



REVISED CRITICAL AREAS REPORT

June 5, 2019



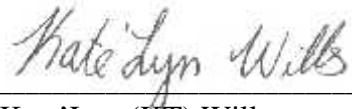
Highland Terrace *La Center, Washington*

Prepared for
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13217 NW 30th Court
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Prepared by
Ecological Land Services
1157 3rd Avenue, Suite 220A • Longview, WA 98632
(360) 578-1371 • Project Number 2378.01
Corps Reference Number : NWS-2016-540

SIGNATURE PAGE

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



Kate'Lyn (KT) Wills
Biologist/Environmental Scientist IV

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INTRODUCTION

Ecological Land Services, Inc. (ELS) has completed this critical areas report including wetland delineation on behalf of the applicant, Evergreen Homes NW. The study area consists of Clark County Tax Parcels 258636-000, 258704-000, 258702-000, 258727-000, 258644-000, and 258763-000 located south of NW Bolen Street and north of NW Pacific Highway in La Center, Washington, within in a portion of Section 33, Township 5 North, Range 1 East, of the Willamette Meridian (Figure 1). The applicant is proposing to subdivide six adjacent parcels totaling approximately 26.06 acres, zoned as MDR-16, into lots to be used for single-family dwellings with associated shared driveways, stormwater facilities, utility installation, and road improvements. ELS conducted a site visit on March 23, 2016 to inventory site conditions within the study area for the preparation of this critical areas report as required under *La Center Municipal Code (LCMC) Chapter 18.300.040*.

Project History

A first version of this critical areas report and a bank use plan was submitted to the appropriate regulatory agencies on May 30, 2016. On July 28, 2016, Jim Carsner from the U.S. Army Corps of Engineers (Corps), Seattle District visited the site as part of his review of the applicants Nationwide Permit (NWP) 29 application. At this time, Jim requested further delineation of a dry stream channel and revision of the existing wetland boundaries. ELS conducted a second site visit on September 28, 2016 to investigate and map the additional areas in question in preparation of this revised critical areas report. It was determined that a redesign of the site plans was necessary to reduce proposed impacts to the greatest extent practicable. On November 11, 2018 this project was put on hold with the Corps as the developers needed more time complete the redesign. See the *Bank Use Plan for the Highland Terrace Subdivision* for project details.

SITE DESCRIPTION

The topography of the site slopes from north to south dropping approximately 100 feet in elevation from NW Bolen Street to NW Pacific Highway. The study area consists of Clark County Tax Parcels 258636-000, 258704-000, 258702-000, 258727-000, 258644-000, and 258763-000. The two northern parcels (258704000 and 258636000) are bordered to the north by NW Bolen Street. These northern parcels share a gravel driveway which divides the parcels east to west. Both parcels contain single-family dwellings with numerous outbuildings and pastureland. The three southern parcels (258702000, 258727000, and 258644000) are bordered to the south by NW Pacific Highway. Both the southwestern (258702000) and southeastern parcel (258644000) contain no structures and consist of pastureland. The southcentral parcel (258727000) contains a single-family dwelling with various outbuildings in the northeastern corner with pastureland and a small barn on the southern portion of the parcel. The eastern parcel (258763000) contains two single-family dwellings with numerous outbuildings and consists primarily of pastureland with a forested area containing a scrub/shrub understory along the southern boundary. Property surrounding the study area consists of single-family residences and pastureland (Figure 2, Photoplate 1).

METHODS

The wetland delineation followed the Routine Determination Method according to the U.S. Army Corps of Engineers', *Wetland Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western*

Mountains, Valleys and Coast Region (Version 2.0) (U.S. Army Engineer Research and Development Center 2010).

The Routine Determination Method examines three parameters—vegetation, soils, and hydrology—to determine if wetlands exist in a given area. Hydrology is critical in determining what is wetland but is often difficult to assess because hydrologic conditions can change periodically (hourly, daily, or seasonally). Consequently, it is necessary to determine if hydrophytic vegetation and hydric soils are present, which would indicate that water is present for long enough duration to support a wetland plant community. By definition, wetlands are those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands are regulated as “Waters of the United States” by the U.S. Army Corps of Engineers (Corps) and as “Waters of the State” by the Washington Department of Ecology (Ecology), and locally by *LCMC 19.15.120*.

ELS evaluated the property for the presence of critical areas and located six wetlands and one seasonal stream within the study area. Fieldwork was conducted on March 23, and September 7, 2016. Vegetation, soil, and hydrology information was collected from 13 test plots to determine the location and extent of wetlands onsite. Wetland boundaries were delineated mainly by changes in vegetation, and evidence of hydrology. Wetlands boundaries, test plot locations, and the stream centerline were mapped with a hand-held GPS unit with sub-meter accuracy. Test Plot data sheets can be found in Appendix A.

VEGETATION

Dominant vegetation in the wetlands consisted mainly of; **Trees:** Oregon ash (*Fraxinus latifolia*, FACW), mature Pacific crabapple (*Malus fusca*, FACW); **Saplings/Shrubs:** Oregon ash, Pacific crabapple, evergreen blackberry (*Rubus laciniatus*, FACU); **Herbs:** reed canarygrass (*Phalaris arundinacea*, FACW), creeping buttercup (*Ranunculus repens*, FACW), orchardgrass (*Dactylis glomerata*, FACU), velvetgrass (*Holcus lanatus*, FAC), soft rush (*Juncus effusus*, FACW); and **Woody vines:** Himalayan blackberry (*Rubus armeniacus*, FAC).

Dominant vegetation in the upland areas consisted mainly of; **Trees:** Oregon ash, mature Pacific crabapple; **Saplings/Shrubs:** common snowberry (*Symphoricarpos albus*, FACU), Oregon ash, Pacific crabapple, evergreen blackberry; **Herbs:** Canada thistle (*Cirsium arvense*, FAC), colonial bentgrass (*Agrostis capillaris*, FAC), bluegrass (*Poa spp.*, FAC), meadow foxtail (*Alopecurus pratensis*, FAC), swordfern (*Polystichum munitum*, FACU), creeping buttercup, orchardgrass, velvetgrass; and **Woody vines:** Himalayan blackberry.

The indicator status, following the scientific names, indicates the likelihood of the species to be found in wetlands. Listed from most likely to least likely to be found in wetlands, the indicator status categories are:

- **OBL** (obligate wetland) - occur almost always under natural conditions in wetlands.
- **FACW** (facultative wetland) - usually occur in wetlands, but occasionally found in non-wetlands.
- **FAC** (facultative) - equally likely to occur in wetlands or non-wetlands.

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

SOILS

The U.S.D.A. National Resources Conservation Service (NRCS) map depicts seven soil units within the study area: (CwA) Cove silty clay loam, thin solum, 0 to 3 percent slopes; (GeB) Gee silt loam, 0 to 9 percent slopes; (GeD) Gee silt loam, 8 to 20 percent slopes; (GeE) Gee silt loam, 20 to 30 percent slopes; (HcB) Hesson clay loam, 0 to 8 percent slopes; (HoG) Hillsboro silt loam, 30 to 65 percent slopes; (OdB) Odne silt loam, 0 to 5 percent slopes (NRCS 2016)(Figure 4). Cove silty clay loam, thin solum, consists of very deep, poorly drained soils found on flood plains from alluvial deposits. Gee silt loam consists of very deep, moderately well drained soil found on terraces from alluvial deposits. Hesson clay loam consists of very deep, well drained soil found on terraces from alluvial deposits. Hillsboro silt loam consists of very deep, well drained soil found on terraces from alluvial deposits. Odne silt loam consists of very deep, poorly drained soil found on terraces and in drainageways from alluvial deposits. Cove silty clay loam, thin solum and Odne silt loam are both mapped as hydric on the NRCS Hydric Soil List for Washington (2015).

The evaluated soil within wetland Test Plots 2, 3, 5, 7, and 9, consisted primarily of very dark brown (10YR2/2) silty loam in the upper profile (~ 0 to 8 inches below ground surface (BGS)) and dark gray (10YR4/1) silty clay loam with dark yellowish brown (10YR4/6) redox concentrations in the lower profile (~ 8 to 16 inches BGS). Test Plot 11 consisted of dark brown (10YR3/3) silty loam in the upper profile (0 to 5 inches BGS) and dark grayish brown (10YR4/2) silty loam in the lower profile (5 to 16 inches BGS) with 10 percent yellowish red (5YR4/6) redox concentrations found in as concentrations in root channels. Test Plots 2, 3, 5, 9, and 11 meet the hydric soil indicator F3 Depleted Matrix while Test Plot 7 meets the hydric soil indicator F6 Redox Dark Surface.

The evaluated soil within upland Test Plots 1, 4, 6, 8, 10, 12 and 13 consisted of dark brown (10YR3/3) silty loam from 0 to 16 inches BGS. Appendix A contains the test plot data sheets. Table 1 below summarizes the soil units mapped onsite by NRCS.

Table 1: Summary of NRCS Soil Survey Data

Soil Series	Unit Symbol	Percent Slope	Drainage Class	Hydric Soil?
Cove silty clay loam, thin solum	CwA	0 to 3	Poorly drained	Yes
Gee silt loam	GeB	0 to 8	Moderately well drained	No
Gee silt loam	GeD	8 to 20	Moderately well drained	No
Gee silt loam	GeE	20 to 30	Moderately well drained	No
Hesson clay loam	HcB	0 to 8	Well drained	No
Hillsboro silt loam	HoG	30 to 65	Well drained	No
Oodne silt loam	OdB	0 to 5	Poorly drained	Yes

HYDROLOGY

The topography of the site slopes from north to south dropping approximately 100 feet in elevation from NW Bolen Street to NW Pacific Highway. Wetlands B and F are small seeps where groundwater reaches the surface along the bottom of the slope. Wetland A is located directly upslope of, and drains into, a roadside ditch that flows southeast along NW Pacific Highway. Just southeast of Wetland A, a berm approximately 3-feet tall divides Wetland E from the road and roadside ditch. A 12-inch culvert forms the outlet of Wetland E which conveys water to the east side of an adjacent driveway and into a Type Ns stream which directs flow southeast offsite. Wetland hydrology likely comes from precipitation, hillside runoff, and a shallow groundwater table. Hydroperiods of the wetlands include seasonally flooded, occasionally flooded, and saturated only. All of the wetland test plots met primary hydrology indicators including Surface Water (A1), High Water Table (A2), Saturation (A3), Surface Soil Cracks (B6), Water-Stained Leaves (B9) Oxidized Rhizospheres along Living Roots (C3) and Stunted or Stressed Plants (D1) and some test plots met secondary hydrology indicators as well such as Drainage Patterns (B10), Geomorphic Position (D2), and FAC-Neutral Test (D5).

NATIONAL WETLANDS INVENTORY

The National Wetlands Inventory (NWI) map does not indicate wetlands within the study area (Figure 5). ELS observations were inconsistent with the NWI map in that there were six wetlands found onsite. NWI maps are typically used to gather general wetland information about a region and due to the large scale necessary for regional mapping, are limited in accuracy for localized analyses.

CRITICAL AREAS SUMMARY

Wetland A

Wetland A is a Category III emergent, slope wetland totaling 0.681 acres (29,645 sq. ft.) and is in the southern portion of the site within parcels 258644-000 and 258727-000. The wetland area onsite is dominated by orchardgrass (*Dactylis glomerata*), velvetgrass (*Holcus lanatus*), and soft rush (*Juncus effusus*) which experiences annual mowing. Wetland A receives most of its hydrology from a seasonally high groundwater table, precipitation, and surface runoff from surrounding uplands. Hydroperiods of Wetland A consist of saturated only. The wetland functions to slow surface flow and to recharge groundwater. According to the *Washington State Wetland Rating System for Western Washington: 2014 Update* (rating system); Wetland A is a Category III wetland scoring 6 points for water quality functions, 4 points for hydrologic functions, and 6 points for habitat functions for a total of 16 points. The designated buffer width for a Category III wetland is 150-feet as listed in LCMC *Table 18.300.090(6)(h)(i)-2*.

Wetland B

Wetland B is a Category IV emergent, slope wetland totaling 0.007 acres (298 sq. ft.) and was delineated in the southern portion of Parcel # 258702-000. The wetland area onsite is dominated by velvetgrass, and reed canarygrass (*Phalaris arundinacea*). Wetland B receives the majority of its hydrology from a seasonally high groundwater table, precipitation, and surface runoff from surrounding uplands. Wetland B acts like a seep during periods of supersaturation. Hydroperiods of Wetland B consist of saturated only. The wetland functions to slow surface flow and to recharge groundwater. According to the rating system, Wetland B is a Category IV wetland scoring 6 points for water quality functions, 4 points for hydrologic functions, and 4 points for

habitat functions for a total of 14 points. LCMC states that isolated wetlands less than one-tenth of an acre and scoring less than 20 points for function on the 2004 rating system are exempt from buffer regulations *Chapter 18.300.090(6)(c)(i)*. Wetland B is isolated, less than one-tenth of an acre and scored 4 points for habitat function using the 2014 rating system which converts to 19 points using the 2004 rating system making Wetland B exempt from City buffer regulations.

Wetland C

Wetland C is a Category IV emergent, scrub-shrub, slope wetland totaling 0.022 acres (961 sq. ft.) and was delineated in the southwestern portion of the eastern parcel, #258763-000. The wetland area onsite is dominated by evergreen blackberry (*Rubus laciniatus*), orchardgrass, reed canarygrass, creeping buttercup (*Ranunculus repens*), soft rush and Himalayan blackberry (*Rubus armeniacus*). Wetland C receives the majority of its hydrology from a seasonally high groundwater table, precipitation, and surface runoff from surrounding uplands. Hydroperiods of Wetland C consist of saturated only. The wetland functions to slow surface flow and to recharge groundwater. According to the rating system, Wetland C is a Category IV wetland scoring 6 points for water quality functions, 3 points for hydrologic functions, and 5 points for habitat functions for a total of 14 points. LCMC states that isolated wetlands less than one-tenth of an acre and scoring less than 20 points for function on the 2004 rating system are exempt from buffer regulations *Chapter 18.300.090(6)(c)(i)*. Wetland C is isolated, less than one-tenth of an acre and scored 5 points for habitat function using the 2014 rating system which converts to 19 points using the 2004 rating system making Wetland C exempt from City buffer regulations.

Wetland D

Wetland D is a Category IV emergent, depressional wetland totaling 0.027 acres (1,156 sq. ft.) and was delineated south of Wetland C in the southern portion of Parcel #258702-000. The wetland area onsite is dominated by soft rush, and reed canarygrass. There is a small portion of scrub-shrub vegetation containing Pacific crabapple (*Malus fusca*) and evergreen blackberry but it comprised less than 10 percent of the total area of the wetland so it is not included as a Cowardin class. Wetland D receives the majority of its hydrology from a seasonally high groundwater table, precipitation, and surface runoff from surrounding uplands. Hydroperiods of Wetland D consist of saturated only. The wetland provides flood storage and delay and groundwater recharge functions. According to the rating system, Wetland D is a Category IV wetland scoring 6 points for water quality functions, 3 points for hydrologic functions, and 5 points for habitat functions for a total of 14 points. LCMC states that isolated wetlands less than one-tenth of an acre and scoring less than 20 points for function on the 2004 rating system are exempt from buffer regulations *Chapter 18.300.090(6)(c)(i)*. Wetland D is isolated, less than one-tenth of an acre and scored 5 points for habitat function using the 2014 rating system which converts to 19 points using the 2004 rating system making Wetland D exempt from City buffer regulations.

Wetland E

Wetland E is a Category IV scrub-shrub, forested, and depressional wetland totaling 0.016 acres (683 sq. ft.) and was delineated in the southeast corner of Parcel #258644-000 and the southwest corner of Parcel #258763-000. The wetland area onsite is dominated by Oregon ash (*Fraxinus latifolia*), Pacific crabapple, and Himalayan blackberry. Wetland E receives most of its hydrology from a seasonally high groundwater table, precipitation, and surface runoff from surrounding uplands. Hydroperiods of Wetland E consist of seasonally flooded and saturated

only. The wetland provides flood storage and delay and groundwater recharge functions. According to the rating system, Wetland E is a Category IV wetland scoring 6 points for water quality functions, 3 points for hydrologic functions, and 6 points for habitat functions for a total of 15 points. The designated buffer width for a Category IV wetland is 50-feet as listed in LCMC *Table 18.300.090(6)(h)(i)-2*.

Wetland F

Wetland F is a Category IV emergent, slope wetland totaling 0.007 acres (312 sq. ft.) and was delineated north of Wetland A in the southern portion of Parcel # 258727-000. The wetland area onsite is dominated by creeping buttercup and reed canarygrass. Wetland F receives the majority of its hydrology from a seasonally high groundwater table, precipitation, and surface runoff from surrounding uplands. Wetland F acts like a seep during periods of supersaturation. Hydroperiods of Wetland F consist of saturated only. The wetland functions to slow surface flow and to recharge groundwater. According to the rating system, Wetland F is a Category IV wetland scoring 6 points for water quality functions, 4 points for hydrologic functions, and 4 points for habitat functions for a total of 14 points. LCMC states that isolated wetlands less than one-tenth of an acre and scoring less than 20 points for function on the 2004 rating system are exempt from buffer regulations *Chapter 18.300.090(6)(c)(i)*. Wetland F is isolated, less than one-tenth of an acre and scored 4 points for habitat function using the 2014 rating system which converts to 19 points using the 2004 rating system making Wetland F exempt from City buffer regulations.

Stream 1

Stream 1 is a non-fish bearing, seasonal stream that originates at the eastern (downslope) end of Wetland E and flows southeast where it connects with a larger unnamed tributary and then is conveyed south for approximately 1,700 feet where it connects with the East Fork Lewis River. At the time of the site visit the stream channel was approximately 6 to 12 inches wide and was dry. According to LCMC, a Type Ns stream has a designated buffer width of 75 feet *Table 18.300.090(2)(f)*. Table 2 below summarizes the critical areas onsite.

Table 2. Summary of Critical Areas.

Critical Area	Category ¹ /Cowardin Class ² /HGM Class ³	Size Onsite	Buffer Width ^{4, 5}
Wetland A	III/emergent/slope	0.681 acres 29,645 sq. ft.	150 feet
Wetland B	IV/emergent/slope	0.007 acres 298 sq. ft.	Exempt
Wetland C	IV/emergent, scrub-shrub/slope	0.022 acres 961 sq. ft.	Exempt
Wetland D	IV/emergent/slope	0.027 acres 1,156 sq. ft.	Exempt
Wetland E	IV/scrub-shrub, forested/depressional	0.016 acres 683 sq. ft.	50 feet
Wetland F	IV/emergent/slope	0.007 acres 312 sq. ft.	Exempt
Stream 1	Type Ns Stream	N/A	75 feet

¹Hruby 2004

²Cowardin *et al.* 1979

³NRCS 2008

⁴LCMC 18.300.090(6)(h)(i)-1 & -2

⁵LCMC18.300.090(2)(f)

LIMITATIONS

ELS bases the above listed determinations and conclusions on standard scientific methodology and best professional judgment. In our opinion, the conclusions should agree with local, state, and federal regulatory agencies. However, this should be considered a preliminary jurisdictional determination and should be used at your own risk until it has been reviewed and approved in writing by the appropriate regulatory agencies.

REFERENCES

- City of La Center. 2018. *La Center Municipal Code, Chapter 18.300.090. Critical Lands*. March.
- Cowardin, L.M., C. Carter, F.C. Golet, and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. FWS/OBS-78/31. U.S. Department of the Interior, Fish and Wildlife Service, Office of Biological Services, Washington D.C.
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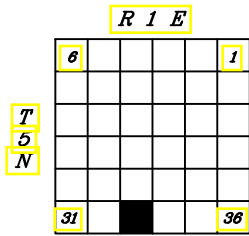
FIGURES & PHOTOPLATES

WASHINGTON



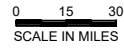
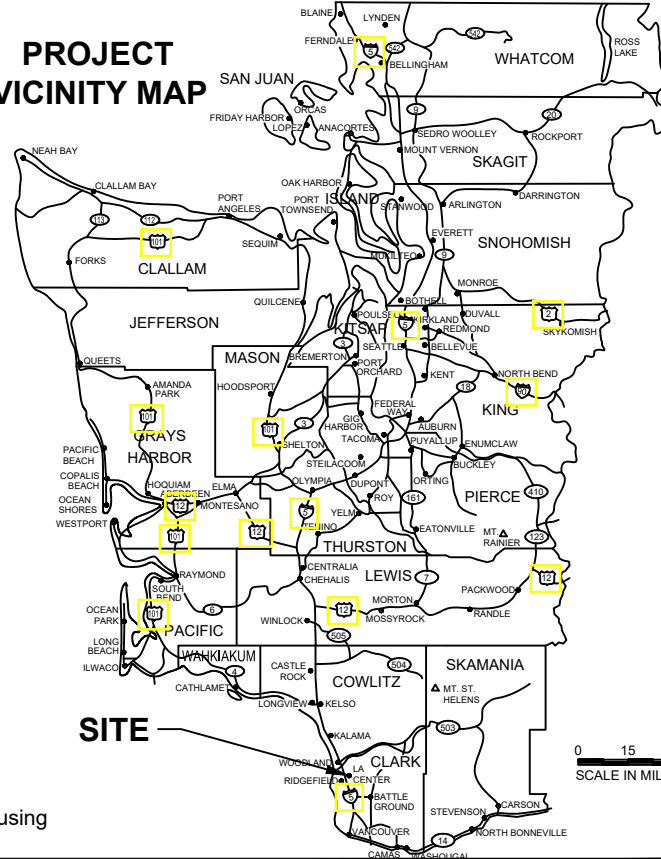
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LOCATION MAP



NOTE:
USGS topographic quadrangle map reproduced using MAPTECH Inc., Terrain Navigator Pro software.

