.				OBL species $\underline{0}$ x 1 = $\underline{0}$
5.				FACW species $\underline{0}$ x 2 = $\underline{0}$ FAC species $\underline{0}$ x 3 = $\underline{0}$
Total Cover = 0				FAC species $\underline{0}$ x 3 = $\underline{0}$ FACU species $\underline{0}$ x 4 = $\underline{0}$
Herb Stratum (Plot size: <u>5M</u>) 1. Agrostis capillaris	<u>50</u>	<u>Yes</u>	<u>FAC</u>	UPL species $\underline{0}$ x 5 = $\underline{0}$
Schedonorus arundinaceus	15	No	FAC	Column Totals: $\underline{0}$ (A) $\underline{0}$ (B)
3. Ranunculus repens	<u>10</u>	No	FAC	Browslaw as Index . B/A . O
4.				Prevalence Index = B/A = <u>0</u>
5.				Hydrophytic Vegetation Indicators:
6. 7.				1 –Rapid Test for Hydrophytic Vegetation
8.				X 2 – Dominance Test >50%
9.				3 - Prevalence Index is ≤ 3.01
10.				4 - Morphological Adaptions¹ (Provide supporting data in Remarks or on a separate sheet)
11. Total Cover = <u>75</u>				5 – Wetland Non-Vascular Plants ¹
10tal Cover – <u>75</u>				Problematic Hydrophytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size: _0_)				¹ Indicators of hydric soil and wetland hydrology
1.				must be present, unless disturbed or problematic.
2.				μ ,
Total Cover = <u>0</u>				
% Bare Ground in Herb Stratum: 0				Hadronkatic Vocatetian Bracout? Voc
Remarks:		<u> </u>	1	Hydrophytic Vegetation Present? Yes

SOIL Sampling Point: 1

	<u>Mat</u>	<u>rix</u>		Redox I	-eatures					
Depth	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
(inches)										
<u>0-16</u>	<u>10YR 3/2</u>	<u>0</u>		<u>0</u>						
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.) Indicators for Problematic Hydric Soils ³ :									
	sol (A1)			ndy Redo					m Muck (A10)	
· · · · · · · · · · · · · · · · · · ·	Epipedon (A2)			ripped Ma					Parent Material (TF2)	
	Histic (A3)					l (F1) (exc	ept MLRA 1)		ry Shallow Dark Surface (TF12)	
	ogen Sulfide (A4)		· 	•	ed Matrix		ept Milion 1)	<u> </u>	ner (Explain in Remarks)	
	ted Below Dark S	urface (A1		epleted M		(12)			ici (Explain in Nemarks)	
	Dark Surface (A1		· · · · · · · · · · · · · · · · · · ·		Surface (F	6)		3Indicat	ors of hydrophytic vegetation and	
	Mucky Mineral (•			ark Surface	•			d hydrology must be present, unless	
	Gleyed Matrix (S				essions (F				ed or problematic.	
	e Layer (if preser									
Type:	e Layer (ii preser	,.								
Depth (in	ches): <u>0</u>							Hydric Soil Present? No		
Remarks:										
	.0.4									
HYDROLO										
	Hydrology Indicat Idicators (minimu		equired; check all	that apply	/)			Secondary	Indicators (two or more required)	
Surfac	e Water (A1)		Wa	ter-Staine	ed Leaves	(R9)		Water	-Stained Leaves (B9)(MLRA 1,2,4A,4B)	
	Water Table (A2)				RA 1,2,4A				age Patterns (B10)	
X Satura				t Crust (B:		, a.i.a i.b.,			eason Water Table (C2)	
	· Marks (B1)		·		, rtebrates ((B13)			ition Visible on Aerial Imagery (C9)	
·	ent Deposits (B2)	1	<u> </u>		lfide Odor	,			orphic Position (D2)	
	Deposits (B3)	'	•	_			ng Roots (C3)		w Aquitard (D3)	
	Mat or Crust (B4)				Reduced Ir	_			eutral Test (D5)	
	eposits (B5)		·		Reduction		oils (C6)		Ant Mounds (D6)(LRR A)	
	e Soil Cracks (B6)	ı			tressed Pla				Heave Hummocks (D7)	
·	ation Visible on A				in in Rema				(27)	
	ely Vegetated Cor	_		(=		,				
Field Obse			()							
	ater Present? Ye	s	Depth (in	ches): 0						
Water Tak	ole Present? Ye	<u> </u>	Depth (in	ches):						
	n Present? Ye	<u>!S</u>	Depth (ir	nches): 4					12.1/	
	apillary fringe)		14 15 11	:-11				drology Pres	ent? <u>Yes</u>	
Describe i	recorded Data (St	ream gaug	e, monitoring well	, aeriai pr	iotos, pre\	rious inspe	ections), it availa	able:		
Remarks:										

Project/Site: <u>NE Lockwood Creek Road</u> City/G Applicant/Owner: <u>La Center School District</u> State: <u>W/</u>	Sampling Date: <u>11/20/2017</u> Sampling Point: <u>2</u>									
Landform (hillslope, terrace, etc.): Plain Local	hip, Range: <u>02/4N</u> relief (concave, co		one Slo	ppe (%): <u>2</u>						
Subregion (LRR): Northwest Forests & Coast (LRR A) Lat: 45.85758670 Long: -122.65018650 Datum: WGS84										
Soil Map Unit Name: Odne Silt Loam (OdB) NWI o	classification: None	!								
Are climatic/hydrologic conditions on the site typical fo	or this time of year?	? Yes(if no, exp	olain in Rema	rks.)						
Are Vegetation, Soil, or Hydrology significant	ly disturbed?		Are "Normal	Circumstances" present? Yes						
Are Vegetation, Soil, or Hydrology naturally p	problematic?		(if needed, e	xplain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site map show	ing sampling poi	int locations,	transects, i	mportant features, etc.						
Hydrophytic Vegetation Present? Yes										
Wetland Hydrology Present? <u>Yes</u>		is the s	Sampled Area	a within a Wetland? <u>Yes</u>						
Remarks:										
VEGETATION – Use scientific names of plants.	Absolute 0/	Dominant	Indicator	Dominance Test worksheet:						
Tree Stratum (Plot size: 0)	Absolute % Cover	Species?	Status	Number of Dominant Species						
1.	Cover	Species:	Status	That Are OBL, FACW, or FAC: $\underline{1}$ (A)						
2.										
3.				Total Number of Dominant						
4.				Species Across All Strata: <u>1</u> (B)						
Total Cover = <u>0</u>										
Sapling/Shrub Stratum (Plot size: 0)				Percent of Dominant Species						
1.				That Are OBL, FACW, or FAC: 100 (A/B)						
2.				Prevalence Index worksheet:						
3.				OBL species $\underline{0}$ $\times 1 = \underline{0}$						
4. 5.				FACW species $\underline{0}$ \times 2 = $\underline{0}$						
Total Cover =0				FAC species $\underline{0}$ $\times 3 = \underline{0}$						
Herb Stratum (Plot size: _5M)				FACU species $\underline{0}$ x 4 = $\underline{0}$						
1. Agrostis stolonifera	<u>60</u>	<u>Yes</u>	FAC	UPL species $\underline{0}$ x 5 = $\underline{0}$						
2. Agrostis capillaris	<u>10</u>	No	FAC	Column Totals: $\underline{0}$ (A) $\underline{0}$ (B)						
3. <u>Phalaris arundinacea</u>	<u>5</u>	<u>No</u>	<u>FACW</u>	Prevalence Index = $B/A = 0$						
4.				Prevalence index – b/A – <u>o</u>						
5.				Hydrophytic Vegetation Indicators:						
6. 7.				1 –Rapid Test for Hydrophytic Vegetation						
8.				X 2 – Dominance Test >50%						
9.				3 - Prevalence Index is ≤ 3.0¹						
10.				4 - Morphological Adaptions ¹ (Provide supporting data in Remarks or on a separate sheet)						
11.				5 – Wetland Non-Vascular Plants ¹						
Total Cover = <u>75</u>				Problematic Hydrophytic Vegetation¹ (Explain)						
Woody Vine Stratum (Plot size: 0)				¹ Indicators of hydric soil and wetland hydrology						
1.				must be present, unless disturbed or problematic.						
2.										
Total Cover = <u>0</u>										
% Bare Ground in Herb Stratum: <u>0</u>				Hydrophytic Vegetation Present? Yes						
Remarks:										

SOIL Sampling Point: New Point 2

	Mati	<u>rix</u>		Redox F	Features Peatures Peatures						
Depth	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks		
(inches)			, ,		"						
<u>0-5</u>	10YR 3/2	100		<u>0</u>							
5-16	10YR 3/1	80	5YR 3/3	20	<u>C</u>	M	Clay Loam				
3 10	<u> 1011(5/ 1</u>	50	<u>311(3/3</u>	<u> 20</u>		<u></u>	Cidy Louin				
	ļ										
	ļ										
	ļ										
¹Type: C=	¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix										
Hydric So	il Indicators: (Ap	plicable to	all LRRs, unless ot	herwise r	noted.)			Indicato	rs for Problematic Hydric Soils ³ :		
Histor	sol (A1)		Sa	ndy Redo	x (S5)			2 cr	m Muck (A10)		
	Epipedon (A2)			ripped Ma					d Parent Material (TF2)		
	Histic (A3)		· · · · · · · · · · · · · · · · · · ·			I (E1) (ove	ept MLRA 1)	I	ry Shallow Dark Surface (TF12)		
			· 	•	•		ept MILKA 1)		• • • • • • • • • • • • • • • • • • • •		
	ogen Sulfide (A4)	C /844			ed Matrix	(FZ)		Otr	ner (Explain in Remarks)		
	eted Below Dark S			epleted M				2			
	Dark Surface (A12		·		Surface (F				tors of hydrophytic vegetation and		
-	/ Mucky Mineral (De	pleted Da	ark Surface	∍ (F7)			d hydrology must be present, unless		
Sandy	, Gleyed Matrix (S	.4)	Re	dox Depr	essions (F8	3)		aisturb	ed or problematic.		
Restrictiv	e Layer (if presen	nt):	-								
Type:											
Depth (inc	ches): <u>0</u>							Hydric	Soil Present? Yes		
Remarks:											
ricinario.											
HYDROLO	GY										
Wetland I	Hydrology Indicat	ors:	-								
Primary In	ndicators (minimu	m of one re	equired; check all	that apply	y)			Secondary	/ Indicators (two or more required)		
X Surfac	ce Water (A1)		Wa	ter-Stains	ed Leaves ((B9)		Water	Stained Leaves (B9)(MLRA 1,2,4A,4B)		
	Water Table (A2)				RA 1,2,4A,				age Patterns (B10)		
X Satura	` '		•	t Crust (B1		, and 40)			eason Water Table (C2)		
			· · · · · · · · · · · · · · · · · · ·			(D43)			• •		
	r Marks (B1)				rtebrates (ation Visible on Aerial Imagery (C9)		
	ent Deposits (B2)			-	ılfide Odor				orphic Position (D2)		
Drift D	Deposits (B3)		·		•	_	ng Roots (C3)		w Aquitard (D3)		
Algal N	Mat or Crust (B4)		Pre	sence of I	Reduced Ir	on (C4)		FAC-N	eutral Test (D5)		
Iron D	eposits (B5)		Rec	ent Iron F	Reduction	in Tilled S	oils (C6)	Raised	d Ant Mounds (D6)(LRR A)		
Surfac	ce Soil Cracks (B6)		Stu	nted or St	tressed Pla	ants (D1)(I	LRR A)	Frost-	Heave Hummocks (D7)		
Inund	ation Visible on A	erial Image	ry (B7)Oth	ner (Explai	in in Rema	ırks)					
·	ely Vegetated Con	_	- · · · · · · · · · · · · · · · · · · ·								
Field Obse											
	/ater Present? Ye	·S	Depth (in	ches): 1							
	ole Present? Ye		Depth (in								
Saturation			Depth (ir	. –							
(includes ca	apillary fringe)						Wetland Hy	drology Pres	ent? Yes		
Describe F	Recorded Data (st	ream gauge	e, monitoring well	, aerial ph	notos, prev	vious inspe	ections), if availa	able:			
Remarks:											

Applicant/Owner: <u>La Center School District</u> State: <u>WA</u> Investigator(s): <u>Kevin Grosz</u> Section, Townsl Landform (hillslope, terrace, etc.): <u>Plain</u> Local Subregion (LRR): <u>Northwest Forests & Coast (LRR A)</u>	nip, Range: <u>02/4N</u> relief (concave, cor Lat: classification:None or this time of year? ly disturbed? oroblematic?	N/1E nvex, none): No. 45.85770970 Pres (if no, exp. 10 in the locations, 10 in the location	Long: <u>-122.6</u> Dlain in Rema Are "Normal (if needed, e transects, i	rks.) Circumstances" present? <u>Yes</u> xplain any answers in Remarks.)
VECETATION Has scientific powers of plants				
VEGETATION – Use scientific names of plants. Tree Stratum (Plot size: 0) 1. 2. 3.	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant
4.				Species Across All Strata: <u>2</u> (B)
Total Cover = 0 Sapling/Shrub Stratum (Plot size: 0)				Percent of Dominant Species
1.				That Are OBL, FACW, or FAC: 100 (A/B)
2. 3. 4. 5. Total Cover = 0 Herb Stratum (Plot size: _5M_) 1. Holcus lanatus 2. Agrostis stolonifera 3. Phalaris arundinacea 4. 5. 6. 7. 8. 9. 10. 11. Total Cover = 85 Woody Vine Stratum (Plot size: _0_) 1. 2. Total Cover = 0	20 50 15	Yes Yes No	FAC FAC FACW	Prevalence Index worksheet:
% Bare Ground in Herb Stratum: <u>0</u>				Hydrophytic Vegetation Present? Yes
Remarks:		1	1	, , , , , , , , , , , , , , , , , , ,

SOIL Sampling Point: 3

	Mat	<u>rix</u>		Redox I	-eatures						
Depth	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks		
(inches)	40)/D 4/4	70	5) (D. 2./2	20							
<u>0-16</u>	<u>10YR 4/1</u>	<u>70</u>	<u>5YR 3/3</u>	<u>30</u>	<u>C</u>	<u>M</u>	<u>Clay Loam</u>				
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix											
Hydric So	Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :										
Histosol (A1)Sandy Redox (S5)2 cm Muck (A10)											
	Epipedon (A2)			ripped Ma					d Parent Material (TF2)		
Black	Histic (A3)		Lo	amy Muc	ky Minera	l (F1) (exc	ept MLRA 1)	Ve	ry Shallow Dark Surface (TF12)		
Hydro	gen Sulfide (A4)		Lo	amy Gley	ed Matrix	(F2)		Oth	ner (Explain in Remarks)		
Deple	ted Below Dark S	urface (A1	L) <u>X</u> De	epleted M	atrix (F3)						
	Dark Surface (A12		· · · · · · · · · · · · · · · · · · ·		Surface (F				tors of hydrophytic vegetation and		
-	Mucky Mineral (ark Surface				d hydrology must be present, unless		
•	Gleyed Matrix (S		Re	dox Depr	essions (F8	3)		uistui bi	ed or problematic.		
	e Layer (if preser	nt):									
Type:	ah a a\. O							Hydric Soil Present? Yes			
Depth (in	· · ·							Tiyane .	Son Fresent: <u>res</u>		
Remarks:											
HYDROLO									1		
	Hydrology Indicat Idicators (minimu		equired; check all	that apply	/)			Secondary	/ Indicators (two or more required)		
•	e Water (A1)				ed Leaves ((PO)			-Stained Leaves (B9)(MLRA 1,2,4A,4B)		
·	Vater Table (A2)				RA 1,2,4A,	•			age Patterns (B10)		
X Satura			•	t Crust (B:		aliu 46)			eason Water Table (C2)		
	· Marks (B1)				rtebrates (B13)			ation Visible on Aerial Imagery (C9)		
	ent Deposits (B2)				lfide Odor				orphic Position (D2)		
	Deposits (B3)		· · · · · · · · · · · · · · · · · · ·	-			ng Roots (C3)		w Aquitard (D3)		
	Mat or Crust (B4)				Reduced Ir		. ,		eutral Test (D5)		
Iron D	eposits (B5)		Rec	ent Iron I	Reduction	in Tilled S	oils (C6)	Raised	Ant Mounds (D6)(LRR A)		
Surfac	e Soil Cracks (B6)		Stu	nted or St	tressed Pla	nts (D1)(I	RR A)	Frost-l	Heave Hummocks (D7)		
Inund	ation Visible on A	erial Image	ry (B7)Oth	ner (Expla	in in Rema	rks)					
Sparse	ely Vegetated Cor	ncave Surfa	ce (B8)								
	ervations:										
	ater Present? No		Depth (in	•							
Saturation	ole Present? <u>Ye</u> n Present? <u>Ye</u>		Depth (in Depth (in	ches): <u>4</u> nches): <u>0</u>							
	apillary fringe)	<u>.5</u>	Deptii (ii	icrics). <u>o</u>			Wetland Hyd	drology Pres	ent? <u>Yes</u>		
Describe F	Recorded Data (st	ream gaug	e, monitoring well	, aerial pł	notos, prev	ious inspe	ections), if availa	ble:			
Remarks:											
nemarks.											

	/County: <u>La Center/</u>	<u>Clark</u>		Sampling Date: <u>11/20/2017</u>						
Applicant/Owner: La Center School District State: WA Sampling Point: 4										
Investigator(s): Kevin Grosz Section, Township, Range: 02/4N/1E										
Landform (hillslope, terrace, etc.): <u>plain</u> Local relief (concave, convex, none): <u>None</u> Slope (%): <u>3</u>										
Subregion (LRR): Northwest Forests & Coast (LRR A) Lat: 45.85990740 Long: -122.64974100 Datum: WGS84										
Soil Map Unit Name: Odne Silt Loam NWI classification: None										
Are climatic/hydrologic conditions on the site typical for this time of year? Yes(if no, explain in Remarks.)										
Are Vegetation, Soil, or Hydrology significan				Circumstances" present? Yes						
Are Vegetation, Soil, or Hydrology naturally	problematic?		(if needed, e	xplain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site map show	ving samnling noi	int locations	transects i	mnortant features, etc						
Hydrophytic Vegetation Present? Yes	wing sumpling por		transcets, n	mportune reactives, etc.						
Hydric Soil Present? Yes										
Wetland Hydrology Present? Yes		Is the S	Sampled Area	a within a Wetland? <u>No</u>						
Remarks:										
VEGETATION – Use scientific names of plants.										
	Absolute %	Dominant	Indicator	Dominance Test worksheet:						
<u>Tree Stratum</u> (Plot size: <u>0</u>)	Cover	Species?	Status	Number of Dominant Species						
1.				That Are OBL, FACW, or FAC: $\underline{2}$ (A)						
2.				Total Number of Demisers						
3. 4.				Total Number of Dominant Species Across All Strata: <u>2</u> (B)						
Total Cover =0				Species Across Air Strata.						
Sapling/Shrub Stratum (Plot size: 0)				Percent of Dominant Species						
1.				That Are OBL, FACW, or FAC: <u>100</u> (A/B)						
2.				Prevalence Index worksheet:						
3.				Total % Cover of: Multiply by:						
4.				OBL species $\underline{0}$ x 1 = $\underline{0}$						
5.				FACW species $\underline{0}$ x 2 = $\underline{00}$ FAC species $\underline{0}$ x 3 = $\underline{0}$						
Total Cover = 0				FACU species $0 \times 4 = 0$						
Herb Stratum (Plot size: <u>5M</u>)		.,	E 4 6) 4 /	$\begin{array}{cccccccccccccccccccccccccccccccccccc$						
1. Phalaris arundinacea	<u>20</u>	Yes Yes	FACW	Column Totals: $\underline{0}$ (A) $\underline{0}$ (B)						
Agrostis stolonifera Holcus lanatus	<u>50</u> <u>6</u>	<u>Yes</u> No	<u>FAC</u> <u>FAC</u>	_ `, `,						
4. Juncus effusus	10	No	FACW	Prevalence Index = $B/A = 2.65$						
5.	10	140	171011							
6.				Hydrophytic Vegetation Indicators:						
7.				1 –Rapid Test for Hydrophytic Vegetation						
8.				X 2 – Dominance Test >50%						
9.				3 - Prevalence Index is ≤ 3.01						
10.				4 - Morphological Adaptions ¹ (Provide supporting data in Remarks or on a separate sheet)						
11.				5 – Wetland Non-Vascular Plants ¹						
Total Cover = <u>86</u>				Problematic Hydrophytic Vegetation¹ (Explain)						
Woody Vine Stratum (Plot size: _0_)				¹ Indicators of hydric soil and wetland hydrology						
1.				must be present, unless disturbed or problematic.						
2.				mast se present, amess alotal sea or presidentalis						
Total Cover = <u>0</u>										
% Bare Ground in Herb Stratum: 0										
Remarks:				Hydrophytic Vegetation Present? Yes						
nemarks.										
I										

SOIL Sampling Point: 4

	Mat	<u>rix</u>		Redox F	-eatures					
Depth	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
(inches)	40)/D 4/4	00	5) (D. 2./2	20			6.11			
<u>0-16</u>	<u>10YR 4/1</u>	<u>80</u>	<u>5YR 3/3</u>	<u>20</u>	<u>C</u>	<u>M</u>	<u>Silt Loam</u>			
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.) Indicators for Problematic Hydric Soils ³ :										
Histosol (A1)Sandy Redox (S5)2 cm Muck (A10)										
	Epipedon (A2)			ripped Ma					l Parent Material (TF2)	
Black	Histic (A3)		Lo	amy Muc	ky Minera	l (F1) (exc	ept MLRA 1)	Ve	ry Shallow Dark Surface (TF12)	
Hydro	gen Sulfide (A4)		Lo	amy Gley	ed Matrix	(F2)		Oth	er (Explain in Remarks)	
Deple	ted Below Dark S	urface (A1	L) <u>X</u> De	epleted M	atrix (F3)					
Thick	Dark Surface (A12	2)	Re	dox Dark	Surface (F	6)		II .	ors of hydrophytic vegetation and	
Sandy	Mucky Mineral (S1)	De	pleted Da	ark Surface	e (F7)			d hydrology must be present, unless	
Sandy	Gleyed Matrix (S	54)	Re	dox Depr	essions (F	3)		disturb	ed or problematic.	
Restrictiv	e Layer (if preser	nt):								
Type:										
Depth (in	ches): <u>0</u>							Hydric	Soil Present? Yes	
Remarks:										
HYDROLO	GY									
	Hydrology Indicat				,					
Primary Ir	idicators (minimu	m of one r	equired; check all	that apply	/)			Secondary	nIndicators (two or more required)	
·	e Water (A1)				ed Leaves	•		Water	-Stained Leaves (B9)(MLRA 1,2,4A,4B)	
_	Vater Table (A2)		•	•	RA 1,2,4A	and 4B)			age Patterns (B10)	
X_Satura				t Crust (B					eason Water Table (C2)	
	Marks (B1)				rtebrates (ition Visible on Aerial Imagery (C9)	
	ent Deposits (B2)		· · · · · · · · · · · · · · · · · · ·	_	lfide Odor				orphic Position (D2)	
	Deposits (B3)						ng Roots (C3)		w Aquitard (D3)	
	Mat or Crust (B4)				Reduced Ir		:1 (00)		eutral Test (D5)	
	eposits (B5)				Reduction				Ant Mounds (D6)(LRR A)	
	ce Soil Cracks (B6)				tressed Pla		.RR A)	Frost-I	Heave Hummocks (D7)	
	ation Visible on A	•		ier (Expia	in in Rema	rks)				
	ely Vegetated Cor ervations:	icave Suria	ce (B8)							
	ater Present? No	,	Depth (inc	hes).						
	ole Present? Ye		Depth (in	•						
Saturation				nches): <u>0</u>						
	apillary fringe)						Wetland Hyd		ent? Yes	
Describe F	Recorded Data (st	ream gaug	e, monitoring well	, aerial ph	notos, prev	vious inspe	ections), if availa	ble:		
Remarks:										

Applicant/Owner: <u>La Center School District</u> State: <u>W/A</u> Investigator(s): <u>Kevin Grosz</u> Section, Townsl Landform (hillslope, terrace, etc.): <u>Plain</u> Local Subregion (LRR): <u>Northwest Forests & Coast (LRR A)</u>	relief (concave, cor Lat: classification: None or this time of year? ly disturbed?	/1E nvex, none): Note	Long: <u>-122.6</u> Dlain in Rema Are "Normal (if needed, e transects, i	rks.) Circumstances" present? <u>Yes</u> xplain any answers in Remarks.)		
VEGETATION – Use scientific names of plants.			_			
Tree Stratum (Plot size: 0) 1. 2. 3. 4. Total Cover =0	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 1 (B)		
				Percent of Dominant Species		
Sapling/Shrub Stratum (Plot size: 0) 1. 2. 2. 3. 4. 5. Total Cover = 0 5. No FACW 7. No FACW 7						
% Bare Ground in Herb Stratum: <u>0</u>				Hydrophytic Vegetation Present? Yes		
Remarks:	1	1	1	, ,		

