

CRITICAL AREAS REPORT

Stephens Hillside Farm

Tax Parcels: 258901-000, 258919-000, 258922-000, 258971-000, and 258972-000
37400 NE North Fork Road, La Center, WA 98629

Prepared by:

Jim Barnes, President
Cascadia Ecological Services, Inc.
14205 NW 56th Avenue
Vancouver, WA 98685
(360) 601-8631

Applicant:

Carleen Stephens
34700 NE North Fork Road
La Center, WA 98642
(360) 281-0897

Date: January 29, 2018



Executive Summary

The applicant is proposing to develop the 43 acres of tax parcels 258901-000, 258919-000, 258922-000, 258971-000, and 258972-000 into 86 residential lots that, upon annexation, will be zoned LDR-7.5 with an Urban Holding Overlay, and construct the associated infrastructure to support the proposed development.

Wetlands associated with McCormick Creek were identified along the south and west portions of the project area. Per the Washington State Wetland Rating System for Western Washington: 2014 Update (effective date January 1, 2015) rating completed by CES, the wetlands rate as Category 2 PFO riverine. The City of La Center regulates the wetlands under LCMC 18.300.090(6)(f).

McCormick Creek is a DNR Type F (fish-bearing) stream which is regulated under LCMC 18.300.090(2) as a fish and wildlife habitat conservation area.

This report documents the investigation, best professional judgment and conclusions of Cascadia Ecological Services, Inc. (CES).



Jim Barnes
President
Cascadia Ecological Services, Inc.

Table of Contents

Executive Summary	i
Chapter 1. Introduction	4
Chapter 2. Proposed Project	4
2.1 Location	4
2.2 Purpose and Description	5
Chapter 3. Methods.....	5
Chapter 4. Existing Conditions.....	6
4.1 Landscape Setting	6
4.2 Critical Areas	7
Chapter 4. Conclusion	13
Chapter 5. References.....	14

Figures

Figure 1. Project Vicinity Map	5
Figure 2. Aerial photo of the project area and surrounding land uses.	6
Figure 3. Weather data during period prior to site visit.	10
Figure 4. WDFW PHS on the Web mapping for the project area and vicinity.	12
Figure 5. Mapping from the DNR FPARS website showing Type N and Type F streams within the project area.	12
Figure 6. DNR Wetland of High Conservation Value in the vicinity of the project area.	13

Tables

Table 1. Wetland Unit 1 Information Summary.....	8
Table 2. Functions and Values of the Existing Wetlands.	11

Appendices

- Appendix A — Methods and Tools
- Appendix B — Background Information
- Appendix C — Plan Sheets
- Appendix D — Wetland Determination Data Sheets
- Appendix E — Wetland Rating Form

Acronyms and Abbreviations

Applicant	Carleen Stephens
CES	Cascadia Ecological Services, Inc.
DNR	Department of Natural Resources
Ecology	Washington State Department of Ecology
FPARS	Forest Practices Application Review System
LMC	La Center Municipal Code
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
WDFW	Washington State Department of Fish and Wildlife
WRIA	Water Resource Inventory Area

Chapter 1. Introduction

The applicant contracted with Cascadia Ecological Services, Inc. (CES) to complete a critical areas report for tax parcels 258901-000, 258919-000, 258922-000, 258971-000, and 258972-000. The purpose of the report is to identify and describe wetlands and streams, and to identify possible sensitive plant, fish, and wildlife species within the confines of the project area.

This report facilitates the applicant's efforts to:

1. Avoid or minimize impacts to wetlands and streams during the design process.
2. Document wetland and stream boundary determinations for review by regulatory authorities.
3. Provide early indications to project engineers of sensitive species within the project area.
4. Provide background information for critical areas mitigation.

This report is anticipated to support a critical areas permit through the City of La Center. Critical areas are regulated by the City of La Center Municipal Code (LMC Chapter 18.300).

Chapter 2. Proposed Project

2.1 Location

Project Location: 34700 NE North Fork Avenue, La Center, WA 98642

County: Clark

Section, Township, and Range: SW 1/4, S34, T5N, R1E of the Willamette Meridian

Milepost: Located 2.7 miles northeast of Interstate 5 (La Center Exit). (see Figure 1).