PROJECT VICINITY MAP

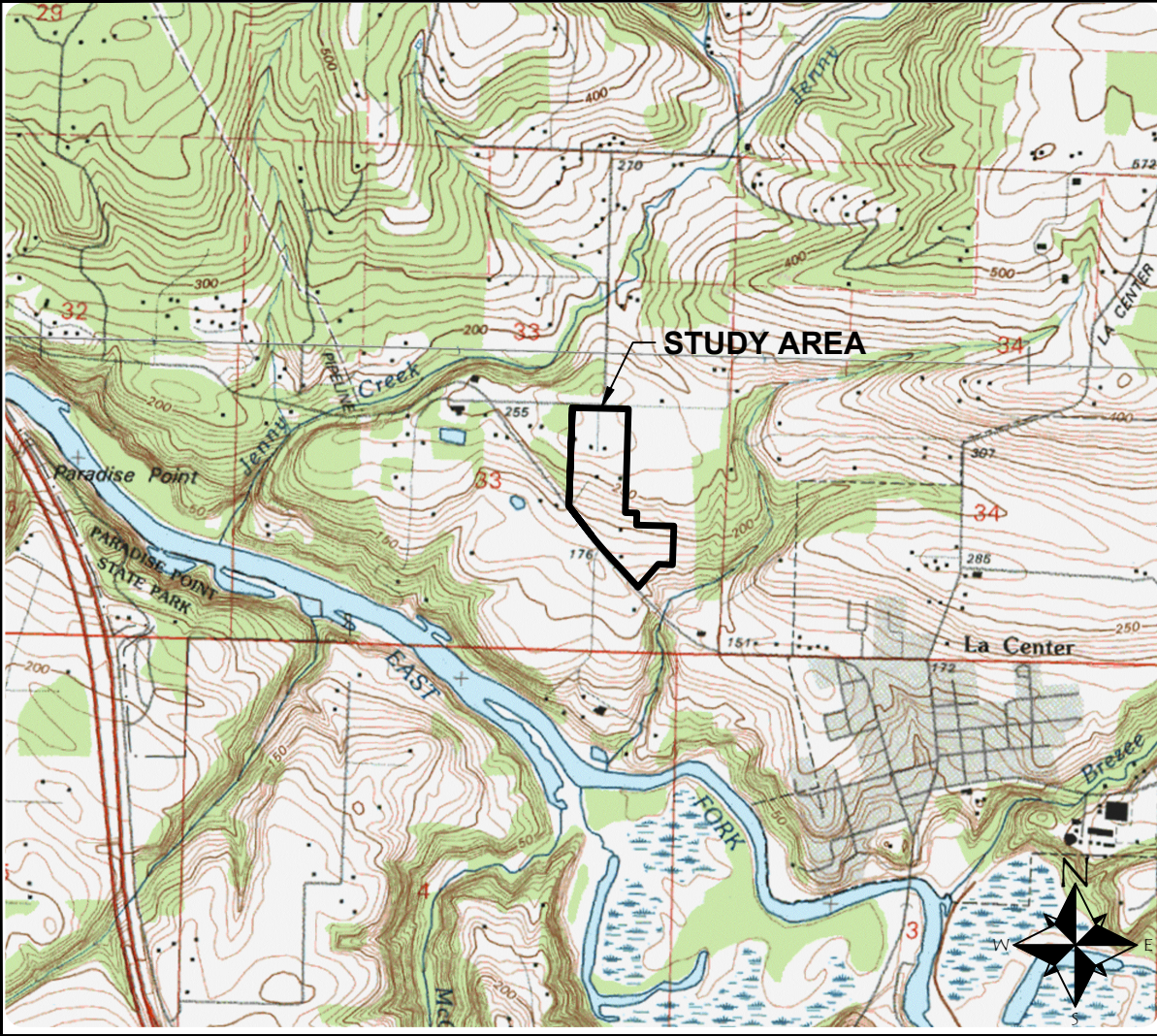


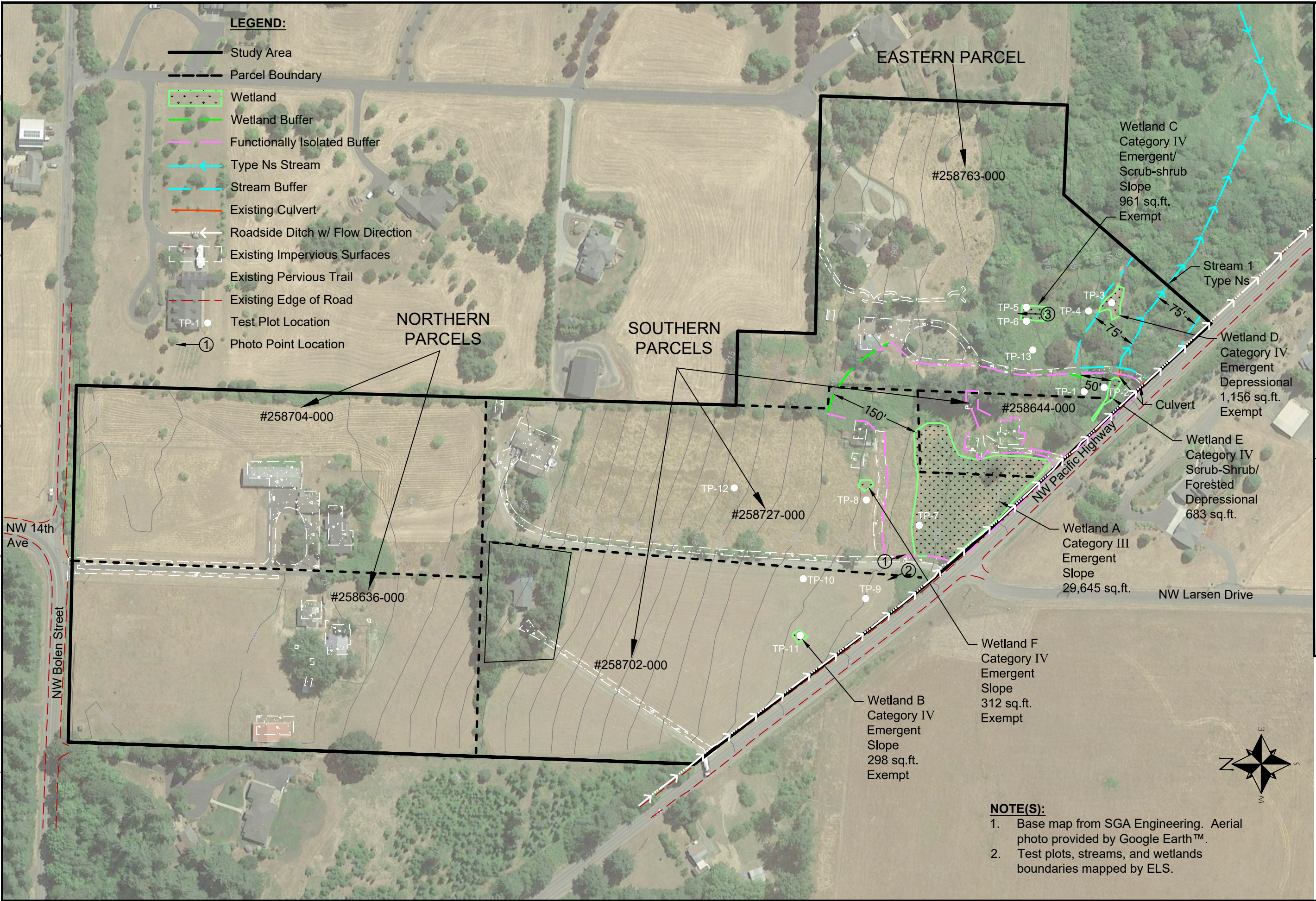
PROPOSED: Wetland Fill
IN Wetlands
NEAR: La Center
COUNTY: Clark
STATE: WA
SHEET 1 OF 17
DATE: 6/5/19

VICINITY MAP
APPLICANT: Evergreen Homes NW
PROJECT NAME: Highland Terrace Subdivision
REFERENCE #: NWS-2016-540
SITE LOCATION ADDRESS:
NW Pacific Hwy.
La Center, WA 98629

PURPOSE:
Construction of 97 lot subdivision
DATUM: NAD83
ADJACENT PROPERTY OWNERS:
SEE JARPA

SCALE IN FEET
0 2000 4000
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371





NOTE(S):

- Base map from SGA Engineering. Aerial photo provided by Google Earth™.
- Test plots, streams, and wetlands boundaries mapped by ELS.

PROPOSED: Wetland Fill

EXISTING CONDITIONS

APPLICANT: Evergreen Homes NW
 PROJECT NAME: Highland Terrace Subdivision
 REFERENCE #: NWS-2016-540
 SITE LOCATION ADDRESS:
 NW Pacific Hwy.
 La Center, WA 98629

PURPOSE:
 Construction of 97 lot subdivision

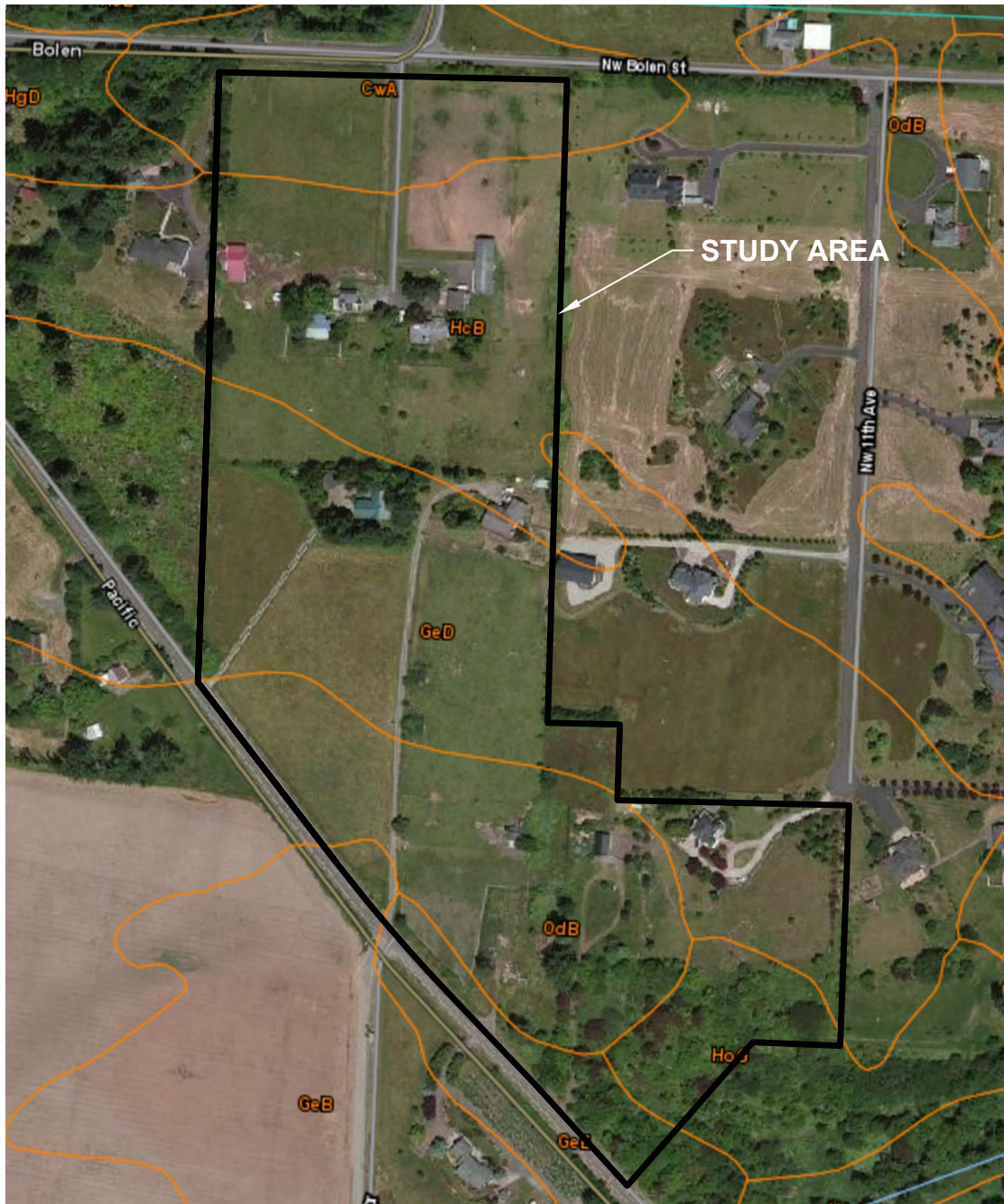
DATUM: NAD83
ADJACENT PROPERTY OWNERS:
 SEE JARPA

IN Wetlands
 NEAR: La Center
 COUNTY: Clark
 STATE: WA

SHEET 2 OF 17
 DATE: 6/5/19

SCALE IN FEET
 0 150 300

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

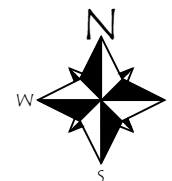


LEGEND:

- CwA** Cove silty clay loam thin solum, 0 to 3 percent slopes. Hydric.
- GeB** Gee silt loam, 0 to 8 percent slopes. Not hydric.
- GeD** Gee silt loam, 8 to 20 percent slopes. Not hydric.
- GeE** Gee silt loam, 20 to 30 percent slopes. Not hydric.
- HoG** Hillsboro silt loam, 30 to 65 percent slopes. Not hydric.
- OdB** Odne silt loam, 0 to 5 percent slopes. Hydric.

NOTE(S):

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



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



PURPOSE:
Construction of 97 lot subdivision

DATUM: NAD83

ADJACENT PROPERTY OWNERS:

SEE JARPA

SOIL SURVEY MAP

APPLICANT: Evergreen Homes NW

PROJECT NAME: Highland Terrace Subdivision

REFERENCE #: NWS-2016-540

SITE LOCATION ADDRESS:

NW Pacific Hwy.
La Center, WA 98629

PROPOSED: Wetland Fill

IN Wetlands

NEAR: La Center

COUNTY: Clark **STATE:** WA



SHEET 3 OF 17

DATE: 6/5/19



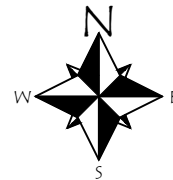
No mapped wetlands indicated onsite by US Fish & Wildlife Service.

LEGEND:

-  Freshwater Emergent Wetland
-  Freshwater Pond

NOTE(S):

1. Map provided on-line by US Fish & Wildlife Service at web address:
<http://www.fws.gov/wetlands/data/index.html>



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Phone: (360) 578-1371



PURPOSE:
Construction of 97 lot subdivision

DATUM: NAD83

ADJACENT PROPERTY OWNERS:
SEE JARPA

NATIONAL WETLANDS INVENTORY MAP

APPLICANT: Evergreen Homes NW
PROJECT NAME: Highland Terrace Subdivision
REFERENCE #: NWS-2016-540
SITE LOCATION ADDRESS:
 NW Pacific Hwy.
 La Center, WA 98629

PROPOSED: Wetland Fill

IN Wetlands
NEAR: La Center
COUNTY: Clark
STATE: WA
SHEET 4 OF 17
DATE: 6/5/19



PROPOSED: Wetland Fill
IN Wetlands
NEAR: La Center
COUNTY: Clark
STATE: WA
SHEET 5 OF 17
DATE: 6/5/19

WETLAND A RATING FIGURE-150' OFFSET
APPLICANT: Evergreen Homes NW
PROJECT NAME: Highland Terrace Subdivision
REFERENCE #: NWS-2016-540
SITE LOCATION ADDRESS:
 NW Pacific Hwy.
 La Center, WA 98629

PURPOSE:
 Construction of 97 lot subdivision
DATUM: NAD83
ADJACENT PROPERTY OWNERS:
 SEE JARPA

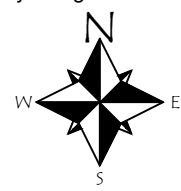
NOTE: Aerial photo provided by Google Earth™.

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

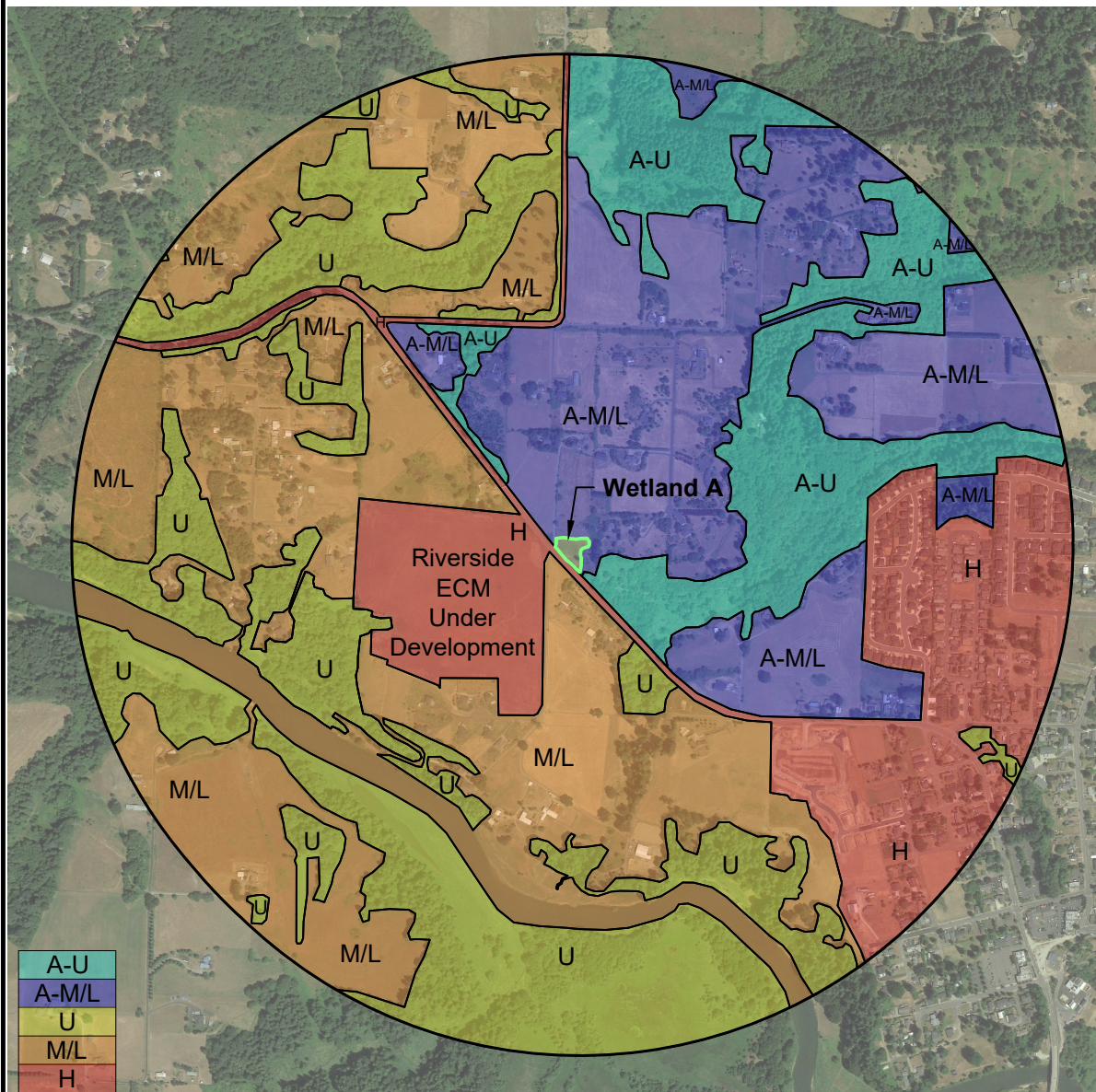
Hydroperiods:
 SO Saturated only
Cowardin Classes:
 EM Emergent

LEGEND:

- Wetland Unit Boundary
- Roadside Ditch
- Vegetation Class Division
- Hydroperiod Division
- 150' Wetland Offset
- Upslope Area
- Pollutants/Runoff - 100% of Upslope Area



- S 1.3 - Characteristics of plants in wetland that trap sediments and pollutants: Dense, uncut, herbaceous plants >1/4 of the wetland area
- S 2.1 - >10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants (100%).
- S 4.1 - Characteristics of plants that reduce the velocity of surface flows during storms: All other conditions
- S 5.1 - >25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff (100%).
- H 1.1 - Structure of plant community: Emergent
- H 1.2 - Hydroperiods: Saturated only
- H 1.4 - Interspersion of habitats: None



NOTE: Aerial photo provided by Google Earth™

LEGEND:

— Wetland Unit Boundary

H2.1 Accessible Habitat

A-U A-U (11.2%)
 A-M/L A-M/L (20.3%)

H2.2 Undisturbed Habitat

U U (21.4%)
 M/L M/L (31.6%)

H2.3 Land Use Intensity

H H (15.5%)

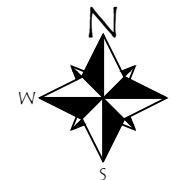
H 2.1 - Accessible habitat is 20-33% of 1 km Polygon (21.35%).
 H 2.2 - Undisturbed habitat > 50% of Polygon (58.55%).
 H 2.3 - ≤ 50% of polygon is high land use intensity (15.5%).

H 2.1. Accessible Habitat Equation

$$11.2\% \text{ A-U habitat} + [(20.3\% \text{ A-M/L intensity land uses})/2] \text{ } 10.15\% = 21.35\%$$

H 2.2. Total Undisturbed Habitat Equation

$$11.2\% \text{ A-U} + 21.4\% \text{ U habitat} + [(20.3\% \text{ A-M/L} + 31.6\% \text{ M/L land uses})/2] \text{ } 25.95\% = 58.55\%$$



PURPOSE:
 Construction of 97 lot subdivision

DATUM: NAD83

ADJACENT PROPERTY OWNERS:

SEE JARPA

WETLAND A RATING FIGURE-1 KM OFFSET

APPLICANT: Evergreen Homes NW

PROJECT NAME: Highland Terrace Subdivision

REFERENCE #: NWS-2016-540

SITE LOCATION ADDRESS:

NW Pacific Hwy.