SOIL Sampling Point: 5

	Mat	rix		Redox F	<u>eatures</u>						
Depth	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks		
(inches)											
0-16	10YR 3/2	<u>0</u>		<u>0</u>							
_	1Type: C-Concentration, D-Depletion, PM-Peduced Matrix, CS-Covered or Coated Sand Grains, 2Legation: PL-Pere Lining, M-Matrix										
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix											
Hydric So	Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :										
Histo:	sol (A1)		Sa	ndy Redo	x (S5)			2 cr	m Muck (A10)		
Histic	Epipedon (A2)			ipped Ma					Parent Material (TF2)		
	Histic (A3)					l (F1) (exc	ept MLRA 1)		ry Shallow Dark Surface (TF12)		
	ogen Sulfide (A4)		· · · · · · · · · · · · · · · · · · ·	-	ed Matrix		,		er (Explain in Remarks)		
	eted Below Dark S	Surface (A1		pleted M		()			er (Explain in Nemana)		
	Dark Surface (A1	•			Surface (F	6)		3Indicat	ors of hydrophytic vegetation and		
	/ Mucky Mineral (-			ark Surface	•			d hydrology must be present, unless		
	•			•					ed or problematic.		
	Gleyed Matrix (Re	аох Берг	essions (F	5)					
	e Layer (if prese	nt):									
Type:								I londata (Cail Busseut 2 No		
Depth (in	ches): <u>0</u>							Hyaric	Soil Present? <u>No</u>		
Remarks:											
HYDROLO											
	Hydrology Indica				,						
•		ım of one r	equired; check all	that apply	/)			Secondary	Indicators (two or more required)		
Surfac	ce Water (A1)		Wa	ter-Staine	ed Leaves	(B9)		Water	-Stained Leaves (B9)(MLRA 1,2,4A,4B)		
High \	Water Table (A2)		(e	cept ML	RA 1,2,4A	, and 4B)		Draina	ge Patterns (B10)		
Satura	ation (A3)		Salt	Crust (B2	L1)			Dry-Se	ason Water Table (C2)		
Wate	Marks (B1)		Aqı	atic Inve	rtebrates ((B13)		Satura	tion Visible on Aerial Imagery (C9)		
Sedim	ent Deposits (B2))	Hyd	drogen Su	lfide Odor	(C1)		Geom	orphic Position (D2)		
Drift [Deposits (B3)		Oxi	dized Rhi	zospheres	along Livi	ng Roots (C3)	Shallo	w Aquitard (D3)		
	Mat or Crust (B4)				Reduced Ir	_		FAC-N	eutral Test (D5)		
	eposits (B5)		·		Reduction		oils (C6)		Ant Mounds (D6)(LRR A)		
	ce Soil Cracks (B6)	١			tressed Pla				Heave Hummocks (D7)		
	ation Visible on A				in in Rema		-		reave trainingers (57)		
		_		ici (Expiai	iii iii iteiiid	11 K3)					
-	ely Vegetated Cor	icave Suria	се (во)								
	ervations:	•	Donth (in	·hoc\·							
	/ater Present? <u>No</u> ole Present? N		Depth (ind Depth (ind	-							
	n Present? <u>N</u>		Depth (in	•							
	apillary fringe)	<u>~</u>	2 op (Wetland Hyd	drology Pres	ent? <u>No</u>		
		ream gaug	e, monitoring well	, aerial ph	otos, prev	ious inspe	ections), if availa	able:			
Remarks:				_	_						

Applicant/Owner: <u>La Center School District</u> State: <u>WA</u> Investigator(s): <u>Kevin Grosz, Ryan Thiele</u> Landform (hillslope, terrace, etc.): <u>Plain</u> Local r Subregion (LRR): <u>Northwest Forests & Coast (LRR A)</u>	Section, Towns elief (concave, cor Lat: assification: none this time of year? disturbed? oblematic?	ship, Range:s nvex, none): <u>co</u> 45.85758670 P <u>Yes</u> (if no, exp	Long: -122.6 Long: -122.6 Dain in Rema Are "Normal (if needed, e	rks.) Circumstances" present? <u>Yes</u> xplain any answers in Remarks.)
VEGETATION – Use scientific names of plants.				
Tree Stratum (Plot size: 10m) 1. 2. 3. 4. Total Cover =0 Sapling/Shrub Stratum (Plot size: 10m) 1. 2. 3. 4. 5. Total Cover =0 Herb Stratum (Plot size: 5m) 1. Agrostis stolonifera 2. Agrostis capillaris 3. Hypochaeris radicata 4. Schedonorus arundinaceus 5. Ranunculus repens 6. 7. 8. 9. 10. 11. Total Cover =95	Absolute % Cover 45 25 15 5	Yes Yes No No	FAC FAC FAC FACU FAC FACU	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 0 x 3 = 0 FACU species 0 x 4 = 0 UPL species 0 x 5 = 0 Column Totals: 0 (A) 0 (B) Prevalence Index = B/A = 0 Hydrophytic Vegetation Indicators: 1 -Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test >50% 3 - Prevalence Index is ≤ 3.0¹ 4 - Morphological Adaptions¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size: _5m_) 1. 2. Total Cover =0 % Bare Ground in Herb Stratum: 5% Remarks: Study is regularly mowed.				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes

Matrix Redox Features										
Depth	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
(inches)										
<u>0-5</u>	<u>10YR 4/2</u>	<u>100</u>		<u>0</u>			silt loam		Oxidized rhizospheres	
<u>5-10</u>	10YR 4/2	<u>95</u>	7.5YR 3/3	<u>5</u>	<u>C</u>	<u>M</u>	clayey silt loam			
<u>10-16</u>	<u>7.5YR 4/1</u>	<u>50</u>	10YR 4/6	<u>3</u>	<u>C</u>	<u>M</u>	<u>clay loam</u>		<u>Small masses</u>	
	7.5YR 4/3	<u>40</u>								
	10YR 5/3	<u>7</u>			<u>D</u>	<u>M</u>				
¹Type: C=	Concentration, D	=Depletior	n, RM=Reduced Ma	atrix, CS=0	Covered o	Coated S	and Grains. ² Lo	cation: P	L=Pore Lining, M=Matrix	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :										
Histosol (A1)Sandy Redox (S5)								2 cm Muck (A10)		
Histic Epipedon (A2)Stripped Matrix (S6)							Red Parent Material (TF2)			
Black Histic (A3)Loamy Mucky Mineral (F1) (except MLRA 1)						ept MLRA 1)	Very Shallow Dark Surface (TF12)			
Hydrogen Sulfide (A4)Loamy Gleyed Matrix (F2)							Oth	ner (Explain in Remarks)		
Depleted Below Dark Surface (A11)										
Thick Dark Surface (A12)Redox Dark Surface (F6)							3Indica	tors of hydrophytic vegetation and		
Sandy Mucky Mineral (S1)Depleted Dark Surface (F7)						wetland hydrology must be present, unless				
Sandy	Sandy Gleyed Matrix (S4)Redox Depressions (F8)					disturbed or problematic.				
Restrictiv	e Layer (if presen	t):								
Type:										
Depth (in	ches): <u>0</u>							Hydric	Soil Present? Yes	
Remarks:	Soil layer from :	10-16 inch	es was matrix of th	ree color	s, with dis	tinct/pror	ninent redox featur	es.		
	•									
HYDROLO										
wetland I	Hydrology Indicat	ors:								

HYDROLOGY							
Wetland Hydrology Indicators:							
Primary Indicators (minimum of one required;	Secondary Indicators (two or more required)						
Surface Water (A1)	Water-Stained Leaves (B9)		Water-Stained Leaves (B9)(MLRA 1,2,4A,4B)				
High Water Table (A2)	(except MLRA 1,2,4A, and 4B)		Drainage Patterns (B10)				
Saturation (A3)	Salt Crust (B11)		Dry-Season Water Table (C2)				
Water Marks (B1)	Aquatic Invertebrates (B13)		X Saturation Visible on Aerial Imagery (C9)				
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)		X Geomorphic Position (D2)				
Drift Deposits (B3)	X Oxidized Rhizospheres along Living	g Roots (C3)	Shallow Aquitard (D3)				
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)		FAC-Neutral Test (D5)				
Iron Deposits (B5)	ls (C6)	Raised Ant Mounds (D6)(LRR A)					
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1)(LR	R A)	Frost-Heave Hummocks (D7)				
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)						
Sparsely Vegetated Concave Surface (B8)							
Field Observations:							
Surface Water Present? No	Depth (inches): 0						
Water Table Present? <u>No</u>	Depth (inches): <u>0</u>						
Saturation Present? <u>No</u>	Depth (inches): <u>0</u>						
(includes capillary fringe)		Wetland Hyd	rology Present? Yes				
Describe Recorded Data (stream gauge, monit	oring well, aerial photos, previous inspec	tions), if availa	ble:				
Remarks: Field study was conducted at the b	peginning of the wet season, in a year of b	elow-average	rainfall.				

Applicant/Owner: La Center School District Investigator(s): Kevin Grosz, Ryan Thiele Landform (hillslope, terrace, etc.): plain Subregion (LRR): Northwest Forests & Coast (LRR A) Soil Map Unit Name: Gee Silt Loam (GeB) Are climatic/hydrologic conditions on the site typical for Are Vegetation, Soil, or Hydrology significantly Are Vegetation, Soil, or Hydrology naturally pro SUMMARY OF FINDINGS — Attach site map showin Hydrophytic Vegetation Present? No Hydric Soil Present? No	ssification: none this time of year? disturbed? oblematic?	ship, Range: <u>S</u> nvex, none): <u>not 45.85758670</u> Yes (if no, exp	one Slo Long: <u>-122.6</u> Dain in Rema Are "Normal (if needed, e	rks.) Circumstances" present? <u>Yes</u> xplain any answers in Remarks.)	:: <u>12/06/2018</u> ppling Point: <u>7</u>
Wetland Hydrology Present? <u>No</u> Remarks: Study area is regularly mowed.		is the	Jampieu Area	a within a vvetiditu: <u>IVO</u>	
VEGETATION – Use scientific names of plants.					
	Absolute %	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 10m) 1.	Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)
2.				macrace obe, mew, or me.	± (/)
3.				Total Number of Dominant	0 (5)
4. Total Cover =0				Species Across All Strata:	<u>2</u> (B)
Sapling/Shrub Stratum (Plot size: 10m)				Percent of Dominant Species	
1.				That Are OBL, FACW, or FAC:	<u>50</u> (A/B)
2.				Prevalence Index worksheet:	
3.					
4. 5.				FACW species $\underline{0}$ \times 2 =	<u>0</u> <u>0</u>
Total Cover = <u>0</u>				FAC species $\underline{0}$ x 3 =	<u>0</u>
Herb Stratum (Plot size: 5m)				FACU species $\underline{0}$ x 4 =	<u>0</u>
1. Hypochaeris radicata	<u>35</u>	<u>Yes</u>	<u>FACU</u>	UPL species $\underline{0}$ x 5 = Column Totals: $\underline{0}$ (A)	<u>0</u> <u>0</u> (B)
Agrostis capillaris Agrostis stolonifera	<u>25</u> <u>15</u>	<u>Yes</u> <u>No</u>	<u>FAC</u> FAC	<u>o</u> (/ /,	<u>o</u> (5)
4. Holcus lanatus	<u>10</u>	<u>No</u>	FAC	Prevalence Index = $B/A = 0$	
5. Schedonorus arundinaceus	<u>5</u>	<u>No</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:	
6. Ranunculus repens 7.	<u>2</u>	<u>No</u>	<u>FAC</u>	1 –Rapid Test for Hydrophytic Ve	egetation
8.				2 – Dominance Test >50%	
9.				3 – Prevalence Index is ≤ 3.0¹	
10.				4 – Morphological Adaptions ¹ (P data in Remarks or on a separate sheet)	rovide supporting
11. Total Cover = <u>92</u>				5 – Wetland Non-Vascular Plants	
Total Cover – <u>32</u>				Problematic Hydrophytic Vegeta	ition¹ (Explain)
Woody Vine Stratum (Plot size: _5m_)				Indicators of hydric soil and wetland	l hydrology
1.				must be present, unless disturbed or	
2.					
Total Cover = <u>0</u>					
% Bare Ground in Herb Stratum: <u>8%</u>				Hydrophytic Vegetation Present? No	<u>0</u>
Remarks: Study is regularly mowed.					

SOIL Sampling Point: 7

	<u>Mat</u>	<u>rix</u>		<u>Redox F</u>	<u>-eatures</u>				
Depth	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks
(inches)									
<u>0-8</u>	10YR 4/2	<u>100</u>		<u>0</u>			clayey silt loam		
<u>8-11</u>	<u>7.5YR 4/2</u>	<u>85</u>	7.5YR 3/3	<u>15</u>	<u>C</u>	<u>M</u>	clayey silt loam		<u>redox features - Faint</u>
<u>11-16</u>	<u>7.5YR 4/1</u>	<u>95</u>	<u>7.5YR 4/6</u>	<u>5</u>	<u>C</u>	<u>M</u>	clayey silt loam		
¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :									
	sol (A1)	piicabic to							•
	• •			ndy Redo					m Muck (A10)
	Epipedon (A2)			ipped Ma		(=4) (d Parent Material (TF2)
	Histic (A3)			•	•		ept MLRA 1)		ry Shallow Dark Surface (TF12)
	gen Sulfide (A4)			-	ed Matrix	(F2)		Oth	ner (Explain in Remarks)
	ted Below Dark S	•	1)De	pleted M	atrix (F3)				
Thick	Dark Surface (A12	2)	Re	dox Dark	Surface (F	6)			tors of hydrophytic vegetation and
Sandy	Mucky Mineral (S1)	De	pleted Da	ark Surface	(F7)			d hydrology must be present, unless
Sandy	Gleyed Matrix (S	64)	Re	dox Depr	essions (F8	3)		disturb	ed or problematic.
Restrictiv	e Layer (if preser	nt):							
Type:	,	•							
Depth (inc	ches): 0							Hydric	Soil Present? No
		:		h	.	- +la: / -/	: \i+le "fe:+"		alify as Depleted Matrix (F3). Soil value is
	>30iis froiii 6-16			, nowever	i layer is to)O (11111 (<4	iii.) Witii Taiiit Te	euox to qu	ally as Depleted Matrix (FS). Soil value is
too mgm (>5) to quality as t	Jaik Suitaci	e (A11, A12, 10).						
HYDROLO	_								
	Hydrology Indicat				۸			C	. In direct one (to use on means are suited)
		im of one r	equired; check all				ľ		y Indicators (two or more required)
	e Water (A1)		·		ed Leaves (r-Stained Leaves (B9)(MLRA 1,2,4A,4B)
High V	Vater Table (A2)		(e	xcept ML	RA 1,2,4A,	and 4B)		Draina	age Patterns (B10)
Satura	ition (A3)		Salt	: Crust (B	11)			Dry-Se	eason Water Table (C2)
Water	Marks (B1)		Aqı	uatic Inve	rtebrates (B13)		Satura	ation Visible on Aerial Imagery (C9)
Sedim	ent Deposits (B2))	Нус	drogen Su	lfide Odor	(C1)		Geom	orphic Position (D2)
Drift D	Deposits (B3)		Oxi	dized Rhi:	zospheres	along Livi	ng Roots (C3)	Shallo	w Aquitard (D3)
Algal N	Mat or Crust (B4)		Pre	sence of I	Reduced Ir	on (C4)		FAC-N	leutral Test (D5)
	eposits (B5)				Reduction		oils (C6)		d Ant Mounds (D6)(LRR A)
	e Soil Cracks (B6)				tressed Pla				Heave Hummocks (D7)
	ation Visible on A				in in Rema		.iii A)	11030	ricave riammocks (D7)
		_	· · · · —	iei (Expiai	III III NEIIIa	11.5)			
	ely Vegetated Cor	icave Suria	се (во)						
Field Obse		_	Donth /in	has\. 0					
	ater Present? <u>No</u> ble Present? <u>No</u>		Depth (ind Depth (ind						
	ole Present? <u>No</u> n Present?	_	Depth (in						
	pillary fringe)	2	Deptii (iii	crics). <u>o</u>			Wetland Hydr	ology Pres	ent? No
		ream gaug	e, monitoring well	, aerial ph	notos, prev	rious inspe			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks:	Field study was	conducted	at the beginning o	of the wet	t season, ir	n a year of	below-average ra	infall.	

Applicant/Owner: La Center School District Investigator(s): Kevin Grosz, Ryan Thiele Landform (hillslope, terrace, etc.): plain Subregion (LRR): Northwest Forests & Coast (LRR A) Soil Map Unit Name: Odne Silt Loam (OdB) Are climatic/hydrologic conditions on the site typical for Are Vegetation, Soil, or Hydrology significantly Are Vegetation, Soil, or Hydrology naturally pro SUMMARY OF FINDINGS — Attach site map showin Hydrophytic Vegetation Present? Yes	ssification: none this time of year? disturbed? oblematic?	ship, Range: <u>S</u> invex, none): <u>c</u> 45.85758670 ² <u>Yes</u> (if no, ex	oncave Slo Long: <u>-122.6</u> blain in Rema Are "Normal (if needed, e	ope (%): <u>2</u> 05018650 Datum: <u>WGS84</u> rks.) I Circumstances" present? <u>Yes</u> explain any answers in Remarks.)	: <u>12/06/2018</u> pling Point: <u>8</u>
Hydric Soil Present? Yes Wetland Hydrology Present? Yes		Is the	Sampled Area	a within a Wetland? Yes	
Remarks: Study area is regularly mowed.					
VEGETATION – Use scientific names of plants.					
	Absolute %	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 10m)	Cover	Species?	Status	Number of Dominant Species	2 (4)
1. 2.				That Are OBL, FACW, or FAC:	<u>2</u> (A)
3.				Total Number of Dominant	
4.				Species Across All Strata:	<u>2</u> (B)
Total Cover = <u>0</u>					
Sapling/Shrub Stratum (Plot size: 10m)				Percent of Dominant Species	100 (A/D)
1.				That Are OBL, FACW, or FAC:	<u>100</u> (A/B)
2.				Prevalence Index worksheet: Total % Cover of: Multiply by	v.
3. 4.				OBL species $\underline{0}$ x 1 =	<u>0</u>
5.				FACW species $0 \times 2 =$	<u>0</u>
Total Cover = <u>0</u>				FAC species $\underline{0}$ x 3 =	<u>0</u>
Herb Stratum (Plot size: _5m_)				FACU species $\underline{0}$ x 4 =	<u>0</u>
1. Agrostis stolonifera	<u>40</u>	<u>Yes</u>	FAC	UPL species $\underline{0}$ x 5 = Column Totals: $\underline{0}$ (A)	<u>0</u> <u>0</u> (B)
Schedonorus arundinaceus Holcus lanatus	30 10	<u>Yes</u> <u>No</u>	<u>FAC</u> FAC	<u> </u>	<u>s</u> (5)
4. Ranunculus repens	10 10	No No	FAC	Prevalence Index = $B/A = 0$	
5. <u>Hypochaeris radicata</u>	<u>5</u>	No	FACU	Hadarahadi Wasabaha Indiadaa	
6.				Hydrophytic Vegetation Indicators: 1 –Rapid Test for Hydrophytic Ve	egetation
7.				$\frac{1}{X}$ 2 – Dominance Test >50%	getation
8. 9.				3 - Prevalence Index is ≤ 3.0 ¹	
10.				4 - Morphological Adaptions¹ (Pr	ovide supporting
11.				data in Remarks or on a separate sheet) 5 – Wetland Non-Vascular Plants	-1
Total Cover = <u>95</u>				Problematic Hydrophytic Vegeta	
					(
Woody Vine Stratum (Plot size: <u>5m</u>)				¹ Indicators of hydric soil and wetland	
1.				must be present, unless disturbed or	problematic.
2. Total Cover =0					
Total cover – <u>o</u>					
% Bare Ground in Herb Stratum: <u>5%</u>				Hydrophytic Vegetation Present? Ye	<u>S</u>
Remarks: Study is regularly mowed.					

SOIL Sampling Point: 8

	. <u>Mat</u>	rix	•	Redox I	eatures					
Depth	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
(inches)										
<u>0-6</u>	7.5YR 4/2	<u>100</u>		<u>0</u>			<u>silt loam</u>		Oxidized rhizospheres	
<u>6-9</u>	7.5YR 4/2	<u>95</u>	7.5YR 3/2	<u>5</u>	<u>C</u>	<u>M</u>	clayey silt loam			
<u>9-16</u>	7.5YR 4/2	<u>88</u>	7.5YR 3/3	<u>10</u>	<u>C</u>	<u>M</u>	clayey silt loam			
			<u>7.5YR 4/6</u>	<u>2</u>	<u>C</u>	<u>M</u>	clayey silt loam		<u>Small masses</u>	
17										
Type: C=	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.) Indicators for Problematic Hydric Soils ³ :									rs for Problematic Hydric Soils ³ :	
Histos	sol (A1)		Sa	ndy Redo	x (S5)			2 c	m Muck (A10)	
Histic	Epipedon (A2)		St	ripped Ma	atrix (S6)			Red	d Parent Material (TF2)	
Black	Histic (A3)		Lo	amy Muc	ky Minera	l (F1) (exc	ept MLRA 1)	Ve	ry Shallow Dark Surface (TF12)	
Hydro	ogen Sulfide (A4)		Lo	amy Gley	ed Matrix	(F2)		Oth	ner (Explain in Remarks)	
Deple	eted Below Dark S	urface (A1	1) <u>X</u> De	epleted M	atrix (F3)					
Thick	Dark Surface (A12	2)			Surface (F	-			tors of hydrophytic vegetation and	
-	/ Mucky Mineral (· · · · · · · · · · · · · · · · · · ·	•	ark Surface				d hydrology must be present, unless	
Sandy	, Gleyed Matrix (S	4)	Re	dox Depr	essions (F8	3)		disturb	ed or problematic.	
	e Layer (if preser	ıt):								
Type:										
Depth (in	ches): <u>0</u>							Hydric	Soil Present? Yes	
Remarks:	Remarks: Soil layer from 9-16 inches had redox features with two colors.									
HYDROLO	HYDROLOGY									
	Hydrology Indicat									
Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (two or more required)										
Surfac	ce Water (A1)		Wa	ter-Staine	ed Leaves ((B9)		Water	r-Stained Leaves (B9)(MLRA 1,2,4A,4B)	
High \	Water Table (A2)		(е	xcept ML	RA 1,2,4A,	and 4B)		Draina	age Patterns (B10)	
Satura	ation (A3)		Sal	t Crust (B:	11)			Dry-Se	eason Water Table (C2)	
Water	r Marks (B1)		Aqı	uatic Inve	rtebrates (B13)		X Satura	ation Visible on Aerial Imagery (C9)	
Sedim	ent Deposits (B2)		Нус	drogen Su	lfide Odor	(C1)		X Geom	orphic Position (D2)	
Drift [Deposits (B3)		<u>X</u> Ox	dized Rhi	zospheres	along Livi	ng Roots (C3)	Shallo	w Aquitard (D3)	
Algal I	Mat or Crust (B4)		Pre	sence of	Reduced Ir	on (C4)		FAC-N	leutral Test (D5)	
Iron D	eposits (B5)		Rec	ent Iron I	Reduction	in Tilled S	oils (C6)	Raised	d Ant Mounds (D6)(LRR A)	
Surfac	ce Soil Cracks (B6)		Stu	nted or St	tressed Pla	nts (D1)(L	.RR A)	Frost-	Heave Hummocks (D7)	
Inund	ation Visible on A	erial Image	ery (B7)Oth	ner (Expla	in in Rema	rks)				
Sparse	ely Vegetated Cor	icave Surfa	ce (B8)							
	ervations:									
	/ater Present? No	_	Depth (inc							
	ble Present? <u>No</u> n Present? No	 '	Depth (in							
	n Present? <u>No</u> apillary fringe)	<u>)</u>	Depth (in	cries). <u>u</u>			Wetland Hydi	ology Pres	ent? Yes	
		ream gaug	e, monitoring well	, aerial pł	notos, prev	ious inspe	ections), if availab	ole:		
Remarks: Field study was conducted at the beginning of the wet season, in a year of below-average rainfall.										