Latitude/Longitude: 45.8723, -122.6751

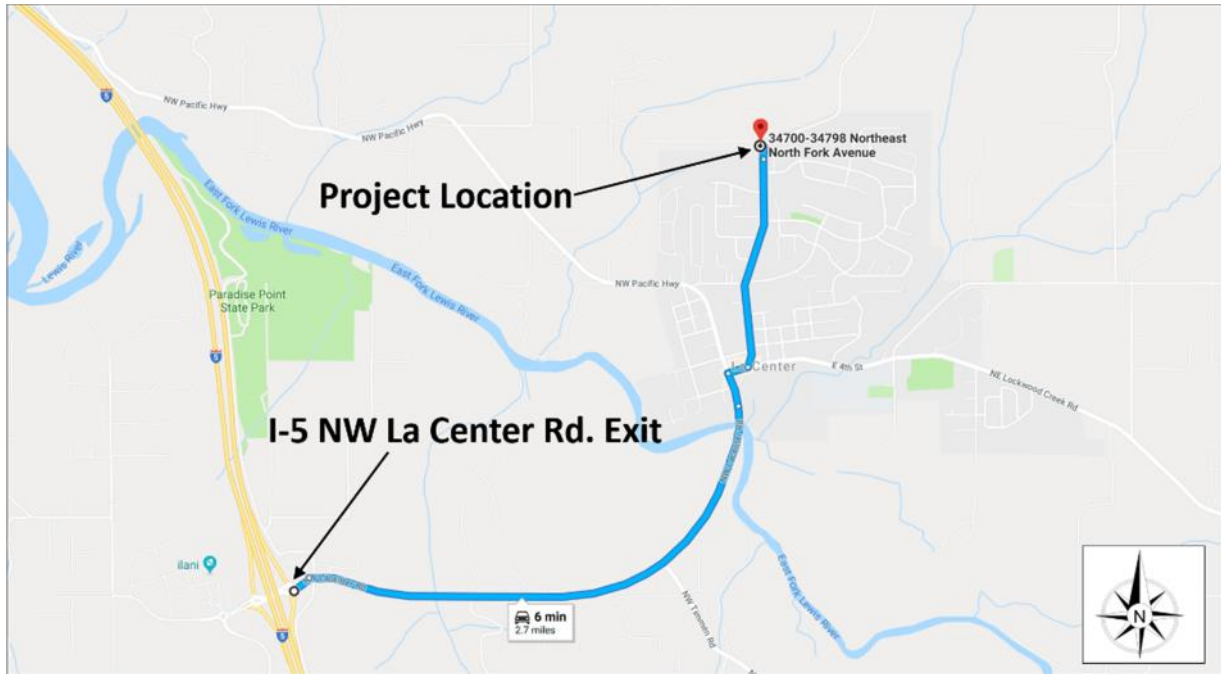


Figure 1. Project Vicinity Map.

2.2 Purpose and Description

The applicant is proposing to develop the 43 acres of tax parcels 258901-000, 258919-000, 258922-000, 258971-000, and 258972-000 into 86 residential lots that, upon annexation, will be zoned LDR-7.5 with an Urban Holding Overlay, and construct the associated infrastructure to support the proposed development.

All existing structures will be removed except the residence in 208 N 348th Street, which will be retained on a new lot. A 0.61 acre park is proposed within a stream buffer on the south part of the project area. All lots will be 7,500 sf or less in area. The project is being undertaken to construct additional residential housing units in the urban growth area of the City of La Center. The Applicant has not yet completed a conceptual design for this project.

Chapter 3. Methods

This chapter summarizes the methods used to comply with federal, state, and local guidance. Streams and other natural habitats were assessed by traversing the property on foot. A wetland determination was made by observing vegetation, hydrology, and soils in conjunction with data from the National Wetland Inventory maps of the U.S. Fish and Wildlife Service (USFWS), the Soil Survey for Clark County (McGee, 1972), and aerial photos. See Appendix B for maps showing soils, topography, and the wetland inventory. In order to determine whether wetlands were present on the project area, CES used the methodology of the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (USACE, 2010).

The condition of buffers within 150 feet of critical areas identified on the project area were

qualitatively assessed using the following criteria:

- Dominant land use (e.g., agriculture, residential, commercial, industrial).
- Dominant buffer vegetation type (tree, shrub, herb, vine, un-vegetated).
- Estimated percent cover of invasive plants by species.

Chapter 4. Existing Conditions

4.1 Landscape Setting

The 43-acre project area contains three single-family residences that are all accessed via a gravel driveway extending west from NE North Fork Avenue. Of the 43 acres, approximately 33 acres consists of mowed grassland pasture, residential areas, and gravel driveways. The remainder consists of a mature forested corridor along McCormick Creek which flows through the west part of the site from north to south, and a tributary stream along the south side which originates in wetlands on the Southview Heights Subdivision to the east. Site topography is generally sloping from north to south. According to the Clark County GIS, the slopes on the project area average between 10 and 15 percent except within the riparian corridor of McCormick Creek where steeper slopes are present in the range of 25 to 40 percent.

The project area is located along the northeast side of the City of La Center. Land uses to the east and south are in residential subdivisions. Open space, forestland, and farmland are the dominant land uses to the north and west. Interstate 5 is 2.7 miles to the southwest.



Figure 2. Aerial photo of the project area and surrounding land uses.

4.2 Critical Areas

4.2.1 Wetlands (RMC 18.280.150)


The project area contains Category 2 PFO riverine wetlands (Wetland 1 – Appendix Sheet C-1; ~1.60 acres on-site) as rated by CES per the Washington State Wetland Rating System for Western Washington: 2014 Update (Hruby, 2014). Reference Table 1 for details regarding the wetland classification and area.