La Center, WA 98629

PROPOSED: Wetland Fill

IN Wetlands

NEAR: La Center

COUNTY: Clark

STATE: WA

SHEET 6 OF 17

DATE: 6/5/19



SCALE IN FEET

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PROPOSED: Wetland Fill

IN Wetlands
NEAR: La Center
COUNTY: Clark
STATE: WA

SHEET 7 OF 17
DATE: 6/5/19

WETLAND B RATING FIGURE-150' OFFSET
APPLICANT: Evergreen Homes NW
PROJECT NAME: Highland Terrace Subdivision
REFERENCE #: NWS-2016-540
SITE LOCATION ADDRESS:
 NW Pacific Hwy.
 La Center, WA 98629

PURPOSE:
 Construction of 97 lot subdivision

DATUM: NAD83
ADJACENT PROPERTY OWNERS:
 SEE JARPA

NOTE: Aerial photo provided by Google Earth™.

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 SCALE IN FEET

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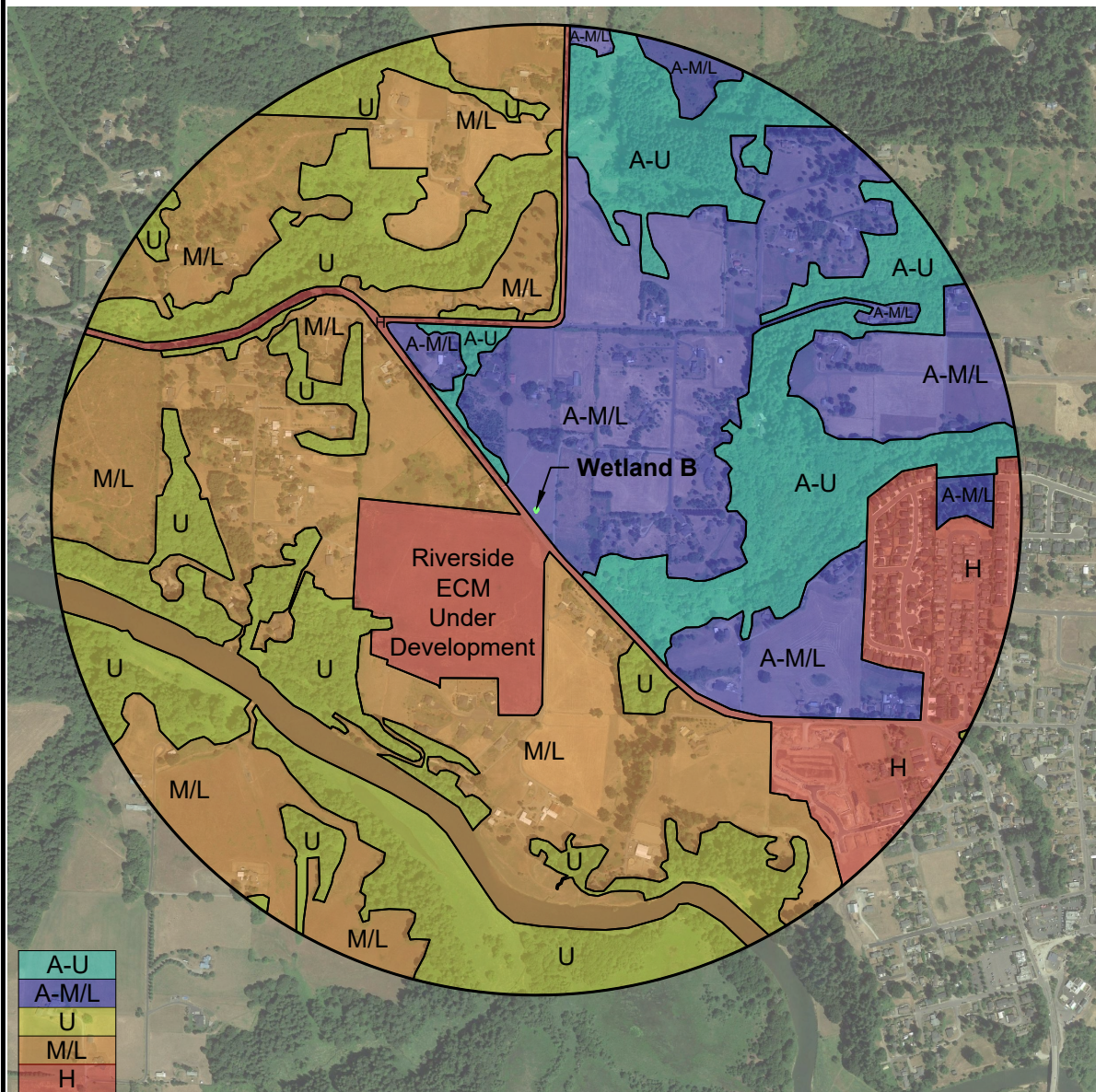
Hydroperiods:
 SO Saturated only

Cowardin Classes:
 EM Emergent

LEGEND:

- Wetland Unit Boundary
- Vegetation Class Division
- Hydroperiod Division
- 150' Wetland Offset
- Upslope Area
- Pollutants/Runoff - 100% of Upslope Area

- S 1.3 - Characteristics of plants in wetland that trap sediments and pollutants:
 Does not meet any of the criteria above for plants
- S 2.1 - >10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants (100%).
- S 4.1 - Characteristics of plants that reduce the velocity of surface flows during storms: All other conditions
- S 5.1 - >25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff (100%).
- H 1.1 - Structure of plant community: Emergent
- H 1.2 - Hydroperiods: Saturated only
- H 1.4 - Interspersion of habitats: None



NOTE: Aerial photo provided by Google Earth™

LEGEND:

Wetland Unit Boundary

H2.1 Accessible Habitat

A-U (11.6%)
A-M/L (21.0%)

H2.2 Undisturbed Habitat

U (20.4%)
M/L (34.8%)

H2.3 Land Use Intensity

H (12.2%)

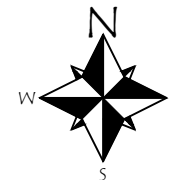
H 2.1 - Accessible habitat is 20-33% of 1 km Polygon (22.1%).
H 2.2 - Undisturbed habitat > 50% of Polygon (59.9%).
H 2.3 - ≤ 50% of polygon is high land use intensity (12.2%).

H 2.1. Accessible Habitat Equation

$$11.6\% \text{ A-U habitat} + [(21.0\% \text{ A-M/L intensity land uses})/2] \text{ 10.5\%} = 22.1\%$$

H 2.2. Total Undisturbed Habitat Equation

$$11.6\% \text{ A-U} + 20.4\% \text{ U habitat} + [(21.0\% \text{ A-M/L} + 34.8\% \text{ M/L land uses})/2] \text{ 27.9\%} = 59.9\%$$



PURPOSE:
Construction of 97 lot subdivision

DATUM: NAD83

ADJACENT PROPERTY OWNERS:

SEE JARPA

WETLAND B RATING FIGURE-1 KM OFFSET

APPLICANT: Evergreen Homes NW

PROJECT NAME: Highland Terrace Subdivision

REFERENCE #: NWS-2016-540

SITE LOCATION ADDRESS:

NW Pacific Hwy.

La Center, WA 98629

PROPOSED: Wetland Fill

IN Wetlands

NEAR: La Center

COUNTY: Clark

STATE: WA

SHEET 8 OF 17

DATE: 6/5/19



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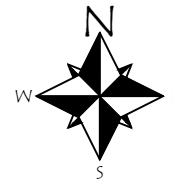


Hydroperiods:
 SO Saturated only

Cowardin Classes:
 EM Emergent
 SS Scrub-shrub

- LEGEND:**
- Wetland Unit Boundary
 - Vegetation Class Division
 - Hydroperiod Division
 - 150' Wetland Offset
 - Upslope Area
 - Pollutants/Runoff - 40.3% of Upslope Area

NOTE: Aerial photo provided by Google Earth™.



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PURPOSE:
 Construction of 97 lot subdivision

DATUM: NAD83

ADJACENT PROPERTY OWNERS:
 SEE JARPA

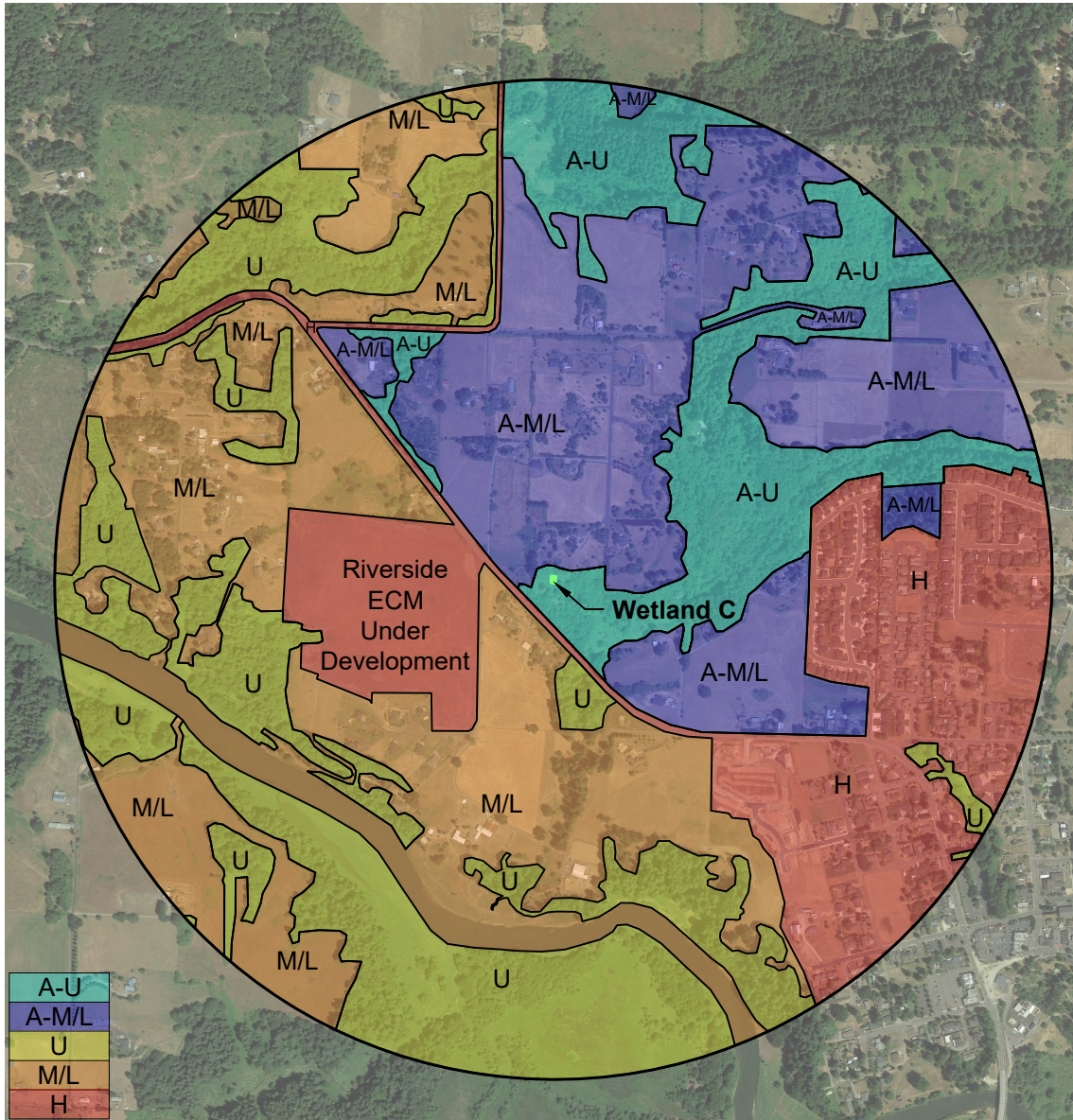
WETLAND C RATING FIGURE-150' OFFSET

APPLICANT: Evergreen Homes NW
PROJECT NAME: Highland Terrace Subdivision
REFERENCE #: NWS-2016-540
SITE LOCATION ADDRESS:
 NW Pacific Hwy.
 La Center, WA 98629

PROPOSED: Wetland Fill


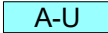
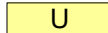
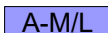

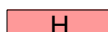
IN Wetlands
NEAR: La Center
COUNTY: Clark
STATE: WA
SHEET 9 OF 17
DATE: 6/5/19

S 1.3 - Characteristics of plants in wetland that trap sediments and pollutants: Dense, uncut, herbaceous plants >1/4 of area
 S 2.1 - >10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants (40.3%).
 S 4.1 - Characteristics of plants that reduce the velocity of surface flows during storms: All other conditions
 S 5.1 - >25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff (40.3%).
 H 1.1 - Structure of plant community: Emergent, Scrub-shrub
 H 1.2 - Hydroperiods: Saturated only
 H 1.4 - Interspersion of habitats: Low



NOTE: Aerial photo provided by Google Earth™

LEGEND:

 Wetland Unit Boundary	H2.1 Accessible Habitat	H2.2 Undisturbed Habitat
	 A-U A-U (11.4%)	 U U (21.0%)
	 A-M/L A-M/L (21.8%)	 M/L M/L (27.3%)
		H2.3 Land Use Intensity
		 H H (18.5%)

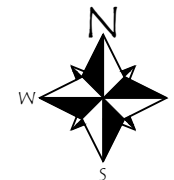
H 2.1 - Accessible habitat is 20-33% of 1 km Polygon (22.3%).
H 2.2 - Undisturbed habitat > 50% of Polygon (56.95%).
H 2.3 - ≤ 50% of polygon is high land use intensity (18.5%).

H 2.1. Accessible Habitat Equation

$$11.4\% \text{ A-U habitat} + [(21.8\% \text{ A-M/L intensity land uses})/2] \text{ 10.9\%} = 22.3\%$$

H 2.2. Total Undisturbed Habitat Equation

$$11.4\% \text{ A-U} + 21.0\% \text{ U habitat} + [(21.8\% \text{ A-M/L} + 27.3\% \text{ M/L land uses})/2] \text{ 24.55\%} = 56.95\%$$



PURPOSE:
Construction of 97 lot subdivision

DATUM: NAD83

ADJACENT PROPERTY OWNERS:

SEE JARPA

WETLAND C RATING FIGURE-1 KM OFFSET

APPLICANT: Evergreen Homes NW

PROJECT NAME: Highland Terrace Subdivision

REFERENCE #: NWS-2016-540

SITE LOCATION ADDRESS:

NW Pacific Hwy.
La Center, WA 98629

PROPOSED: Wetland Fill

IN Wetlands

NEAR: La Center

COUNTY: Clark **STATE:** WA

SHEET 10 OF 17

DATE: 6/5/19



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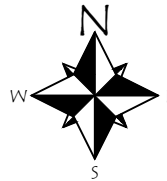
Hydroperiods:
 SO Saturated only
 OF Occasionally Flooded

Cowardin Classes:
 EM Emergent

LEGEND:

- Wetland Unit Boundary
- - - Vegetation Class Division
- - - Hydroperiod Division
- 150' Wetland Offset
- Pollutants/Runoff - 0%

NOTE: Aerial photo provided by Google Earth™.



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- D 1.1/4.1 - Wetland is a depression with no outlet
- D 1.3 - Wetland has persistent, ungrazed, plants <95% of area (100%).
- D 1.4 - Area seasonally ponded is <1/4 total area of wetland (0%).
- D 2.2 - <10% of the area within 150 ft of the wetland in land uses that generate pollutants (0%).
- D 5.2 - <10% of the area within 150 ft of the wetland in land uses that generate excess runoff (0%).
- H 1.1 - Structure of plant community: Emergent
- H 1.2 - Hydroperiods: Saturated only, Occasionally flooded
- H 1.4 - Interspersion of habitats: None

PURPOSE:
 Construction of 97 lot subdivision

DATUM: NAD83

ADJACENT PROPERTY OWNERS:

SEE JARPA

WETLAND D RATING FIGURE-150' OFFSET

APPLICANT: Evergreen Homes NW

PROJECT NAME: Highland Terrace Subdivision

REFERENCE #: NWS-2016-540

SITE LOCATION ADDRESS:
 NW Pacific Hwy.
 La Center, WA 98629

PROPOSED: Wetland Fill

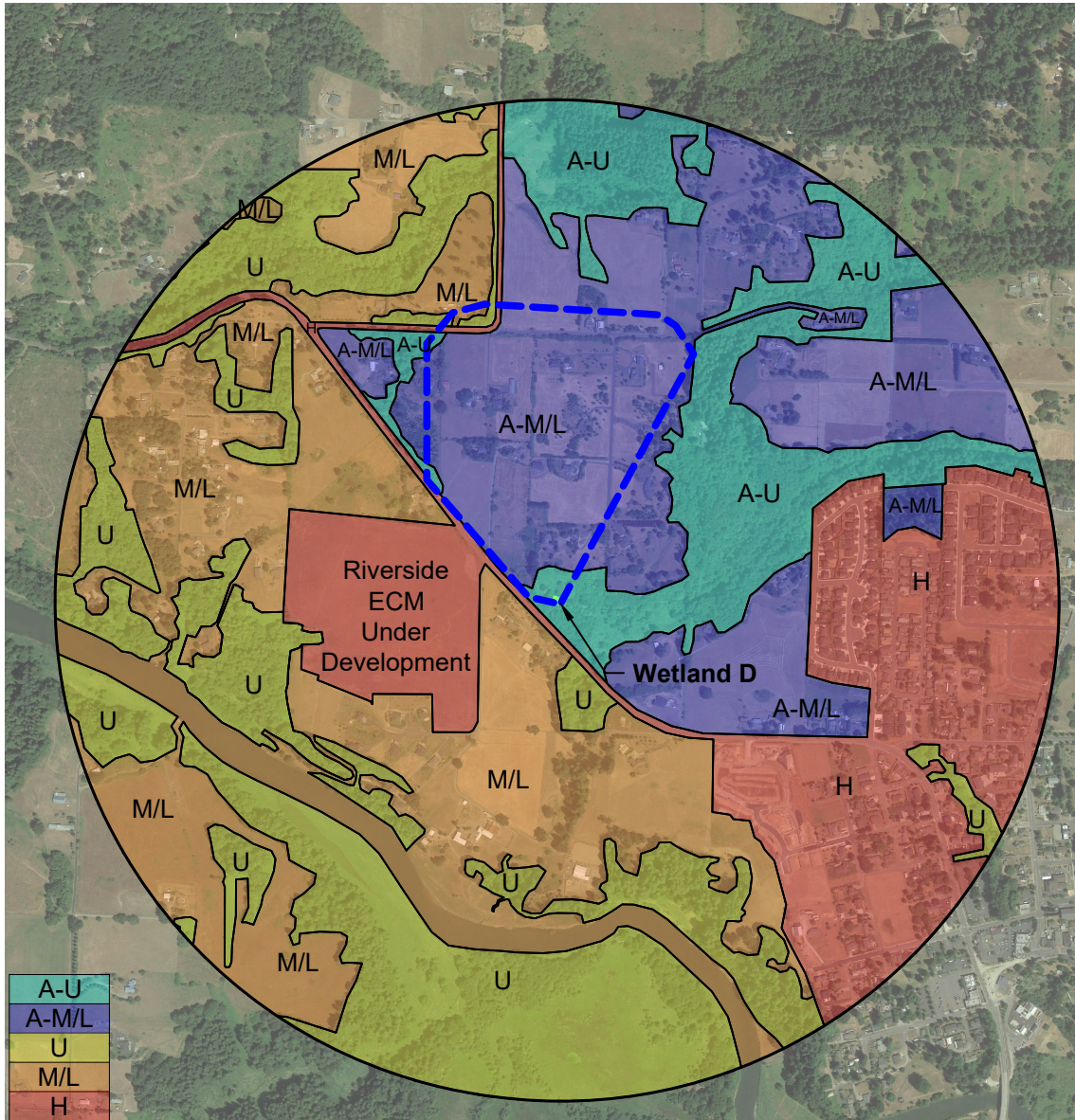
IN Wetlands

NEAR: La Center

COUNTY: Clark **STATE:** WA

SHEET 11 OF 17

DATE: 6/5/19



NOTE: Aerial photo provided by Google Earth™

LEGEND:

- Wetland Unit Boundary
- - - Contributing Basin (1,986x area of wetland)

H2.1 Accessible Habitat

A-U	A-U (10.7%)
A-M/L	A-M/L (21.1%)

H2.2 Undisturbed Habitat

U	U (21.9%)
M/L	M/L (27.0%)

H2.3 Land Use Intensity

H	H (19.3%)
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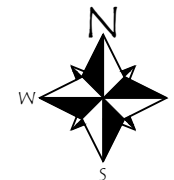
H 2.1 - Accessible habitat is 20-33% of 1 km Polygon (21.25%).
 H 2.2 - Undisturbed habitat > 50% of Polygon (56.65%).
 H 2.3 - ≤ 50% of polygon is high land use intensity (19.3%).
 D 4.3 - The area of the basin is more than 100 times the area of the unit (1,986x).
 D 5.3 - Less than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.).