Applicant/Owner: La Center School District Investigator(s): Kevin Grosz, Ryan Thiele Landform (hillslope, terrace, etc.): plain Subregion (LRR): Northwest Forests & Coast (LRR A) Soil Map Unit Name: Odne Silt Loam (OdB) Are climatic/hydrologic conditions on the site typical fo Are Vegetation, Soil, or Hydrology significant! Are Vegetation, Soil, or Hydrology naturally p SUMMARY OF FINDINGS — Attach site map show Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	Section, Towns relief (concave, cor Lat: lassification: none r this time of year? y disturbed? roblematic?	ship, Range: <u>So</u> nvex, none): <u>n</u> . 45.85758670 P Yes (if no, exp	one Slo Long: <u>-122.6</u> Dlain in Rema Are "Normal (if needed, e	rks.) Circumstances" present? <u>Yes</u> xplain any answers in Remarks.)
Remarks: Study area is regularly mowed. VEGETATION — Use scientific names of plants				
Tree Stratum (Plot size: 10m) 1. 2. 3. 4. Total Cover = 0 Sapling/Shrub Stratum (Plot size: 10m) 1. 2. 3. 4. Total Cover = 0 Herb Stratum (Plot size: 5m) 1. Hypochaeris radicata 2. Holcus lanatus 3. Agrostis stolonifera	Absolute % Cover 35 25 20	Pominant Species? Yes Yes Yes Yes	Indicator Status FACU FAC FAC	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: 66.7 (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FAC species 0 x 4 = 0 UPL species 0 x 5 = 0 Column Totals: 0 (A) Prevalence Index = B/A = 0
4. Leucanthemum vulgare 5. Schedonorus arundinaceus 6. 7. 8. 9. 10. 11. Total Cover = 95	<u>10</u> <u>5</u>	No No	FACU FAC	Hydrophytic Vegetation Indicators: 1 — Rapid Test for Hydrophytic Vegetation X2 — Dominance Test >50% 3 — Prevalence Index is ≤ 3.0¹ 4 — Morphological Adaptions¹ (Provide supporting data in Remarks or on a separate sheet) 5 — Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. Total Cover = 0 % Bare Ground in Herb Stratum: 5% Remarks: Study is regularly mowed.				Hydrophytic Vegetation Present? No

SOIL Sampling Point: 9

	Mat	<u>rix</u>		Redox F	<u>eatures</u>				
Depth	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks
(inches) 0-10	7.5YR 4/2	100		0			silt loam		
<u>0 10</u> 10-13	7.5YR 4/2 7.5YR 4/2	90	7.5YR 3/3	<u>0</u> 10	C	<u>M</u>	clayey silt loam		redox features - faint
13-16	7.5YR 4/2	<u>70</u>	7.5YR 4/6	10 10	<u>C</u> C	<u>M</u>	clayey silt loam		redox reacures - raint
15-10	7.5YR 5/1	<u>70</u> 20	7.51K 4/0	10	<u>D</u>	<u>M</u>	clayey silt loam		
	7.51K 5/1	<u>20</u>			<u> </u>	<u>IVI</u>	<u>ciayey siit ioaiii</u>		
¹Type: C=	Concentration, D	=Depletior	ı, RM=Reduced Ma	atrix, CS=0	Covered or	Coated S	and Grains. ² L	ocation: P	L=Pore Lining, M=Matrix
Hydric So	il Indicators: (Ap _l	olicable to	all LRRs, unless ot	herwise r	noted.)			Indicato	rs for Problematic Hydric Soils ³ :
Histos	sol (A1)		Sa	ndy Redo	x (S5)			2 cı	m Muck (A10)
Histic	Epipedon (A2)		Str	ipped Ma	itrix (S6)			Rec	d Parent Material (TF2)
	Histic (A3)					(F1) (exc	ept MLRA 1)	Ve	ry Shallow Dark Surface (TF12)
Hydro	gen Sulfide (A4)		·	-	ed Matrix				ner (Explain in Remarks)
Deple	ted Below Dark S	urface (A1	1)De	pleted M	atrix (F3)				
Thick	Dark Surface (A12	2)	Re	dox Dark	Surface (F	6)		3Indicat	tors of hydrophytic vegetation and
Sandy	Mucky Mineral (S1)	De	pleted Da	rk Surface	(F7)			d hydrology must be present, unless
Sandy	Gleyed Matrix (S	4)	Re	dox Depr	essions (F8	3)		disturb	ed or problematic.
Restrictive Layer (if present):									
Type:									
Depth (inches): <u>0</u> Hydric Soil Present? <u>No</u>									Soil Present? <u>No</u>
Remarks: Soils from 10-13 inches shows redox features, however layer is too thin (<4in.) with "faint" redox to qualify as Depleted Matrix (F3). Soil value									
is too high (>3) to qualify as dark surface (A11, A12, F6).									
HYDROLO	ιGΥ								
Wetland I	Hydrology Indicat	ors:							
Primary In	ndicators (minimu	m of one r	equired; check all	hat apply	')			Secondary	/ Indicators (two or more required)
Surfac	e Water (A1)		Wa	ter-Staine	d Leaves (B9)		Water	-Stained Leaves (B9)(MLRA 1,2,4A,4B)
High V	Vater Table (A2)		(e:	cept ML	RA 1,2,4A,	and 4B)		Draina	age Patterns (B10)
Satura	ation (A3)		Salt	Crust (B1	L1)			Dry-Se	eason Water Table (C2)
Water	Marks (B1)		Aqı	iatic Invei	rtebrates (B13)		Satura	ation Visible on Aerial Imagery (C9)
Sedim	ent Deposits (B2)		Нус	Irogen Su	lfide Odor	(C1)		Geom	orphic Position (D2)
Drift D	Deposits (B3)		Oxi	dized Rhiz	ospheres	along Livi	ng Roots (C3)	Shallo	w Aquitard (D3)
Algal I	Mat or Crust (B4)		Pre	sence of I	Reduced Ir	on (C4)		FAC-N	eutral Test (D5)
Iron D	eposits (B5)		Rec	ent Iron F	Reduction	in Tilled S	oils (C6)	Raised	d Ant Mounds (D6)(LRR A)
Surfac	e Soil Cracks (B6)		Stu	nted or St	ressed Pla	nts (D1)(L	RR A)	Frost-	Heave Hummocks (D7)
Inund	ation Visible on A	erial Image	ery (B7)Oth	er (Explai	n in Rema	rks)			
Sparse	ely Vegetated Cor	icave Surfa	ce (B8)						
Field Obse									
	ater Present? No	_	Depth (inc	. –					
	ole Present? <u>No</u> No Present? No	='	Depth (in						
	Saturation Present? No Depth (inches): 0 Wetland Hydrology Present? No								
		ream gaug	e, monitoring well	, aerial ph	otos, prev	ious inspe	ections), if availabl	le:	
Remarks: Field study was conducted at the beginning of the wet season, in a year of below-average rainfall.									
Remarks:	Field study was	conducted	at the beginning of	of the wet	season, ir	n a year of	below-average ra	infall.	

Applicant/Owner: <u>La Center School District</u> State: <u>WA</u> Investigator(s): <u>Kevin Grosz, Ryan Thiele</u> Landform (hillslope, terrace, etc.): <u>plain</u> Local re Subregion (LRR): <u>Northwest Forests & Coast (LRR A)</u>	assification: <u>none</u> this time of year? disturbed? oblematic?	ship, Range: <u>_\$</u> nvex, none): <u>c</u> 45.85758670 ^o <u>Yes</u> (if no, ex	oncave Slo Long: <u>-122.6</u> Dlain in Rema Are "Normal (if needed, e	ope (%): <u>0-3%</u> <u>05018650</u> Datum: <u>WGS84</u> rks.) Circumstances" present? <u>Yes</u> xplain any answers in Remarks.)					
Hydric Soil Present? Yes									
Wetland Hydrology Present? Yes		Is the	Sampled Area	a within a Wetland? Yes					
Remarks: Study area is regularly mowed.									
VEGETATION – Use scientific names of plants.									
Tree Stratum (Plot size: 10m) 1. 2. 3. 4. Total Cover =0	Absolute % Cover	Dominant Species?	Indicator Status	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					
Sapling/Shrub Stratum (Plot size: 10m) 1. 2. 3. 4. 5. Total Cover = 0 Herb Stratum (Plot size: 5m) 1. Lolium perenne 2. Agrostis stolonifera 3. Hypochaeris radicata	30 20 20	Yes Yes Yes	FAC FAC FACU	That Are OBL, FACW, or FAC: $\underline{66.7}$ (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species $\underline{0}$ x 1 = $\underline{0}$ FACW species $\underline{0}$ x 2 = $\underline{0}$ FAC species $\underline{0}$ x 4 = $\underline{0}$ UPL species $\underline{0}$ x x x = $\underline{0}$ Column Totals: $\underline{0}$ (A) Prevalence Index = B/A = $\underline{0}$					
 4. <u>Juncus effusus</u> 5. <u>Schedonorus arundinaceus</u> 6. <u>Holcus lanatus</u> 7. 8. 9. 10. 11. Total Cover = 95 	15 10 5	<u>No</u> <u>No</u> <u>No</u>	FACW FAC FAC	Hydrophytic Vegetation Indicators: 1 –Rapid Test for Hydrophytic Vegetation X 2 – Dominance Test >50% 3 - Prevalence Index is ≤ 3.0¹ 4 - Morphological Adaptions¹ (Provide supporting data in Remarks or on a separate sheet) 5 – Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain)					
Woody Vine Stratum (Plot size: _5m_) 1. 2. Total Cover =0				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
% Bare Ground in Herb Stratum: <u>5%</u>				Hydrophytic Vegetation Present? Yes					
Remarks: Study is regularly mowed.									

Tomic Des	scription: (Describ Matr	-	in needed to di		eatures	tor or con	iiiii tiie absence	of indicators.
Depth	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
(inches)								
<u>0-4</u>	<u>10YR 4/2</u>	<u>100</u>		<u>0</u>			silt loam	
<u>4-12</u>	<u>10YR 4/1</u>	<u>90</u>	7.5YR 3/3	<u>10</u>	<u>C</u>	<u>M</u>	clayey silt Loam	ı.
<u>12-16</u>	<u>10YR 5/1</u>	<u>80</u>	7.5YR 4/4	<u>20</u>	<u>C</u>	<u>M</u>	clayey silt loam	
¹Type: C=	Concentration, D	=Depletion, F	RM=Reduced Ma	atrix, CS=	Covered o	r Coated S	and Grains. 2	Location: PL=Pore Lining, M=Matrix
Hydric So	il Indicators: (App	licable to all	LRRs, unless ot	herwise	noted.)			Indicators for Problematic Hydric Soils ³ :
·	sol (A1)			ndy Redo				2 cm Muck (A10)
	Epipedon (A2)			ripped Ma				Red Parent Material (TF2)
	Histic (A3)			-	ky Minera ed Matrix		ept MLRA 1)	Very Shallow Dark Surface (TF12)
	gen Sulfide (A4)		Other (Explain in Remarks)					
	ted Below Dark Su							
	Dark Surface (A12	•	³ Indicators of hydrophytic vegetation and					
	Mucky Mineral (S		wetland hydrology must be present, unless					
Sandy	Gleyed Matrix (S	4)	Re	dox Depr	essions (F8	3)		disturbed or problematic.
	e Layer (if presen	t):						
Type:								Hadda Call Burnant 2 Van
Depth (in	ches): <u>0</u>							Hydric Soil Present? Yes
Remarks:	Soil layer from 4	I-12 inches h	ad "distinct" red	dox featui	es.			
IYDROLO	GY							
	lydrology Indicat							
Primary In	dicators (minimui	m of one req	uired; check all	that apply	/)			Secondary Indicators (two or more required)
Surfac	e Water (A1)		Wa	ter-Staine	ed Leaves	(B9)		Water-Stained Leaves (B9)(MLRA 1,2,4A,4B)
High V	Vater Table (A2)		(e:	xcept ML	RA 1,2,4A,	and 4B)		Drainage Patterns (B10)
Satura	tion (A3)		Salt	t Crust (B	11)			Dry-Season Water Table (C2)
Water	Marks (B1)		Aqı	uatic Inve	rtebrates (B13)		X Saturation Visible on Aerial Imagery (C9)
Sedim	ent Deposits (B2)		Нус	drogen Su	lfide Odor	(C1)		X Geomorphic Position (D2)
Drift D	eposits (B3)		<u>X</u> Oxi	dized Rhi	zospheres	along Livi	ng Roots (C3)	Shallow Aquitard (D3)
Algal N	Mat or Crust (B4)		Pre	sence of	Reduced Ir	on (C4)		FAC-Neutral Test (D5)
Iron D	eposits (B5)		Rec	ent Iron I	Reduction	Raised Ant Mounds (D6)(LRR A)		
Surfac	e Soil Cracks (B6)		Stu	nted or S	tressed Pla	nts (D1)(I	RR A)	Frost-Heave Hummocks (D7)
Inunda	ation Visible on Ae	erial Imagery	(B7)Oth	ner (Expla	in in Rema	rks)		
Sparse	ly Vegetated Con	cave Surface	(B8)					
Field Obse	ervations:						'	

Surface Water Present? No

Water Table Present? No Saturation Present?

(includes capillary fringe)

No

Depth (inches): 0

Depth (inches): 0

Depth (inches): 0

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

Remarks: Field study was conducted at the beginning of the wet season, in a year of below-average rainfall.

Wetland Hydrology Present? Yes

WEILAND DEILANNIANO	N DAIA I ONN	Westernia	ountains, v	uncys, and coast region						
Project/Site: NE Lockwood Creek Road City/Co	ounty: <u>La Center/</u>	<u>Clark</u>		Sampling Date: <u>12/07/2018</u>						
Applicant/Owner: <u>La Center School District</u> State: <u>WA</u>				Sampling Point: <u>11</u>						
Investigator(s): Kevin Grosz, Ryan Thiele	Section, Towns	ship, Range: <u>S</u>	02, T4N, R1E							
Landform (hillslope, terrace, etc.): plain Local re	elief (concave, cor	nvex, none): <u>no</u>	one Slo	pe (%): <u>0-3%</u>						
Subregion (LRR): Northwest Forests & Coast (LRR A)	Lat:	45.85758670	Long: <u>-122.6</u>	5018650 Datum: WGS84						
Soil Map Unit Name: Odne Silt Loam (OdB) NWI classification: none										
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 Vegetation, Soil, or Hydrology naturally pro	oblematic?		(if needed, ex	xplain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site map showing	ng sampling poi	nt locations,	transects, ir	nportant features, etc.						
Hydrophytic Vegetation Present? Yes										
Hydric Soil Present? <u>No</u>	Hydric Soil Present? No Is the Sampled Area within a Wetland? No									
Wetland Hydrology Present? <u>No</u>		is the S	ampied Area	within a wetland? NO						
Remarks: Study area is regularly mowed.										
VEGETATION – Use scientific names of plants.										
Use Scientific Harries of plants.	Absolute %	Dominant	Indicator	Dominance Test worksheet:						
<u>Tree Stratum</u> (Plot size: <u>10m</u>)	Cover	Species?	Status	Number of Dominant Species						
1.				That Are OBL, FACW, or FAC: <u>1</u> (A)						
2.										
3.				Total Number of Dominant						
4. Total Cover =0				Species Across All Strata: $\underline{1}$ (B)						
				Percent of Dominant Species						
Sapling/Shrub Stratum (Plot size: 10m)				That Are OBL, FACW, or FAC: 100 (A/B)						
1. 2.				Prevalence Index worksheet:						
3.				Total % Cover of: Multiply by:						
4.				OBL species $\underline{0}$ x 1 = $\underline{0}$						
5.				FACW species $\underline{0}$ x 2 = $\underline{0}$						
Total Cover = <u>0</u>				FAC species $\underline{0}$ \times 3 = $\underline{0}$ FACU species 0 \times 4 = 0						
Herb Stratum (Plot size: 5m)				FACU species $\underline{0}$ x 4 = $\underline{0}$ UPL species $\underline{0}$ x 5 = $\underline{0}$						
Agrostis stolonifera Agrostis radianta	<u>60</u>	<u>Yes</u>	FAC	Column Totals: $\underline{0}$ (A) $\underline{0}$ (B)						
Hypochaeris radicata Holcus lanatus	<u>10</u> <u>10</u>	<u>No</u> <u>No</u>	<u>FACU</u> <u>FAC</u>							
4. Schedonorus arundinaceus		No	FAC	Prevalence Index = $B/A = 0$						
5. Jacobaea vulgaris	<u>5</u> 5	<u>No</u>	<u>FACU</u>	Hadaada da Vandada u tadaataa						
6.				Hydrophytic Vegetation Indicators: 1 -Rapid Test for Hydrophytic Vegetation						
7.				$\frac{X}{X}$ 2 – Dominance Test >50%						
8. 9.				$\frac{1}{n/a}$ 3 – Prevalence Index is ≤ 3.0 ¹						
9. Total Cover = <u>90</u>				4 – Morphological Adaptions ¹ (Provide supporting						
10tal 60vel <u>50</u>				data in Remarks or on a separate sheet)						
				5 – Wetland Non-Vascular Plants ¹ Problematic Hydrophytic Vegetation ¹ (Explain)						
				Problematic Hydrophytic Vegetation (Explain)						
Woody Vine Stratum (Plot size: _5m_)				¹ Indicators of hydric soil and wetland hydrology						
1.				must be present, unless disturbed or problematic.						
2.										
Total Cover = <u>0</u>										
9/ Para Ground in Harb Stratum: 109/										
% Bare Ground in Herb Stratum: 10%				Hydrophytic Vegetation Present? <u>Yes</u>						
Remarks: Study is regularly mowed.										

SOIL Sampling Point: 11

	Mat	rix	•	Redox F	eatures					
Depth	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
(inches)	, ,		, ,		,,					
<u>0-11</u>	10YR 4/2	100		<u>0</u>			silt loam			
11-13	10YR 4/1	98	7.5YR 5/6	<u>2</u>	<u>C</u>	<u>M</u>	clayey silt loam			
13-16	10YR 5/1	<u>35</u> <u>85</u>	7.5YR 5/8	<u>=</u> <u>15</u>	<u>c</u>	<u>м</u>	clayey silt loam		small masses	
13-10	101K 3/1	83	7.51K 3/8	13	<u>C</u>	<u>IVI</u>	ciayey siit ioaiii		Siliali illasses	
¹Type: C=	Concentration, D	=Depletior	, RM=Reduced Ma	atrix, CS=0	Covered or	Coated S	and Grains. ² L	ocation: P	L=Pore Lining, M=Matrix	
Hydric So	il Indicators: (App	olicable to	all LRRs, unless ot	nerwise r	ioted.)			Indicato	rs for Problematic Hydric Soils ³ :	
Histos	sol (A1)		Sa	ndy Redo	x (S5)			2 cı	m Muck (A10)	
Histic	Epipedon (A2)		Str	ipped Ma	itrix (S6)			Rec	d Parent Material (TF2)	
Black	Histic (A3)		Lo	amy Muc	ky Mineral	(F1) (exc	ept MLRA 1)	Ve	ry Shallow Dark Surface (TF12)	
Hydro	gen Sulfide (A4)		Lo	amy Gley	ed Matrix	(F2)		Oth	ner (Explain in Remarks)	
	ted Below Dark S	urface (A1:		pleted M		` ,			,	
	Dark Surface (A12				Surface (F	6)		3Indicat	tors of hydrophytic vegetation and	
	Mucky Mineral (·		rk Surface				d hydrology must be present, unless	
-					essions (F8				ed or problematic.	
	Gleyed Matrix (S	•	ĸe	dox Depri	25510115 (F	>)				
	e Layer (if presen	it):								
Type:										
Depth (inches): <u>0</u>								Hydric	Soil Present? <u>No</u>	
Remarks:	Remarks: Soils from 11-13 inches shows redox features, however layer is too thin (<4in.) and too low (>10in.) to qualify as Depleted Matrix (F3). Soils									
			k surface (A11, A1		,	•	,	` ,	, , , , , , , , , , , , , , , , , , , ,	
	0 () 1	,	,	, ,						
HYDROLO	GY									
Wetland H	Hydrology Indicat	ors:								
Primary In	dicators (minimu	m of one r	equired; check all t	that apply	')			Secondary	/ Indicators (two or more required)	
Surfac	e Water (A1)		\/\a	tor-Stains	ed Leaves (RQ)		\\/ater	r-Stained Leaves (B9)(MLRA 1,2,4A,4B)	
			· 			•				
·	Vater Table (A2)		•	•	RA 1,2,4A,	and 4B)			age Patterns (B10)	
	ition (A3)		<u></u>	Crust (B1					eason Water Table (C2)	
	Marks (B1)				rtebrates (ation Visible on Aerial Imagery (C9)	
Sedim	ent Deposits (B2)		Нус	drogen Su	lfide Odor	(C1)		Geom	orphic Position (D2)	
Drift D	eposits (B3)		Oxi	dized Rhiz	ospheres	along Livi	ng Roots (C3)	Shallo	w Aquitard (D3)	
Algal N	Mat or Crust (B4)		Pre	sence of I	Reduced Ir	on (C4)		FAC-N	leutral Test (D5)	
Iron D	eposits (B5)		Rec	ent Iron F	Reduction	in Tilled S	oils (C6)	Raised	d Ant Mounds (D6)(LRR A)	
Surfac	e Soil Cracks (B6)		Stu	nted or St	ressed Pla	nts (D1)(L	RR A)	Frost-	Heave Hummocks (D7)	
	ation Visible on A	erial Image			n in Rema		,		, ,	
	ely Vegetated Cor	_				-,				
Field Obse	-		cc (50)							
	ater Present? No		Depth (inc	has). O						
	ole Present? <u>No</u>	_	Depth (inc							
	Saturation Present? No Depth (inches): 0									
(includes capillary fringe) Wetland Hydrology Present? No										
		ream gaug	e, monitoring well	, aerial ph	otos, prev	ious inspe	ections), if availab	le:		
				•	•	•	•			
Remarks:	Field study was	conducted	at the beginning o	of the wet	season, ir	a year of	f below-average ra	infall.		

Project/Site <u>La Center School District/NE Lockwood Creel</u> Applicant/Owner: <u>La Center School District</u> State: <u>WA</u>		/County: <u>La Ce</u>	_	Sampling Date: <u>09/20/2018</u> Sampling Point: <u>12</u>				
Investigator(s): <u>Kevin Grosz, Ryan Thiele</u> Landform (hillslope, terrace, etc.): <u>hillslope</u> Subregion (LRR): <u>Northwest Forests & Coast (LRR A)</u>	Section, Towns Local relief (co		none): <u>none</u>	Slope (%): <u>0-8%</u> 5118000 Datum: <u>WGS84</u>				
Soil Map Unit Name: Gee silt loam NWI classification		15.000107 10	2011B. <u>12210</u>	<u> </u>				
Are climatic/hydrologic conditions on the site typical for		Yes(if no, exp	olain in Rema	rks.)				
Are Vegetation, Soil, or Hydrology significantly				Circumstances" present? Yes				
Are Vegetation, Soil, or Hydrology naturally pro			(if needed, e	xplain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showin	ng sampling poi	nt locations,	transects, i	nportant features, etc.				
Hydrophytic Vegetation Present? Yes				-				
Hydric Soil Present? <u>Yes</u>								
Wetland Hydrology Present? <u>Yes</u>		Is the S	Sampled Area	within a Wetland? <u>Yes</u>				
Remarks:								
VEGETATION – Use scientific names of plants.								
panes	Absolute %	Dominant	Indicator	Dominance Test worksheet:				
<u>Tree Stratum</u> (Plot size: <u>10 meter</u>)	Cover	Species?	Status	Number of Dominant Species				
1.				That Are OBL, FACW, or FAC: <u>2</u> (A)				
2.								
3.				Total Number of Dominant				
4.				Species Across All Strata: <u>2</u> (B)				
Total Cover = <u>0</u>				Barrant of Barrin ant Caraina				
Sapling/Shrub Stratum (Plot size: 10 meter)				Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)				
1.				Prevalence Index worksheet:				
2.				Total % Cover of: Multiply by:				
3. 4.				OBL species $\underline{0}$ \times 1 = $\underline{0}$				
4. 5.				FACW species 15 x 2 = 30				
Total Cover =0				FAC species $\underline{68}$ x 3 = $\underline{204}$				
Herb Stratum (Plot size: 1 meter)				FACU species $\underline{0}$ x 4 = $\underline{0}$				
1. Agrostis capillaris	<u>60</u>	<u>Yes</u>	FAC	UPL species $\underline{0}$ x 5 = $\underline{0}$				
2. Phalaris arundinacea	<u>15</u>	<u>No</u>	FACW	Column Totals: <u>83</u> (A) <u>234</u> (B)				
3. <u>Lupinus polyphyllus</u>	<u>1</u>	<u>No</u>	<u>FAC</u>	Provalence Index = P/A = 2.92				
4. Holcus lanatus	<u>5</u>	<u>No</u>	<u>FAC</u>	Prevalence Index = B/A = 2.82				
5.				Hydrophytic Vegetation Indicators:				
6. 7.				1 –Rapid Test for Hydrophytic Vegetation				
8.				X 2 – Dominance Test >50%				
9.				\underline{X} 3 - Prevalence Index is ≤ 3.0 ¹				
10.				4 - Morphological Adaptions ¹ (Provide supporting				
11.				data in Remarks or on a separate sheet) 5 – Wetland Non-Vascular Plants ¹				
Total Cover = <u>81</u>				5 - Wettand Non-Vascular Flants - Problematic Hydrophytic Vegetation¹ (Explain)				
				Problematic Trydrophytic Vegetation (Explain)				
Woody Vine Stratum (Plot size: _1 meter_)				¹ Indicators of hydric soil and wetland hydrology				
1. Rubus armeniacus	<u>2</u>	Yes	FAC	must be present, unless disturbed or problematic.				
2.								
Total Cover = 2								
% Bare Ground in Herb Stratum: 19 Hydrophytic Vegetation Present? Yes								
Remarks:								

SOIL Sampling Point: 12

	Mat	<u>rix</u>		Redox I	-eatures						
Depth	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks		
(inches)											
0-12	10YR 3/2	<u>90</u>	7.5YR 4/4	<u>10</u>	<u>C</u>	<u>M</u>	Silt Loam				
<u>12-16</u>	10YR 3/1	80	7.5YR 4/4	20	<u>C</u>	<u>M</u>	Silt Loam				
1- 0		D 1	D14 D 1 114				10 : 1				
-Type: C=	=Concentration, D	=Depletior	, RM=Reduced Ma	atrix, CS=0	Loverea o	r Coated S	and Grains.	Location: Pi	L=Pore Lining, M=Matrix		
Hydric So	il Indicators: (Ap	plicable to	all LRRs, unless ot	herwise ı	noted.)			Indicato	rs for Problematic Hydric Soils ³ :		
Histos	sol (A1)		Sa	ndy Redo	x (S5)			2 cr	m Muck (A10)		
Histic	Epipedon (A2)		St	ripped Ma	atrix (S6)			Rec	l Parent Material (TF2)		
Black	Histic (A3)		Lo	amy Muc	ky Minera	l (F1) (exc	ept MLRA 1)	Ve	ry Shallow Dark Surface (TF12)		
Hydro	ogen Sulfide (A4)		· · · · · · · · · · · · · · · · · · ·	-	ed Matrix				er (Explain in Remarks)		
, Deple	eted Below Dark S	urface (A1	·	pleted M		` '			, ,		
	Dark Surface (A1	•	•	•	Surface (F	6)		3Indicat	ors of hydrophytic vegetation and		
	/ Mucky Mineral (-	·		ark Surface				d hydrology must be present, unless		
	, Gleyed Matrix (S		·	•	essions (F				ed or problematic.		
				иох Бері	C3310113 (1 t	<i>-</i> ,			•		
	e Layer (if preser	it):									
Type: Depth (inches): <u>0</u>									Hydric Soil Present? Yes		
7											
Remarks:											
HYDROLO	icv										
	Hydrology Indicat	ors:									
			equired; check all	that apply	/)			Secondary	Indicators (two or more required)		
	ce Water (A1)				ed Leaves	(RQ)			-Stained Leaves (B9)(MLRA 1,2,4A,4B)		
	Water Table (A2)				RA 1,2,4A	. ,			ge Patterns (B10)		
			•	•		, and 40)					
	ation (A3)		· 	t Crust (B:	-	(D42)			eason Water Table (C2)		
	r Marks (B1)				rtebrates (ition Visible on Aerial Imagery (C9)		
	ent Deposits (B2)		· · · · · · · · · · · · · · · · · · ·		lfide Odor				orphic Position (D2)		
	Deposits (B3)		·		•	_	ng Roots (C3)		w Aquitard (D3)		
	Mat or Crust (B4)				Reduced Ir				eutral Test (D5)		
Iron D	eposits (B5)				Reduction			Raised	Ant Mounds (D6)(LRR A)		
Surfac	ce Soil Cracks (B6)		Stu	nted or S	tressed Pla	ants (D1)(I	.RR A)	Frost-l	Heave Hummocks (D7)		
Inund	ation Visible on A	erial Image	ry (B7)Oth	ner (Expla	in in Rema	ırks)					
Sparse	ely Vegetated Cor	ncave Surfa	ce (B8)								
Field Obse	ervations:										
Surface W	/ater Present? <u>No</u>	<u>)</u>	Depth (inc	ches):							
	ole Present? <u>No</u>	<u>)</u>	Depth (in	•							
	n Present? <u>No</u>	<u>)</u>	Depth (in	ches):			Wetland Hud	rology Droc	ont3 Voc		
	apillary fringe)	roam carr	n monitoring	agricl r	notos ars	ious isse	Wetland Hyd		Circ. <u>163</u>		
Describe i	necorueu Data (St	ream gaug	e, monitoring well	, aeriai pr	iotos, prev	rious irispe	cuonsj, ii avallai	uie.			
Remarks:											

	n, Township, Rang relief (concave, con Lat: on: <u>N/A</u> r this time of year! y disturbed? roblematic?	nvex, none): <u>co</u> 45.86012280 ? <u>Yes</u> (if no, exp	bovex Slo Long: <u>-122.6</u> Dlain in Rema Are "Normal (if needed, e	rks.) Circumstances" present? <u>Yes</u> xplain any answers in Remarks.)
VEGETATION – Use scientific names of plants.	Absolute %	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>10 meter</u>)	Cover	Species?	Status	Number of Dominant Species
1.		'		That Are OBL, FACW, or FAC: <u>2</u> (A)
2.				
3. 4.				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
Total Cover = 0				Species Across Air Strata.
Sapling/Shrub Stratum (Plot size: 10 meter)				Percent of Dominant Species
1.				That Are OBL, FACW, or FAC: <u>66</u> (A/B)
2.				Prevalence Index worksheet: Total % Cover of: Multiply by:
3.				OBL species $\underline{0}$ $\times 1 = \underline{0}$
4.				FACW species $\frac{10}{2}$ x 2 = $\frac{20}{2}$
7. Total Cover = <u>0</u>				FAC species $\underline{60}$ x 3 = $\underline{180}$
Herb Stratum (Plot size: 1 meter)				FACU species $\frac{20}{2}$ x 4 = $\frac{80}{2}$
1. Phalaris arundinacea	<u>10</u>	<u>No</u>	<u>FACW</u>	UPL species $\underline{0}$ x 5 = $\underline{0}$
2. Agrostis capillaris	<u>40</u>	<u>Yes</u>	FAC	Column Totals: <u>90</u> (A) <u>280</u> (B)
Anthoxanthum odoratum Schedonorus arundinaceus	<u>20</u>	<u>Yes</u>	FACU FAC	Prevalence Index = $B/A = 3.11$
4. <u>Schedonorus arundinaceus</u> 5.	<u>20</u>	<u>Yes</u>	<u>FAC</u>	
6.				Hydrophytic Vegetation Indicators:
7.				1 – Rapid Test for Hydrophytic Vegetation
8.				$\frac{X}{2}$ 2 − Dominance Test >50% 3 - Prevalence Index is ≤ 3.0 ¹
9. 10.				4 - Morphological Adaptions ¹ (Provide supporting
11.				data in Remarks or on a separate sheet)
Total Cover = <u>90</u>				5 – Wetland Non-Vascular Plants ¹
_				Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: _10 meter_)				Indicators of hydric soil and wetland hydrology
1.				must be present, unless disturbed or problematic.
2.				
Total Cover = <u>0</u>				
% Bare Ground in Herb Stratum: 10				Hydrophytic Vegetation Present? No
Remarks:		•	•	<u> </u>