H 2.1. Accessible Habitat Equation

$$10.7\% \text{ [A-U] habitat} + [(21.1\% \text{ [A-M/L] intensity land uses})/2] \text{ 10.55\%} = \text{21.25\%}$$

H 2.2. Total Undisturbed Habitat Equation

$$10.7\% \text{ [A-U]} + 21.9\% \text{ [U] habitat} + [(21.1\% \text{ [A-M/L]} + 27.0\% \text{ [M/L] land uses})/2] \text{ 24.05\%} = \text{56.65\%}$$



PURPOSE:
Construction of 97 lot subdivision

DATUM: NAD83

ADJACENT PROPERTY OWNERS:

SEE JARPA

WETLAND D RATING FIGURE-1 KM OFFSET

APPLICANT: Evergreen Homes NW

PROJECT NAME: Highland Terrace Subdivision

REFERENCE #: NWS-2016-540

SITE LOCATION ADDRESS:

NW Pacific Hwy.

La Center, WA 98629

PROPOSED: Wetland Fill

IN Wetlands

NEAR: La Center

COUNTY: Clark

STATE: WA

SHEET 12 OF 17

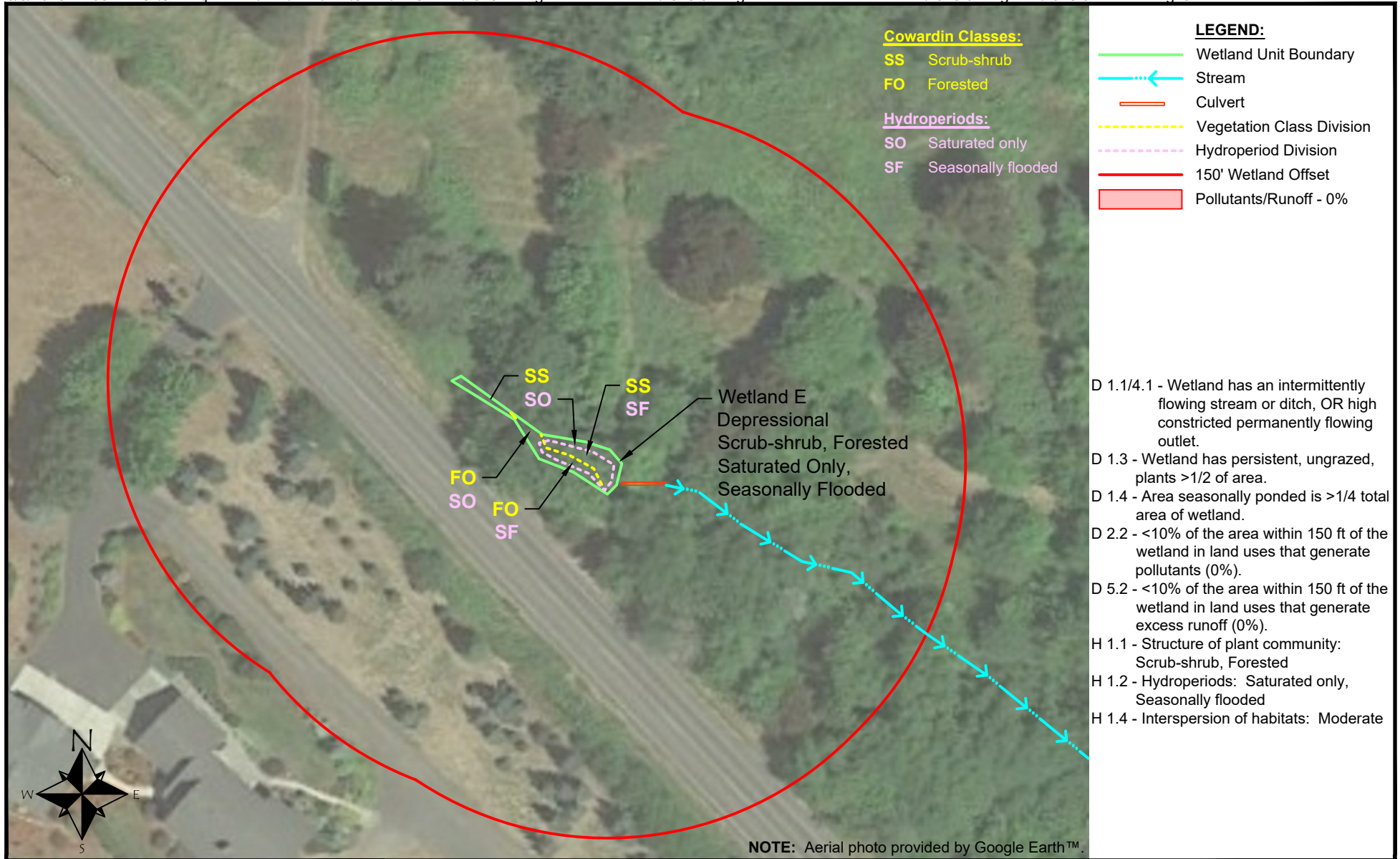
DATE: 6/5/19

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SCALE IN FEET

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- D 1.1/4.1 - Wetland has an intermittently flowing stream or ditch, OR high constricted permanently flowing outlet.
- D 1.3 - Wetland has persistent, ungrazed, plants >1/2 of area.
- D 1.4 - Area seasonally ponded is >1/4 total area of wetland.
- D 2.2 - <10% of the area within 150 ft of the wetland in land uses that generate pollutants (0%).
- D 5.2 - <10% of the area within 150 ft of the wetland in land uses that generate excess runoff (0%).
- H 1.1 - Structure of plant community: Scrub-shrub, Forested
- H 1.2 - Hydroperiods: Saturated only, Seasonally flooded
- H 1.4 - Interspersion of habitats: Moderate

0 60 120
 SCALE IN FEET

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 Phone: (360) 578-1371

PURPOSE:
 Construction of 97 lot subdivision

DATUM: NAD83

ADJACENT PROPERTY OWNERS:
 SEE JARPA

WETLAND E RATING FIGURE-150' OFFSET

APPLICANT: Evergreen Homes NW

PROJECT NAME: Highland Terrace Subdivision

REFERENCE #: NWS-2016-540

SITE LOCATION ADDRESS:
 NW Pacific Hwy.
 La Center, WA 98629

PROPOSED: Wetland Fill

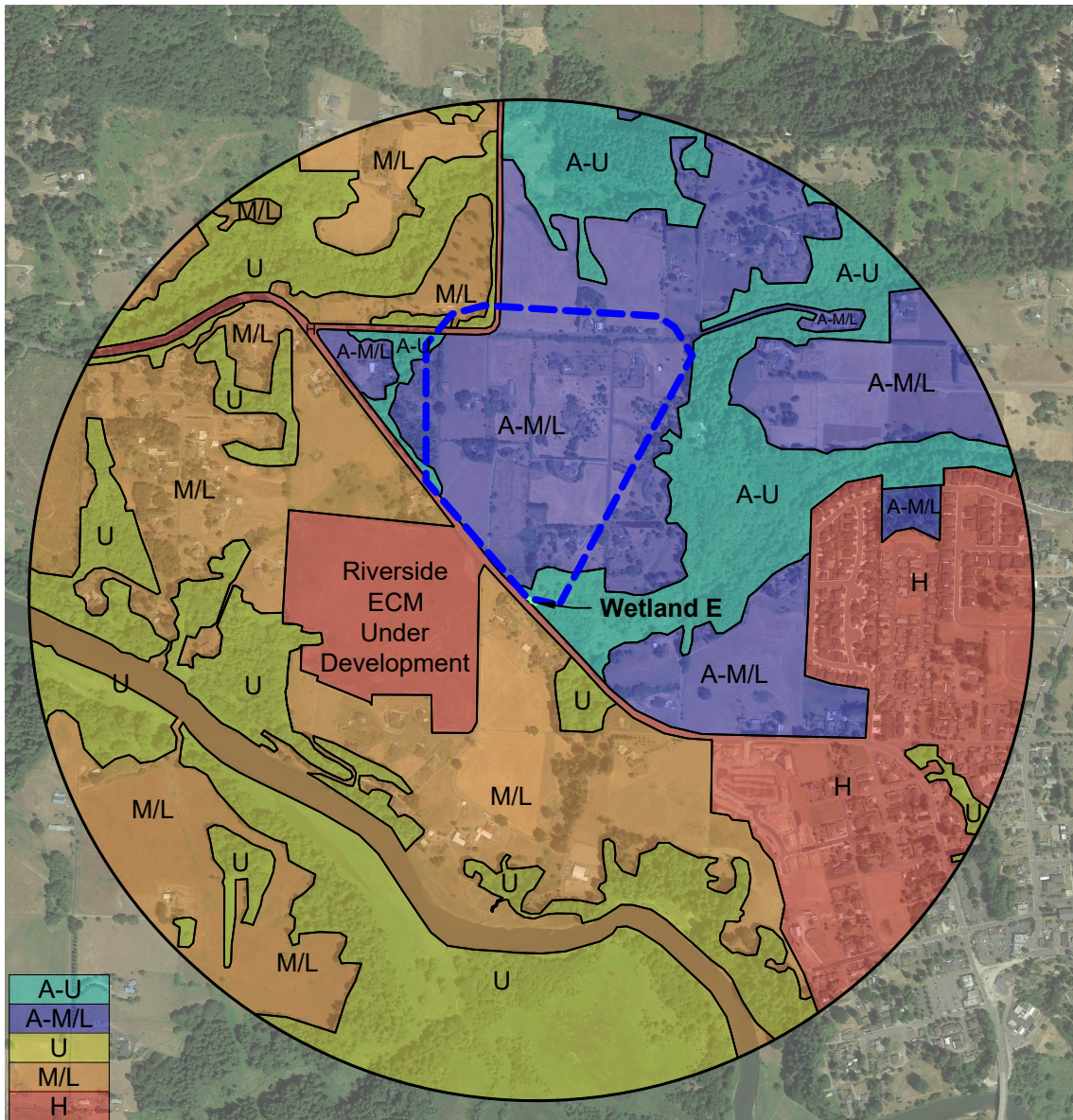
IN Wetlands

NEAR: La Center

COUNTY: Clark **STATE:** WA

SHEET 13 OF 17

DATE: 6/5/19



NOTE: Aerial photo provided by Google Earth™

LEGEND:

- Wetland Unit Boundary
- - - Contributing Basin
(3,432x area of wetland)

H2.1 Accessible Habitat

- A-U A-U (10.3%)
- A-M/L A-M/L (20.4%)

H2.2 Undisturbed Habitat

- U U (22.5%)
- M/L M/L (29.1%)

H2.3 Land Use Intensity

- H H (17.7%)

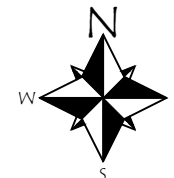
H 2.1 - Accessible habitat is 20-33% of 1 km Polygon (20.5%).
 H 2.2 - Undisturbed habitat > 50% of Polygon (57.55%).
 H 2.3 - ≤ 50% of polygon is high land use intensity (17.7%).
 D 4.3 - The area of the basin is more than 100 times the area of the unit (3,432x).
 D 5.3 - Less than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.).

H 2.1. Accessible Habitat Equation

$$10.3\% \text{ [A-U] habitat} + [(20.4\% \text{ [A-M/L] intensity land uses})/2] \text{ } 10.2\% = 20.5\%$$

H 2.2. Total Undisturbed Habitat Equation

$$10.3\% \text{ [A-U]} + 22.5\% \text{ [U] habitat} + [(20.4\% \text{ [A-M/L]} + 29.1\% \text{ [M/L] land uses})/2] \text{ } 24.75\% = 57.55\%$$



PURPOSE:
Construction of 97 lot subdivision

DATUM: NAD83

ADJACENT PROPERTY OWNERS:

SEE JARPA

WETLAND E RATING FIGURE-1 KM OFFSET

APPLICANT: Evergreen Homes NW

PROJECT NAME: Highland Terrace Subdivision

REFERENCE #: NWS-2016-540

SITE LOCATION ADDRESS:

NW Pacific Hwy.
La Center, WA 98629

PROPOSED: Wetland Fill

IN Wetlands

NEAR: La Center

COUNTY: Clark

STATE: WA

SHEET 14 OF 17

DATE: 6/5/19



SCALE IN FEET

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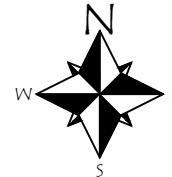
Hydroperiods:
 SO Saturated only

Cowardin Classes:
 EM Emergent

LEGEND:

- Wetland Unit Boundary
- Vegetation Class Division
- Hydroperiod Division
- 150' Wetland Offset
- Upslope Area
- Pollutants/Runoff - 100% of Upslope Area

NOTE: Aerial photo provided by Google Earth™.

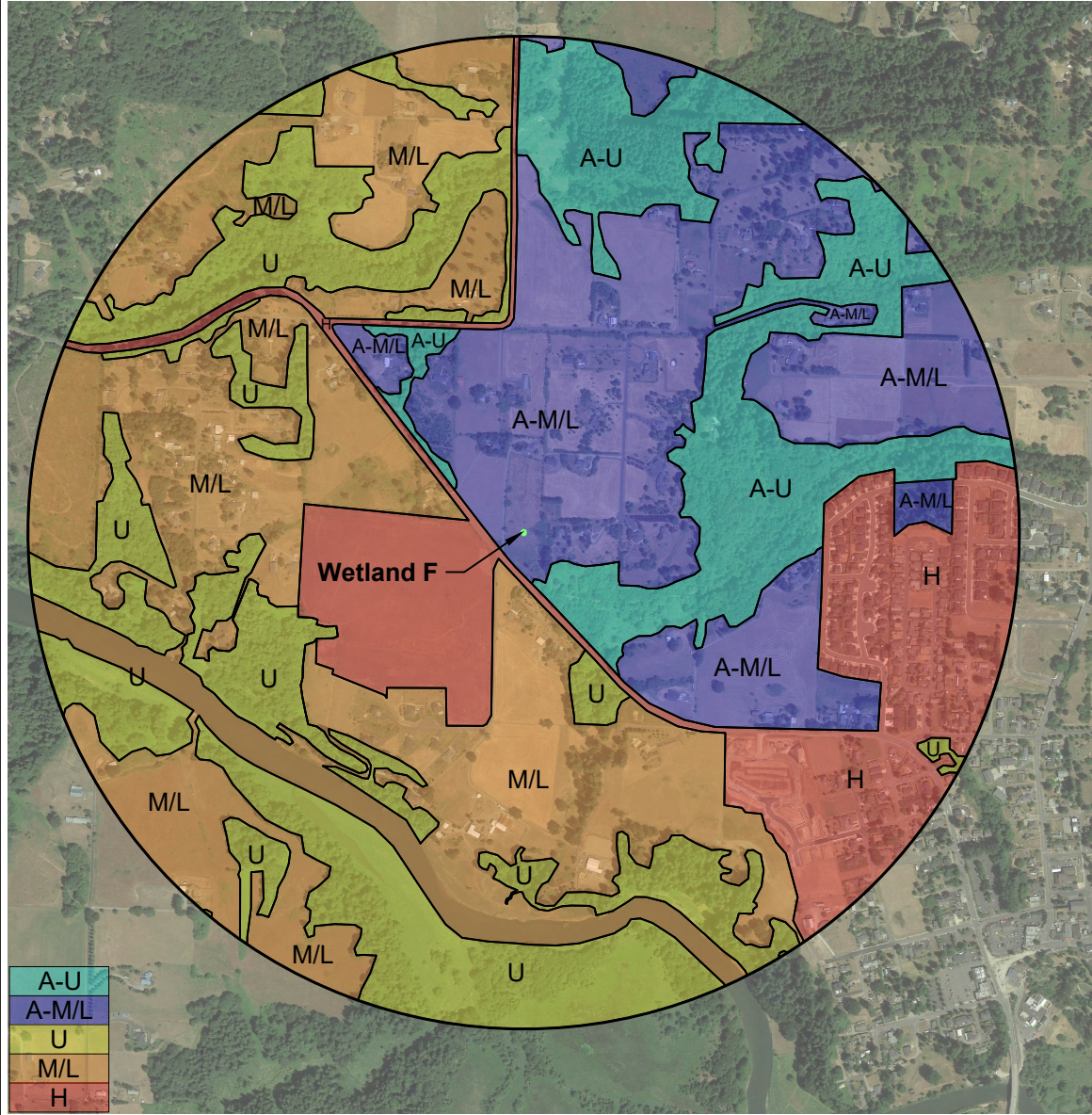


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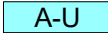
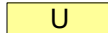
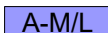

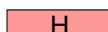
- S 1.3 - Characteristics of plants in wetland that trap sediments and pollutants: Dense, uncut, herbaceous plants > 90% of the wetland area
- S 2.1 - >10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants (100%).
- S 4.1 - Characteristics of plants that reduce the velocity of surface flows during storms: Dense, uncut, rigid plants cover >90% of area of the wetland
- S 5.1 - >25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff (100%).
- H 1.1 - Structure of plant community: Emergent
- H 1.2 - Hydroperiods: Saturated only
- H 1.4 - Interspersion of habitats: None

<p>PROPOSED: Wetland Fill</p> <p>IN Wetlands NEAR: La Center COUNTY: Clark STATE: WA</p> <p>SHEET 15 OF 17 DATE: 6/5/19</p>	<p>WETLAND F RATING FIGURE-150' OFFSET</p> <p>APPLICANT: Evergreen Homes NW</p> <p>PROJECT NAME: Highland Terrace Subdivision</p> <p>REFERENCE #: NWS-2016-540</p> <p>SITE LOCATION ADDRESS: NW Pacific Hwy. La Center, WA 98629</p>	<p>PURPOSE: Construction of 97 lot subdivision</p> <p>DATUM: NAD83</p> <p>ADJACENT PROPERTY OWNERS: SEE JARPA</p>
<p>Ecological Land Services</p>		



NOTE: Aerial photo provided by Google Earth™

LEGEND:

 Wetland Unit Boundary	H2.1 Accessible Habitat	H2.2 Undisturbed Habitat
	 A-U A-U (12.1%)	 U U (19.7%)
	 A-M/L A-M/L (21.7%)	 M/L M/L (31.7%)
		H2.3 Land Use Intensity
		 H H (14.8%)

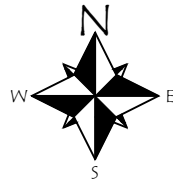
H 2.1 - Accessible habitat is 20-33% of 1 km Polygon (22.95%).
 H 2.2 - Undisturbed habitat > 50% of Polygon (58.5%).
 H 2.3 - ≤ 50% of polygon is high land use intensity (14.8%).

H 2.1. Accessible Habitat Equation

$$12.1\% \text{ A-U habitat} + [(21.7\% \text{ A-M/L intensity land uses})/2] \text{ 10.85\%} = 22.95\%$$

H 2.2. Total Undisturbed Habitat Equation

$$12.1\% \text{ A-U} + 19.7\% \text{ U habitat} + [(21.7\% \text{ A-M/L} + 31.7\% \text{ M/L land uses})/2] \text{ 26.7\%} = 58.5\%$$



PURPOSE:
Construction of 97 lot subdivision

DATUM: NAD83

ADJACENT PROPERTY OWNERS:

SEE JARPA

PROPOSED: Wetland Fill

IN Wetlands

NEAR: La Center

COUNTY: Clark

STATE: WA

SHEET 16 OF 17

DATE: 6/5/19

WETLAND F RATING FIGURE-1 KM OFFSET

APPLICANT: Evergreen Homes NW

PROJECT NAME: Highland Terrace Subdivision

REFERENCE #: NWS-2016-540

SITE LOCATION ADDRESS:

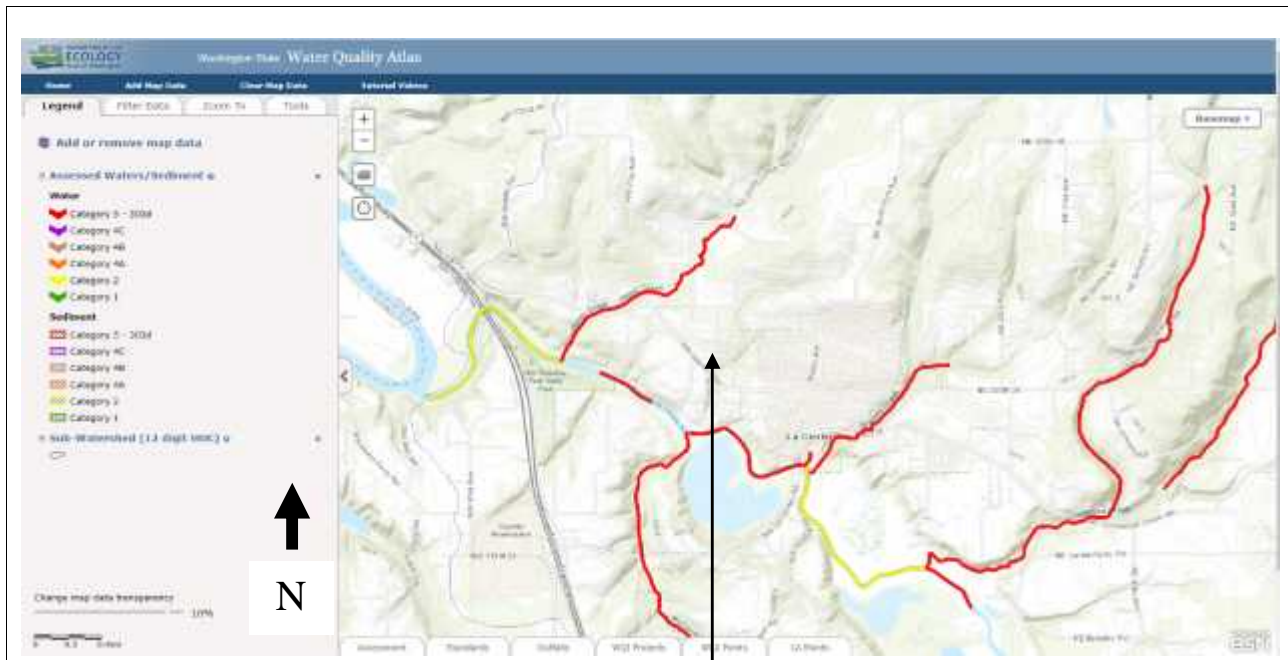
NW Pacific Hwy.

La Center, WA 98629

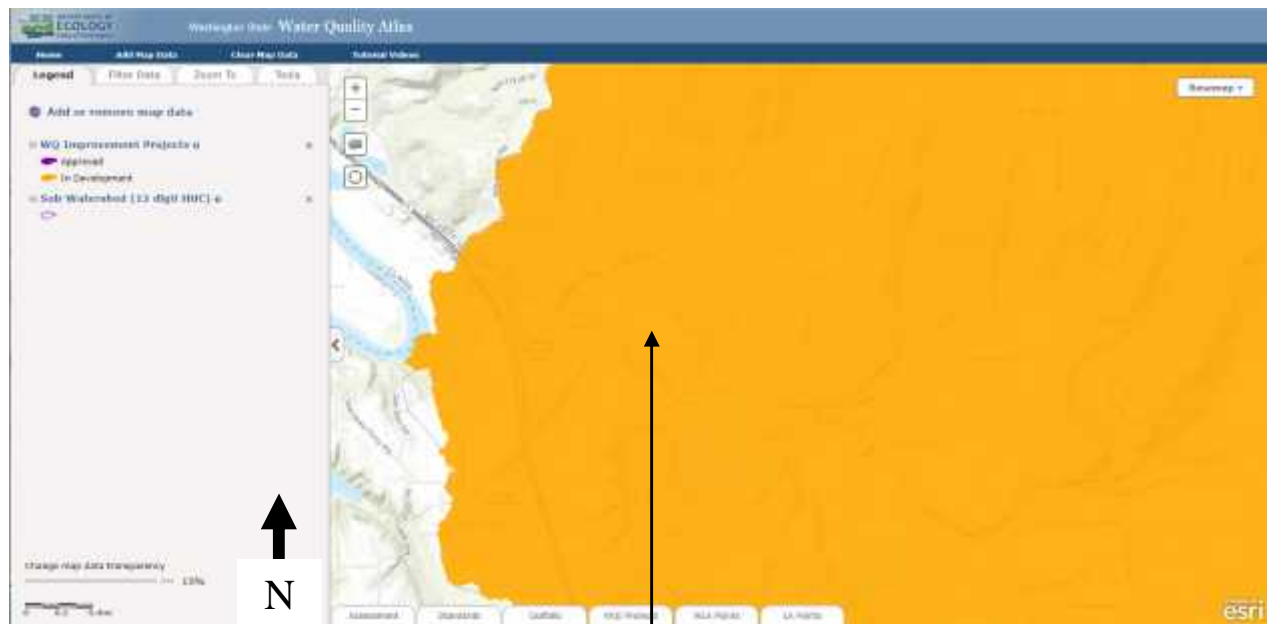


1157 3rd Ave., Suite 220A
 Longview, WA 98632
 Phone: (360) 578-1371





Study Site



Study Site



1157 3rd Ave., Suite 220A
 Longview, WA 98632
 Phone: (360) 578-1371
 Fax: (360) 414-9305

DATE: 05/21/19
 DWN: KT
 PRJ. MGR: KT
 PROJ.#: 2378.01

Sheet 17
 303(d) Listed Waters
 & TMDL's



Photo 1: Taken from just north of Wetland A facing south towards NW Pacific Hwy across the wetland.



Photo 2: Taken from east of the driveway currently aligned north from Larson Road, facing east across Wetland B.



Photo 3: Taken from within Wetland C facing north across the emergent portion of the wetland.



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DATE: 6/5/19
DWN: KT
PRJ. MGR: KT
PROJ.#:
2378.01

**Photoplate 1
Site Photos**
Critical Areas Report
Highland Terrace
La Center, Washington

APPENDIX A: WETLAND DETERMINATION DATA FORMS

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

Project/Site: Highland Terrace Subdivision City/County: La Center/Clark Sampling Date: 4/6/16
 Applicant/Owner: Evergreen Homes NW State: WA Sampling Point: TP1
 Investigator(s): Wills, Kate'Lyn Section, Township, Range: 33, 5N, 1E
 Landform (hillslope, terrace, etc.): hillslope Local relief: convex Slope (%): 5%
 Subregion (LRR): A Lat: 45.521107 Long: -122.410450 Datum: NAD83

Soil Map Unit Name: Gee silt loam, 20-30 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Area "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soils Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: The vegetation in this test plot consisted of trees, scrub/shrub and herbaceous species. This test plot met one wetland indicator for hydrophytic vegetation therefore it does not meet the criteria of being wetland.		

VEGETATION (Use scientific names)

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 30 ft radius)				
1. <i>Malus fusca</i>	50%	yes	FACW	Dominance Test Worksheet Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66</u> (A/B)
2. <i>Fraxinus latifolia</i>	20%	yes	FACW	
3. _____	%			
4. _____	%			
Total Cover:	70%			
Sapling/Shrub Stratum (Plot size: 15 ft. radius)				
1. <i>Malus fusca</i>	40%	yes	FACW	Prevalence Index worksheet Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1= _____ FACW species _____ x 2= _____ FAC species _____ x 3= _____ FACU species _____ x 4= _____ UPL species _____ x 5= _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
2. <i>Symphoricarpos albus</i>	5%	no	FACU	
3. _____	%			
4. _____	%			
5. _____	%			
Total Cover:	45%			
Herb Stratum (Plot size: 5 ft radius)				
1. <i>Dactylis glomerata</i>	5%	yes	FACU	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data In Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <i>Polystichum munitum</i>	5%	yes	FACU	
3. _____	%			
4. _____	%			
5. _____	%			
6. _____	%			
7. _____	%			
8. _____	%			
Total Cover:	10%			
Woody Vine Stratum (Plot size: 15 ft radius)				
1. <i>Rubus armeniacus</i>	40%	yes	FAC	¹ Indicators of hydric soil and wetland hydrology Must be present, unless disturbed or problematic.
2. _____	%			
Total Cover:	40%			
% Bare Ground in Herb Stratum 95%				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: The hydrophytic vegetation criterion is met due to 66% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.				

SOIL

Sampling Point: TP1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR3/3	100%		%			silty 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.)

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

Indicators for Problematic Hydric Soils

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

³Indicators of hydrophytic vegetation and Wetland hydrology must be present

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present?

Yes No

Remarks: There was no evidence of hydric soils within this test plot.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

- Water Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)
- Raised Ant Mounds (D6) (LRR A)
- Frost-Heave Hummocks (D4)

Field Observations:

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

Wetland Hydrology Present?

Yes No

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

Remarks: There was no evidence of hydrology within this test plot.

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

Project/Site: ighland Terrace Subdivision City/County: La Center/Clark Sampling Date: 4/6/16
 Applicant/Owner: Evergreen Homes NW State: WA Sampling Point: TP2
 Investigator(s): Wills, Kate'Lyn Section, Township, Range: 33, 5N, 1E
 Landform (hillslope, terrace, etc.): depression Local relief: concave Slope (%): <1%
 Subregion (LRR): A Lat: 45.521107 Long: -122.410450 Datum: NAD83

Soil Map Unit Name: Gee silt loam, 20-30 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Area "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soils Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: The vegetation in this test plot consisted of trees, and scrub/shrub species. This test plot met all three wetland indicators with 100% hydrophytic vegetation, soils with a Depleted Matrix, and the presence of hydrologic indicators; High Water Table (A2), Saturation (A3), Surface Soil Cracks (B6), Water Stained Leaves (B9), and Stunted or stressed Plants (D1) were found on the surface of the ground within the test plot. Additionally, the test plot was located in a depression (Geomorphic Position D2) and had a positive FAC-Neutral Test (D5).		

VEGETATION (Use scientific names)

	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet	
Tree Stratum (Plot size: <u>30</u> ft radius)				Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)	
1. <u>Fraxinus latifolia</u>	40%	yes	FACW	Total Number of Dominant Species Across All Strata: <u>5</u> (B)	
2. <u>Malus fusca</u>	30%	yes	FACW		
3. _____	%				
4. _____	%				
Total Cover:	70%			Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
Sapling/Shrub Stratum (Plot size: <u>15</u> ft. radius)				Prevalence Index worksheet	
1. <u>Fraxinus latifolia</u>	30%	yes	FACW	Total % Cover of: _____ Multiply by: _____	
2. <u>Malus fusca</u>	30%	yes	FACW	OBL species _____ x 1= _____	
3. <u>Crataegus douglasii</u>	10%	no	FAC	FACW species _____ x 2= _____	
4. <u>Symphoricarpos albus</u>	5%	no	FACU	FAC species _____ x 3= _____	
5. <u>Oemleria cerasiformis</u>	5%	no	FACU	FACU species _____ x 4= _____	
Total Cover:	80%			UPL species _____ x 5= _____	
Herb Stratum (Plot size: <u>5</u> ft radius)				Column Totals: _____ (A) _____ (B)	
1. _____	%			Prevalence Index = B/A = _____	
2. _____	%			Hydrophytic Vegetation Indicators:	
3. _____	%			<input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation	
4. _____	%			<input checked="" type="checkbox"/> 2 – Dominance Test is >50%	
5. _____	%			<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹	
6. _____	%			4 - Morphological Adaptations ¹ (Provide supporting data In Remarks or on a separate sheet)	
7. _____	%			<input type="checkbox"/> Wetland Non-Vascular Plants ¹	
8. _____	%			<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
Total Cover:	%			¹ Indicators of hydric soil and wetland hydrology Must be present, unless disturbed or problematic.	
Woody Vine Stratum (Plot size: <u>15</u> ft radius)				Hydrophytic Vegetation Present?	
1. <u>Rubus armeniacus</u>	20%	yes	FAC	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
2. _____	%				
Total Cover:	20%				
% Bare Ground in Herb Stratum <u>100%</u>					

Remarks: The hydrophytic vegetation criterion is met due to 100% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.

SOIL

Sampling Point: TP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	2.5YR3/2	100%		%			silty loam	
6-16	10YR4/1	70%	10YR4/6	30%	C	M	silty clay loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)			Indicators for Problematic Hydric Soils		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Sandy Mucky Minerals (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)				

³Indicators of hydrophytic vegetation and Wetland hydrology must be present

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): _____	

Remarks: The hydric soil indicator Depleted Matrix (F3) was met due to a matrix value of 4 and a chroma of 1 with more than 5 percent redox concentrations found in the matrix.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (min. of one required; check all that apply)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)
<input checked="" type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Frost-Heave Hummocks (D4)

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
(Includes Capillary fringe)	

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

Remarks: The hydrology indicators, High Water Table (A2), Saturation (A3), Surface Soil Cracks (B6), Water Stained Leaves (B9), and Stunted or sTressed Plants (D1) were found on the surface of the ground within the test plot. Additionally, the test plot was located in a depression (Geomorphic Position D2) and had a positive FAC-Neutral Test (D5).

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

Project/Site: Highland Terrace Subdivision City/County: La Center/Clark Sampling Date: 4/6/16
 Applicant/Owner: Evergreen Homes NW State: WA Sampling Point: TP3
 Investigator(s): Wills, Kate'Lyn Section, Township, Range: 33, 5N, 1E
 Landform (hillslope, terrace, etc.): terrace Local relief: slope Slope (%): 1%
 Subregion (LRR): A Lat: 45.521107 Long: -122.410450 Datum: NAD83

Soil Map Unit Name: Gee silt loam, 20-30 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Area "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soils Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: The vegetation in this test plot consisted of scrub/shrub and herbaceous species. This test plot met all three wetland indicators with 75% hydrophytic vegetation, soils with a Depleted Matrix, and the presence of hydrology indicators; The hydrology indicators, Surface Water (A1), Saturation (A3), Water Stained Leaves (B9), and Stunted or stressed Plants (D1) were found on the surface of the ground within the test plot. Additionally, the test plot was located in a depression (Geomorphic Position D2) and had a positive FAC-Neutral Test (D5).	

VEGETATION (Use scientific names)

	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet
Tree Stratum (Plot size: <u>30</u> ft radius)				Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)
1. _____	%			
2. _____	%			
3. _____	%			
4. _____	%			
Total Cover:	%			
Sapling/Shrub Stratum (Plot size: <u>15</u> ft. radius)				Prevalence Index worksheet Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1= _____ FACW species _____ x 2= _____ FAC species _____ x 3= _____ FACU species _____ x 4= _____ UPL species _____ x 5= _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A= _____
1. <u>Rubus laciniatus</u>	5%	yes	FACU	
2. <u>Malus fusca</u>	5%	yes	FACW	
3. _____	%			
4. _____	%			
Total Cover:	10%			
Herb Stratum (Plot size: <u>5</u> ft radius)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ 4 - Morphological Adaptations ¹ (Provide supporting data In Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Phalaris arundinacea</u>	80%	yes	FACW	
2. <u>Juncus effusus</u>	40%	yes	FACW	
3. <u>Ranunculus repens</u>	20%	no	FAC	
4. <u>Trifolium repens</u>	20%	no	FAC	
5. <u>Equisetum arvense</u>	10%	no	FAC	
6. _____	%			
7. _____	%			
8. _____	%			
Total Cover:	170%			
Woody Vine Stratum (Plot size: <u>15</u> ft radius)				¹ Indicators of hydric soil and wetland hydrology Must be present, unless disturbed or problematic.
1. _____	%			
2. _____	%			
Total Cover:	%			
% Bare Ground in Herb Stratum <u>0%</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Remarks: The hydrophytic vegetation criterion is met due to 75% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.

SOIL

Sampling Point: TP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-8	10YR2/2	100%		%			silty loam
8-16	10YR4/1	80%	10YR4/6	20%			silty clay loam
		%		%			
		%		%			
		%		%			
		%		%			
		%		%			
		%		%			

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

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

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

Indicators for Problematic Hydric Soils

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

³Indicators of hydrophytic vegetation and Wetland hydrology must be present

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present?

Yes No

Remarks: The hydric soil indicator Depleted Matrix (F3) was met due to a matrix value of 4 and a chroma of 1 with more than 5 percent redox concentrations found in the matrix.

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, & 4B)
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Stunted or Stressed Plants (D1) (LRR A)
- Other (Explain in Remarks)
- Water Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)
- Raised Ant Mounds (D6) (LRR A)
- Frost-Heave Hummocks (D4)

Field Observations:

Surface Water Present? Yes No Depth (Inches): 1
 Water Table Present? Yes No Depth (Inches): _____
 Saturation Present? Yes No Depth (Inches): 2
 (Includes Capillary fringe)

Wetland Hydrology Present?

Yes No

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

Remarks: Perched water table. Surface water filled the test pit. The hydrology indicators, Surface Water (A1), Saturation (A3), Water Stained Leaves (B9), and Stunted or stressed Plants (D1) were found on the surface of the ground within the test plot. Additionally, the test plot was located in a depression (Geomorphic Position D2) and had a positive FAC-Neutral Test (D5).

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

Project/Site: Highland Terrace Subdivision City/County: La Center/Clark Sampling Date: 4/6/16
 Applicant/Owner: Evergreen Homes NW State: WA Sampling Point: TP4
 Investigator(s): Wills, Kate'Lyn Section, Township, Range: 33, 5N, 1E
 Landform (hillslope, terrace, etc.): hillslope Local relief: convex Slope (%): 5%
 Subregion (LRR): A Lat: 45.521107 Long: -122.410450 Datum: NAD83

Soil Map Unit Name: Hillsboro silt loam, 30 to 65 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Area "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soils Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: The vegetation in this test plot consisted of scrub/shrub and herbaceous species. This test plot did not meet any wetland indicators therefore it does not meet the criteria of being wetland.		

VEGETATION (Use scientific names)

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet	
1. _____	%			Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)	
2. _____	%				
3. _____	%				
4. _____	%				
Total Cover:	%			Total Number of Dominant Species Across All Strata: <u>5</u> (B)	
				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40</u> (A/B)	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet	
1. <i>Malus fusca</i>	35%	yes	FACW	Total % Cover of: _____ Multiply by: _____	
2. <i>Rubus laciniatus</i>	10%	yes	FACU		OBL species _____ x 1= _____
3. <i>Quercus garryana</i>	5%	no	FACU		FACW species _____ x 2= _____
4. _____	%				FAC species _____ x 3= _____
5. _____	%				FACU species _____ x 4= _____
Total Cover:	50%			UPL species _____ x 5= _____	
				Column Totals: (A) _____ (B) _____	
				Prevalence Index = B/A = _____	
Herb Stratum (Plot size: 5 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:	
1. <i>Dactylis glomerata</i>	15%	yes	FACU	<input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data In Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <i>Polystichum munitum</i>	10%	yes	FACU		
3. _____	%				
4. _____	%				
5. _____	%				
6. _____	%				
7. _____	%				
8. _____	%				
Total Cover:	25%				
Woody Vine Stratum (Plot size: 15 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?	
1. <i>Rubus armeniacus</i>	10%	yes	FAC	1Indicators of hydric soil and wetland hydrology Must be present, unless disturbed or problematic.	
2. _____	%				
Total Cover:	10%			Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
% Bare Ground in Herb Stratum <u>70%</u>					
Remarks: Bare ground is partially covered with moss. The hydrophytic vegetation criterion is NOT met due to only 40% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.					

SOIL

Sampling Point: TP4

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR3/3	100%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sandy Mucky Minerals (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and Wetland hydrology must be present
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if present):

Type: _____	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Depth (inches): _____	

Remarks: There was no evidence of hydric soils within this test plot.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (min. of one required; check all that apply)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, & 4B) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Water Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D4)

Field Observations:

Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (Inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (Inches): _____	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (Inches): _____	

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

Remarks: There was no evidence of hydrology within this test plot.

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

Project/Site: Highland Terrace Subdivision City/County: La Center/Clark Sampling Date: 4/6/16
 Applicant/Owner: Evergreen Homes NW State: WA Sampling Point: TP5
 Investigator(s): Wills, Kate'Lyn Section, Township, Range: 33, 5N, 1E
 Landform (hillslope, terrace, etc.): hillslope Local relief: concave Slope (%): 3%
 Subregion (LRR): A Lat: 45.521107 Long: -122.410450 Datum: NAD83

Soil Map Unit Name: Hillsboro silt loam, 30 to 65 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Area "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soils Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: The vegetation in this test plot consisted of scrub/shrub and herbaceous species. This test plot met all three wetland indicators with 60% hydrophytic vegetation, soils with a Depleted Matrix, and the presence of hydrologic indicators; High Water Table (A2), Saturation (A3) were present within this test plot.		

VEGETATION (Use scientific names)

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30</u> ft radius)				Dominance Test Worksheet Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60</u> (A/B)
1. _____	%			
2. _____	%			
3. _____	%			
4. _____	%			
Total Cover:	%			
Sapling/Shrub Stratum (Plot size: <u>15</u> ft. radius)				Prevalence Index worksheet Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1= _____ FACW species <u>35</u> x 2= <u>70</u> FAC species <u>25</u> x 3= <u>75</u> FACU species <u>80</u> x 4= <u>320</u> UPL species _____ x 5= _____ Column Totals: <u>140</u> (A) <u>465</u> (B) Prevalence Index = B/A= <u>3.3</u>
1. <u>Rubus laciniatus</u>	40%	yes	FACU	
2. _____	%			
3. _____	%			
4. _____	%			
5. _____	%			
Total Cover:	40%			
Herb Stratum (Plot size: <u>5</u> ft radius)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data In Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Dactylis glomerata</u>	30%	yes	FACU	
2. <u>Ranunculus repens</u>	20%	yes	FAC	
3. <u>Juncus effusus</u>	20%	yes	FACW	
4. <u>Phalaris arundinacea</u>	15%	no	FACW	
5. <u>Cirsium arvense</u>	5%	no	FAC	
6. _____	%			
7. _____	%			
8. _____	%			
Total Cover:	90%			
Woody Vine Stratum (Plot size: <u>15</u> ft radius)				¹ Indicators of hydric soil and wetland hydrology Must be present, unless disturbed or problematic.
1. <u>Rubus armeniacus</u>	10%	yes	FAC	
2. _____	%			
Total Cover:	10%			
% Bare Ground in Herb Stratum <u>0</u> % Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: The hydrophytic vegetation criterion is met due to 60% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.				

SOIL

Sampling Point: TP5

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR2/2	100%		%			silty clay loam	
10-16	10YR4/1	80%	10YR4/6	20%	C	M	clay loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

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

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

Indicators for Problematic Hydric Soils

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

³Indicators of hydrophytic vegetation and Wetland hydrology must be present

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present?

Yes No

Remarks: The hydric soil indicator Depleted Matrix (F3) was met due to a matrix value of 4 and a chroma of 1 with more than 5 percent redox concentrations found in the matrix.

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

- | | | |
|--|---|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, & 4B) | <input type="checkbox"/> Water Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Algal Mat or crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) | <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Frost-Heave Hummocks (D4) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | |

Field Observations:

Surface Water Present? Yes No Depth (Inches): _____
 Water Table Present? Yes No Depth (Inches): 7
 Saturation Present? Yes No Depth (Inches): 0
 (Includes Capillary fringe)

Wetland Hydrology Present?

Yes No

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

Remarks: The hydrology indicators, High Water Table (A2), Saturation (A3) were present within this test plot.

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

Project/Site: Highland Terrace Subdivision City/County: La Center/Clark Sampling Date: 4/6/16
 Applicant/Owner: Evergreen Homes NW State: WA Sampling Point: TP6
 Investigator(s): Wills, Kate'Lyn Section, Township, Range: 33, 5N, 1E
 Landform (hillslope, terrace, etc.): hillslope Local relief: convex Slope (%): 5%
 Subregion (LRR): A Lat: 45.521107 Long: -122.410450 Datum: NAD83

Soil Map Unit Name: Hillsboro silt loam, 30 to 65 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Area "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soils Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Area has been cleared in past years and only herbaceous and shrub vegetation are starting to grow back. Evidence of a burn pile, large pieces of charcoal. The vegetation in this test plot consisted of scrub/shrub and herbaceous species. This test plot did not meet any wetland indicators therefore it does not meet the criteria of being wetland.	