SOIL Sampling Point: 13

	Mat	rix		Redox I	eatures					
Depth	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
(inches)	, ,		, ,		, ,					
0-16	10YR 3/2	<u>0</u>		<u>0</u>			Silt Loam			
<u>0 10</u>	<u> </u>	<u> </u>		<u> </u>			<u> </u>			
1= 0			204 2 1 104			0 1 10	10 : 2	5	D 1:: 24.84 ::	
¹Type: C=	Concentration, L	=Depletior	n, RM=Reduced Ma	atrix, CS=0	Lovered of	r Coated S	and Grains. ²	Location: Pi	L=Pore Lining, M=Matrix	
Hydric So	il Indicators: (Ap	plicable to	all LRRs, unless ot	herwise ı	noted.)			Indicato	rs for Problematic Hydric Soils ³ :	
Histos	sol (A1)		Sa	ndy Redo	x (S5)			2 cr	m Muck (A10)	
· · · · · · · · · · · · · · · · · · ·	Epipedon (A2)			ripped Ma					Parent Material (TF2)	
	Histic (A3)					/E1\ /ove	ept MLRA 1)	· · · · · · · · · · · · · · · · · · ·	ry Shallow Dark Surface (TF12)	
	` '		· · · · · · · · · · · · · · · · · · ·	-			ept with 1)			
	ogen Sulfide (A4)				ed Matrix	(F2)		Oth	er (Explain in Remarks)	
Deple	ted Below Dark S	urface (A1	1)De	pleted M	atrix (F3)					
Thick	Dark Surface (A1	2)	Re	dox Dark	Surface (F	6)		3Indicat	ors of hydrophytic vegetation and	
Sandy	/ Mucky Mineral ((S1)	De	pleted Da	ark Surface	e (F7)		wetland	d hydrology must be present, unless	
	Gleyed Matrix (S				essions (F8			disturb	ed or problematic.	
					, ,	-,				
	e Layer (if preser	nt):								
Type:									0.11.0	
Depth (in	ches): <u>0</u>							Hyaric	Soil Present? No	
Remarks:										
	.01									
HYDROLO										
	Hydrology Indicat									
Primary Ir	ndicators (minimu	ım of one r	equired; check all	that apply	<i>(</i>)			Secondary	Indicators (two or more required)	
Surfac	ce Water (A1)		Wa	ter-Staine	ed Leaves	(B9)		Water	-Stained Leaves (B9)(MLRA 1,2,4A,4B)	
	Water Table (A2)				RA 1,2,4A,	` '			age Patterns (B10)	
			•	•		, and 4D ₁				
	ation (A3)		<u> </u>	t Crust (B:	•	(5.40)			eason Water Table (C2)	
	r Marks (B1)				rtebrates (tion Visible on Aerial Imagery (C9)	
Sedim	ent Deposits (B2)		Нус	drogen Su	lfide Odor	(C1)		Geom	orphic Position (D2)	
Drift [Deposits (B3)		Oxi	dized Rhi	zospheres	along Livi	ng Roots (C3)	Shallo	w Aquitard (D3)	
Algal I	Mat or Crust (B4)		Pre	sence of	Reduced Ir	on (C4)		FAC-N	eutral Test (D5)	
	eposits (B5)				Reduction		oils (C6)	· ·	Ant Mounds (D6)(LRR A)	
·										
	ce Soil Cracks (B6)				tressed Pla		.KK A)	FIOSt-I	Heave Hummocks (D7)	
	ation Visible on A	_		ier (Expla	in in Rema	irks)				
Sparse	ely Vegetated Cor	ncave Surfa	ce (B8)							
Field Obse	ervations:									
Surface W	/ater Present? <u>No</u>	<u>)</u>	Depth (inc	ches):						
	ole Present? N		Depth (in	ches):						
Saturation	n Present? <u>No</u>	<u> </u>	Depth (in	ches):						
(includes ca	(includes capillary fringe) Wetland Hydrology Present? No									
Describe F	Recorded Data (st	ream gaug	e, monitoring well	, aerial pł	notos, prev	ious inspe	ections), if availab	ole:		
Remarks:										

Project/Site: <u>La Center School District/NE Lockwood Cre</u> Applicant/Owner: <u>La Center School District</u> State: <u>WA</u> Investigator(s): <u>Kevin Grosz, Ryan Thiele</u>	ek Rd City/C	ounty: <u>La Cent</u>		Sampling Date: <u>09/20/2018</u> Sampling Point: 1 <u>4</u>					
Landform (hillslope, terrace, etc.): <u>hillslope</u> Local re Subregion (LRR): <u>Northwest Forests & Coast (LRR A)</u>	elief (concave, co		ncave Slo	ppe (%): <u>8-15%</u> 55070310 Datum: <u>WGS84</u>					
Are climatic/hydrologic conditions on the site typical for	· · · · · · · · · · · · · · · · · · ·	Yes(if no, ex	olain in Rema	rks.)					
Are Vegetation, Soil, or Hydrology significantly				Circumstances" present? Yes					
Are Vegetation, Soil, or Hydrology naturally pro				xplain any answers in Remarks.)					
0 = 7			,	,					
SUMMARY OF FINDINGS – Attach site map showing	ng sampling poi	nt locations,	transects, i	mportant features, etc.					
Hydrophytic Vegetation Present? Yes			-	· · · · · · · · · · · · · · · · · · ·					
Hydric Soil Present? <u>Yes</u>									
Wetland Hydrology Present? Yes		Is the S	Sampled Area	a within a Wetland? <u>Yes</u>					
Remarks:									
VEGETATION – Use scientific names of plants.									
	Absolute %	Dominant	Indicator	Dominance Test worksheet:					
<u>Tree Stratum</u> (Plot size: <u>10 meter</u>)	Cover	Species?	Status	Number of Dominant Species					
1.				That Are OBL, FACW, or FAC: $\underline{4}$ (A)					
2.									
3. 4.	Total Number of Dominant								
Total Cover =0				Species Across All Strata: <u>5</u> (B)					
				Percent of Dominant Species					
Sapling/Shrub Stratum (Plot size: 10 meter) 1. Symphoricarpos albus	10	Vos	EACH	That Are OBL, FACW, or FAC: 80 (A/B)					
2. <u>Salix scouleriana</u>	<u>10</u> <u>5</u> <u>5</u>	<u>Yes</u> <u>Yes</u>	<u>FACU</u> FAC	Prevalence Index worksheet:					
3. Spiraea douglasii	5	Yes	FACW	Total % Cover of: Multiply by:					
4.	_			OBL species $\underline{0}$ x 1 = $\underline{0}$					
5.				FACW species $90 \times 2 = 180$					
Total Cover = 20				FAC species $\frac{25}{10}$ x 3 = $\frac{75}{40}$ FACU species $\frac{10}{10}$ x 4 = $\frac{40}{10}$					
Herb Stratum (Plot size: 1 meter)				FACU species $\underline{10}$ x 4 = $\underline{40}$ UPL species $\underline{0}$ x 5 = $\underline{0}$					
1. Phalaris arundinacea	<u>75</u>	<u>Yes</u>	FACW FACW	Column Totals: 125 (A) 295 (B)					
Juncus effusus Schedonorus arundinaceus	<u>10</u> <u>5</u>	<u>No</u> No	<u>FACW</u> <u>FAC</u>						
4.		INO	FAC	Prevalence Index = $B/A = 2.36$					
5.									
6.				Hydrophytic Vegetation Indicators:					
7.				1 —Rapid Test for Hydrophytic Vegetation X 2 — Dominance Test >50%					
8.				$\frac{X}{X}$ 3 - Prevalence Index is $\leq 3.0^{1}$					
9.				4 - Morphological Adaptions ¹ (Provide supporting					
10. 11.				data in Remarks or on a separate sheet)					
Total Cover = <u>90</u>				5 – Wetland Non-Vascular Plants ¹					
10tal cover = <u>30</u>				Problematic Hydrophytic Vegetation ¹ (Explain)					
Woods Vine Chartery (Plateins, 1 mater)									
Woody Vine Stratum (Plot size: 1 meter) 1. Rubus armeniacus	<u>15</u>	Yes	FAC	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
2.	15	163	IAC	must be present, unless disturbed or problematic.					
Total Cover = 15									
_									
% Bare Ground in Herb Stratum: <u>10</u>				Hydrophytic Vegetation Present? Yes					
Remarks:	t		1	, , , <u>, , , , , , , , , , , , , , , , </u>					

SOIL Sampling Point: 14

	Mat	rix		Redox F	<u>-eatures</u>				
Depth	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks
(inches)	1		` ,	l	'				
<u>0-5</u>	10YR 3/2	<u>100</u>		<u>0</u>			Silt Loam		
<u>5-16</u>	10YR 3/1	85	7.5YR 3/4	<u>5</u> 15	<u>C</u>	M	Clayey Silt Loam		
<u>3-10</u>	101K 3/1	83	7.51K 3/4	<u>15</u>	<u> </u>	<u>IVI</u>	Clayey Silt Loain		
				l					
				l					
				l					
				l					
1Tupo: C-	-Concontration C	-Doplotion	DM-Poducod M:	atrix CS-1	Covered o	r Coatad S	and Grains 21 s	cation: D	-Doro Lining M-Matrix
-Type: C=	Concentration, D	=Depletion	, RM=Reduced Ma	3111X, CS=0	Lovered of	Coated 5	and GrainsLC	Cation: Pi	L=Pore Lining, M=Matrix
Hydric So	il Indicators: (Ap	plicable to	all LRRs, unless ot	herwise r	noted.)			Indicato	rs for Problematic Hydric Soils ³ :
Histos	sol (A1)		Sa	ndy Redo	x (S5)			2 cr	n Muck (A10)
Histic	Epipedon (A2)		Str	ripped Ma	atrix (S6)			Rec	l Parent Material (TF2)
	Histic (A3)		<u></u> -	• •	` '	l (F1) (exco	ept MLRA 1)	II	ry Shallow Dark Surface (TF12)
	ogen Sulfide (A4)		·	-	ed Matrix		- p · · · · - · · - ·		ner (Explain in Remarks)
	eted Below Dark S	urfaco (A1				(12)			ici (Explain in Kemarks)
		-	· —	pleted M		\		21 11	
	Dark Surface (A12	-			Surface (F	-			cors of hydrophytic vegetation and
Sandy	/ Mucky Mineral (S1)	De	pleted Da	ark Surface	∍ (F7)			d hydrology must be present, unless
Sandy	/ Gleyed Matrix (S	.4)	Re	dox Depr	essions (F8	3)		disturb	ed or problematic.
Restrictiv	e Layer (if presen	nt):							
Type:	.,. ()	•							
Depth (in	ches): 0							Hydric	Soil Present? Yes
								-	
Remarks:									
HYDROLO									
	Hydrology Indicat								
Primary In	idicators (minimu	m of one re	equired; check all t	that apply	<i>(</i>)		Ç	Secondary	Indicators (two or more required)
Surfac	ce Water (A1)		Wa	ter-Staine	ed Leaves ((B9)		Water	-Stained Leaves (B9)(MLRA 1,2,4A,4B)
	Water Table (A2)				RA 1,2,4A,	` '	-		ge Patterns (B10)
			·	•		, and 4 0)	-		• , ,
	ation (A3)		· · · · · · · · · · · · · · · · · · ·	t Crust (B1		(040)	-		eason Water Table (C2)
	Marks (B1)				rtebrates (-		ition Visible on Aerial Imagery (C9)
	ent Deposits (B2)		· · · · · · · · · · · · · · · · · · ·	_	lfide Odor			X_Geom	orphic Position (D2)
Drift D	Deposits (B3)		<u>X</u> Oxi	dized Rhi	zospheres	along Livi	ng Roots (C3)	Shallo	w Aquitard (D3)
Algal I	Mat or Crust (B4)		Pre	sence of I	Reduced Ir	ron (C4)	_	FAC-N	eutral Test (D5)
Iron D	eposits (B5)			ent Iron F	Reduction	in Tilled So	oils (C6)	Raisec	Ant Mounds (D6)(LRR A)
	ce Soil Cracks (B6)					ants (D1)(L			Heave Hummocks (D7)
							- III A)	11030	ricave riammocks (D7)
	ation Visible on A	_	- · · · · · · · · · · · · · · · · · · ·	iei (Expiai	in in Rema	irks)			
Sparse	ely Vegetated Cor	icave Surfa	ce (B8)						
Field Obse									
Surface W	/ater Present? <u>No</u>	<u>)</u>	Depth (inc						
Water Tak	ole Present? <u>No</u>	<u>)</u>	Depth (inc	ches):					
Saturation		<u>)</u>	Depth (in	ches):			Madandland	l B	
	apillary fringe)						Wetland Hydro		ent? Yes
Describe F	Recorded Data (st	ream gauge	e, monitoring well	, aerial ph	iotos, prev	/ious inspe	ections), if available	2:	
Remarks:									

Subregion (LRR): Northwest Forests & Coast (LRR A)	Section, Towns elief (concave, con Lat: assification: <u>N/A</u> this time of year? disturbed? oblematic?	nvex, none): <u>no</u> 45.86019240 ? <u>Yes</u> (if no, exp	one Slo Long: <u>-122.6</u> Dlain in Remai Are "Normal (if needed, es	rks.) Circumstances" present? <u>Yes</u> xplain any answers in Remarks.)
Hydric Soil Present? No				
Wetland Hydrology Present? <u>No</u>		Is the S	Sampled Area	within a Wetland? <u>No</u>
VEGETATION – Use scientific names of plants.				
Tree Shortons (Plateins 40 mater)	Absolute %	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: _10 meter_) 1.	Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
2.				
3.				Total Number of Dominant
4.				Species Across All Strata: <u>3</u> (B)
Total Cover = 0				Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 10 meter) 1.				That Are OBL, FACW, or FAC: 100 (A/B)
2.				Prevalence Index worksheet:
3.				Total % Cover of: Multiply by:
4.				OBL species $\underline{0}$ x 1 = $\underline{0}$
5.				FACW species $\underline{0}$ x 2 = $\underline{0}$ FAC species $\underline{55}$ x 3 = $\underline{165}$
Total Cover = 0				FACU species $\frac{33}{20}$ $\times 3 = \frac{103}{100}$
Herb Stratum (Plot size: 1 meter) 1. Agrostis capillaris	<u>25</u>	Yes	FAC	UPL species $\underline{0}$ x 5 = $\underline{0}$
Schedonorus arundinaceus	2 <u>5</u> 20	<u>Yes</u>	FAC FAC	Column Totals: <u>75</u> (A) <u>275</u> (B)
3. Anthoxanthum odoratum	<u>20</u>	Yes	FACU	
5. <u>Holcus lanatus</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	Prevalence Index = B/A = 3.26
6. 7. 8. 9. 10. 11. Total Cover = 75				Hydrophytic Vegetation Indicators: 1 — Rapid Test for Hydrophytic Vegetation
Woody Vine Stratum (Plot size: 1 meter)				¹Indicators of hydric soil and wetland hydrology
1. 2.				must be present, unless disturbed or problematic.
7. Total Cover = <u>0</u>				
_				
% Bare Ground in Herb Stratum: <u>25</u>				Hydrophytic Vegetation Present? Yes
Remarks:				

SOIL Sampling Point: 15

	<u>Mat</u>	<u>rix</u>		Redox I	-eatures					
Depth	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
(inches)	10VD 2/2			0			Cilk I a a ma			
<u>0-16</u>	10YR 3/2	<u>0</u>		<u>0</u>			<u>Silt Loam</u>			
¹Type: C=	Concentration, D	ı =Depletio	n, RM=Reduced Ma	atrix, CS=0	Covered o	r Coated S	and Grains. 2	Location: P	L=Pore Lining, M=Matrix	
Hydric So	il Indicators: (Ap	plicable to	all LRRs, unless ot	herwise ı	noted.)			Indicato	rs for Problematic Hydric Soils ³ :	
	sol (A1)	•		ndy Redo					m Muck (A10)	
· · · · · · · · · · · · · · · · · · ·	Epipedon (A2)			ripped Ma					Parent Material (TF2)	
	Histic (A3)					l (F1) (exc	ept MLRA 1)		ry Shallow Dark Surface (TF12)	
	ogen Sulfide (A4)		· 		ed Matrix				ner (Explain in Remarks)	
	ted Below Dark S	urface (A1		pleted M						
Thick	Dark Surface (A1	2)	Re	dox Dark	Surface (F	6)		³ Indicat	tors of hydrophytic vegetation and	
Sandy	Mucky Mineral (S1)	De	pleted Da	ark Surface	e (F7)			d hydrology must be present, unless	
Sandy	Gleyed Matrix (S	54)	Re	dox Depr	essions (F	3)		disturb	ed or problematic.	
Restrictiv	e Layer (if preser	nt):								
Type:										
Depth (in	ches): <u>0</u>							Hydric Soil Present? No		
Remarks:										
HYDROLO	icv									
	Hydrology Indicat	tors:								
			equired; check all	that apply	/)			Secondary	/ Indicators (two or more required)	
Surfac	e Water (A1)		Wa	ter-Staine	ed Leaves	(B9)		Water	Stained Leaves (B9)(MLRA 1,2,4A,4B)	
—— High V	Water Table (A2)				RA 1,2,4A				age Patterns (B10)	
_	ation (A3)			t Crust (B:				Dry-Se	eason Water Table (C2)	
	Marks (B1)		Aqı	uatic Inve	rtebrates (B13)			ation Visible on Aerial Imagery (C9)	
Sedim	ent Deposits (B2))	Нус	drogen Su	lfide Odor	(C1)		Geom	orphic Position (D2)	
Drift [Deposits (B3)		Oxi	dized Rhi	zospheres	along Livi	ng Roots (C3)	Shallo	w Aquitard (D3)	
Algal I	Mat or Crust (B4)		Pre	sence of	Reduced Ir	on (C4)		FAC-N	eutral Test (D5)	
Iron D	eposits (B5)		Rec	ent Iron I	Reduction	in Tilled S	oils (C6)	Raised	d Ant Mounds (D6)(LRR A)	
Surfac	e Soil Cracks (B6)		Stu	nted or St	tressed Pla	nts (D1)(I	.RR A)	Frost-	Heave Hummocks (D7)	
Inund	ation Visible on A	erial Image	ery (B7)Oth	ner (Expla	in in Rema	rks)				
Sparse	ely Vegetated Cor	ncave Surfa	ice (B8)							
Field Obse	ervations:									
	ater Present? No	<u>)</u>	Depth (inc	•						
	ole Present? No		Depth (in	-						
	n Present? <u>No</u> apillary fringe)	<u>)</u>	Depth (in	cnes):			Wetland Hyd	rology Pres	ent? No	
		ream gaug	e, monitoring well	, aerial ph	notos, prev	ious inspe				
	(-	56	. 5	. 1	, -	- 1	,,			
Remarks:										

Project/Site: La Center School District/NE Lockwood Cree Applicant/Owner: La Center School District State: WA Investigator(s): Kevin Grosz Section, Township Landform (hillslope, terrace, etc.): hillslope Local re Subregion (LRR): Northwest Forests & Coast (LRR A) Soil Map Unit Name: Gee silt loam NWI classification Are climatic/hydrologic conditions on the site typical for Are Vegetation, Soil, or Hydrology significantly Are Vegetation, Soil, or Hydrology naturally pro SUMMARY OF FINDINGS - Attach site map showin Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Yes	p, Range: <u>02, T4N</u> elief (concave, con Lat: n: <u>N/A</u> this time of year? disturbed?	nvex, none): <u>cc</u> <u>45.86022250</u> ? <u>Yes</u> (if no, ex	oncave Slo Long: <u>-122.6</u> plain in Rema Are "Normal (if needed, e	rks.) Circumstances" present? <u>Yes</u> xplain any answers in Remarks.)
Wetland Hydrology Present? Yes		Is the	Sampled Area	within a Wetland? <u>Yes</u>
Remarks: VEGETATION – Use scientific names of plants.				
·	Absolute %	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>10 meter</u>)	Cover	Species?	Status	Number of Dominant Species
1. <u>Populus balsamifera</u> 2.	<u>40</u>	<u>Yes</u>	FAC	That Are OBL, FACW, or FAC: $\underline{4}$ (A)
3.				Total Number of Dominant
4.				Species Across All Strata: <u>4</u> (B)
Total Cover = <u>40</u>				
Sapling/Shrub Stratum (Plot size: 10 meter)				Percent of Dominant Species That Are ORL EACH, or EAC: 100 (A/R)
1. Rosa nutkana	20 2	<u>Yes</u>	<u>FAC</u>	That Are OBL, FACW, or FAC: 100 (A/B) Prevalence Index worksheet:
2. <u>Corylus cornuta</u>	<u>2</u>	<u>No</u>	<u>FACU</u>	Total % Cover of: Multiply by:
3. 4.				OBL species $\underline{0}$ \times 1 = $\underline{0}$
5.				FACW species 35 x 2 = 70
Total Cover = <u>22</u>				FAC species $90 \times 3 = 270$
<u>Herb Stratum</u> (Plot size: <u>1 meter</u>)				FACU species $\underline{19}$ x 4 = $\underline{76}$ UPL species $\underline{0}$ x 5 = $\underline{0}$
1. Juncus effusus	<u>20</u>	Yes No	FACU.	Column Totals: <u>144</u> (A) <u>416</u> (B)
2. Rubus ursinus3. Phalaris arundinacea	<u>15</u> <u>15</u>	<u>No</u> <u>No</u>	<u>FACU</u> <u>FACW</u>	
4. Schedonorus arundinaceus	<u>5</u>	No	FAC	Prevalence Index = $B/A = 2.89$
5. <u>Anthoxanthum odoratum</u>	5 2 5 20	<u>No</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators:
6. Phleum pratense	<u>5</u>	No Vac	FAC	1 –Rapid Test for Hydrophytic Vegetation
7. Agrostis capillaris 8.	20	<u>Yes</u>	<u>FAC</u>	X 2 – Dominance Test >50%
9.				\underline{X} 3 - Prevalence Index is ≤ 3.0 ¹
10.				4 - Morphological Adaptions¹ (Provide supporting data in Remarks or on a separate sheet)
11.				5 – Wetland Non-Vascular Plants ¹
Total Cover = <u>82</u>				Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 1 meter)				¹ Indicators of hydric soil and wetland hydrology
1.				must be present, unless disturbed or problematic.
2.				
Total Cover = <u>0</u>				
% Bare Ground in Herb Stratum: <u>18</u>				Hydrophytic Vegetation Present? Yes
Remarks:				