VEGETATION (Use scientific names)

	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet
Tree Stratum (Plot size: 30 ft radius)				
1. _____	%			Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
2. _____	%			
3. _____	%			
4. _____	%			
Total Cover:	%			
Sapling/Shrub Stratum (Plot size: 15 ft. radius)				
1. <i>Rubus laciniatus</i>	40%	yes	FACU	Prevalence Index worksheet Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1= _____ FACW species _____ x 2= _____ FAC species _____ x 3= _____ FACU species _____ x 4= _____ UPL species _____ x 5= _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A= _____
2. <i>Rosa nutkana</i>	5%	no	FAC	
3. _____	%			
4. _____	%			
5. _____	%			
Total Cover:	45%			
Herb Stratum (Plot size: 5 ft radius)				
1. <i>Ranunculus repens</i>	15%	yes	FAC	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data In Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <i>Dactylis glomerata</i>	15%	yes	FACU	
3. <i>Cirsium arvense</i>	5%	no	FAC	
4. <i>Tolmiea menziesii</i>	5%	no	FAC	
5. <i>Taraxacum officinale</i>	5%	no	FACU	
6. <i>Tanacetum vulgare</i>	5%	no	FACU	
7. _____	%			
8. _____	%			
Total Cover:	50%			
Woody Vine Stratum (Plot size: 15 ft radius)				
1. <i>Rubus armeniacus</i>	10%	yes	FAC	¹ Indicators of hydric soil and wetland hydrology Must be present, unless disturbed or problematic.
2. _____	%			
Total Cover:	10%			
% Bare Ground in Herb Stratum <u>30%</u>				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: The hydrophytic vegetation criterion is NOT met due to only 50% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.				

SOIL

Sampling Point: TP6

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR3/3	99%	7.5YR3/4	1%	C	M	silty 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.)

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

Indicators for Problematic Hydric Soils

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

³Indicators of hydrophytic vegetation and Wetland hydrology must be present

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present?

Yes No

Remarks: There was no evidence of hydric soils within this test plot.

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

- | | | |
|--|---|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, & 4B) | <input type="checkbox"/> Water Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Algal Mat or crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) | <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Frost-Heave Hummocks (D4) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | |

Field Observations:

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

Wetland Hydrology Present?

Yes No

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

Remarks: There was no evidence of hydrology within this test plot.

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

Project/Site: Highland Terrace Subdivision City/County: La Center/Clark Sampling Date: 4/6/16
 Applicant/Owner: Evergreen Homes NW State: WA Sampling Point: TP7
 Investigator(s): Wills, Kate'Lyn Section, Township, Range: 33, 5N, 1E
 Landform (hillslope, terrace, etc.): hillslope Local relief: concave Slope (%): 1%
 Subregion (LRR): A Lat: 45.521107 Long: -122.410450 Datum: NAD83

Soil Map Unit Name: Odne silt loam, 0 to 5 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Area "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soils Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: This test plot is located in a pasture that receives regular mowing. The vegetation in this test plot consisted of herbaceous species. This test plot met two out of three wetland indicators with soils with a Redox Dark Surface, and the presence of hydrologic indicators; High Water Table (A2), Saturation (A3), and Oxidized Rhizospheres along Living Roots (C3) were found on the surface of the ground within the test plot. Additionally, the test plot was located in a depression (Geomorphic Position D2).	

VEGETATION (Use scientific names)

	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet
Tree Stratum (Plot size: <u>30</u> ft radius)				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1. _____	%	_____	_____	
2. _____	%	_____	_____	
3. _____	%	_____	_____	
4. _____	%	_____	_____	
Total Cover:	%	_____	_____	
Sapling/Shrub Stratum (Plot size: <u>15</u> ft. radius)				Prevalence Index worksheet Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1= _____ FACW species <u>10</u> x 2= <u>20</u> FAC species <u>30</u> x 3= <u>90</u> FACU species <u>60</u> x 4= <u>240</u> UPL species _____ x 5= _____ Column Totals: <u>100</u> (A) <u>350</u> (B) Prevalence Index = B/A= <u>3.5</u>
1. _____	%	_____	_____	
2. _____	%	_____	_____	
3. _____	%	_____	_____	
4. _____	%	_____	_____	
Total Cover:	%	_____	_____	
Herb Stratum (Plot size: <u>5</u> ft radius)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data In Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Dactylis glomerata</u>	<u>60%</u>	<u>yes</u>	<u>FACU</u>	
2. <u>Holcus lanatus</u>	<u>30%</u>	<u>yes</u>	<u>FAC</u>	
3. <u>Juncus effusus</u>	<u>10%</u>	<u>no</u>	<u>FACW</u>	
4. _____	%	_____	_____	
5. _____	%	_____	_____	
6. _____	%	_____	_____	
7. _____	%	_____	_____	
8. _____	%	_____	_____	
Total Cover:	<u>100%</u>	_____	_____	
Woody Vine Stratum (Plot size: <u>15</u> ft radius)				
1. _____	%	_____	_____	
2. _____	%	_____	_____	
Total Cover:	%	_____	_____	
% Bare Ground in Herb Stratum <u>0%</u>				

Remarks: this test plot is located in a pasture that receives regular mowing. The hydrophytic vegetation criterion is NOT met due to only 50% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.

Hydrophytic Vegetation Present? Yes No

SOIL

Sampling Point: TP7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR2/2	100%		%			silty clay loam	
8-16	10YR2/2	70%	7.5YR3/4	30%	C	M	silty clay loam	
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				
		%		%				

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)			Indicators for Problematic Hydric Soils		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Sandy Mucky Minerals (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)				

³Indicators of hydrophytic vegetation and Wetland hydrology must be present

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): _____	

Remarks: The hydric soil indicator Redox Dark Surface (F6) was met due to a matrix value of 2 and a chroma of 2 with more than 5 percent redox concentrations found in the matrix.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (min. of one required; check all that apply)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, & 4B) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Salt Crust (B11) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Water Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D4)
Field Observations:	
Surface Water Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (Inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (Inches): 8 Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (Inches): 4 (Includes Capillary fringe)	Wetland Hydrology Present?
Describe Recorded Data (Stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: The hydrology indicators, High Water Table (A2), Saturation (A3), and Oxidized Rhizospheres along Living Roots (C3) were found on the surface of the ground within the test plot. Additionally, the test plot was located in a depression (Geomorphic Position D2).	

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

Project/Site: Highland Terrace Subdivision City/County: La Center/Clark Sampling Date: 4/6/16
 Applicant/Owner: Evergreen Homes NW State: WA Sampling Point: TP8
 Investigator(s): Wills, Kate'Lyn Section, Township, Range: 33, 5N, 1E
 Landform (hillslope, terrace, etc.): hillslope Local relief: convex Slope (%): 2%
 Subregion (LRR): A Lat: 45.521107 Long: -122.410450 Datum: NAD83

Soil Map Unit Name: Odne silt loam, 0 to 5 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Area "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soils Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: This test plot is located in a pasture that receives regular mowing. The vegetation in this test plot consisted of herbaceous species. This test plot did not meet any wetland indicators therefore it does not meet the criteria of being wetland.	

VEGETATION (Use scientific names)

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

Remarks: This test plot is located in a pasture that receives regular mowing. The hydrophytic vegetation criterion is NOT met due to only 0% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.

SOIL

Sampling Point: TP8

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR3/3	100%		%			silty 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.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sandy Mucky Minerals (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and Wetland hydrology must be present
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if present):	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Type: _____ Depth (inches): _____	

Remarks: There was no evidence of hydric soils within this test plot.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (min. of one required; check all that apply)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, & 4B) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Water Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D4)

Field Observations:	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (Inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (Inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (Inches): _____ (Includes Capillary fringe)	

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

Remarks: There was no evidence of hydrology within this test plot.

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

Project/Site: Highland Terrace Subdivision City/County: La Center/Clark Sampling Date: 4/6/16
 Applicant/Owner: Evergreen Homes NW State: WA Sampling Point: TP9
 Investigator(s): Wills, Kate'Lyn Section, Township, Range: 33, 5N, 1E
 Landform (hillslope, terrace, etc.): hillslope Local relief: concave Slope (%): 1%
 Subregion (LRR): A Lat: 45.521107 Long: -122.410450 Datum: NAD83

Soil Map Unit Name: Odne silt loam, 0 to 5 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Area "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soils Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: This test plot is located in a pasture that receives regular mowing. The vegetation in this test plot consisted of herbaceous species. This test plot meet one wetland indicator with soils with a Depleted Matrix, therefore it does not meet the criteria of being wetland.		

VEGETATION (Use scientific names)

	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet	
Tree Stratum (Plot size: 30 ft radius)					
1. _____	%	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)	
2. _____	%	_____	_____		
3. _____	%	_____	_____		
4. _____	%	_____	_____		
Total Cover:	%			Total Number of Dominant Species Across All Strata: _____ (B)	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)				Percent of Dominant Species That Are OBL, FACW, or FAC _____ (A/B)	
1. _____	%	_____	_____	Prevalence Index worksheet Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1= _____ FACW species _____ x 2= _____ FAC species <u>70</u> x 3= <u>210</u> FACU species <u>30</u> x 4= <u>120</u> UPL species _____ x 5= _____ Column Totals: <u>100</u> (A) <u>330</u> (B) Prevalence Index = B/A = <u>3.3</u>	
2. _____	%	_____	_____		
3. _____	%	_____	_____		
4. _____	%	_____	_____		
5. _____	%	_____	_____		
Total Cover:	%				
Herb Stratum (Plot size: 5 ft radius)					
1. <i>Holcus lanatus</i>	60%	yes	FAC	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data In Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <i>Dactylis glomerata</i>	30%	yes	FACU		
3. <i>Alopecurus pratensis</i>	10%	no	FAC		
4. _____	%	_____	_____		
5. _____	%	_____	_____		
6. _____	%	_____	_____		
7. _____	%	_____	_____		
8. _____	%	_____	_____		
Total Cover:	100%				
Woody Vine Stratum (Plot size: 15 ft radius)					
1. _____	%	_____	_____	¹ Indicators of hydric soil and wetland hydrology Must be present, unless disturbed or problematic.	
2. _____	%	_____	_____		
Total Cover:	%				
% Bare Ground in Herb Stratum <u>0%</u>				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Remarks: This test plot is located in a pasture that receives regular mowing. This test plot is located in a pasture that receives regular mowing. The hydrophytic vegetation criterion is NOT met due to only 50% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.

SOIL

Sampling Point: TP9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-6	10YR3/2	100%		%		silty loam	
6-16	10YR4/2	85%	10YR4/6	15%	C	silty clay loam	
		%		%			
		%		%			
		%		%			
		%		%			
		%		%			
		%		%			

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

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

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

Indicators for Problematic Hydric Soils

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

³Indicators of hydrophytic vegetation and Wetland hydrology must be present

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present?

Yes No

Remarks: The hydric soil indicator Depleted Matrix (F3) was met due to a matrix value of 4 and a chroma of 2 with more than 5 percent redox concentrations found in the matrix.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

- Water Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)
- Raised Ant Mounds (D6) (LRR A)
- Frost-Heave Hummocks (D4)

Field Observations:

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

Wetland Hydrology Present?

Yes No

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

Remarks: There was no evidence of hydrology within this test plot.

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

Project/Site: Highland Terrace Subdivision City/County: La Center/Clark Sampling Date: 4/6/16
 Applicant/Owner: Evergreen Homes NW State: WA Sampling Point: TP10
 Investigator(s): Wills, Kate'Lyn Section, Township, Range: 33, 5N, 1E
 Landform (hillslope, terrace, etc.): hillslope Local relief: convex Slope (%): 5%
 Subregion (LRR): A Lat: 45.521107 Long: -122.410450 Datum: NAD83

Soil Map Unit Name: Odne silt loam, 0 to 5 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Area "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soils Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: This test plot is located in a pasture that receives regular mowing. The vegetation in this test plot consisted of herbaceous species. This test plot meet one wetland indicator with soils with 66% hydrophytic vegetation, therefore it does not meet the criteria of being wetland.		

VEGETATION (Use scientific names)

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet	
1. _____	%	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)	
2. _____	%	_____	_____		
3. _____	%	_____	_____		
4. _____	%	_____	_____		
Total Cover:	%			Total Number of Dominant Species Across All Strata: <u>3</u> (B)	
				Percent of Dominant Species That Are OBL, FACW, or FAC	<u>66</u> (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft. radius)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet	
1. _____	%	_____	_____	Total % Cover of: _____ Multiply by: _____	
2. _____	%	_____	_____		
3. _____	%	_____	_____		
4. _____	%	_____	_____		
5. _____	%	_____	_____		
Total Cover:	%			OBL species _____ x 1= _____	
				FACW species _____ x 2= _____	
				FAC species _____ x 3= _____	
				FACU species _____ x 4= _____	
				UPL species _____ x 5= _____	
				Column Totals: _____ (A) _____ (B)	
				Prevalence Index = B/A= _____	
Herb Stratum (Plot size: 5 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:	
1. <i>Dactylis glomerata</i>	45%	yes	FACU	<input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ 4 - Morphological Adaptations ¹ (Provide supporting data In Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <i>Holcus lanatus</i>	30%	yes	FAC		
3. <i>Alopecurus pratensis</i>	20%	yes	FAC		
4. <i>Festuca arundinacea</i>	5%	no	FAC		
5. _____	%	_____	_____		
6. _____	%	_____	_____		
7. _____	%	_____	_____		
8. _____	%	_____	_____		
Total Cover:	100%			¹ Indicators of hydric soil and wetland hydrology Must be present, unless disturbed or problematic.	
Woody Vine Stratum (Plot size: 15 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?	
1. _____	%	_____	_____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
2. _____	%	_____	_____		
Total Cover:	%				
% Bare Ground in Herb Stratum <u>0%</u>					
Remarks: The hydrophytic vegetation criterion is met due to 66% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.					

SOIL

Sampling Point: TP10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR3/3	100%		%			silty 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		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Sandy Mucky Minerals (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)				

³Indicators of hydrophytic vegetation and Wetland hydrology must be present

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Depth (inches): _____	
Remarks: There was no evidence of hydric soils within this test plot.	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (min. of one required; check all that apply)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, & 4B)	<input type="checkbox"/> Water Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or crust (B4)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Frost-Heave Hummocks (D4)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (Inches): _____	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (Inches): _____	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (Inches): _____	
(Includes Capillary fringe)	
Describe Recorded Data (Stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: There was no evidence of hydrology within this test plot.	

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

Project/Site: Highland Terrace Subdivision City/County: La Center/Clark Sampling Date: 9/7/16
 Applicant/Owner: Evergreen Homes NW State: WA Sampling Point: TP11
 Investigator(s): Wills, Kate'Lyn Section, Township, Range: 33, 5N, 1E
 Landform (hillslope, terrace, etc.): hillslope Local relief: convex Slope (%): 5%
 Subregion (LRR): A Lat: 45.521107 Long: -122.410450 Datum: NAD83

Soil Map Unit Name: Odne silt loam, 0 to 5 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Area "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soils Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Remarks: This test plot is located in a pasture that receives regular mowing but at the time of the site visit grasses were approximately 10 inches tall. Test Plot was located in a small patch of velvetgrass that was distinctly different than other vegetation in this field. This area is likely a small seep. The vegetation in this test plot consisted of herbaceous species. This test plot met all three wetland indicators with 100% hydrophytic vegetation, soils with a Depleted Matrix, and the presence of hydrologic indicators; Oxidized Rhizospheres along Living Roots (C3), and a positive FAC-Neutral Test (D5).

VEGETATION (Use scientific names)

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30</u> ft radius)				Dominance Test Worksheet Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____	%			
2. _____	%			
3. _____	%			
4. _____	%			
Total Cover: _____	%			
Sapling/Shrub Stratum (Plot size: <u>15</u> ft. radius)				Prevalence Index worksheet Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1= _____ FACW species _____ x 2= _____ FAC species _____ x 3= _____ FACU species _____ x 4= _____ UPL species _____ x 5= _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A= _____
1. _____	%			
2. _____	%			
3. _____	%			
4. _____	%			
Total Cover: _____	%			
Herb Stratum (Plot size: <u>5</u> ft radius)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data In Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Phalaris arundinacea</u>	5%	no	FACW	
2. <u>Holcus lanatus</u>	95%	yes	FAC	
3. _____	%			
4. _____	%			
5. _____	%			
6. _____	%			
7. _____	%			
8. _____	%			
Total Cover: _____	100%			
Woody Vine Stratum (Plot size: <u>15</u> ft radius)				
1. _____	%			
2. _____	%			
Total Cover: _____	%			
% Bare Ground in Herb Stratum <u>0%</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Remarks: This test plot is located in a pasture that receives regular mowing. The hydrophytic vegetation criterion is met due to 100% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.

SOIL

Sampling Point: TP11

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR3/3	100%		%			silty loam	
5-16	10Y/R4/2	90%	5YR4/6	10%	C	RC	silty 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.)

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

Indicators for Problematic Hydric Soils

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

³Indicators of hydrophytic vegetation and Wetland hydrology must be present

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present?

Yes No

Remarks: The hydric soil indicator Depleted Matrix (F3) was met due to a matrix value of 4 and a chroma of 2 with more than 5 percent redox concentrations found in the matrix.

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

- | | | |
|--|---|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, & 4B) | <input type="checkbox"/> Water Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Algal Mat or crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) | <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Frost-Heave Hummocks (D4) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | |

Field Observations:

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

Wetland Hydrology Present?

Yes No

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

Remarks: The hydrology indicators, Oxidized Rhizospheres along Living Roots (C3), and a positive FAC-Neutral Test (D5).

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

Project/Site: Highland Terrace Subdivision City/County: La Center/Clark Sampling Date: 9/7/16
 Applicant/Owner: Evergreen Homes NW State: WA Sampling Point: TP12
 Investigator(s): Wills, Kate'Lyn Section, Township, Range: 33, 5N, 1E
 Landform (hillslope, terrace, etc.): hillslope Local relief: convex Slope (%): 5%
 Subregion (LRR): A Lat: 45.521107 Long: -122.410450 Datum: NAD83

Soil Map Unit Name: Odne silt loam, 0 to 5 percent slopes NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Area "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soils Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: This test plot is located in a pasture that receives regular mowing but at the time of the site visit herbaceous vegetations was approximately 10 inches tall. Test Plot was located in a small patch of green vegetation that was distinctly different than other vegetation in this field. The vegetation in this test plot consisted of herbaceous species. This test plot met one wetland indicator with 100% hydrophytic vegetation, therefore it does not meet the criteria of being wetland.	

VEGETATION (Use scientific names)

	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet
Tree Stratum (Plot size: <u>30</u> ft radius)				Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____	%			
2. _____	%			
3. _____	%			
4. _____	%			
Total Cover:	%			
Sapling/Shrub Stratum (Plot size: <u>15</u> ft. radius)				Prevalence Index worksheet Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1= _____ FACW species _____ x 2= _____ FAC species _____ x 3= _____ FACU species _____ x 4= _____ UPL species _____ x 5= _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1. _____	%			
2. _____	%			
3. _____	%			
4. _____	%			
Total Cover:	%			
Herb Stratum (Plot size: <u>5</u> ft radius)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data In Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <i>Cirsium arvense</i>	35%	yes	FAC	
2. <i>Agrostis capillaris</i>	35%	yes	FAC	
3. <i>*Poa sp.</i>	20%	yes	FAC	
4. <i>Plantago lanceolata</i>	15%	no	FACU	
5. <i>Hypochaeris radicata</i>	10%	no	FACU	
6. <i>Rumex crispus</i>	5%	no	FAC	
7. _____	%			
8. _____	%			
Total Cover:	120%			
Woody Vine Stratum (Plot size: <u>15</u> ft radius)				¹ Indicators of hydric soil and wetland hydrology Must be present, unless disturbed or problematic.
1. _____	%			
2. _____	%			
Total Cover:	%			
% Bare Ground in Herb Stratum <u>0%</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Remarks: *Assumed FAC indicator status. This test plot is located in a pasture that receives regular mowing. The hydrophytic vegetation criterion is met due to 100% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.

SOIL

Sampling Point: TP12

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR3/3	100%		%			silty 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.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Minerals (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Indicators for Problematic Hydric Soils

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

³Indicators of hydrophytic vegetation and Wetland hydrology must be present

Restrictive Layer (if present):	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Type: _____	
Depth (inches): _____	

Remarks: There was no evidence of hydric soils within this test plot.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (min. of one required; check all that apply)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, & 4B) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Water Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D4)

Field Observations:	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (Inches): _____	
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (Inches): _____	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (Inches): _____ (Includes Capillary fringe)	

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

Remarks: There was no evidence of hydrology within this test plot.

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

Project/Site: Highland Terrace Subdivision City/County: La Center/Clark Sampling Date: 9/7/16
 Applicant/Owner: Evergreen Homes NW State: WA Sampling Point: TP13
 Investigator(s): Wills, Kate'Lyn Section, Township, Range: 33, 5N, 1E
 Landform (hillslope, terrace, etc.): hillslope Local relief: convex Slope (%): 5%
 Subregion (LRR): A Lat: 45.521107 Long: -122.410450 Datum: NAD83

Soil Map Unit Name: Odne silt loam, 0 to 5 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Area "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soils Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Test plot was located in a patch of reed canarygrass. This test plot is located in a pasture that receives regular mowing but at the time of the site visit herbaceous vegetations was approximately 10 inches tall. The vegetation in this test plot consisted of herbaceous species. This test plot met one wetland indicator with 100% hydrophytic vegetation, therefore it does not meet the criteria of being wetland.	

VEGETATION (Use scientific names)

	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet
Tree Stratum (Plot size: <u>30</u> ft radius)				
1. _____	%			Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66</u> (A/B)
2. _____	%			
3. _____	%			
4. _____	%			
Total Cover:	%			
Sapling/Shrub Stratum (Plot size: <u>15</u> ft. radius)				
1. <u>Rubus laciniatus</u>	30%	yes	FACU	Prevalence Index worksheet Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1= _____ FACW species _____ x 2= _____ FAC species _____ x 3= _____ FACU species _____ x 4= _____ UPL species _____ x 5= _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A= _____
2. _____	%			
3. _____	%			
4. _____	%			
5. _____	%			
Total Cover:	30%			
Herb Stratum (Plot size: <u>5</u> ft radius)				
1. <u>Phalaris arundinacea</u>	80%	yes	FACW	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data In Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Chamerion angustifolium</u>	15%	no	FACU	
3. <u>Cirsium arvense</u>	10%	no	FAC	
4. <u>Hypochaeris radicata</u>	5%	no	FACU	
5. _____	%			
6. _____	%			
7. _____	%			
8. _____	%			
Total Cover:	110%			
Woody Vine Stratum (Plot size: <u>15</u> ft radius)				
1. <u>Rubus armeniacus</u>	20%	yes	FAC	¹ Indicators of hydric soil and wetland hydrology Must be present, unless disturbed or problematic.
2. _____	%			
Total Cover:	20%			
% Bare Ground in Herb Stratum <u>0%</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: *Assumed FAC indicator status. This test plot is located in a pasture that receives regular mowing. The hydrophytic vegetation criterion is met due to 66% of the dominant vegetation within the test plot having either OBL, FACW, or FAC indicator statuses.				

SOIL

Sampling Point: TP13

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR3/3	100%		%			silty 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.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sandy Mucky Minerals (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and Wetland hydrology must be present

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: There was no evidence of hydric soils within this test plot.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (min. of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Water Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D4)

Field Observations:

Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (Inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (Inches): _____	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (Inches): _____	

(Includes Capillary fringe)

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

Remarks: There was no evidence of hydrology within this test plot.

APPENDIX B: WETLAND RATING FORM

Wetland name or number A

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland A Date of site visit: 3/3/2016, 9/7/16

Rated by KT Wills Trained by Ecology? Yes No Date of training 9/2016

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

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

Source of base aerial photo/map Google Earth

OVERALL WETLAND CATEGORY 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	Improving Water Quality			Hydrologic			Habitat			
<i>Circle the appropriate ratings</i>										
Site Potential	H	M	L	H	M	L	H	M	L	
Landscape Potential	H	M	L	H	M	L	H	M	L	
Value	H	M	L	H	M	L	H	M	L	TOTAL
Score Based on Ratings	6			4			6			16

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	Not Applicable

Wetland name or number A

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	5
Hydroperiods	H 1.2	5
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	5
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to figure above</i>)	S 4.1	5
Boundary of 150 ft buffer (<i>can be added to another figure</i>)	S 2.1, S 5.1	5
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	6
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	17
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	17

HGM Classification of Wetlands in Western Washington

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

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

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

NO – go to 2

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

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

NO – Saltwater Tidal Fringe (Estuarine)

YES – Freshwater Tidal Fringe

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

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

NO – go to 3

YES – The wetland class is **Flats**

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

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

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

NO – go to 4

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

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

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

NO – go to 5

YES – The wetland class is **Slope**

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

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

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

Wetland name or number A

NO – go to 6

YES – The wetland class is **Riverine**

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

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

NO – go to 7

YES – The wetland class is **Depressional**

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

NO – go to 8

YES – The wetland class is **Depressional**

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

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

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

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

Wetland name or number A

SLOPE WETLANDS

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

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

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

Record the rating on the first page

S 2.0. Does the landscape have the potential to support the water quality function of the site?		
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants?		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?		0
Other sources	Yes = 1 No = 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?		1
	Yes = 1 No = 0	
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? <i>At least one aquatic resource in the basin is on the 303(d) list.</i>		1
	Yes = 1 No = 0	
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? <i>Answer YES if there is a TMDL for the basin in which unit is found.</i>		2
	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 = M 0 = L

Record the rating on the first page

Wetland name or number A

SLOPE WETLANDS

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

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

S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. <i>Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows.</i> Dense, uncut, rigid plants cover > 90% of the area of the wetland <i>All other conditions</i>	0
--	----------

Rating of Site Potential If score is: 1 = M X 0 = L Record the rating on the first page

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

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

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

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

S 6.1. Distance to the nearest areas downstream that have flooding problems: The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) points = 2 Surface flooding problems are in a sub-basin farther down-gradient points = 1 No flooding problems anywhere downstream points = 0	0
--	----------

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

Total for S 6 Add the points in the boxes above	0
--	----------

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

NOTES and FIELD OBSERVATIONS:

Wetland name or number A

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

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

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

0

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

H 1.2. Hydroperiods

0

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

- Permanently flooded or inundated 4 or more types present: points = 3
- Seasonally flooded or inundated 3 types present: points = 2
- Occasionally flooded or inundated 2 types present: points = 1
- 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**

H 1.3. Richness of plant species

1

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

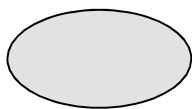
*Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. **Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***

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

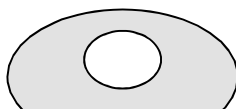
H 1.4. Interspersion of habitats

0

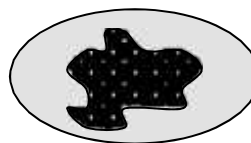
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always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



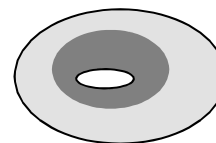
None = 0 points



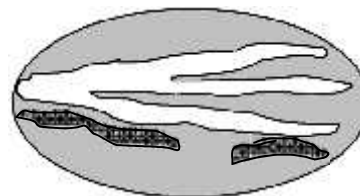
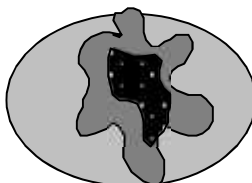
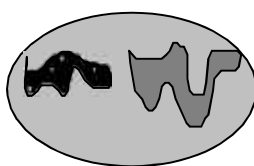
Low = 1 point



Moderate = 2 points



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



Wetland name or number A

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

Rating of Site Potential If score is: 15-18 = H 7-14 = M X 0-6 = L *Record the rating on the first page*

<p>H 2.0. Does the landscape have the potential to support the habitat functions of the site?</p>	
<p>H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>).</p> <p><i>Calculate:</i> % undisturbed habitat <u>11</u> + [(% moderate and low intensity land uses)<u>20</u>/2] <u>10</u> = <u>21</u> %</p> <p>If total accessible habitat is:</p> <p>> 1/3 (33.3%) of 1 km Polygon points = 3</p> <p>20-33% of 1 km Polygon points = 2</p> <p>10-19% of 1 km Polygon points = 1</p> <p>< 10% of 1 km Polygon points = 0</p>	2
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p><i>Calculate:</i> % undisturbed habitat <u>33</u> + [(% moderate and low intensity land uses)<u>52</u>/2] <u>26</u> = <u>59</u> %</p> <p>Undisturbed habitat > 50% of Polygon points = 3</p> <p>Undisturbed habitat 10-50% and in 1-3 patches points = 2</p> <p>Undisturbed habitat 10-50% and > 3 patches points = 1</p> <p>Undisturbed habitat < 10% of 1 km Polygon points = 0</p>	3
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p>> 50% of 1 km Polygon is high intensity land use points = (- 2)</p> <p>≤ 50% of 1 km Polygon is high intensity points = 0</p>	0
<p>Total for H 2</p>	<p>Add the points in the boxes above</p> <p>5</p>

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?

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

Wetland name or number A

WDFW Priority Habitats

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

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

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

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

Wetland name or number A

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<p><i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i></p>	
<p>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 <input checked="" type="radio"/> = Not an estuarine wetland</p>	
<p>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</p>	<p>Cat. I</p>
<p>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-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</p>	<p>Cat. I Cat. II</p>
<p>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 <input checked="" type="radio"/> – Go to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = Category I No = Not a WHCV SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf Yes – Contact WNHP/WDNR and go to SC 2.4 <input checked="" type="radio"/> = 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</p>	<p>Cat. I</p>
<p>SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? Yes – Go to SC 3.3 <input checked="" type="radio"/> – 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 <input checked="" type="radio"/> = Is not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = Is a Category I bog No – Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = Is a Category I bog No = Is not a bog</p>	<p>Cat. I</p>

Wetland name or number A

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

Wetland name or number A

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Wetland name or number B

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland B Date of site visit: 3/3/2016, 9/7/16

Rated by KT Wills Trained by Ecology? Yes Date of training 9/2016

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

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

Source of base aerial photo/map Google Earth

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

1. Category of wetland based on FUNCTIONS

 Category I – Total score = 23 – 27

 Category II – Total score = 20 – 22

 Category III – Total score = 16 – 19

X Category IV – Total score = 9 – 15

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

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

9 = H,H,H

8 = H,H,M

7 = H,H,L

7 = H,M,M

6 = H,M,L

6 = M,M,M

5 = H,L,L

5 = M,M,L

4 = M,L,L

3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	Not Applicable

Wetland name or number B

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	7
Hydroperiods	H 1.2	7
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	7
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to figure above</i>)	S 4.1	7
Boundary of 150 ft buffer (<i>can be added to another figure</i>)	S 2.1, S 5.1	7
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	8
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	17
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	17

HGM Classification of Wetlands in Western Washington

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

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

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

NO – go to 2

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

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

NO – **Saltwater Tidal Fringe (Estuarine)**

YES – **Freshwater Tidal Fringe**

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

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

NO – go to 3

YES – The wetland class is **Flats**

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

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

The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;

At least 30% of the open water area is deeper than 6.6 ft (2 m).

NO – go to 4

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

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

The wetland is on a slope (*slope can be very gradual*),

The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,

The water leaves the wetland **without being impounded**.

NO – go to 5

YES – The wetland class is **Slope**

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

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

The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,

The overbank flooding occurs at least once every 2 years.

Wetland name or number

NO – go to 6

YES – The wetland class is **Riverine**

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

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

NO – go to 7

YES – The wetland class is **Depressional**

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

NO – go to 8

YES – The wetland class is **Depressional**

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

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

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

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

Wetland name or number B

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?		1
S 1.1. Characteristics of the average slope of the wetland: <i>(a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)</i>		1
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. <u>The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions):</u> Yes = 3 No = 0		0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. <i>Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.</i>		0
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	1

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?		0
Other sources	Yes = 1 No = 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?		0
	Yes = 1 No = 0	
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? <i>At least one aquatic resource in the basin is on the 303(d) list.</i>		1
	Yes = 1 No = 0	
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? <i>Answer YES if there is a TMDL for the basin in which unit is found.</i>		2
	Yes = 2 No = 0	
Total for S 3	Add the points in the boxes above	3

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

Record the rating on the first page

Wetland name or number B

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?

<p>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. <i>Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows.</i> Dense, uncut, rigid plants cover > 90% of the area of the wetland All other conditions</p>	<p>0</p>
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Rating of Site Potential If score is: 1 = M X 0 = L Record the rating on the first page

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

<p>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</p>	<p>1</p>
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Rating of Landscape Potential If score is: X 1 = M 0 = L Record the rating on the first page

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

<p>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</p>	<p>0</p>
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<p>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</p>	<p>0</p>
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<p>Total for S 6 Add the points in the boxes above</p>	<p>0</p>
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Rating of Value If score is: 2-4 = H 1 = M X 0 = L Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

Wetland name or number B

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

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

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

0

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

H 1.2. Hydroperiods

0

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

- Permanently flooded or inundated 4 or more types present: points = 3
- Seasonally flooded or inundated 3 types present: points = 2
- Occasionally flooded or inundated 2 types present: points = 1
- 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**

H 1.3. Richness of plant species

1

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

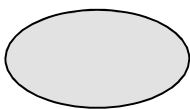
*Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. **Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***

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

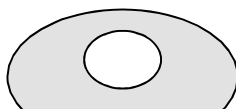
H 1.4. Interspersion of habitats

0

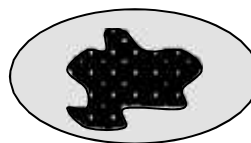
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always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



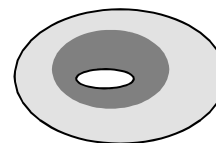
None = 0 points



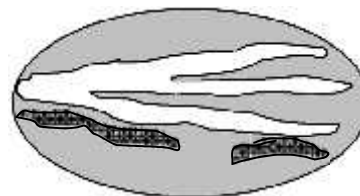
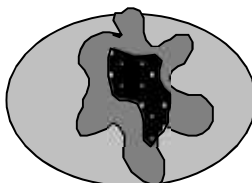
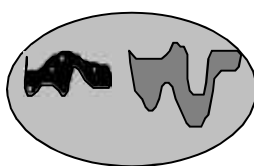
Low = 1 point



Moderate = 2 points



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



Wetland name or number B

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

Rating of Site Potential If score is: 15-18 = H 7-14 = M X 0-6 = L *Record the rating on the first page*

<p>H 2.0. Does the landscape have the potential to support the habitat functions of the site?</p>	
<p>H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>).</p> <p><i>Calculate:</i> % undisturbed habitat <u>11.6</u> + [(% moderate and low intensity land uses)<u>21/2</u>] <u>10.5</u> = <u>22</u> %</p> <p>If total accessible habitat is:</p> <p>> 1/3 (33.3%) of 1 km Polygon points = 3</p> <p>20-33% of 1 km Polygon points = 2</p> <p>10-19% of 1 km Polygon points = 1</p> <p>< 10% of 1 km Polygon points = 0</p>	2
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p><i>Calculate:</i> % undisturbed habitat <u>32</u> + [(% moderate and low intensity land uses)<u>56/2</u>] <u>28</u> = <u>60</u> %</p> <p>Undisturbed habitat > 50% of Polygon points = 3</p> <p>Undisturbed habitat 10-50% and in 1-3 patches points = 2</p> <p>Undisturbed habitat 10-50% and > 3 patches points = 1</p> <p>Undisturbed habitat < 10% of 1 km Polygon points = 0</p>	3
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p>> 50% of 1 km Polygon is high intensity land use points = (- 2)</p> <p>≤ 50% of 1 km Polygon is high intensity points = 0</p>	0
<p>Total for H 2</p>	<p>Add the points in the boxes above</p> <p>5</p>

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?

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

Wetland name or number

WDFW Priority Habitats

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

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

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

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

Wetland name or number B

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

Wetland name or number B

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Wetland name or number C

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland C Date of site visit: 3/3/2016, 9/7/16

Rated by KT Wills Trained by Ecology? Yes No Date of training 9/2016

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

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

Source of base aerial photo/map Google Earth

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

1. Category of wetland based on FUNCTIONS

 Category I – Total score = 23 – 27

 Category II – Total score = 20 – 22

 Category III – Total score = 16 – 19

X Category IV – Total score = 9 – 15

FUNCTION	Improving Water Quality			Hydrologic			Habitat			
<i>Circle the appropriate ratings</i>										
Site Potential	H	M	L	H	M	L	H	M	L	
Landscape Potential	H	M	L	H	M	L	H	M	L	
Value	H	M	L	H	M	L	H	M	L	TOTAL
Score Based on Ratings	6			3			6			15

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	Not Applicable

Wetland name or number C

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	9
Hydroperiods	H 1.2	9
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	9
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to figure above</i>)	S 4.1	9
Boundary of 150 ft buffer (<i>can be added to another figure</i>)	S 2.1, S 5.1	9
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	10
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	17
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	17

HGM Classification of Wetlands in Western Washington

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

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

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

NO – go to 2

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

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

NO – **Saltwater Tidal Fringe (Estuarine)**

YES – **Freshwater Tidal Fringe**

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

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

NO – go to 3

YES – The wetland class is **Flats**

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

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

The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;

At least 30% of the open water area is deeper than 6.6 ft (2 m).

NO – go to 4

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

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

The wetland is on a slope (*slope can be very gradual*),

The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,

The water leaves the wetland **without being impounded**.

NO – go to 5

YES – The wetland class is **Slope**

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

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

The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,

The overbank flooding occurs at least once every 2 years.

Wetland name or number C

NO – go to 6

YES – The wetland class is **Riverine**

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

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

NO – go to 7

YES – The wetland class is **Depressional**

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

NO – go to 8

YES – The wetland class is **Depressional**

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

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

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

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

Wetland name or number C

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

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

Record the rating on the first page

S 2.0. Does the landscape have the potential to support the water quality function of the site?		
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? Yes = 1 No = 0		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		0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? <i>At least one aquatic resource in the basin is on the 303(d) list.</i> Yes = 1 No = 0		1
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? <i>Answer YES if there is a TMDL for the basin in which unit is found.</i> Yes = 2 No = 0		2
Total for S 3 Add the points in the boxes above		3

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

Record the rating on the first page

Wetland name or number C

SLOPE WETLANDS

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

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

S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. <i>Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows.</i> Dense, uncut, rigid plants cover > 90% of the area of the wetland All other conditions	0
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Rating of Site Potential If score is: 1 = M X 0 = L

Record the rating on the first page

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

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

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

Record the rating on the first page

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

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

Total for S 6	Add the points in the boxes above	0
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Rating of Value If score is: 2-4 = H 1 = M X 0 = L

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

Wetland name or number C

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.*

1

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

H 1.2. Hydroperiods

0

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

- Permanently flooded or inundated 4 or more types present: points = 3
- Seasonally flooded or inundated 3 types present: points = 2
- Occasionally flooded or inundated 2 types present: points = 1
- 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**

H 1.3. Richness of plant species

1

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

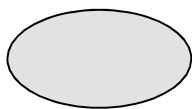
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle

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

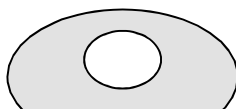
H 1.4. Interspersion of habitats

1

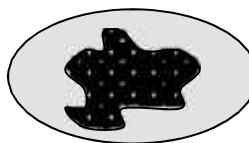
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always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



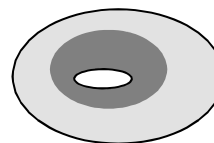
None = 0 points



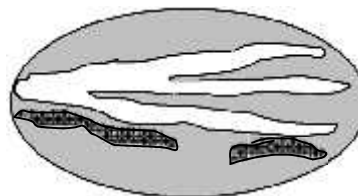
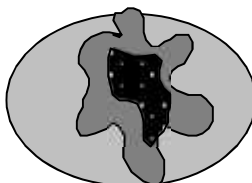
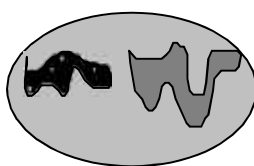
Low = 1 point



Moderate = 2 points



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



Wetland name or number C

<p>H 1.5. Special habitat features:</p> <p>Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <p><input type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).</p> <p><input type="checkbox"/> Standing snags (dbh > 4 in) within the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)</p> <p><input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)</p> <p><input type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>)</p> <p><input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)</p>	0
<p>Total for H 1</p>	<p>Add the points in the boxes above</p> <p>3</p>

Rating of Site Potential If score is: 15-18 = H 7-14 = M X 0-6 = L *Record the rating on the first page*

<p>H 2.0. Does the landscape have the potential to support the habitat functions of the site?</p>	
<p>H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>).</p> <p><i>Calculate:</i> % undisturbed habitat <u>11.4</u> + [(% moderate and low intensity land uses)<u>22/2</u>] <u>11</u> = <u>22</u> %</p> <p>If total accessible habitat is:</p> <p>> 1/3 (33.3%) of 1 km Polygon points = 3</p> <p>20-33% of 1 km Polygon points = 2</p> <p>10-19% of 1 km Polygon points = 1</p> <p>< 10% of 1 km Polygon points = 0</p>	2
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p><i>Calculate:</i> % undisturbed habitat <u>32</u> + [(% moderate and low intensity land uses)<u>49/2</u>] <u>24.5</u> = <u>57</u> %</p> <p>Undisturbed habitat > 50% of Polygon points = 3</p> <p>Undisturbed habitat 10-50% and in 1-3 patches points = 2</p> <p>Undisturbed habitat 10-50% and > 3 patches points = 1</p> <p>Undisturbed habitat < 10% of 1 km Polygon points = 0</p>	3
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p>> 50% of 1 km Polygon is high intensity land use points = (- 2)</p> <p>≤ 50% of 1 km Polygon is high intensity points = 0</p>	0
<p>Total for H 2</p>	<p>Add the points in the boxes above</p> <p>5</p>

Rating of Landscape Potential If score is: X 4-6 = H 1-3 = M < 1 = L *Record the rating on the first page*

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

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

WDFW Priority Habitats

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

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

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

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

Wetland name or number C

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

Wetland name or number C

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Wetland name or number D

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland D Date of site visit: 4/6/16 and 9/7/16

Rated by KT Wills Trained by Ecology? Yes Date of training 9/2016

HGM Class used for rating Depressional Wetland has multiple HGM classes? Y X N

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

Source of base aerial photo/map Google Earth

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

1. Category of wetland based on FUNCTIONS

 Category I – Total score = 23 – 27

 Category II – Total score = 20 – 22

 Category III – Total score = 16 – 19

 X Category IV – Total score = 9 – 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>Circle the appropriate ratings</i>				
Site Potential	H (M) L	H M (L)	H M (L)	
Landscape Potential	H M (L)	H M (L)	(H) M L	
Value	(H) M L	H M (L)	H (M) L	TOTAL
Score Based on Ratings	6	3	6	15

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	Not Applicable

Wetland name or number D

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	11
Hydroperiods	D 1.4, H 1.2	11
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	11
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	11
Map of the contributing basin	D 4.3, D 5.3	12
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	12
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	17
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	17