SOIL Sampling Point: <u>16</u>

Depth Color (moist) % C	<u>Redux i</u>	eatures				
	Color (moist) %	Type ¹	Loc ²	Texture		Remarks
(inches) 0-16 10YR 3/2 80	7.5YR 4/4 20	<u>C</u>	<u>M</u>	Clayey Silt Loam		
<u> </u>	<u>7.511(4/4</u> <u>20</u>	<u>5</u>	111	Ciayey Sile Eduiri		
¹Type: C=Concentration, D=Depletion, R	M=Reduced Matrix, CS=	Covered or	Coated S	and Grains. ² Lo	cation: Pl	=Pore Lining, M=Matrix
Hydric Soil Indicators: (Applicable to all	LRRs, unless otherwise	noted.)			Indicato	rs for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redo	x (S5)			2 cr	n Muck (A10)
Histic Epipedon (A2)	Stripped Ma	itrix (S6)			Red	Parent Material (TF2)
Black Histic (A3)	Loamy Muc	ky Mineral	(F1) (exce	ept MLRA 1)	Vei	ry Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gley	ed Matrix	(F2)		Oth	er (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted M					
Thick Dark Surface (A12)	X Redox Dark	•	•			ors of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Da					I hydrology must be present, unless ed or problematic.
Sandy Gleyed Matrix (S4)	Redox Depr	essions (F8	3)		uistai s	ad or problematic.
Restrictive Layer (if present): Type:						
Depth (inches): <u>0</u>					Hydric :	Soil Present? Yes
Remarks:						
Nemarks.						
HYDROLOGY						
Wetland Hydrology Indicators:						
Primary Indicators (minimum of one requ	ired; check all that apply	')		S	Secondary	Indicators (two or more required)
Surface Water (A1)	Water-Staine	d Leaves ((B9)	_	Water	-Stained Leaves (B9)(MLRA 1,2,4A,4B)
High Water Table (A2)	(except ML	RA 1,2,4A,	and 4B)			
Saturation (A3)	Salt Crust (B:	11)		_	X Draina	ge Patterns (B10)
Water Marks (B1)		,		-		ge Patterns (B10) ason Water Table (C2)
	Aquatic Inve	rtebrates (•	-	Dry-Se Satura	ason Water Table (C2) tion Visible on Aerial Imagery (C9)
Sediment Deposits (B2)	Hydrogen Su	rtebrates (Ifide Odor	(C1)	- - -	Dry-Se Satura XGeom	ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2)
Drift Deposits (B3)	Hydrogen Su Noxidized Rhiz	rtebrates (Ifide Odor ospheres a	(C1) along Livir	- - -	Dry-Se Satura X_Geom Shallo	ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3)
Drift Deposits (B3) Algal Mat or Crust (B4)	Hydrogen Su X Oxidized Rhiz Presence of	rtebrates (Ifide Odor ospheres (Reduced Ir	(C1) along Livir on (C4)	ng Roots (C3)	Dry-Se Satura XGeom Shallo FAC-N	ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5)
Drift Deposits (B3)Algal Mat or Crust (B4)Iron Deposits (B5)	Hydrogen Su X Oxidized Rhiz Presence of Recent Iron	rtebrates (Ifide Odor ospheres a Reduced Ir Reduction	(C1) along Livir on (C4) in Tilled So	ng Roots (C3) oils (C6)	Dry-Se Satura XGeom Shallo FAC-N Raised	ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A)
Drift Deposits (B3)Algal Mat or Crust (B4)Iron Deposits (B5)Surface Soil Cracks (B6)	Hydrogen Su X Oxidized Rhiz Presence of Recent Iron Stunted or S	rtebrates (Ifide Odor ospheres a Reduced Ir Reduction cressed Pla	(C1) along Livinon (C4) in Tilled Sounts (D1)(L	ng Roots (C3) oils (C6)	Dry-Se Satura XGeom Shallo FAC-N Raised	ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5)
Drift Deposits (B3)Algal Mat or Crust (B4)Iron Deposits (B5)Surface Soil Cracks (B6)Inundation Visible on Aerial Imagery (Hydrogen Su X Oxidized Rhiz Presence of Recent Iron Stunted or S B7) Other (Expla	rtebrates (Ifide Odor ospheres a Reduced Ir Reduction cressed Pla	(C1) along Livinon (C4) in Tilled Sounts (D1)(L	ng Roots (C3) oils (C6)	Dry-Se Satura XGeom Shallo FAC-N Raised	ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A)
Drift Deposits (B3)Algal Mat or Crust (B4)Iron Deposits (B5)Surface Soil Cracks (B6)Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface (Hydrogen Su X Oxidized Rhiz Presence of Recent Iron Stunted or S B7) Other (Expla	rtebrates (Ifide Odor ospheres a Reduced Ir Reduction cressed Pla	(C1) along Livinon (C4) in Tilled Sounts (D1)(L	ng Roots (C3) oils (C6)	Dry-Se Satura XGeom Shallo FAC-N Raised	ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A)
Drift Deposits (B3)Algal Mat or Crust (B4)Iron Deposits (B5)Surface Soil Cracks (B6)Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface (Field Observations:	Hydrogen Su X Oxidized Rhiz Presence of Recent Iron I Stunted or S B7) Other (Expla	rtebrates (Ifide Odor ospheres a Reduced Ir Reduction cressed Pla	(C1) along Livinon (C4) in Tilled Sounts (D1)(L	ng Roots (C3) oils (C6)	Dry-Se Satura XGeom Shallo FAC-N Raised	ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A)
Drift Deposits (B3)Algal Mat or Crust (B4)Iron Deposits (B5)Surface Soil Cracks (B6)Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface (Hydrogen Su X Oxidized Rhiz Presence of Recent Iron Stunted or S B7) Other (Expla	rtebrates (Ifide Odor ospheres a Reduced Ir Reduction cressed Pla	(C1) along Livinon (C4) in Tilled Sounts (D1)(L	ng Roots (C3) oils (C6)	Dry-Se Satura XGeom Shallo FAC-N Raised	ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A)
Drift Deposits (B3)Algal Mat or Crust (B4)Iron Deposits (B5)Surface Soil Cracks (B6)Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface (Field Observations: Surface Water Present? No Water Table Present? No Saturation Present? No	Hydrogen Su X Oxidized Rhiz Presence of Recent Iron I Stunted or S B7) Other (Expla	rtebrates (Ifide Odor ospheres a Reduced Ir Reduction cressed Pla	(C1) along Livinon (C4) in Tilled Sounts (D1)(L	ng Roots (C3) oils (C6) RR A)	Dry-Se Satura XGeom Shalloo FAC-N Raised Frost-I	ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A) Heave Hummocks (D7)
Drift Deposits (B3)Algal Mat or Crust (B4)Iron Deposits (B5)Surface Soil Cracks (B6)Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface (Field Observations: Surface Water Present? No Water Table Present? No Saturation Present? No (includes capillary fringe)	Hydrogen Su X Oxidized Rhiz Presence of Recent Iron Stunted or S' B7) Other (Expla B8) Depth (inches): Depth (inches):	rtebrates (Ifide Odor ospheres a Reduced Ir Reduction cressed Pla in in Rema	(C1) along Livir on (C4) in Tilled So ints (D1)(L rks)	ng Roots (C3) oils (C6) RR A) Wetland Hydro	Dry-Se Satura XGeom Shallor FAC-N Raised Frost-I	ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A) Heave Hummocks (D7)
Drift Deposits (B3)Algal Mat or Crust (B4)Iron Deposits (B5)Surface Soil Cracks (B6)Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface (Field Observations: Surface Water Present? No Water Table Present? No Saturation Present? No	Hydrogen Su X Oxidized Rhiz Presence of Recent Iron Stunted or S' B7) Other (Expla B8) Depth (inches): Depth (inches):	rtebrates (Ifide Odor ospheres a Reduced Ir Reduction cressed Pla in in Rema	(C1) along Livir on (C4) in Tilled So ints (D1)(L rks)	ng Roots (C3) oils (C6) RR A) Wetland Hydro	Dry-Se Satura XGeom Shallor FAC-N Raised Frost-I	ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A) Heave Hummocks (D7)
Drift Deposits (B3)Algal Mat or Crust (B4)Iron Deposits (B5)Surface Soil Cracks (B6)Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface (Field Observations: Surface Water Present? No Water Table Present? No Saturation Present? No (includes capillary fringe)	Hydrogen Su X Oxidized Rhiz Presence of Recent Iron Stunted or S' B7) Other (Expla B8) Depth (inches): Depth (inches):	rtebrates (Ifide Odor ospheres a Reduced Ir Reduction cressed Pla in in Rema	(C1) along Livir on (C4) in Tilled So ints (D1)(L rks)	ng Roots (C3) oils (C6) RR A) Wetland Hydro	Dry-Se Satura XGeom Shallor FAC-N Raised Frost-I	ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A) Heave Hummocks (D7)
Drift Deposits (B3)Algal Mat or Crust (B4)Iron Deposits (B5)Surface Soil Cracks (B6)Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface (Field Observations: Surface Water Present? No Water Table Present? No Saturation Present? No (includes capillary fringe)	Hydrogen Su X Oxidized Rhiz Presence of Recent Iron Stunted or S' B7) Other (Expla B8) Depth (inches): Depth (inches):	rtebrates (Ifide Odor ospheres a Reduced Ir Reduction cressed Pla in in Rema	(C1) along Livir on (C4) in Tilled So ints (D1)(L rks)	ng Roots (C3) oils (C6) RR A) Wetland Hydro	Dry-Se Satura XGeom Shallor FAC-N Raised Frost-I	ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A) Heave Hummocks (D7)
Drift Deposits (B3)Algal Mat or Crust (B4)Iron Deposits (B5)Surface Soil Cracks (B6)Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface (Field Observations: Surface Water Present? No Water Table Present? No Saturation Present? No (includes capillary fringe) Describe Recorded Data (stream gauge, n	Hydrogen Su X Oxidized Rhiz Presence of Recent Iron Stunted or S' B7) Other (Expla B8) Depth (inches): Depth (inches):	rtebrates (Ifide Odor ospheres a Reduced Ir Reduction cressed Pla in in Rema	(C1) along Livir on (C4) in Tilled So ints (D1)(L rks)	ng Roots (C3) oils (C6) RR A) Wetland Hydro	Dry-Se Satura XGeom Shallor FAC-N Raised Frost-I	ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6)(LRR A) Heave Hummocks (D7)

Subregion (LRR): Northwest Forests & Coast (LRR A) Soil Map Unit Name: Gee silt loam Are climatic/hydrologic conditions on the site typical for the Are Vegetation, Soil, or Hydrology significantly Are Vegetation, Soil, or Hydrology naturally pro-	Section, Towns lief (concave, con Lat: : <u>N/A</u> this time of year? disturbed?	nvex, none): <u>co</u> <u>45.86019240</u> P <u>Yes</u> (if no, exp	, T4N, R1E ncave Slo Long: -122.6 plain in Remai Are "Normal (if needed, e	rks.) Circumstances" present? <u>Yes</u> xplain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing Hydrophytic Vegetation Present? No	ig sampling poi	nt locations,	transects, ir	mportant features, etc.
Hydric Soil Present? No				
Wetland Hydrology Present? No		Is the S	Sampled Area	within a Wetland? No
Remarks:				
VEGETATION – Use scientific names of plants.				
, and the second	Absolute %	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>10 meter</u>)	Cover	Species?	Status	Number of Dominant Species
1.				That Are OBL, FACW, or FAC: $\underline{2}$ (A)
2.				Total Number of Deminent
3. 4.				Total Number of Dominant Species Across All Strata: 4 (B)
Total Cover = <u>0</u>				Species Across Air Strata.
Sapling/Shrub Stratum (Plot size: _10 meter_)				Percent of Dominant Species
1.				That Are OBL, FACW, or FAC: <u>50</u> (A/B)
2.				Prevalence Index worksheet:
3.				Total % Cover of: Multiply by:
4.				OBL species $\underline{0}$ x 1 = $\underline{0}$
5.				FACW species $\underline{0}$ x 2 = $\underline{0}$ FAC species $\underline{45}$ x 3 = $\underline{135}$
Total Cover = 0				FACU species $\frac{45}{35}$ $\times 4 = \frac{140}{140}$
Herb Stratum (Plot size: 1 meter)	20	Voc	FACU	UPL species $\underline{0}$ x 5 = $\underline{0}$
Anthoxanthum odoratum Agrostis capillaris	20 20	<u>Yes</u> <u>Yes</u>	FACO FAC	Column Totals: <u>80</u> (A) <u>275</u> (B)
Schedonorus arundinaceus	<u>15</u>	<u>Yes</u>	FAC	
5. Holcus lanatus	<u>10</u>	<u>No</u>	FAC	Prevalence Index = $B/A = 3.44$
6.				Hydrophytic Vegetation Indicators:
7.				1 –Rapid Test for Hydrophytic Vegetation
8. 9.				2 – Dominance Test >50%
10.				3 - Prevalence Index is ≤ 3.0¹
11.				4 - Morphological Adaptions ¹ (Provide supporting
Total Cover = <u>65</u>				data in Remarks or on a separate sheet) 5 – Wetland Non-Vascular Plants ¹
				9 - Wetland Non-Vascular Flants Problematic Hydrophytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size: 1 meter)				¹ Indicators of hydric soil and wetland hydrology
1. Rubus ursinus	<u>15</u>	<u>Yes</u>	<u>FACU</u>	must be present, unless disturbed or problematic.
2.				
Total Cover = 15				
% Bare Ground in Herb Stratum: <u>35</u>				Hydrophytic Vegetation Present? No
Remarks:				

SOIL Sampling Point: <u>17</u>

	Mat	rix		Redox F	eatures				
Depth	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks
(inches)									
<u>0-16</u>	10YR 3/2	<u>0</u>		<u>0</u>			Silt Loam		
¹Type: C=	-Concentration, D	=Depletior	n, RM=Reduced Ma	atrix, CS=0	Covered o	Coated S	and Grains. 2	Location: Pl	_=Pore Lining, M=Matrix
Hydric So	il Indicators: (Ap	plicable to	all LRRs, unless ot	herwise r	noted.)			Indicato	rs for Problematic Hydric Soils ³ :
Histo	sol (A1)		Sa	ndy Redo	x (S5)			2 cr	m Muck (A10)
	Epipedon (A2)			ipped Ma					Parent Material (TF2)
	Histic (A3)					(F1) (exc	ept MLRA 1)		ry Shallow Dark Surface (TF12)
	ogen Sulfide (A4)		· · · · · · · · · · · · · · · · · · ·		ed Matrix		ept WIERA 1)		er (Explain in Remarks)
	eted Below Dark S	Jurface (A1		pleted M		(12)			er (Explain in Nemarks)
	Dark Surface (A1	•	-		Surface (F	6)		3Indicat	ors of hydrophytic vegetation and
	-	-			•	•			d hydrology must be present, unless
	/ Mucky Mineral (rk Surface				ed or problematic.
	Gleyed Matrix (S		Re	dox Depr	essions (F	5)			
	e Layer (if preser	nt):							
Type:	shas). O							Hydric	Soil Present? <u>No</u>
Depth (in								Tiyune .	on resent: <u>No</u>
Remarks:									
HYDROLO	ocv.								
	Hydrology Indicat	tors:							
			equired; check all	hat apply	()			Secondary	Indicators (two or more required)
•	ce Water (A1)				d Leaves	'B9)			-Stained Leaves (B9)(MLRA 1,2,4A,4B)
	Water Table (A2)				RA 1,2,4A,	. ,		·	ige Patterns (B10)
	ation (A3)		•	Crust (B		ana 40,			ason Water Table (C2)
	Marks (B1)			-	rtebrates (D12\			tion Visible on Aerial Imagery (C9)
	, ,	١				•			• ,
	ent Deposits (B2))	-	_	lfide Odor		D+- (C2)		orphic Position (D2)
	Deposits (B3)					_	ng Roots (C3)	· ·	w Aquitard (D3)
	Mat or Crust (B4)		·		Reduced Ir		(06)	· · ·	eutral Test (D5)
	eposits (B5)				Reduction				Ant Mounds (D6)(LRR A)
	ce Soil Cracks (B6)				ressed Pla		.RR A)	Frost-l	Heave Hummocks (D7)
Inund	ation Visible on A	erial Image	ery (B7)Oth	er (Explai	n in Rema	rks)			
Sparse	ely Vegetated Cor	ncave Surfa	ce (B8)						
	ervations:								
	/ater Present? No		Depth (inc	-					
	ole Present? <u>No</u>		Depth (in	•					
	n Present? <u>No</u> apillary fringe)	<u>0</u>	Depth (in	cnes):			Wetland Hyd	rology Pres	ent? No
		ream gaug	e, monitoring well	aerial ph	otos, prev	ious inspe			
		30		P.	-,		,, =======		
Remarks:									

Project/Site: La Center School District/NE Lockwood Cree Applicant/Owner: La Center School District State: WA Investigator(s): Kevin Grosz, Ryan Thiele Landform (hillslope, terrace, etc.): hillslope Local re Subregion (LRR): Northwest Forests & Coast (LRR A) Soil Map Unit Name: Gee silt loam NWI classification Are climatic/hydrologic conditions on the site typical for Are Vegetation, Soil, or Hydrology significantly Are Vegetation, Soil, or Hydrology naturally pro	Section, Townselief (concave, con Lat: n: <u>N/A</u> this time of year? disturbed?	nvex, none): <u>co</u> 45.86010680 ? <u>Yes</u> (if no, exp	<u>2, T4N, R1E</u> oncave Slo Long: <u>-122.6</u> olain in Remal Are "Normal	
SUMMARY OF FINDINGS – Attach site map showing	ng sampling poi	nt locations,	transects, ir	nportant features, etc.
Hydrophytic Vegetation Present? <u>Yes</u> Hydric Soil Present? <u>No</u>				
Hydric Soil Present? <u>No</u> Wetland Hydrology Present? <u>No</u>		Is the S	Sampled Area	within a Wetland? No
Remarks:				
VEGETATION – Use scientific names of plants.				
	Absolute %	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>10 meter</u>)	Cover	Species?	Status	Number of Dominant Species
1.				That Are OBL, FACW, or FAC: $\underline{2}$ (A)
2. 3.				Total Number of Dominant
3. 4.				Species Across All Strata: <u>2</u> (B)
Total Cover = <u>0</u>				<u>z</u> (b)
Sapling/Shrub Stratum (Plot size: 10 meter)				Percent of Dominant Species
1.				That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2.				Prevalence Index worksheet:
3.				Total % Cover of: Multiply by:
4.				OBL species $\underline{0}$ $\times 1 = \underline{0}$
5.				FACW species $\underline{0}$ x 2 = $\underline{0}$ FAC species $\underline{85}$ x 3 = $\underline{255}$
Total Cover = 0				FACU species $\frac{10}{10}$ x 4 = $\frac{40}{10}$
Herb Stratum (Plot size: 1 meter) 1. Schedonorus arundinaceus	60	Yes	FAC	UPL species $\underline{0}$ x 5 = $\underline{0}$
2. Holcus lanatus	<u>20</u>	Yes	FAC	Column Totals: <u>95</u> (A) <u>295</u> (B)
3. Anthoxanthum odoratum	<u>10</u>	No	FACU	
4. Agrostis capillaris	<u>5</u>	<u>No</u>	<u>FAC</u>	Prevalence Index = B/A = 3.11
5.				Hydrophytic Vegetation Indicators:
6. 7.				1 –Rapid Test for Hydrophytic Vegetation
8.				X 2 – Dominance Test >50%
9.				3 - Prevalence Index is ≤ 3.0¹
10.				4 - Morphological Adaptions ¹ (Provide supporting data in Remarks or on a separate sheet)
11.				5 – Wetland Non-Vascular Plants ¹
Total Cover = <u>95</u>				Problematic Hydrophytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size: 10 meter)				¹ Indicators of hydric soil and wetland hydrology
1.				must be present, unless disturbed or problematic.
2. Total Cover =0				
Total cover – <u>o</u>				
% Bare Ground in Herb Stratum: <u>5</u>				Hydrophytic Vegetation Present? Yes
Remarks:				

SOIL Sampling Point: <u>18</u>

	Mati	<u>rix</u>		Redox F	<u>Features</u>				
Depth	Color (moist)	% (Color (moist)	%	Type ¹	Loc ²	Texture		Remarks
(inches)	10VP 2/2	100		0			Silt Loam		
<u>0-16</u>	<u>10YR 3/2</u>	<u>100</u>		<u>0</u>			<u>Silt Loam</u>		
	ļ								
					ļ				
	ļ								
¹Type: C=	Concentration, D	=Depletion, R	M=Reduced Ma	atrix, CS=0	Covered or	r Coated S	and Grains. ² l	Location: Pl	L=Pore Lining, M=Matrix
Hydric So	il Indicators: (App	plicable to all	LRRs, unless ot	herwise r	noted.)			Indicato	rs for Problematic Hydric Soils ³ :
Histos	sol (A1)		Sa	ndy Redo	x (S5)			2 cr	m Muck (A10)
Histic	Epipedon (A2)		Stı	ripped Ma	atrix (S6)			Rec	l Parent Material (TF2)
Black	Histic (A3)		Lo	amy Muc	ky Mineral	l (F1) (exce	ept MLRA 1)	Ve	ry Shallow Dark Surface (TF12)
Hydro	gen Sulfide (A4)		Lo	amy Gley	ed Matrix	(F2)		Oth	ner (Explain in Remarks)
Deple	ted Below Dark S	urface (A11)	De	epleted M	atrix (F3)				
	Dark Surface (A12		Re	dox Dark	Surface (F	6)			ors of hydrophytic vegetation and
	Mucky Mineral (De	pleted Da	ark Surface	؛ (F7)			d hydrology must be present, unless
Sandy	Gleyed Matrix (S	4)	Re	dox Depr	essions (F8	3)		disturb	ed or problematic.
	e Layer (if presen	it):							
Type: Depth (in	ches): 0							Hydric	Soil Present? <u>No</u>
Remarks:									
							<u></u>		
HYDROLO									
	Hydrology Indicat ndicators (minimu		uired; check all	that apply	/)			Secondary	Indicators (two or more required)
Surfac	e Water (A1)		Wa	ter-Staine	ed Leaves ((B9)		Water	-Stained Leaves (B9)(MLRA 1,2,4A,4B)
	Vater Table (A2)				RA 1,2,4A,				age Patterns (B10)
Satura	ation (A3)			t Crust (B1					eason Water Table (C2)
Water	Marks (B1)		Aqı	uatic Inve	rtebrates ((B13)			ition Visible on Aerial Imagery (C9)
Sedim	ent Deposits (B2)	1	Нус	drogen Su	lfide Odor	(C1)		Geom	orphic Position (D2)
Drift D	Deposits (B3)		Oxi	dized Rhi:	zospheres	along Livi	ng Roots (C3)	Shallo	w Aquitard (D3)
Algal I	Mat or Crust (B4)		Pre	sence of I	Reduced Ir	on (C4)		FAC-N	eutral Test (D5)
Iron D	eposits (B5)		Rec	ent Iron F	Reduction	in Tilled So	oils (C6)	Raised	Ant Mounds (D6)(LRR A)
Surfac	e Soil Cracks (B6)		Stu	nted or St	tressed Pla	ants (D1)(L	.RR A)	Frost-l	Heave Hummocks (D7)
Inunda	ation Visible on A	erial Imagery	(B7)Oth	ner (Explai	in in Rema	ırks)			
Sparse	ely Vegetated Con	ncave Surface	(B8)						
Field Obse	ervations:						1		
Surface W	ater Present? No	<u>)</u>	Depth (inc	-					
	ole Present? <u>No</u>	_	Depth (inc						
Saturation		<u>)</u>	Depth (in	ches):			Wetland Hydr	ology Pres	ent? No
	apillary fringe) Recorded Data (st	ream gauge, i	 monitoring well	aerial ph	notos, prev	vious inspe			
D000	(1000,000,000,000,000,000,000,000,000,00	,	nomes	,	10100, p			nc.	
Remarks:									

APPENDIX B1

WETLAND RATING FORMS

RATING SUMMARY – Western Washington

Name of wetland (or ID #): N.E. LOCKW	7000 Creek Road	Date of site visit: 11/20/	/1/
Rated by Kevin Grosz	Trained by Ecology? <u>X</u> Y	esNo Date of training	n <u>g 12/22/</u> 15
HGM Class used for rating Depressiona	Wetland has multi	iple HGM classes?Y _	<u>X</u> _N
NOTE: Form is not complete with Source of base aerial photo/r	•	(figures can be combined	d).
OVERALL WETLAND CATEGORY _	(based on functions_X_	_ or special characteristi	ics)
1. Category of wetland based on	1 FUNCTIONS		
Category I – Total sc	core = 23 - 27	Coons for one	<u>.</u>
Category II – Total so	core = 20 - 22	Score for eac	:n ed
Category III – Total s	score = 16 - 19	on three	
X Category IV – Total s	score = 9 - 15	ratings (order of rational is not	ngs

FUNCTION		•	proving Hydrologic Habitat er Quality							
					Circle	the ap	prop	riate i	ratings	
Site Potential	Н	М	<u>L</u>	Н	М	<u>L</u>	Н	М	<u>L</u>	
Landscape Potential	Н	М	<u>L</u>	Н	М	<u>L</u>	<u>H</u>	М	L	
Value	<u>H</u>	М	L	Н	M	L	Н	М	Ī	TOTAL
Score Based on Ratings		5			4			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	CAT	EGORY
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		

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	Figure B1
Hydroperiods	D 1.4, H 1.2	Figure B2
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	Figure B2
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	Figure B1
Map of the contributing basin	D 4.3, D 5.3	Figure B4
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	Figure B5
. , , ,	D24 D22	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	Figure B13
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	Figure B14

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	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

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

Slope Wetlands

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

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.

q	uestions 1-7 apply, and	l go to Question 8.	
1.	Are the water levels in	the entire unit usually controll	ed by tides except during floods?
	<u>NO</u> – go to 2	YES – the we	tland class is Tidal Fringe – go to 1.1
1	1.1 Is the salinity of the	water during periods of annual	low flow below 0.5 ppt (parts per thousand)?
	If your wetland can b	inge it is an Estuarine wetland a	YES – Freshwater Tidal Fringe Il Fringe use the forms for Riverine wetlands. If it and is not scored. This method cannot be used to
2.	The entire wetland un	it is flat and precipitation is the	only source (>90%) of water to it. Groundwater
	and surface water run	off are NOT sources of water to	the unit.
	<u>NO</u> – 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.	The vegetated part plants on the surface	nd unit meet all of the following of the wetland is on the shores of ce at any time of the year) at leas open water area is deeper than	of a body of permanent open water (without any st 20 ac (8 ha) in size;
	<u>NO</u> – go to 4	YES – The wetland clas	ss is Lake Fringe (Lacustrine Fringe)
4.	The wetland is on aThe water flows the seeps. It may flow	nd unit meet all of the following a slope (<i>slope can be very gradue</i> arough the wetland in one direct subsurface, as sheetflow, or in a he wetland without being imp	al), ion (unidirectional) and usually comes from swale without distinct banks,
	<u>NO</u> – go to 5		YES – The wetland class is Slope
			retlands except occasionally in very small and

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).

Does the entire wetland unit meet all of the following criteria?
The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that
stream or river,
The overbank flooding occurs at least once every 2 years.

Wetland name or number A-S

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

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

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

NO – go to 7

YES – The wetland class is **Depressional**

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

NO - go to 8

YES – The wetland class is **Depressional**

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

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

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

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

DEPRESSIONAL AND FLATS WETLANDS Water Quality Functions - Indicators that the site functions to improve water quality				
D 1.0. Does the site have the potential to improve water quality?				
D 1.1. Characteristics of surface water outflows from the wetland:				
Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet).				
points = 3				
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet.				
points = 2				
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	2			
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0				
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes):	0			
Wetland has persistent, ungrazed, plants > 95% of area points = 5				
Wetland has persistent, ungrazed, plants > ½ of area points = 3				
Wetland has persistent, ungrazed plants $> \frac{1}{10}$ of area points = 1				
Wetland has persistent, ungrazed plants $< \frac{1}{10}$ of area points = 0	0			
D 1.4. Characteristics of seasonal ponding or inundation:				
This is the area that is ponded for at least 2 months. See description in manual.				
Area seasonally ponded is > ½ total area of wetland points = 4				
Area seasonally ponded is > ¼ total area of wetland points = 2				
Area seasonally ponded is < ¼ total area of wetland points = 0	2			
Total for D 1 Add the points in the boxes above	4			
Rating of Site Potential If score is: 12-16 = H 6-11 = M X 0-5 = L Record the rating on the first page				
D 2.0. Does the landscape have the potential to support the water quality function of the site?				
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0			
D 2.2. Is $> 10\%$ of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	0			
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	0			
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?				
Source Yes = 1 No = 0	0			
Total for D 2 Add the points in the boxes above	0			
Rating of Landscape Potential If score is: 3 or 4 = H 1 or 2 = M X 0 = L Record the rating on the fine	st page			
D 3.0. Is the water quality improvement provided by the site valuable to society?				
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	1			
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	1			
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in which the unit is found)? Yes = 2 No = 0	2			
Total for D 3 Add the points in the boxes above	4			

DEDDECCIONAL AND ELATE METIANDO			
DEPRESSIONAL AND FLATS WETLANDS			
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradat	ion		
D 4.0. Does the site have the potential to reduce flooding and erosion?			
D 4.1. Characteristics of surface water outflows from the wetland:			
Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4			
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outletpoints = 2			
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch points = 1	2		
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	2		
D 4.2. <u>Depth of storage during wet periods:</u> Estimate the height of ponding above the bottom of the outlet. For wetlands			
with no outlet, measure from the surface of permanent water or if dry, the deepest part.			
Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7			
Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3			
The wetland is a "headwater" wetland points = 3			
Wetland is a meadwater wetland Wetland is flat but has small depressions on the surface that trap water points = 1			
Marks of ponding less than 0.5 ft (6 in)	1		
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin			
contributing surface water to the wetland to the area of the wetland unit itself.			
The area of the basin is less than 10 times the area of the unit points = 5			
The area of the basin is 10 to 100 times the area of the unit points = 3			
The area of the basin is more than 100 times the area of the unit points = 0			
Entire wetland is in the Flats class points = 5	0		
Total for D 4 Add the points in the boxes above	3		
Rating of Site Potential If score is: 12-16 = H 6-11 = M X 0-5 = L Record the rating on the	first page		
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?	=		
D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	0		
D 5.2. Is $>10\%$ of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	0		
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at			
>1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0	0		
Total for D 5 Add the points in the boxes above	0		
Rating of Landscape Potential If score is: 3 = H 1 or 2 = M X 0 = L Record the rating on the	first page		
D 6.0. Are the hydrologic functions provided by the site valuable to society?	=		
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around			
the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.			
The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has			
damaged human or natural resources (e.g., houses or salmon redds):			
 Flooding occurs in a sub-basin that is immediately down-gradient of unit. 			
• Surface flooding problems are in a sub-basin farther down-gradient. points = 1			
Flooding from groundwater is an issue in the sub-basin. points = 1			
The existing or potential outflow from the wetland is so constrained by human or natural conditions that the			
water stored by the wetland cannot reach areas that flood. Explain why points = 0			
There are no problems with flooding downstream of the wetland. points = 0	1		
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?			
Yes = 2 No = 0			
Total for D.6.	0		

Rating of Value If score is: ___2-4 = H _ χ _1 = M ___0 = L

Record the rating on the first page

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 3 structures: points = 2 X Emergent 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) 0 that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). Permanently flooded or inundated 4 or more types present: points = 3 X Seasonally flooded or inundated 3 types present: points = 2 X 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 1 H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species points = 2 5 - 19 species points = 1 < 5 species points = 0 H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. None = 0 points Moderate = 2 points Low = 1 point All three diagrams in this row are **HIGH** = 3points 0

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)	1			
over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)	1			
Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree	1			
slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered	1			
where wood is exposed)				
At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are	1			
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	1			
strata)	0			
Total for H 1 Add the points in the boxes above	2			
Rating of Site Potential If score is:15-18 = H7-14 = MX0-6 = L	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).				
<u> </u>				
If total accessible habitat is:				
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3				
20-33% of 1 km Polygon points = 2				
10-19% of 1 km Polygon points = 1				
< 10% of 1 km Polygon points = 0	1			
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.				
Calculate: % undisturbed habitat 26 + [(% moderate and low intensity land uses)/2] 32 = 58 %				
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	1			
	3			
Undisturbed habitat < 10% of 1 km Polygon points = 0				
H 2.3. Land use intensity in 1 km Polygon: If	1			
> 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	4			
Rating of Landscape Potential If score is: \underline{X} 4-6 = H 1-3 = M< 1 = L Record the rating on the	ne 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? <i>Choose only the highest score</i>				
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: $_{\underline{}}$ 2 = H $_{\underline{}}$ 1 = M $_{\underline{}}$ X 0 = L

Record the rating on the first page

WDFW Priority Habitats

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

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

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

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Caka	
,, , , , , , , , , , , , , , , , , , ,	Category	
Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.		
SC 1.0. Estuarine wetlands		
Does the wetland meet the following criteria for Estuarine wetlands?		
— The dominant water regime is tidal,		
— Vegetated, and		
— With a salinity greater than 0.5 ppt Yes –Go to SC 1.1 No= Not an estuarine wetland		
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I No - Go to SC 1.2	Cat. I	
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?		
 — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i>, see page 25) — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un- 	Cat. I	
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. 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	Cat. I	
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		
SC 3.0. Bogs		
Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key</i>		
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.	Cat. I	
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?		

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? <i>If you answer YES you will still need to rate the wetland based on its functions.</i>	
 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
C 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	Cat. I
C 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).	Cat. II
 — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland is larger than ¹/10 ac (4350 ft²) 	
Yes = Category I No = Category II	
C 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 103Grayland-Westport: Lands west of SR 105	Cat I
Ocean Shores-Copalis: Lands west of SR 115 and SR 109	
Yes – Go to SC 6.1 No = not an interdunal wetland for rating	
C 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 C 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?	Cat. II
Yes = Category II No – Go to SC 6.3 C 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?	Cat. III
Yes = Category III No = Category IV	Cat. IV
Category of wetland based on Special Characteristics	

Wetland name or number <u>A-S</u>

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RATING SUMMARY – Western Washington

Name of wetland (or ID #): N.E. Lockwoo	од Стеек Коад	Date	of site visit: 12	<u>1/20</u> /17	
Rated by Kevin Grosz	_ Trained by Ecology? <u>_X</u>	<u>′</u> Yes	_No Date of tr	ainin <u>g 12/22/</u>	17
HGM Class used for rating Slope	Wetland has mu	ıltiple H0	GM classes?	Y <u>X</u> N	
NOTE: Form is not complete without Source of base aerial photo/ma		e d (figure	es can be comb	bined). —	
OVERALL WETLAND CATEGORY [III] (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

X Category III – Total score = 16 - 19

Category IV – Total score = 9 - 15

FUNCTION		mpro ater C	ving Quality	Н	ydro	logic		Habit	at	
					Circle	the ap	prop	riate r	atings	
Site Potential	Н	М	<u>L</u>	Н	М	<u>L</u>	Н	М	<u>L</u>	
Landscape Potential	Н	M	L	Н	M	L	<u>H</u>	М	L	
Value	<u>H</u>	М	L	Н	M	L	Н	М	Ē	TOTAL
Score Based on										4.6
Ratings		6			5			5		16

Score for each function based on three ratings (order of ratings is not *important)* 9 = H,H,H8 = H,H,M 7 = H,H,L 7 = H,M,M6 = H,M,L6 = M,M,M5 = H,L,L 5 = M,M,L4 = M,L,L3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CAT	EGORY
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		

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	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
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	Figure B1
Hydroperiods	H 1.2	Figure B2
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	Figure B3
Plant cover of dense, rigid trees, shrubs, and herbaceous plants	S 4.1	E: D3
(can be added to figure above)		Figure B3
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	Figure B1
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		Figure B6
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	Figure B13
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	Figure B14

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	v controlled by	v tides excei	ot during f	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 **B-S**

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

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

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

NO – go to 7

YES – The wetland class is **Depressional**

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

NO – go to 8

YES – The wetland class is **Depressional**

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

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

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

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

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					
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					
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					
Total for S 1 Add the points in the boxes above					
Rating of Site Potential If score is: 12 = H 6-11 = M X 0-5 = L Record the rating on R					

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	0			
Total for S 2 Add the points in the boxes above	1			

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? <i>Answer YES</i> 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: $\underline{\chi}$ 2-4 = H $\underline{\hspace{1cm}}$ 1 = M $\underline{\hspace{1cm}}$ 0 = L

Record the rating on the first page

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 for the description that best fits conditions in the wetland. Stems of plants should be thick 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 t	he 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: $\chi 1 = M$ ___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	t in damage to human or				
natural resources (e.g., houses or salmon redds) points = 2					
Surface flooding problems are in a sub-basin farther down-gradient points = 1					
No flooding problems anywhere downstream	points = 0	1			
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a	regional flood control plan?				
	Yes = 2 No = 0	0			
Total for S 6 Add th	e points in the boxes above	1			

Rating of Value If score is: ____2-4 = H __X __1 = M ____0 = L

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

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 3 structures: points = 2 _X_Emergent 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 Seasonally flooded or inundated 3 types present: points = 2 X 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 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species points = 2 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 Moderate = 2 points Low = 1 point All three diagrams in this row are **HIGH** = 3points

H 1.5. Special habitat features:					
Check the habitat features that are present in the wetland. <i>The number of the control of the co</i>					
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 overhang					
over a stream (or ditch) in, or contiguous with the wetland, for at lea					
Stable steep banks of fine material that might be used by beaver or r	= : =				
slope) OR signs of recent beaver activity are present (cut shrubs or to	rees that have not yet weathered				
where wood is exposed)					
At least ¼ ac of thin-stemmed persistent plants or woody branches a					
permanently or seasonally inundated (structures for egg-laying by o					
Invasive plants cover less than 25% of the wetland area in every strater strate)	turn of plants (see H 1.1 for list of	0			
Total for H 1	Add the points in the boxes above				
		1			
Rating of Site Potential If score is:15-18 = H7-14 = MX_0-6 = L	Record the rating on	the first page			
H 2.0. Does the landscape have the potential to support the habitat func	tions of the site?				
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).					
Calculate: % undisturbed habitat 0 + [(% moderate and low int	tensity land uses)/2] <u>30</u> = <u>30</u> %				
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	2			
< 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 int	tensity land uses)/2] <u>30</u> = <u>57</u> %				
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	pomes				
> 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 Rating of Landscape Potential If score is: X 4-6 = H1-3 = M<1 = L	Add the points in the boxes above Record the rating on the	5 ne first nage			
Training of Editoscope Fotential II Score 13. A 4-0 - 111-3 - 191 \ 1 - L	necora the rating on the	ic jii st paye			
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 po	olicies? 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 of the provides habitat for Threatened or Endangered species (any plant of the provides habitat for Threatened or Endangered species (any plant of the provides habitat for Threatened or Endangered species (any plant of the provides habitat for Threatened or Endangered species (any plant of the provides habitat for Threatened or Endangered species (any plant of the provides habitat for Threatened or Endangered species (any plant of the provides habitat for Threatened or Endangered species (any plant of the provides habitat for Threatened or Endangered species (any plant of the provides habitat for Threatened or Endangered species (any plant of the provides habitat for Threatened or Endangered species (any plant of the provides habitat for Threatened or Endangered species (any plant of the provides habitat for the provides habitat	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 region.	onal 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				
	·	0			
Site does not meet any of the criteria above points = 0					
Rating of Value If score is: $_{2} = H$ $_{1} = M$ X $0 = L$	Record the rating on	the first page			

WDFW Priority Habitats

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

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

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

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
	outegoz,
Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	
SC 1.0. Estuarine wetlands	
Does the wetland meet the following criteria for Estuarine wetlands?	
— The dominant water regime is tidal,	
— Vegetated, and	
— With a salinity greater than 0.5 ppt Yes —Go to SC 1.1 No = Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area	
Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I No - Go to SC 1.2	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less	
than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i> , see page 25)	Cat. I
— 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	Cat. II
contiguous freshwater wetlands. Yes = Category I No = Category 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	Cat. I
SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
Yes = Category INo = 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 No = Not a WHCV	
SC 3.0. Bogs	
Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key</i>	
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.	Cat. I
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	

SC 4.0. Forested Wetlands	
Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i>	
— 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	Cat. I
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 unmowed grassland.	
— The wetland is larger than $^{1}/_{10}$ ac (4350 ft ²) Yes = Category I No = Category 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 103Grayland-Westport: Lands west of SR 105	Cat I
— Ocean Shores-Copalis: Lands west of SR 115 and SR 109 — 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	Cat. II
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?	Cat. III
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. IV
Category of wetland based on Special Characteristics	
If you answered No for all types, enter "Not Applicable" on Summary Form	

Wetland name or number <u>B-S</u>

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RATING SUMMARY – Western Washington

Name of wetland (or ID #): N.E. Lockwoo	od Creek Road Dat	Date of site visit: <u>12/07</u> /2018				
Rated by Ryan Thiele	No Date of training <u>10/31/</u> 2018					
HGM Class used for rating Depressional	Wetland has multiple	HGM classes?Y _X_N				
NOTE: Form is not complete with a Source of base aerial photo/ma		•				
OVERALL WETLAND CATEGORY _	IV (based on functions X o	or special characteristics)				
1. Category of wetland based on F Category I – Total score		Score for each				
6	20 22	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2				

_____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		mpro ater (oving Quality	Н	Hydrologic			Habit		
					Circle	e the ap	propr	iate ro	atings	
Site Potential	Н	М	Ī	Н	М	<u>L</u>	Н	М	Ī	
Landscape Potential	Н	М	<u>L</u>	Н	М	<u>L</u>	<u>H</u>	М	L	
Value	<u>H</u>	М	L	Н	M	L	Н	М	Ē	TOTAL
Score Based on Ratings		5	•		4			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		

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	Figure B1
Hydroperiods	D 1.4, H 1.2	Figure B2
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	Figure B2
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	Figure B1
Map of the contributing basin	D 4.3, D 5.3	Figure B4
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	Figure B7
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	Figure B13
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	Figure B14

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	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
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	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

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

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

_	questions 1-7 apply, and go to Question 8.	es. In this case, identify which hydrologic criteria in
1.	1. Are the water levels in the entire unit usually	y controlled by tides except during floods?
	<u>NO</u> – go to 2	- the wetland class is Tidal Fringe - go to 1.1
	1.1 Is the salinity of the water during periods of	of annual low flow below 0.5 ppt (parts per thousand)?
		YES – Freshwater Tidal Fringe vater Tidal Fringe use the forms for Riverine wetlands. If it wetland and is not scored. This method cannot be used to
2.	The entire wetland unit is flat and precipitat and surface water runoff are NOT sources of	ion is the only source (>90%) of water to it. Groundwater water to the unit.
	NO – go to 3 If your wetland can be classified as a Flats we	YES – The wetland class is Flats tland, use the form for Depressional wetlands.
3.	3. Does the entire wetland unit meet all of theThe vegetated part of the wetland is on the plants on the surface at any time of the yeAt least 30% of the open water area is dee	e shores of a body of permanent open water (without any ar) at least 20 ac (8 ha) in size;
	<u>NO</u> – go to 4 YES – The we	etland class is Lake Fringe (Lacustrine Fringe)
4.	4. Does the entire wetland unit meet all of the The wetland is on a slope (<i>slope can be ve</i> The water flows through the wetland in or seeps. It may flow subsurface, as sheetflor The water leaves the wetland without be	ery gradual), one direction (unidirectional) and usually comes from w, or in a swale without distinct banks,
	<u>NO</u> – go to 5	YES – The wetland class is Slope
	•	type of wetlands except occasionally in very small and lepressions are usually <3 ft diameter and less than 1 ft

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

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

Wetland name or number <u>C-S</u>

NO - go to 6

YES – The wetland class is **Riverine NOTE**: The Riverine unit can contain depressions that are filled with water when the river is not flooding

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

YES – The wetland class is **Depressional**

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

YES – The wetland class is **Depressional**

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

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

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

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

DEPRESSIONAL AND FLATS WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland:	
Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3	l
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2	2
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0	0
D 1.3. <u>Characteristics and distribution of persistent plants</u> (Emergent, Scrub-shrub, and/or Forested Cowardin classes):	ı
Wetland has persistent, ungrazed, plants > 95% of area points = 5	ı
Wetland has persistent, ungrazed, plants > $\frac{1}{10}$ of area points = 3 Wetland has persistent, ungrazed plants > $\frac{1}{10}$ of area points = 1	0
Wetland has persistent, ungrazed plants $> \frac{1}{10}$ of area points = 1 Wetland has persistent, ungrazed plants $< \frac{1}{10}$ of area points = 0	ı
D 1.4. <u>Characteristics of seasonal ponding or inundation</u> : This is the area that is ponded for at least 2 months. See description in manual.	ı
Area seasonally ponded is > ½ total area of wetland points = 4	ı
Area seasonally ponded is > 1/2 total area of wetland Area seasonally ponded is > 1/4 total area of wetland points = 2	2
Area seasonally ponded is < 1/4 total area of wetland points = 0	_
Total for D 1 Add the points in the boxes above	4
· ·	
Rating of Site Potential If score is: 12-16 = H6-11 = MX_0-5 = L Record the rating on the first page	ge
D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0
D 2.2. Is $> 10\%$ of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	0
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source Yes = 1 No = 0	0
Total for D 2 Add the points in the boxes above	0
Rating of Landscape Potential If score is: 3 or 4 = H 1 or 2 = M X 0 = L Record the rating on the first	
D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	1
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in which the unit is found)? Yes = 2 No = 0	2
if there is a trivial for the basin in which the unit is journal: $1 + 10 = 0$ $1 + 10 = 0$ $1 + 10 = 0$	

DEPRESSIONAL AND FLATS WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradat	ion
D 4.0. Does the site have the potential to reduce flooding and erosion?	
D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outletpoints = 2 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	2
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part. Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 The wetland is a "headwater" wetland points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in) points = 0	1
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire wetland is in the Flats class	0
Total for D 4 Add the points in the boxes above	3
Rating of Site Potential If score is:12-16 = H6-11 = M \times 0-5 = L Record the rating on the	first page
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?	
D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	0
D 5.2. Is $>10\%$ of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	0
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0	0
Total for D 5 Add the points in the boxes above	0
Rating of Landscape Potential If score is: 3 = H 1 or 2 = M X 0 = L Record the rating on the	first page
D 6.0. Are the hydrologic functions provided by the site valuable to society?	
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met. The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): • Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2	
 Surface flooding problems are in a sub-basin farther down-gradient. Plooding from groundwater is an issue in the sub-basin. points = 1 	
The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. <i>Explain why</i> points = 0	1
There are no problems with flooding downstream of the wetland. points = 0	
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for D 6 Add the points in the boxes above	1

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

Record the rating on the first page

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 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 H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). Permanently flooded or inundated 4 or more types present: points = 3 Seasonally flooded or inundated 3 types present: points = 2 X 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 0 Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species points = 2 5 - 19 species points = 1 1 < 5 species points = 0 H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. None = 0 points Moderate = 2 points Low = 1 point All three diagrams 0 in this row are **HIGH** = 3points

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	1
strata)	
Total for H 1 Add the points in the boxes above	2
Rating of Site Potential If score is:15-18 = H7-14 = MX_0-6 = L	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 $0 + (\% \text{ moderate and low intensity land uses})/2]30 = 30 \%$	
If total accessible habitat is:	
> $\frac{1}{3}$ (33.3%) of 1 km Polygon points = 3	
20-33% of 1 km Polygon points = 2	
, -	_
10-19% of 1 km Polygon points = 1	2
< 10% of 1 km Polygon points = 0	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	
Calculate: % undisturbed habitat $\underline{27}$ + [(% moderate and low intensity land uses)/2] $\underline{30}$ = $\underline{57}$ %	
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	3
Undisturbed habitat < 10% of 1 km Polygon points = 0	
H 2.3. Land use intensity in 1 km Polygon: If	
> 50% of 1 km Polygon is high intensity land use points = (-2)	0
≤ 50% of 1 km Polygon is high intensity points = 0	
Total for H 2 Add the points in the boxes above	5
Rating of Landscape Potential If score is: X_4-6 = H1-3 = M<1 = L Record the rating on the	ne 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? <i>Choose only the highest score</i>	
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

Rating of Value If score is: ___2 = H ___1 = M __X_0 = L

Record the rating on the first page

points = 0

WDFW Priority Habitats

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

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

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

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS	
Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	
SC 1.0. Estuarine wetlands	
Does the wetland meet the following criteria for Estuarine wetlands?	
— The dominant water regime is tidal,	
— Vegetated, and	
— With a salinity greater than 0.5 ppt Yes –Go to SC 1.1 No= Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	
Yes = Category I No - Go to SC 1.2	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i> , see page 25)	Cat. I
— 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	Cat. II
contiguous freshwater wetlands. Yes = Category I No = Category 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	Cat. I
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	
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.	Cat. I
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	

Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i>	
 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)	Cat. I
Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon	
 5C 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- 	Cat. II
mowed grassland.	
— The wetland is larger than $\frac{1}{10}$ ac (4350 ft ²) Yes = Category I No = Category 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 103Grayland-Westport: Lands west of SR 105	Cat I
Ocean Shores-Copalis: Lands west of SR 115 and SR 109	
Yes – Go to SC 6.1 No = not an interdunal wetland for rating	
for the three aspects of function)? 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	Cat. II
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?	Cat. III
Yes = Category III No = Category IV	Cat. IV
Category of wetland based on Special Characteristics	

Wetland name or number <u>C-S</u>

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RATING SUMMARY – Western Washington

Name of wetland (or ID #): N.E. Lockwoo	d Creek Road Date of site visit: 12/06/18
Rated by Ryan Thiele	Trained by Ecology? X YesNo Date of training 10/31/18
HGM Class used for rating Slope	Wetland has multiple HGM classes? Y X N
NOTE: Form is not complete without Source of base aerial photo/map	ut the figures requested (figures can be combined).
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			Н	ydro	logic		Habit		
	Circle the appropriate ratings									
Site Potential	Н	М	<u>L</u>	Н	М	<u>L</u>	Н	М	<u>L</u>	
Landscape Potential	Н	М	<u>L</u>	Н	М	<u>L</u>	<u>H</u>	М	L	
Value	<u>H</u>	М	L	Н	M	L	Н	М	<u>L</u>	TOTAL
Score Based on Ratings		5			4			5		14

Score for each function based on three ratings (order of ratings is not *important)* 9 = H,H,H8 = H,H,M7 = H,H,L 7 = H, M, M6 = H,M,L6 = M,M,M5 = H,L,L5 = M,M,L4 = M, L, L3 = 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				

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	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
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	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
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	Figure B1
Hydroperiods	H 1.2	Figure B2
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	Figure B3
Plant cover of dense, rigid trees, shrubs, and herbaceous plants	S 4.1	Figure B3
(can be added to figure above)		rigule 65
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	Figure B1
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	F: D0
polygons for accessible habitat and undisturbed habitat		Figure B8
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	Figure B13
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	Figure B14

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.