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

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

HGM Classification of Wetlands in Western Washington

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

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

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

NO – go to 2

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

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

NO – Saltwater Tidal Fringe (Estuarine)

YES – Freshwater Tidal Fringe

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

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

NO – go to 3

YES – The wetland class is **Flats**

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

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

___ The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;

___ At least 30% of the open water area is deeper than 6.6 ft (2 m).

NO – go to 4

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

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

___ The wetland is on a slope (*slope can be very gradual*),

___ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,

___ The water leaves the wetland **without being impounded**.

NO – go to 5

YES – The wetland class is **Slope**

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

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

___ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,

___ The overbank flooding occurs at least once every 2 years.

Wetland name or number

NO – go to 6

YES – The wetland class is **Riverine**

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

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

NO – go to 7

YES – The wetland class is **Depressional**

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

NO – go to 8

YES – The wetland class is **Depressional**

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

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

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

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

Wetland name or number D

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	3
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area points = 5 Wetland has persistent, ungrazed, plants > ½ of area points = 3 Wetland has persistent, ungrazed plants > 1/10 of area points = 1 Wetland has persistent, ungrazed plants < 1/10 of area points = 0	5
D 1.4. Characteristics of seasonal ponding or inundation: <i>This is the area that is ponded for at least 2 months. See description in manual.</i> Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0	0
Total for D 1	8

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

D 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
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 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?	Yes = 1 No = 0
Total for D 2	0

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

D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?	Yes = 1 No = 0
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
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
Total for D 3	3

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

Wetland name or number D

DEPRESSIONAL AND FLATS WETLANDS

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

D 4.0. Does the site have the potential to reduce flooding and erosion?		
D 4.1. Characteristics of surface water outflows from the wetland:		4
Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet	points = 2	
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch	points = 1	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 0	
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.		0
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	
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.		0
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	
Total for D 4	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 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.		0
The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):		
• Flooding occurs in a sub-basin that is immediately down-gradient of unit.	points = 2	
• Surface flooding problems are in a sub-basin farther down-gradient.	points = 1	
Flooding from groundwater is an issue in the sub-basin.	points = 1	
The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why _____	points = 0	
There are no problems with flooding downstream of the wetland.	points = 0	
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	0

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

Wetland name or number D

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.*

0

- | | |
|--|----------------------------------|
| <input type="checkbox"/> Aquatic bed | 4 structures or more: points = 4 |
| <input checked="" type="checkbox"/> Emergent | 3 structures: points = 2 |
| <input type="checkbox"/> Scrub-shrub (areas where shrubs have > 30% cover) | 2 structures: points = 1 |
| <input type="checkbox"/> Forested (areas where trees have > 30% cover) | 1 structure: points = 0 |
- 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

1

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

- | | |
|---|-------------------------------------|
| <input type="checkbox"/> Permanently flooded or inundated | 4 or more types present: points = 3 |
| <input type="checkbox"/> Seasonally flooded or inundated | 3 types present: points = 2 |
| <input checked="" type="checkbox"/> Occasionally flooded or inundated | 2 types present: points = 1 |
| <input checked="" type="checkbox"/> 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**

H 1.3. Richness of plant species

1

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

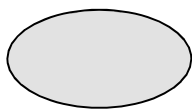
*Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. **Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***

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

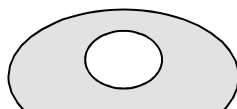
H 1.4. Interspersion of habitats

0

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



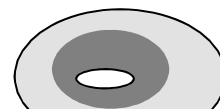
None = 0 points



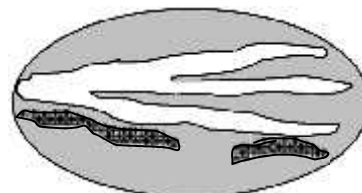
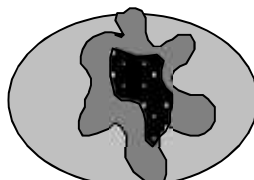
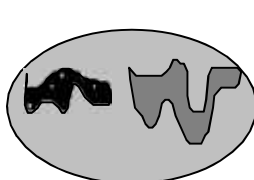
Low = 1 point



Moderate = 2 points



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



Wetland name or number D

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

2

Rating of Site Potential If score is: 15-18 = H 7-14 = M X 0-6 = L *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat functions of the site?

<p>H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>).</p> <p><i>Calculate:</i> % undisturbed habitat $10.7 + [(\% \text{ moderate and low intensity land uses})21.1/2]$ $10.5 = \mathbf{21\%}$</p> <p>If total accessible habitat is:</p> <p>> 1/3 (33.3%) of 1 km Polygon points = 3</p> <p>20-33% of 1 km Polygon points = 2</p> <p>10-19% of 1 km Polygon points = 1</p> <p>< 10% of 1 km Polygon points = 0</p>	2
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p><i>Calculate:</i> % undisturbed habitat $32 + [(\% \text{ moderate and low intensity land uses})48/2]$ $24 = \mathbf{56\%}$</p> <p>Undisturbed habitat > 50% of Polygon points = 3</p> <p>Undisturbed habitat 10-50% and in 1-3 patches points = 2</p> <p>Undisturbed habitat 10-50% and > 3 patches points = 1</p> <p>Undisturbed habitat < 10% of 1 km Polygon points = 0</p>	3
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p>> 50% of 1 km Polygon is high intensity land use points = (- 2)</p> <p>≤ 50% of 1 km Polygon is high intensity points = 0</p>	0
Total for H 2	Add the points in the boxes above

5

Rating of Landscape Potential If score is: X 4-6 = H 1-3 = M < 1 = L *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?

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

Wetland name or number D

WDFW Priority Habitats

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

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

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

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

Wetland name or number D

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
<p>SC 1.0. Estuarine wetlands</p> <p>Does the wetland meet the following criteria for Estuarine wetlands?</p> <ul style="list-style-type: none"> — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt <p style="text-align: right;">Yes –Go to SC 1.1 <input checked="" type="radio"/> No – Not an estuarine wetland</p>	
<p>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?</p> <p style="text-align: right;">Yes = Category I No - Go to SC 1.2</p>	Cat. I
<p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?</p> <ul style="list-style-type: none"> — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i>, see page 25) — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. <p style="text-align: right;">Yes = Category I No = Category II</p>	Cat. I Cat. II
<p>SC 2.0. Wetlands of High Conservation Value (WHCV)</p> <p>SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value?</p> <p style="text-align: right;">Yes – Go to SC 2.2 <input checked="" type="radio"/> No – Go to SC 2.3</p> <p>SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?</p> <p style="text-align: right;">Yes = Category I No = Not a WHCV</p> <p>SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?</p> <p style="text-align: center;">http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</p> <p style="text-align: right;">Yes – Contact WNHP/WDNR and go to SC 2.4 <input checked="" type="radio"/> No = Not a WHCV</p> <p>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?</p> <p style="text-align: right;">Yes = Category I No = Not a WHCV</p>	Cat. I
<p>SC 3.0. Bogs</p> <p>Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i></p> <p>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?</p> <p style="text-align: right;">Yes – Go to SC 3.3 <input checked="" type="radio"/> No – Go to SC 3.2</p> <p>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?</p> <p style="text-align: right;">Yes – Go to SC 3.3 <input checked="" type="radio"/> No = Is not a bog</p> <p>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?</p> <p style="text-align: right;">Yes = Is a Category I bog No – Go to SC 3.4</p> <p>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.</p> <p>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?</p> <p style="text-align: right;">Yes = Is a Category I bog No = Is not a bog</p>	Cat. I

Wetland name or number D

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

Wetland name or number D

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Wetland name or number E

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland E Date of site visit: 4/6/16 and 9/7/16

Rated by KT Wills Trained by Ecology? Yes Date of training 9/2016

HGM Class used for rating Depressional Wetland has multiple HGM classes? Y X N

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

Source of base aerial photo/map Google Earth

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

1. Category of wetland based on FUNCTIONS

 Category I – Total score = 23 – 27

 Category II – Total score = 20 – 22

 Category III – Total score = 16 – 19

X Category IV – Total score = 9 – 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>Circle the appropriate ratings</i>				
Site Potential	H M L	H M L	H M L	
Landscape Potential	H M L	H M L	H M L	
Value	H M L	H M L	H M L	TOTAL
Score Based on Ratings	6	3	6	15

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

9 = H,H,H

8 = H,H,M

7 = H,H,L

7 = H,M,M

6 = H,M,L

6 = M,M,M

5 = H,L,L

5 = M,M,L

4 = M,L,L

3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Wetland name or number E

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	13
Hydroperiods	D 1.4, H 1.2	13
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	13
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	13
Map of the contributing basin	D 4.3, D 5.3	14
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	14
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	17
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	17

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

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

HGM Classification of Wetlands in Western Washington

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

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

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

NO – go to 2

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

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

NO – **Saltwater Tidal Fringe (Estuarine)**

YES – **Freshwater Tidal Fringe**

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

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

NO – go to 3

YES – The wetland class is **Flats**

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

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

The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;

At least 30% of the open water area is deeper than 6.6 ft (2 m).

NO – go to 4

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

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

The wetland is on a slope (*slope can be very gradual*),

The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,

The water leaves the wetland **without being impounded**.

NO – go to 5

YES – The wetland class is **Slope**

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

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

The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,

The overbank flooding occurs at least once every 2 years.

Wetland name or number E

NO – go to 6

YES – The wetland class is **Riverine**

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

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

NO – go to 7

YES – The wetland class is **Depressional**

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

NO – go to 8

YES – The wetland class is **Depressional**

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

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

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

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

Wetland name or number E

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

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

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

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

D 3.0. Is the water quality improvement provided by the site valuable to society?		
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?	Yes = 1 No = 0	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 = H 1 = M 0 = L Record the rating on the first page

Wetland name or number E

DEPRESSIONAL AND FLATS WETLANDS

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

D 4.0. Does the site have the potential to reduce flooding and erosion?		
D 4.1. Characteristics of surface water outflows from the wetland:		
Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	2
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet	points = 2	
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch	points = 1	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 0	
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	3
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	
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	0
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	
Total for D 4	Add the points in the boxes above	5

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

D 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	0
• 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	
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	0

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

Wetland name or number E

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

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

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

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

H 1.2. Hydroperiods

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

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

H 1.3. Richness of plant species

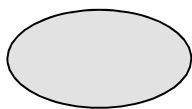
Count the number of plant species in the wetland that cover at least 10 ft².

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

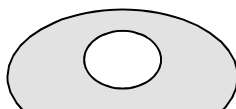
- | | | |
|------------------------------|------------|----------|
| If you counted: > 19 species | points = 2 | 1 |
| 5 - 19 species | points = 1 | |
| < 5 species | points = 0 | |

H 1.4. Interspersion of habitats

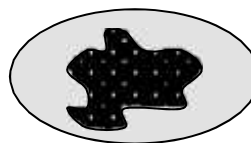
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always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



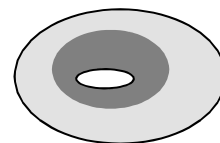
None = 0 points



Low = 1 point

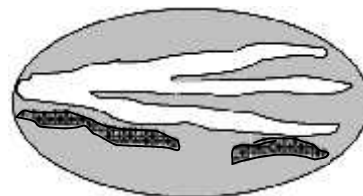
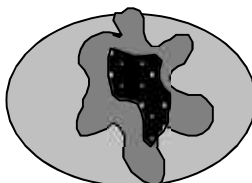
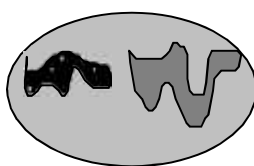


Moderate = 2 points



2

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



Wetland name or number E

<p>H 1.5. Special habitat features:</p> <p>Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <p><input type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).</p> <p><input type="checkbox"/> Standing snags (dbh > 4 in) within the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)</p> <p><input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)</p> <p><input type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>)</p> <p><input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)</p>	0
<p>Total for H 1</p>	<p>Add the points in the boxes above</p> <p>5</p>

Rating of Site Potential If score is: 15-18 = H 7-14 = M X 0-6 = L *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat functions of the site?

<p>H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>).</p> <p><i>Calculate:</i> % undisturbed habitat <u>10.3</u> + [(% moderate and low intensity land uses)<u>20.4/2</u>] <u>10.2</u> = <u>20.5</u> %</p> <p>If total accessible habitat is:</p> <p>> 1/3 (33.3%) of 1 km Polygon points = 3</p> <p>20-33% of 1 km Polygon points = 2</p> <p>10-19% of 1 km Polygon points = 1</p> <p>< 10% of 1 km Polygon points = 0</p>	2
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p><i>Calculate:</i> % undisturbed habitat <u>33</u>+ [(% moderate and low intensity land uses)<u>49.5/2</u>] <u>24.25</u>= <u>57</u> %</p> <p>Undisturbed habitat > 50% of Polygon points = 3</p> <p>Undisturbed habitat 10-50% and in 1-3 patches points = 2</p> <p>Undisturbed habitat 10-50% and > 3 patches points = 1</p> <p>Undisturbed habitat < 10% of 1 km Polygon points = 0</p>	3
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p>> 50% of 1 km Polygon is high intensity land use points = (- 2)</p> <p>≤ 50% of 1 km Polygon is high intensity points = 0</p>	0
<p>Total for H 2</p>	<p>Add the points in the boxes above</p> <p>5</p>

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

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

Wetland name or number E

WDFW Priority Habitats

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

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

Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).

Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).

Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.

Old-growth/Mature forests: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.

Oregon White Oak: Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).

Riparian: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

Westside Prairies: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).

Instream: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.

Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).

Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.

Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.

Talus: Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

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

Wetland name or number E

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
<p>SC 1.0. Estuarine wetlands</p> <p>Does the wetland meet the following criteria for Estuarine wetlands?</p> <ul style="list-style-type: none"> — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt <p style="text-align: right;">Yes – Go to SC 1.1 No = Not an estuarine wetland</p>	
<p>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?</p> <p style="text-align: right;">Yes = Category I No - Go to SC 1.2</p>	Cat. I
<p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?</p> <ul style="list-style-type: none"> — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 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-mowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. <p style="text-align: right;">Yes = Category I No = Category II</p>	Cat. I Cat. II
<p>SC 2.0. Wetlands of High Conservation Value (WHCV)</p> <p>SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value?</p> <p style="text-align: right;">Yes – Go to SC 2.2 No – Go to SC 2.3</p> <p>SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?</p> <p style="text-align: right;">Yes = Category I No = Not a WHCV</p> <p>SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?</p> <p style="text-align: center;">http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</p> <p style="text-align: right;">Yes – Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV</p> <p>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?</p> <p style="text-align: right;">Yes = Category I No = Not a WHCV</p>	Cat. I
<p>SC 3.0. Bogs</p> <p>Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i></p> <p>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?</p> <p style="text-align: right;">Yes – Go to SC 3.3 No – Go to SC 3.2</p> <p>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?</p> <p style="text-align: right;">Yes – Go to SC 3.3 No = Is not a bog</p> <p>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?</p> <p style="text-align: right;">Yes = Is a Category I bog No – Go to SC 3.4</p> <p>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.</p> <p>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?</p> <p style="text-align: right;">Yes = Is a Category I bog No = Is not a bog</p>	Cat. I

Wetland name or number E

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

Wetland name or number E

Wetland name or number F

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland F Date of site visit: 3/3/2016, 9/7/16

Rated by KT Wills Trained by Ecology? Yes Date of training 9/2016

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

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

Source of base aerial photo/map Google Earth

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

1. Category of wetland based on FUNCTIONS

 Category I – Total score = 23 – 27

 Category II – Total score = 20 – 22

 Category III – Total score = 16 – 19

 X Category IV – Total score = 9 – 15

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

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

9 = H,H,H

8 = H,H,M

7 = H,H,L

7 = H,M,M

6 = H,M,L

6 = M,M,M

5 = H,L,L

5 = M,M,L

4 = M,L,L

3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	Not Applicable

Wetland name or number F

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	15
Hydroperiods	H 1.2	15
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	15
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to figure above</i>)	S 4.1	15
Boundary of 150 ft buffer (<i>can be added to another figure</i>)	S 2.1, S 5.1	15
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	16
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	17
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	17

HGM Classification of Wetlands in Western Washington

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

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

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

NO – go to 2

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

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

NO – Saltwater Tidal Fringe (Estuarine)

YES – Freshwater Tidal Fringe

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

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

NO – go to 3

YES – The wetland class is **Flats**

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

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

The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;

At least 30% of the open water area is deeper than 6.6 ft (2 m).

NO – go to 4

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

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

The wetland is on a slope (*slope can be very gradual*),

The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,

The water leaves the wetland **without being impounded**.

NO – go to 5

YES – The wetland class is **Slope**

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

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

The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,

The overbank flooding occurs at least once every 2 years.

Wetland name or number

NO – go to 6

YES – The wetland class is **Riverine**

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

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

NO – go to 7

YES – The wetland class is **Depressional**

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

NO – go to 8

YES – The wetland class is **Depressional**

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

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

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

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

Wetland name or number F

<u>SLOPE WETLANDS</u>	
Water Quality Functions - Indicators that the site functions to improve water quality	
S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: (<i>a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance</i>)	1
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. <u>The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions):</u> Yes = 3 No = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. <i>Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.</i>	1
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	2

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

Record the rating on the first page

S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants?	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?	0
Other sources	Yes = 1 No = 0
Total for S 2	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?	0
Yes = 1 No = 0	
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? <i>At least one aquatic resource in the basin is on the 303(d) list.</i>	1
Yes = 1 No = 0	
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? <i>Answer YES if there is a TMDL for the basin in which unit is found.</i>	2
Yes = 2 No = 0	
Total for S 3	3

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

Record the rating on the first page

Wetland name or number F

SLOPE WETLANDS

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

S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. <i>Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows.</i> Dense, uncut, rigid plants cover > 90% of the area of the wetland <i>All other conditions</i>	0

points = 1
points = 0

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

Record the rating on the first page

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

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

Record the rating on the first page

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

Add the points in the boxes above

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

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

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.*

0

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

H 1.2. Hydroperiods

0

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

- Permanently flooded or inundated 4 or more types present: points = 3
- Seasonally flooded or inundated 3 types present: points = 2
- Occasionally flooded or inundated 2 types present: points = 1
- 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**

H 1.3. Richness of plant species

1

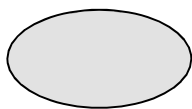
Count the number of plant species in the wetland that cover at least 10 ft². *Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. **Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***

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

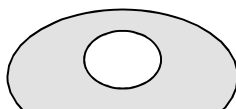
H 1.4. Interspersion of habitats

0

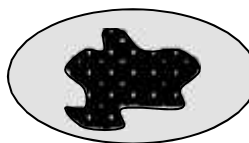
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always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



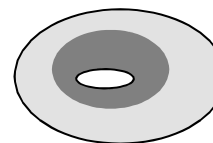
None = 0 points



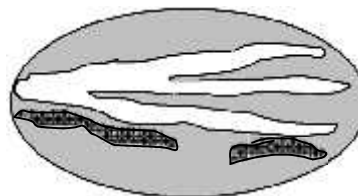
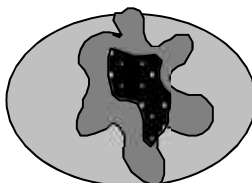
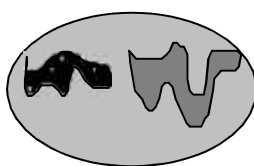
Low = 1 point



Moderate = 2 points



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



Wetland name or number F

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

Rating of Site Potential If score is: 15-18 = H 7-14 = M X 0-6 = L *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat functions of the site?

<p>H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>).</p> <p><i>Calculate:</i> % undisturbed habitat $\frac{12.1}{10} + [(\% \text{ moderate and low intensity land uses}) \frac{19.7}{2}] \frac{10}{10} = \underline{22} \%$ If total accessible habitat is:</p> <p>> 1/3 (33.3%) of 1 km Polygon points = 3</p> <p>20-33% of 1 km Polygon points = 2</p> <p>10-19% of 1 km Polygon points = 1</p> <p>< 10% of 1 km Polygon points = 0</p>	2
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p><i>Calculate:</i> % undisturbed habitat $\frac{32}{53} + [(\% \text{ moderate and low intensity land uses}) \frac{53}{2}] \frac{26.5}{53} = \underline{58.5} \%$</p> <p>Undisturbed habitat > 50% of Polygon points = 3</p> <p>Undisturbed habitat 10-50% and in 1-3 patches points = 2</p> <p>Undisturbed habitat 10-50% and > 3 patches points = 1</p> <p>Undisturbed habitat < 10% of 1 km Polygon points = 0</p>	3
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p>> 50% of 1 km Polygon is high intensity land use points = (- 2)</p> <p>≤ 50% of 1 km Polygon is high intensity points = 0</p>	0
Total for H 2	Add the points in the boxes above
5	

Rating of Landscape Potential If score is: X 4-6 = H 1-3 = M < 1 = L *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?

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

WDFW Priority Habitats

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

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

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

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

Wetland name or number F

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<p><i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i></p>	
<p>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 <input checked="" type="radio"/> No = Not an estuarine wetland</p>	
<p>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</p>	<p>Cat. I</p>
<p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i>, see page 25) — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = Category I No = Category II</p>	<p>Cat. I Cat. II</p>
<p>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 <input checked="" type="radio"/> No – Go to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = Category I No = Not a WHCV SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf Yes – Contact WNHP/WDNR and go to SC 2.4 <input checked="" type="radio"/> = 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</p>	<p>Cat. I</p>
<p>SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? Yes – Go to SC 3.3 <input checked="" type="radio"/> 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 <input checked="" type="radio"/> No = Is not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = Is a Category I bog No – Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = Is a Category I bog No = Is not a bog</p>	<p>Cat. I</p>

Wetland name or number F

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

Wetland name or number F

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