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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-S

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

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

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

NO – go to 7

YES – The wetland class is **Depressional**

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

NO – go to 8

YES – The wetland class is **Depressional**

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

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

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

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

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	ļ
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 = $1 \text{ No} = 0$	0
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other sources Yes = 1 No = 0	0
Total for S 2 Add the points in the boxes above	0

Rating of Landscape Potential If score is: $1-2 = M \times 0 = L$

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? <i>Answer YES</i> 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: \underline{X} 2-4 = H $\underline{\hspace{1cm}}$ 1 = M $\underline{\hspace{1cm}}$ 0 = L

Record the rating on the first page

SLOPE WETLANDS		
Hydrologic Functions - Indicators that the site functions to reduce flooding and	stream eros	ion
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 of for the description that best fits conditions in the wetland. Stems of plants should be thick enough (in), or dense enough, to remain erect during surface flows.		
Dense, uncut, rigid plants cover > 90% of the area of the wetland All other conditions	points = 1 points = 0	0

Rating of Site Potential If score is: $_{1} = M \times _{2} 0 = L$

Record the rating on the first page

S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff? Yes = 1 No = 0	0
3011aCe (01101):	· ·

Rating of Landscape Potential If score is: $1 = M \times 0 = L$

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	1
No flooding problems anywhere downstream	points = 0	т
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a reg	gional flood control plan?	
	Yes = 2 No = 0	0
Total for S 6 Add the po	oints in the boxes above	1

Rating of Value If score is: 2-4 = H $X_1 = M$ 0 = L

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

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 3 structures: points = 2 _X_Emergent 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) 0 that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). Permanently flooded or inundated 4 or more types present: points = 3 X Seasonally flooded or inundated 3 types present: points = 2 X 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 1 H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species points = 2 5 - 19 species points = 1 1 < 5 species points = 0 H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. None = 0 points Moderate = 2 points Low = 1 point All three diagrams in this row are **HIGH** = 3points 0

	1
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	1
strata)	
Total for H 1 Add the points in the boxes above	2
Rating of Site Potential If score is:15-18 = H7-14 = MX_0-6 = L	n 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).	1
Calculate: % undisturbed habitat 0 + [(% moderate and low intensity land uses)/2] 28 = 28 %	
If total accessible habitat is:	
$> \frac{1}{3}$ (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 $\frac{32}{2}$ + [(% moderate and low intensity land uses)/2] 28 = $\frac{60}{2}$	
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)	
\leq 50% of 1 km Polygon is high intensity points = 0	0
Total for H 2 Add the points in the boxes above	5 th a first name
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 = H1 = MX _0 = L	n the first page

Wetland Rating System for Western WA: 2014 Update Rating Form – Effective January 1, 2015

WDFW Priority Habitats

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

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

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

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
	carogor,
Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	
SC 1.0. Estuarine wetlands	
Does the wetland meet the following criteria for Estuarine wetlands?	
— The dominant water regime is tidal,	
 Vegetated, and With a salinity greater than 0.5 ppt Yes –Go to SC 1.1 No= Not an estuarine wetland 	
· · · · · · · · · · · · · · · · · · ·	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I No - Go to SC 1.2	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less	
than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i> , see page 25)	Cat. I
— 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.	Cat. II
— The wetland has at least two of the following features: tidal channels, depressions with open water, or	Cat. II
contiguous freshwater wetlands. Yes = Category I No = Category 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 <u>No</u> – Go to SC 2.3	Cat. I
SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
Yes = Category I <u>No</u> = 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	
SC 3.0. Bogs	
Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key</i>	
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	
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.	Cat. I
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	

C 4.0. Forested Wetlands	
Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate</i>	
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
C 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)	Cat. I
during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)	Cat. I
Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon C 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).	Cat. II
— 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	
C 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	Cat I
 Ocean Shores-Copalis: Lands west of SR 115 and SR 109 	
Yes – Go to SC 6.1 No = not an interdunal wetland for rating	
C 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	Cat. II
for the three aspects of function)? Yes = Category I No – Go to SC 6.2	
C 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	Cat. II
C 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?	
	Cat. IV

Wetland name or number <u>D-S</u>

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RATING SUMMARY – Western Washington

Name of wetland (or ID #): N.E. Lockwood	d Creek Road	_ Date of site visit: <u>1</u> 2	<u>2/07</u> /2018
Rated by Ryan Thiele	_ Trained by Ecology? <u>_X</u> `	YesNo Date of tr	aining <u>10/31/</u> 2018
HGM Class used for rating Depressional	Wetland has mult	tiple HGM classes?	Y <u>X</u> N
NOTE: Form is not complete without Source of base aerial photo/map	-	(figures can be comb	bined).
OVERALL WETLAND CATEGORY <u>IV</u>	'_ (based on functions <u>x</u>	_ or special characte	ristics)
1. Category of wetland based on FU	JNCTIONS		

Category I – Total score = 23 - 27 Category II - Total score = 20 - 22 Category III – Total score = 16 - 19 Category IV – Total score = 9 - 15

FUNCTION		mpro ater C	ving Quality	Н	ydro	logic		Habi	tat	
					Circle	the ap	prop	riate i	ratings	
Site Potential	Н	М	<u>L</u>	Н	М	<u>L</u>	Н	М	<u>L</u>	
Landscape Potential	Н	М	<u>L</u>	Н	М	<u>L</u>	<u>H</u>	М	L	
Value	<u>H</u>	М	L	Н	M	L	Н	М	Ē	TOTAL
Score Based on Ratings		5			4			5		14

Score for each function based on three ratings (order of ratings is not *important)* 9 = H,H,H8 = H,H,M7 = H,H,L 7 = H, M, M6 = H,M,L 6 = M,M,M5 = H,L,L 5 = M,M,L4 = M, L, L3 = 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		

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	Figure B1
Hydroperiods	D 1.4, H 1.2	Figure B2
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	Figure B2
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	Figure B1
Map of the contributing basin	D 4.3, D 5.3	Figure B4
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	Figure B9
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	Figure B13
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	Figure B14

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	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
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	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

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

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.	sses. In this ease, identity which hydrologic effectia in
1.	Are the water levels in the entire unit usua	ally controlled by tides except during floods?
	<u>NO</u> – go to 2	ES – the wetland class is Tidal Fringe – go to 1.1
1	1.1 Is the salinity of the water during period	ls of annual low flow below 0.5 ppt (parts per thousand)?
		e) YES – Freshwater Tidal Fringe shwater Tidal Fringe use the forms for Riverine wetlands. If it ne wetland and is not scored. This method cannot be used to
2.	The entire wetland unit is flat and precipit	tation is the only source (> 90%) of water to it. Groundwater
	and surface water runoff are NOT sources	of water to the unit.
	<u>NO</u> – 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 theThe vegetated part of the wetland is on plants on the surface at any time of theAt least 30% of the open water area is o	the shores of a body of permanent open water (without any year) at least 20 ac (8 ha) in size;
	<u>NO</u> – go to 4 YES – The	wetland class is Lake Fringe (Lacustrine Fringe)
4.		n one direction (unidirectional) and usually comes from flow, or in a swale without distinct banks,
	<u>NO</u> – go to 5	YES – The wetland class is Slope
		ese type of wetlands except occasionally in very small and s (depressions are usually <3 ft diameter and less than 1 ft
5.	Does the entire wetland unit meet all of the	he following criteria?

5

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.

NO - go to 6

YES – The wetland class is **Riverine**

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

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

NO - go to 7

YES – The wetland class is **Depressional**

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

NO - go to 8

YES – The wetland class is **Depressional**

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

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

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

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

DEPRESSIONAL AND FLATS WETLANDS Water Quality Functions - Indicators that the site functions to improve water quality	
D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland:	
Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet).	
points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet.	
points = 2 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1	2
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes):	
Wetland has persistent, ungrazed, plants > 95% of area points = 5	
Wetland has persistent, ungrazed, plants > ½ of area points = 3	
Wetland has persistent, ungrazed plants $> \frac{1}{10}$ of area points = 1	0
Wetland has persistent, ungrazed plants $<^1/_{10}$ of area points = 0	
D 1.4. Characteristics of seasonal ponding or inundation:	
This is the area that is ponded for at least 2 months. See description in manual.	
Area seasonally ponded is > ½ total area of wetland points = 4	
Area seasonally ponded is > ¼ total area of wetland points = 2	2
Area seasonally ponded is < ¼ total area of wetland points = 0	
Total for D 1 Add the points in the boxes above	4
Rating of Site Potential If score is: 12-16 = H 6-11 = M X 0-5 = L Record the rating on the first pa	ge
D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0
D 2.2. Is $> 10\%$ of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	0
D 2.3. Are there septic systems within 250 ft of the wetland?	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?	0
Source Yes = 1 No = 0	
Total for D 2 Add the points in the boxes above	0
Rating of Landscape Potential If score is:3 or 4 = H1 or 2 = MX_0 = LRecord the rating on the fin	st page
D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	1
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in which the unit is found)? Yes = 2 No = 0	2
Total for D 3 Add the points in the boxes above	4
Rating of Value If score is: X 2-4 = H1 = M0 = L Record the rating on the first page	<u> </u>

DEPRESSIONAL AND FLATS WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradat	ion
D 4.0. Does the site have the potential to reduce flooding and erosion?	
D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outletpoints = 2 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	2
D 4.2. <u>Depth of storage during wet periods:</u> <i>Estimate the height of ponding above the bottom of the outlet. For wetlands</i>	
with no outlet, measure from the surface of permanent water or if dry, the deepest part. Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 The wetland is a "headwater" wetland points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in) points = 0	1
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin	
contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of the unit The area of the basin is 10 to 100 times the area of the unit The area of the basin is more than 100 times the area of the unit Entire wetland is in the Flats class Estimate the ratio of the distribution of the unit is points = 5 The area of the basin is 10 to 100 times the area of the unit Entire wetland is in the Flats class	0
Total for D 4 Add the points in the boxes above	3
Rating of Site Potential If score is:12-16 = H6-11 = M $\times \times $	first page
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?	
D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	0
D 5.2. Is $>10\%$ of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	0
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0	0
Total for D 5 Add the points in the boxes above	0
Rating of Landscape Potential If score is: 3 = H 1 or 2 = M X 0 = L Record the rating on the	first page
D 6.0. Are the hydrologic functions provided by the site valuable to society?	
 D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met. The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): Flooding occurs in a sub-basin that is immediately down-gradient of unit. 	
 Flooding occurs in a sub-basin that is immediately down-gradient of unit. Surface flooding problems are in a sub-basin farther down-gradient. Flooding from groundwater is an issue in the sub-basin. 	
The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. <i>Explain why</i> points = 0	1
There are no problems with flooding downstream of the wetland. points = 0	
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for D.6. Add the points in the hoxes above	1

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

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 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 H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). Permanently flooded or inundated 4 or more types present: points = 3 Seasonally flooded or inundated 3 types present: points = 2 X 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 0 Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species points = 2 5 - 19 species points = 1 1 < 5 species points = 0 H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. None = 0 points Moderate = 2 points Low = 1 point All three diagrams 0 in this row are **HIGH** = 3points

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)	1			
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	1			
slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered	1			
where wood is exposed)	1			
At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are	1			
permanently or seasonally inundated (structures for egg-laying by amphibians)	1			
X Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of	1			
strata)	ı			
Total for H 1 Add the points in the boxes above	2			
Rating of Site Potential If score is:15-18 = H7-14 = MX_0-6 = L	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 <i>only habitat that directly abuts wetland unit</i>).				
Calculate: % undisturbed habitat 0 + [(% moderate and low intensity land uses)/2] 29.5 = 29.5 %	1			
If total accessible habitat is:	1			
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3	1			
20-33% of 1 km Polygon points = 2	1			
10-19% of 1 km Polygon points = 1	I			
< 10% of 1 km Polygon points = 0	2			
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	1			
Calculate: % undisturbed habitat $31 + [(\% \text{ moderate and low intensity land uses})/2] 29.5 = 60.5 \%$	1			
Undisturbed habitat > 50% of Polygon points = 3				
Undisturbed habitat 10-50% and in 1-3 patches points = 2	1			
Undisturbed habitat 10-50% and > 3 patches points = 1	3			
Undisturbed habitat < 10% of 1 km Polygon points = 0	,			
H 2.3. Land use intensity in 1 km Polygon: If				
> 50% of 1 km Polygon is high intensity land use points = (- 2)				
\leq 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	ie jirst 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 has 3 of 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)				
	1			
— 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 post page) within 100 m				
Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1	0			
Site does not meet any of the criteria above				

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

WDFW Priority Habitats

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

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

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

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS	
Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	
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- 	Cat. I
mowed grassland.	Cat. II
— 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. 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	Cat. I
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	
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.	Cat. I
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	
105 - 15 th Catalogory 1 205 100 a 105	

Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i>	
 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)	Cat. I
Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon	
 5C 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- 	Cat. II
mowed grassland.	
— The wetland is larger than $\frac{1}{10}$ ac (4350 ft ²) Yes = Category I No = Category 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 103Grayland-Westport: Lands west of SR 105	Cat I
Ocean Shores-Copalis: Lands west of SR 115 and SR 109	
Yes – Go to SC 6.1 No = not an interdunal wetland for rating	
for the three aspects of function)? 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	Cat. II
C 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 $C 6.3$. 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?	Cat. III
Yes = Category III No = Category IV	Cat. IV
Category of wetland based on Special Characteristics	

Wetland name or number <u>E-S</u>

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RATING SUMMARY – Western Washington

Name of wetland (or ID #):NE Lockwood Rated by Alex Sherman	Creek Rd Wetland D-N Date of site visit: 9/20/18 Trained by Ecology? Yes No Date of training 9/18/17
	Trained by Ecology?^_ YesNo Date of training 37.237.27
HGM Class used for rating Slope	Wetland has multiple HGM classes?Y _xN
•	nout the figures requested (figures can be combined). pap ArcGIS World Imagery Basemap
OVERALL WETLAND CATEGORY _	(based on functionsX_ 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 ap	prop	riate r	atings	
Site Potential	Н	М	<u>L</u>	Н	М	<u>L</u>	Н	М	<u>L</u>	
Landscape Potential	Н	М	<u>L</u>	Н	М	<u>L</u>	<u>H</u>	М	L	
Value	<u>H</u>	М	L	Н	M	L	Н	М	<u>L</u>	TOTAL
Score Based on Ratings	!	5			4			5		14

Score for each function based on three ratings (order of ratings is not *important)* 9 = H,H,H8 = H,H,M7 = H,H,L 7 = H,M,M6 = H,M,L6 = M,M,M5 = H,L,L 5 = M,M,L4 = M, L, L3 = 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 A	pplicable

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	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
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	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
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	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
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	В3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants	S 4.1	В3	
(can be added to figure above)		ВЗ	
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	H 2.1, H 2.2, H 2.3	B10	
polygons for accessible habitat and undisturbed habitat		B10	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	B13	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	B14	

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,
 - 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.

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 Slope is > 1%-2% Slope is > 2%-5% points = 1	3
Slope is greater than 5% points = 0 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 Dense, uncut, herbaceous plants > ½ of area Dense, woody, plants > ½ of area Dense, uncut, herbaceous plants > ¼ of area Dense, uncut, herbaceous plants > ¼ of area 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	0
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other sources Yes = 1 No = 0	0
Total for S 2 Add the points in the boxes above	0

Rating of Landscape Potential If score is: $1-2 = M \times 0 = L$

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? <i>Answer YES</i> if there is a TMDL for the basin in which unit is found. Yes = 2 No = 0	
Total for S 3 Add the points in the boxes above	4

Rating of Value If score is: $X_2-4 = H_1 = 0 = L$

SLOPE WETLANDS		
Hydrologic Functions - Indicators that the site functions to reduce flooding and	stream eros	sion
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 All other conditions	points = 1 points = 0	0

Rating of Site Potential If score is: $_{1} = M \times _{0} = L$

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 \times __0 = L

Record the rating on the first page

S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems:	
The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) points = 2 Surface flooding problems are in a sub-basin farther down-gradient points = 1 No flooding problems anywhere downstream points = 0	1
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	
Total for S 6 Add the points in the boxes above	1

Rating of Value If score is: ___2-4 = H __X _1 = M ___0 = L

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

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) 0 that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). 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 0 Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species points = 2 0 5 - 19 species points = 1 < 5 species points = 0 H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. None = 0 points Moderate = 2 points Low = 1 point All three diagrams in this row are **HIGH** = 3points 0

wedand name of number · ·	
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	1
strata)	1
Total for H 1 Add the points in the boxes above	1
Rating of Site Potential If score is:15-18 = H7-14 = MX0-6 = L	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 $\frac{13}{13}$ + [(% moderate and low intensity land uses)/2] $\frac{13}{13}$ = $\frac{26}{13}$ %	
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	2
< 10% of 1 km Polygon points = 0	2
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	
Calculate: % undisturbed habitat $\frac{27}{51}$ + [(% moderate and low intensity land uses)/2] $\frac{24}{51}$ = $\frac{51}{51}$ %	
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	3
Undisturbed habitat < 10% of 1 km Polygon points = 0	
H 2.3. Land use intensity in 1 km Polygon: If	
> 50% of 1 km Polygon is high intensity land use points = (-2)	0
≤ 50% of 1 km Polygon is high intensity points = 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	ie jirst 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 habitate (listed on post page) within 100 m	
Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1	0
Site does not meet any of the criteria above points = 0	

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

WDFW Priority Habitats

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

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

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

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
., ., ., ., ., ., ., ., ., ., ., ., ., .	Carogory
Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	
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	Cati
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i> , see page 25) — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-	Cat. I
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. 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	Cat. I
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	
Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the ke 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 o more of the first 32 in of the soil profile? 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? NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion be 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

SC 4.0. Forested Wetlands	
Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i>	
 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)	Cat. I
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).	Cat. II
— 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	
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	Cat I
 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	Cat. II
for the three aspects of function)? Yes = Category I No – Go to SC 6.2	
C 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	Cat. III
CC 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	
Yes = Category III No = Category IV	Cat. IV
Category of wetland based on Special Characteristics	NA
If you answered No for all types, enter "Not Applicable" on Summary Form	INA

RATING SUMMARY – Western Washington

Name of Wetland (or ID #):NE Lockwood C	reek Rd/North - Wetland E-NDate of site visit: 9/20/18
Rated by Alex Sherman	_ Trained by Ecology? $ imes$ YesNo Date of training $ imes$ 9/18/17
HGM Class used for rating Slope	Wetland has multiple HGM classes?Yx_N
NOTE: Form is not complete witho Source of base aerial photo/map	ut the figures requested (figures can be combined). ArcGIS World Imagery
OVERALL WETLAND CATEGORY	(based on functions X or special characteristics)
1. Category of wetland based on FL	JNCTIONS

_____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		mpro ater O	ving (uality	ŀ	lydro	logic		Habitat		
					Circle	the ap	prop	riate i	ratings	
Site Potential	Н	М	<u>L</u>	Н	М	<u>L</u>	Н	М	<u>L</u>	
Landscape Potential	Н	M	L	Н	М	<u>L</u>	<u>H</u>	М	L	
Value	<u>H</u>	М	L	Н	M	L	Н	М	Ī	TOTAL
Score Based on Ratings		6			4			5		15

Score for each function based on three ratings (order of ratings is not *important)* 9 = H,H,H8 = H,H,M7 = H,H,L 7 = H,M,M6 = H,M,L6 = M,M,M5 = H,L,L5 = M,M,L4 = M, L, L3 = 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	

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	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
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	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
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	В3
Plant cover of dense , rigid trees, shrubs, and herbaceous plants	S 4.1	В3
(can be added to figure above)		
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	H 2.1, H 2.2, H 2.3	B11
polygons for accessible habitat and undisturbed habitat		PII
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	B13
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	B14

HGM Classification of Wetlands in Western Washington

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

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

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

NO - go to 2

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

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

NO - Saltwater Tidal Fringe (Estuarine)

YES - Freshwater Tidal Fringe

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

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

NO - go to 3

YES – The wetland class is **Flats**

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

- 3. Does the entire wetland unit **meet all** of the following criteria?
 - __The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;
 - __At least 30% of the open water area is deeper than 6.6 ft (2 m).

NO – go to 4

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

- 4. Does the entire wetland unit **meet all** of the following criteria?
 - The wetland is on a slope (*slope can be very gradual*),
 - The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,
 - The water leaves the wetland without being impounded.

NO - go to 5

YES - The wetland class is **Slope**

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

- 5. Does the entire wetland unit **meet all** of the following criteria?
 - The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
 - ___The overbank flooding occurs at least once every 2 years.

SLOPE WETLANDS Water Quality Functions - Indicators that the site functions to improve w	ater 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 100 ft of horizontal distance)	n for every	
Slope is 1% or less	points = 3	
Slope is > 1%-2%	points = 2	
Slope is > 2%-5%	points = 1	3
Slope is greater than 5%	points = 0	•
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions): Ye	s = 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 r	means you	
have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plar than 6 in.	nts are higher	
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 > 1/4 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 I	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?	1
Yes = 1 No = 0	
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1?	1
Other sources oil, heavy metals Yes = 1 No = 0	
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? <i>Answer YES</i> 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

SLOPE WETLANDS		
Hydrologic Functions - Indicators that the site functions to reduce floodin	g and stream eros	sion
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 for the description that best fits conditions in the wetland. Stems of plants should be thick en 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: $_{1} = M \times _{0} = L$

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	1
surface runoff? Yes = 1 No = 0	

Rating of Landscape Potential If score is: $X_1 = M_2 = 0$

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) Surface flooding problems are in a sub-basin farther down-gradient No flooding problems anywhere downstream points = 0	1
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for S 6 Add the points in the boxes above	1

Rating of Value If score is: ____2-4 = H ___X __1 = M ____0 = L

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

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: 1 The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). 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 0 Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species points = 2 5 - 19 species points = 1 1 < 5 species points = 0 H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. None = 0 points Moderate = 2 points Low = 1 point All three diagrams in this row 1 are **HIGH** = 3points

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 = H7-14 = MX0-6 = L	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 $12 + [(\% \text{ moderate and low intensity land uses})/2] 13 = 25 \%$	
If total accessible habitat is:	
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3	
20-33% of 1 km Polygon points = 2	2
10-19% of 1 km Polygon points = 1	2
< 10% of 1 km Polygon points = 0	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	
Calculate: % undisturbed habitat $\frac{25}{2}$ + [(% moderate and low intensity land uses)/2] $\frac{25}{2}$ = $\frac{50}{2}$ %	
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)	0
≤ 50% of 1 km Polygon is high intensity points = 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	ne 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 has 1 of 2 priority habitats (histed off flext page) within 100 fit	0
Site does not meet any of the criteria above points = 0	

Rating of Value If score is: ___2 = H ____1 = M __X_0 = L

WDFW Priority Habitats

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

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

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

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS	
Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	
SC 1.0. Estuarine wetlands	
Does the wetland meet the following criteria for Estuarine wetlands?	
— The dominant water regime is tidal,	
— Vegetated, and	
— With a salinity greater than 0.5 ppt Yes –Go to SC 1.1 No= Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I No - Go to SC 1.2	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
 The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i>, see page 25) At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un- 	Cat. I
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. 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	Cat. I
SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
Yes = Category INo = 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 No = Not a WHCV	
SC 3.0. Bogs	
Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below.</i> 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.	Cat. I
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	

SC 4.0. Forested Wetlands	
Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i>	
 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)	Cat. I
Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon	
C 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).	Cat. II
— 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	
C 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	Cat I
 Ocean Shores-Copalis: Lands west of SR 115 and SR 109 	
Yes – Go to SC 6.1 No = not an interdunal wetland for rating	
C 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	Cat. II
for the three aspects of function)? Yes = Category I No – Go to SC 6.2	
C 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	Cat. III
IC 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	
res – Category III NO – Category IV	Cat. IV
Category of wetland based on Special Characteristics	NA
If you answered No for all types, enter "Not Applicable" on Summary Form	INA

RATING SUMMARY – Western Washington

` · · · ·	d Creek Rd/North - Wetland F-N Date of site visit: 9/20/18
Rated by Alex Sherman	Trained by Ecology?x_ YesNo Date of training 9/18/17
HGM Class used for rating Slope	Wetland has multiple HGM classes?Y _xN
NOTE: Form is not complete wit Source of base aerial photo/r	thout the figures requested (figures can be combined). mapArcMap World Imagery
OVERALL WETLAND CATEGORY	(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
__X __Category III - Total score = 16 - 19
____Category IV - Total score = 9 - 15

FUNCTION		mpro ater C	ving Quality	ŀ	lydro	logic		Habi	tat	
					Circle	the ap	prop	riate i	ratings	
Site Potential	Н	М	<u>L</u>	Н	М	<u>L</u>	Н	М	<u>L</u>	
Landscape Potential	Н	M	L	Н	M	L	<u>H</u>	М	L	
Value	<u>H</u>	М	L	Н	M	L	Н	М	<u>L</u>	TOTAL
Score Based on Ratings		6			5			5		16

Score for each function based on three ratings (order of ratings is not *important)* 9 = H,H,H8 = H, H, M7 = H,H,L 7 = H,M,M6 = H,M,L6 = M,M,M5 = H,L,L 5 = M,M,L4 = M, L, L3 = 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	

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	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
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	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
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	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
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	В3
Plant cover of dense, rigid trees, shrubs, and herbaceous plants	S 4.1	В3
(can be added to figure above)		ВЗ
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	H 2.1, H 2.2, H 2.3	B12
polygons for accessible habitat and undisturbed habitat		DIZ
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	B13
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	B14

HGM Classification of Wetlands in Western Washington

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

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

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

NO - go to 2

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

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

NO - Saltwater Tidal Fringe (Estuarine)

YES - Freshwater Tidal Fringe

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

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

NO - go to 3

YES - The wetland class is Flats

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

- 3. Does the entire wetland unit **meet all** of the following criteria?
 - __The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;
 - __At least 30% of the open water area is deeper than 6.6 ft (2 m).

NO – go to 4

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

- 4. Does the entire wetland unit **meet all** of the following criteria?
 - _____The wetland is on a slope (*slope can be very gradual*),
 - The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,
 - The water leaves the wetland without being impounded.

NO – go to 5

YES - The wetland class is **Slope**

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

- 5. Does the entire wetland unit **meet all** of the following criteria?
 - The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
 - ___The overbank flooding occurs at least once every 2 years.

SLOPE WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water qua	lity
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 3
Slope is greater than 5% points =	
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 hig 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} 1
Does not meet any of the criteria above for plants points =	= 0
Total for S 1 Add the points in the boxes abo	ve 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	
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? <i>Answer YES</i> 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

SLOPE WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream en	osion
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: $_{1} = M \times _{0} = L$

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: $X_1 = M_2 = 0$

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) Surface flooding problems are in a sub-basin farther down-gradient No flooding problems anywhere downstream points = 0	1
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for S 6 Add the points in the boxes above	1

Rating of Value If score is: ___2-4 = H __X _1 = M ___0 = L

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

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 3 structures: points = 2 ___Emergent 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) 1 that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). 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 0 Lake Fringe wetland 2 points Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species points = 2 5 - 19 species points = 1 1 < 5 species points = 0 H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. None = 0 points Moderate = 2 points Low = 1 point All three diagrams in this row 1 are **HIGH** = 3points

I 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).
Large downed woody debris within the wetland (> 4 in diameter and 6 ft long)
tanger, downed, woody desire within the wedding (* 1 in diameter and 0 it 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)
\underline{x} Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of
strata)
otal for H 1 Add the points in the boxes above 4
Rating of Site Potential If score is: 15-18 = H7-14 = M \underline{x} 0-6 = L Record the rating on the first page
I 2.0. Does the landscape have the potential to support the habitat functions of the site?
I 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).
Calculate: % undisturbed habitat $\frac{13}{13}$ + [(% moderate and low intensity land uses)/2] $\frac{13}{13}$ = $\frac{26}{13}$ %
If total accessible habitat is:
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3
20-33% of 1 km Polygon points = 2 2 10-19% of 1 km Polygon points = 1
< 10% of 1 km Polygon points = 0
1 2.2. Undisturbed habitat in 1 km Polygon around the wetland.
Calculate: % undisturbed habitat $\underline{26}$ + [(% moderate and low intensity land uses)/2] $\underline{24}$ = $\underline{50}$ %
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
I 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
otal 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
1 3.0. Is the habitat provided by the site valuable to society?
I 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

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

Wetland name or number F-N

WDFW Priority Habitats

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

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

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

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
wedana type	dategory
Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	
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	Cat. I
than 10% cover of non-native plant species. (If non-native species are Spartina, see page 25)	Cat. I
— 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.	Cat. II
— 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	
Contiguous freshwater wetianus.	
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	Cat. I
Conservation Value? Yes – Go to SC 2.2 No – Go to SC 2.3	Cat. I
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	
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	
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	Cot
plant species in Table 4 are present, the wetland is a bog.	Cat. I
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	
165 - 15 a Category I bug 140 - 15 Hut a bug	

SC 4.0. Forested Wetlands				
Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i>				
— 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				
C 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)	Cat. I			
Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon				
C 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).	Cat. II			
— 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				
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	Cat I			
— 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	Cat. II			
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?	Cat. III			
Yes = Category II No – Go to 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?	Cat. III			
Yes = Category III No = Category IV	Cat. IV			
Category of wetland based on Special Characteristics	NΛ			
If you answered No for all types, enter "Not Applicable" on Summary Form	NA			

APPENDIX B2

WETLAND RATING FIGURES

FIGURE B1 - COWARDIN VEGETATION & BOUNDARY AREA

FIGURE B2 – HYDROPERIOD & OUTLETS

FIGURE B3 – PLANT COVER

FIGURE B4 – CONTRIBUTING BASINS

FIGURE B5 – LAND USE INTESITY MAP: WETLAND A-S

FIGURE B6 - LAND USE INTESITY MAP: WETLAND B-S

FIGURE B7 – LAND USE INTESITY MAP: WETLAND C-S

FIGURE B8 – LAND USE INTESITY MAP: WETLAND D-S

FIGURE B9 – LAND USE INTESITY MAP: WETLAND E-S

FIGURE B10 – LAND USE INTESITY MAP: WETLAND D-N

FIGURE B11 – LAND USE INTESITY MAP: WETLAND E-N

FIGURE B12 – LAND USE INTESITY MAP: WETLAND F-N FIGURE B13 – 303(d) WATER QUALITY ASSESSMENT

FIGURE B14 – LIST OF TMDLs IN PROJECT WATERSHED



La Center School District 725 Northeast Highland Avenue La Center, WA 98629

PURPOSE: Revised Wetland Delineation & Assessment

Cowardin Vegetation Map La Center Middle School La Center, Washington



PROPOSED ACTIVITIES IN:

East Fork of the Lewis River

LEGAL: SE & NE 1/4s of Section 02, T4N,

R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: October 29, 2019



La Center School District 725 Northeast Highland Avenue La Center, WA 98629

PURPOSE: Revised Wetland Delineation & Assessment

Hydroperiod Map La Center Middle School La Center, Washington



PROPOSED ACTIVITIES IN:

East Fork of the Lewis River

LEGAL: SE & NE 1/4s of Section 02, T4N,

R1E, W. M.
NEAR: La Center, Washington COUNTY: Clark County DATE: October 29, 2019

Figure B2

222 E. Evergreen Blvd., Vancouver, WA 986bu ph: 360-693-4555 fax: 360-699-6242



La Center School District 725 Northeast Highland Avenue La Center, WA 98629

PURPOSE: Revised Wetland Delineation & Assessment

Plant Cover La Center Middle School La Center, Washington



PROPOSED ACTIVITIES IN:

East Fork of the Lewis River LEGAL: SE & NE 1/4s of Section 02, T4N,

R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: October 29, 2019



La Center School District 725 Northeast Highland Avenue La Center, WA 98629

PURPOSE: Revised Wetland Delineation & Assessment

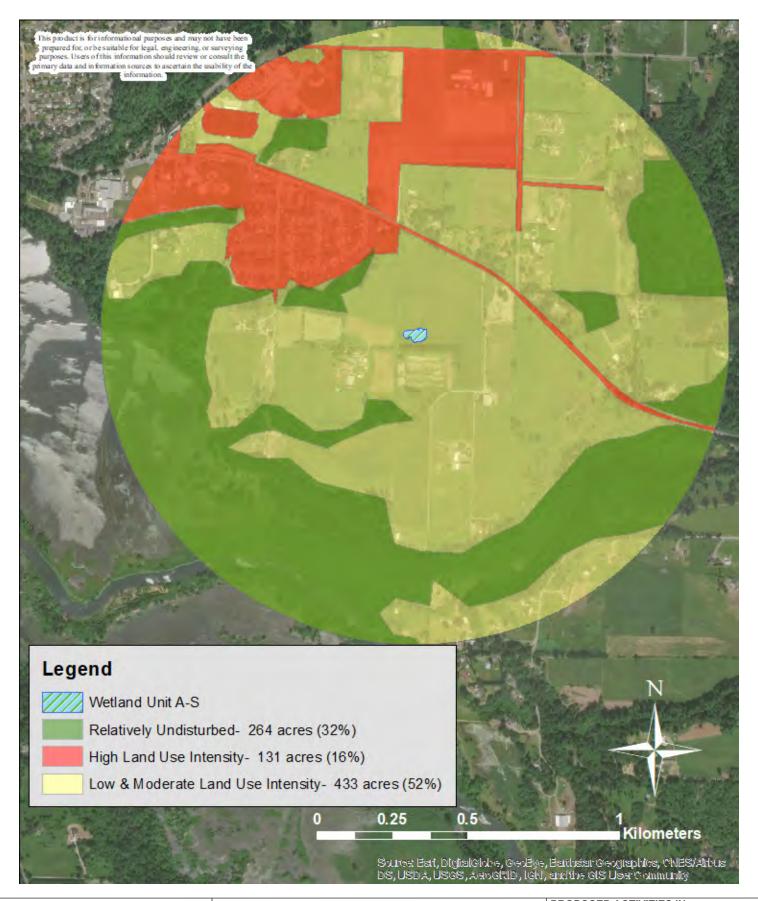
Contributing Basins La Center Middle School La Center, Washington



PROPOSED ACTIVITIES IN:

East Fork of the Lewis River
LEGAL: SE & NE 1/4s of Section 02, T4N,

R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: October 29, 2019



La Center School District 725 Northeast Highland Avenue La Center, WA 98629

PURPOSE: Revised Wetland Delineation & Assessment

Wetland A-S Land-Use Intensity La Center Middle School La Center, Washington



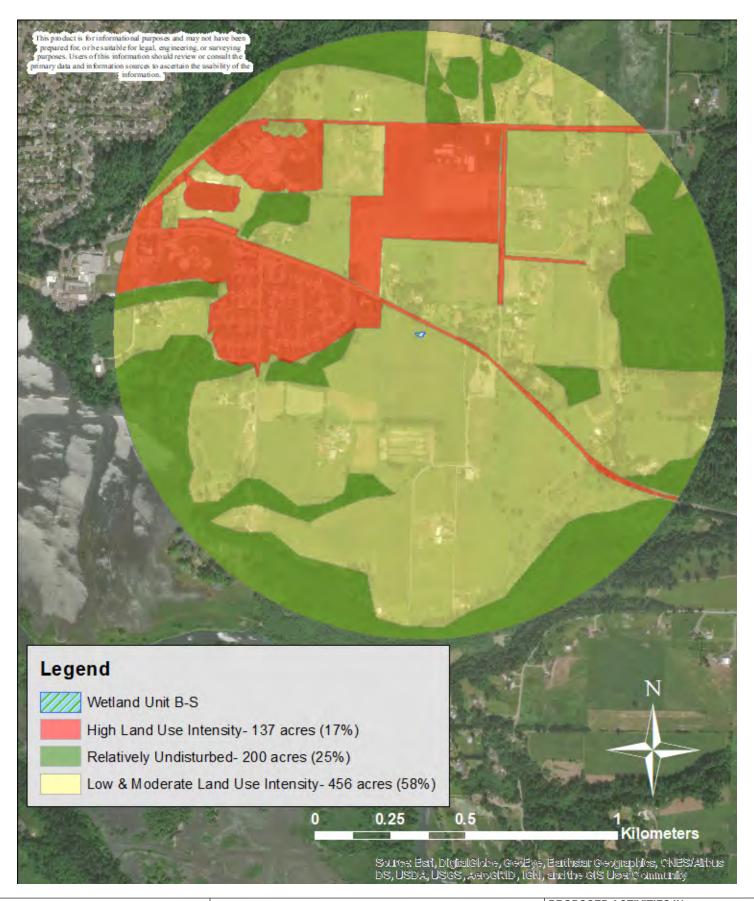
PROPOSED ACTIVITIES IN:

East Fork of the Lewis River

LEGAL: SE & NE 1/4s of Section 02, T4N,

R1E, W. M.

NEAR: La Center, Washington COUNTY: Clark County DATE: October 29, 2019



La Center School District 725 Northeast Highland Avenue La Center, WA 98629

PURPOSE: Revised Wetland Delineation & Assessment

Wetland B-S Land-Use Intensity La Center Middle School La Center, Washington



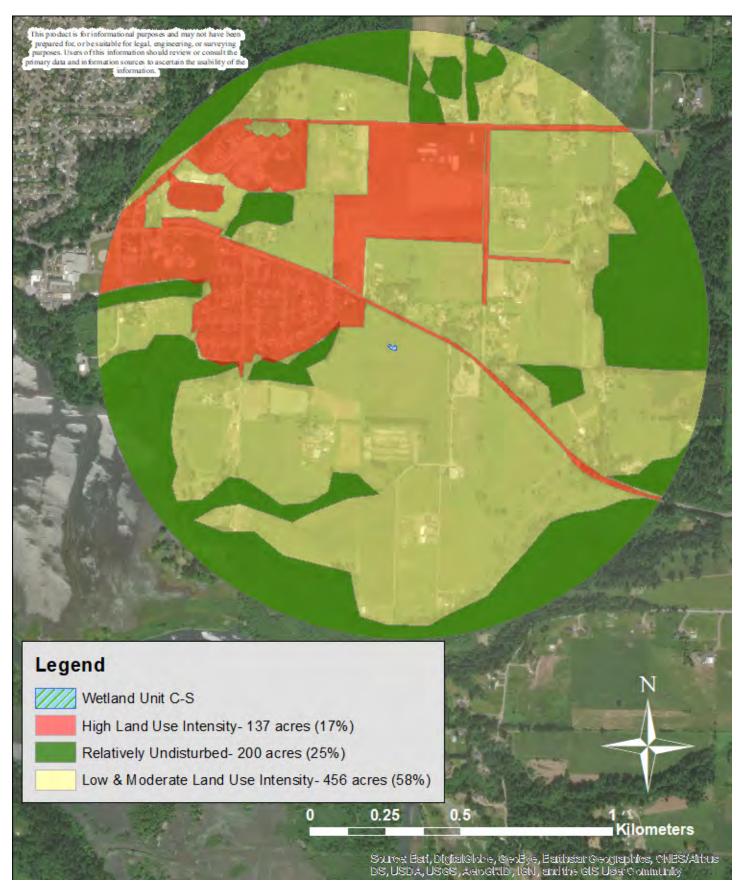
PROPOSED ACTIVITIES IN:

East Fork of the Lewis River

LEGAL: SE & NE 1/4s of Section 02, T4N,

R1E, W. M.

NEAR: La Center, Washington COUNTY: Clark County DATE: October 29, 2019



La Center School District 725 Northeast Highland Avenue La Center, WA 98629

PURPOSE: Revised Wetland Delineation & Assessment

Wetland C-S Land-Use Intensity La Center Middle School La Center, Washington



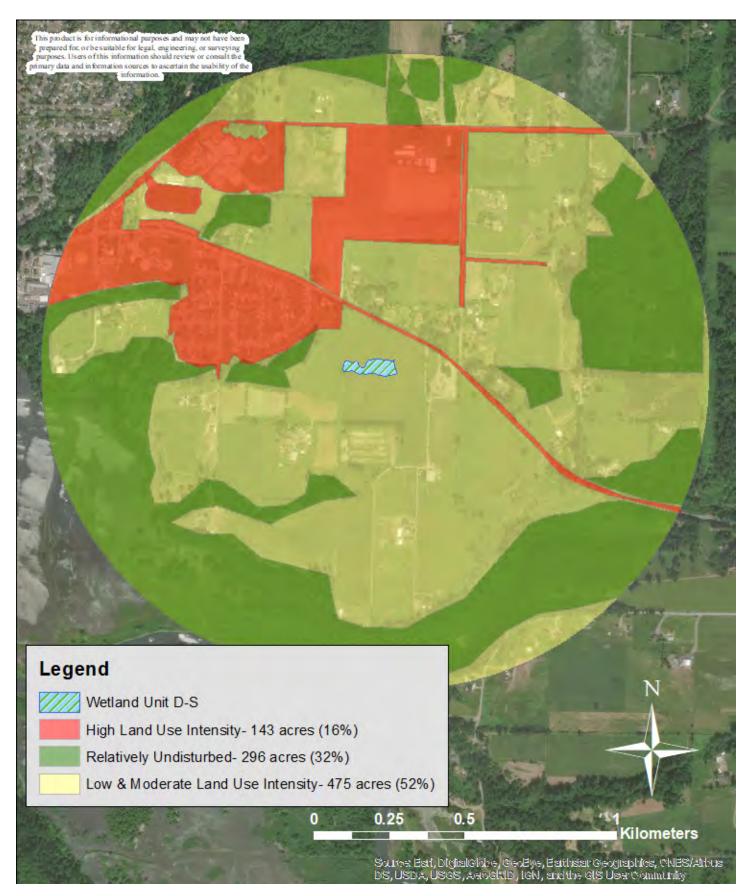
PROPOSED ACTIVITIES IN:

East Fork of the Lewis River

LEGAL: SE & NE 1/4s of Section 02, T4N,

R1E, W. M.

NEAR: La Center, Washington COUNTY: Clark County DATE: October 29, 2019



La Center School District 725 Northeast Highland Avenue La Center, WA 98629

PURPOSE: Revised Wetland Delineation & Assessment

Wetland D-S Land-Use Intensity La Center Middle School La Center, Washington



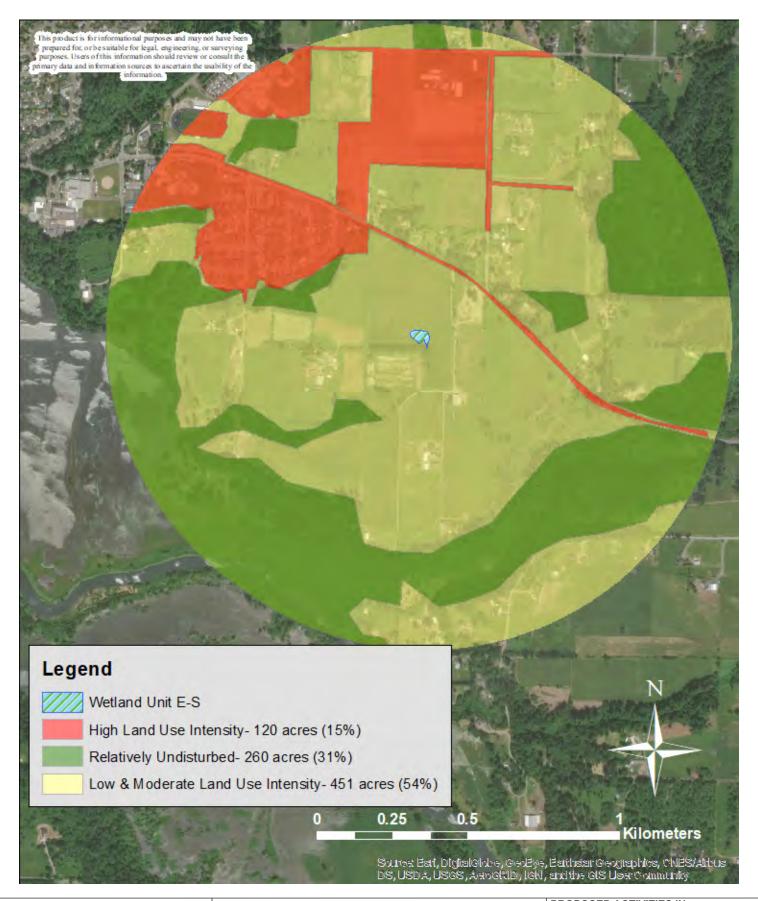
PROPOSED ACTIVITIES IN:

East Fork of the Lewis River

LEGAL: SE & NE 1/4s of Section 02, T4N,

R1E, W. M.

NEAR: La Center, Washington COUNTY: Clark County DATE: October 29, 2019



La Center School District 725 Northeast Highland Avenue La Center, WA 98629

PURPOSE: Revised Wetland Delineation & Assessment

Wetland E-S Land-Use Intensity La Center Middle School La Center, Washington



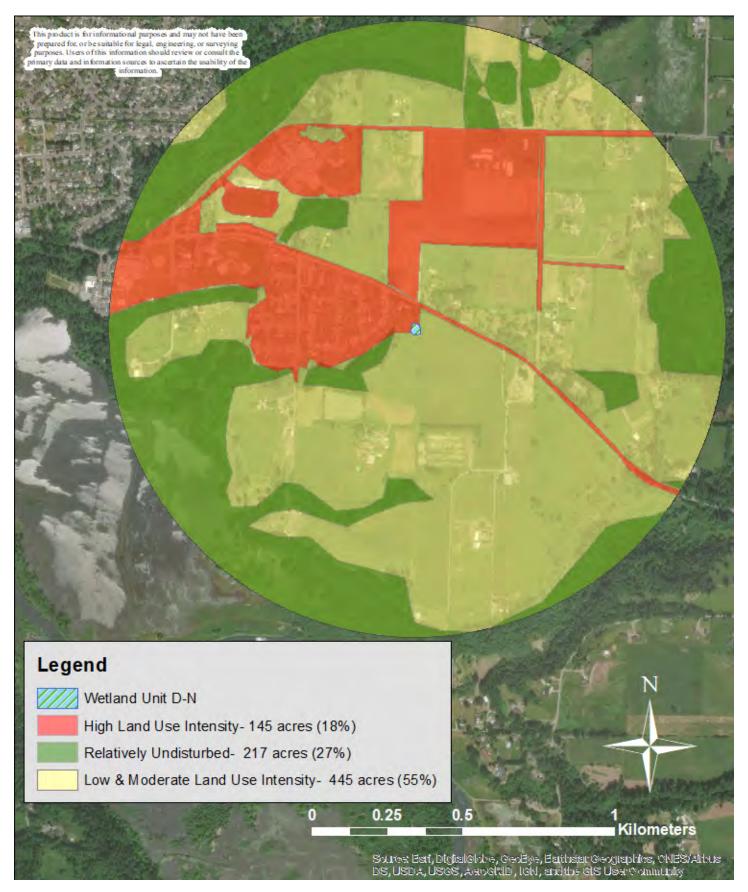
PROPOSED ACTIVITIES IN:

East Fork of the Lewis River

LEGAL: SE & NE 1/4s of Section 02, T4N,

R1E, W. M.

NEAR: La Center, Washington COUNTY: Clark County DATE: October 29, 2019



La Center School District 725 Northeast Highland Avenue La Center, WA 98629

PURPOSE: Revised Wetland Delineation & Assessment

Wetland D-N Land-Use Intensity La Center Middle School La Center, Washington



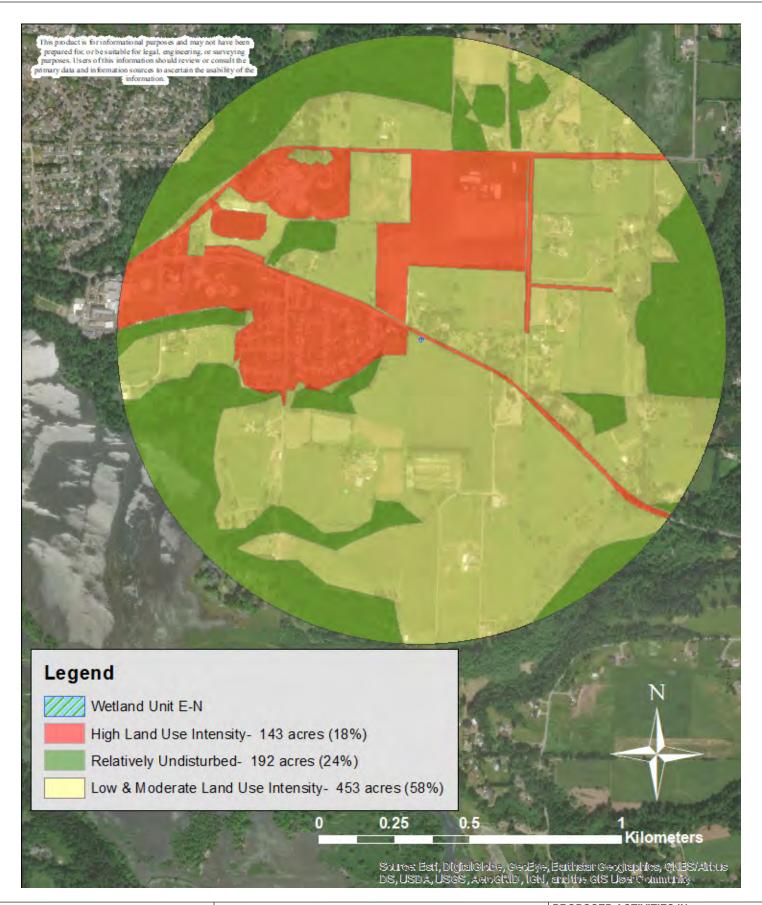
PROPOSED ACTIVITIES IN:

East Fork of the Lewis River

LEGAL: SE & NE 1/4s of Section 02, T4N,

R1E, W. M.

NEAR: La Center, Washington COUNTY: Clark County DATE: October 29, 2019



La Center School District 725 Northeast Highland Avenue La Center, WA 98629

PURPOSE: Revised Wetland Delineation & Assessment

Wetland E-N Land-Use Intensity La Center Middle School La Center, Washington



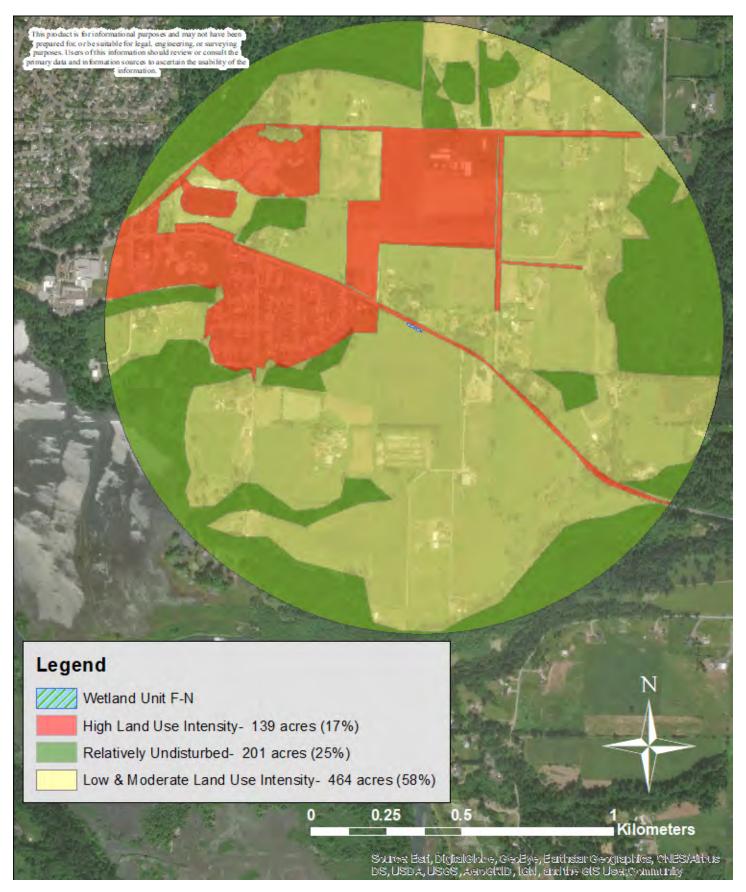
PROPOSED ACTIVITIES IN:

East Fork of the Lewis River

LEGAL: SE & NE 1/4s of Section 02, T4N,

R1E, W. M.

NEAR: La Center, Washington COUNTY: Clark County DATE: October 29, 2019



La Center School District 725 Northeast Highland Avenue La Center, WA 98629

PURPOSE: Revised Wetland Delineation & Assessment

Wetland F-N Land-Use Intensity La Center Middle School La Center, Washington



PROPOSED ACTIVITIES IN:

East Fork of the Lewis River

LEGAL: SE & NE 1/4s of Section 02, T4N,

R1E, W. M.

NEAR: La Center, Washington COUNTY: Clark County DATE: October 29, 2019



La Center School District 725 Northeast Highland Avenue La Center, WA 98629

PURPOSE: Revised Wetland Delineation & Assessment

Ecology 303(d) Listed Waters La Center Middle School La Center, Washington



PROPOSED ACTIVITIES IN:

East Fork of the Lewis River LEGAL: SE & NE 1/4s of Section 02, T4N,

R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: October 29, 2019

Water Quality Improvement Projects (TMDLs)

Water Quality Improvement > Water Quality Improvement Projects by WRIA > WRIA 27: Lewis

WRIA 27: Lewis

The following table lists overview information for water quality improvement projects (including total maximum daily loads, or TMDLs) for this water resource inventory area (WRIA). Please use links (where available) for more information on a project.

Counties

- Clark
- Cowlitz



Waterbody Name	Pollutant(s)	Status**	TMDL Lead
Lewis River, E. Fork	Fecal Coliform Temperature	Under Development	Andrew Kolosseus 360-407-7543

^{**} Status will be listed as one of the following: Approved by EPA, Under Development or Implementation

APPLICANT:

La Center School District 725 Northeast Highland Avenue La Center, WA 98629

PURPOSE: Revised Wetland Delineation & Assessment

TMDLs For Project Watershed La Center Middle School La Center, Washington



PROPOSED ACTIVITIES IN:

East Fork of the Lewis River

LEGAL: SE & NE 1/4s of Section 02, T4N,

R1E, W. M.

NEAR: La Center, Washington COUNTY: Clark County DATE: October 29, 2019