Riverine wetlands occur in flood plains and riparian corridors in association with stream channels. Dominant water sources are often overbank flow from the channel or subsurface hydraulic connections between the stream channel and wetlands. However, sources may be interflow and return flow from adjacent uplands, occasional overland flow from adjacent uplands, tributary inflow, and precipitation. At their headwaters, riverine wetlands often are replaced by slope or depressional wetlands where the channel morphology may disappear. They may intergrade with poorly drained flats or uplands. Perennial flow in the channel is not a requirement (NRCS, 2008).

Wetland 1 consists of narrow riparian floodplain wetlands associated with McCormick Creek and a tributary stream which are located along the south and west portions of the project area. The wetlands lie at the base of a relatively steep mature forested ravine adjacent to the stream and are confined to the stream corridors by the steep slopes leading out of the riparian zone.

Photos of the wetlands are shown on Appendix Sheets C2 to C4.

Table 1. Wetland Unit 1 Information Summary.

WETLAND UNIT 1 – INFORMATION SUMMARY																	
Location:	The wetlands are located along the south and west sides of the project area.																
	<table border="1"> <tr> <td>Local Jurisdiction</td> <td>La Center</td> </tr> <tr> <td>WRIA</td> <td>27 - Lewis</td> </tr> <tr> <td>Ecology Rating (Hruby, 2004)^B</td> <td>II</td> </tr> <tr> <td>Local Jurisdiction Rating^C</td> <td>II</td> </tr> <tr> <td>Local Jurisdiction Buffer Width^D</td> <td>120 feet</td> </tr> <tr> <td>Wetland Size (On-Site)</td> <td>1.60 acres</td> </tr> <tr> <td>Cowardin Classification^A</td> <td>PFO</td> </tr> <tr> <td>HGM Classification</td> <td>Riverine</td> </tr> </table>	Local Jurisdiction	La Center	WRIA	27 - Lewis	Ecology Rating (Hruby, 2004)^B	II	Local Jurisdiction Rating^C	II	Local Jurisdiction Buffer Width^D	120 feet	Wetland Size (On-Site)	1.60 acres	Cowardin Classification^A	PFO	HGM Classification	Riverine
	Local Jurisdiction	La Center															
	WRIA	27 - Lewis															
	Ecology Rating (Hruby, 2004)^B	II															
	Local Jurisdiction Rating^C	II															
	Local Jurisdiction Buffer Width^D	120 feet															
	Wetland Size (On-Site)	1.60 acres															
	Cowardin Classification^A	PFO															
	HGM Classification	Riverine															
	<p>Ribbon flag and pin color: Pink “Wetland Delineation”</p> <p style="text-align: center;">WETLAND DELINEATION</p>																
Dominant Vegetation	<i>Populus balsamifera, Alnus rubra, Rubus spectabilis, Salix lasiandra, Cornus stolonifera, Juncus effusus, Carex obnupta, Ranunculus repens, Urtica dioica, Phalaris arundinacea, Rubus armeniacus</i>																
Soils	Hillsboro silt loam, 30 to 65 percent slopes (HoG)																
Wetland Hydrology Indicators	Saturation (A3), Water Marks (B1), Drainage Patterns (B10)																
Wetland Rating Summary																	
Improving Water Quality	Site Potential: M; Landscape Potential: H; Value: H; Total: 8 pts.																
Hydrologic	Site Potential: M; Landscape Potential: M; Value: M; Total: 8 pts.																
Habitat	Site Potential: M; Landscape Potential: H; Value: M; Total: 7 pts.																
Buffer Condition	The buffer consists of mature upland forest.																

Notes:

- A. Cowardin et al. (1979) or National Wetland Inventory (NWI) Class based on vegetation: PFO = Palustrine Forested.
- B. Ecology rating according to Hruby (2014).
- C. Wetlands rated according to City of La Center Critical Areas Ordinance, Chapter 18.300.090. (6)(g) (City of La Center, 2018).
- D. Wetland buffer width according to City of La Center Critical Areas Ordinance, Chapter 18.300.090.(6)(h) (City of La Center, 2018).

Soils

The project area is mapped with the following soil series:

- Gee silt loam, 0 to 3 percent slopes (GeB)
- Hesson gravelly clay loam, 8 to 20 percent slopes (HgD)
- Hillsboro silt loam, 8 to 15 percent slopes (HoC)
- Hillsboro silt loam, 15 to 20 percent slopes (HoD)
- Hillsboro silt loam, 30 to 65 percent slopes (HoG)

Per the (USDA, 2018), the Gee series consists of deep, moderately well drained soils formed in old alluvium on dissected high terraces and terrace escarpments. Slopes are 0 to 60 percent. Soil sampling throughout project area apart from the wetlands confirmed the mapped soil series.

The Hesson series consists of very deep, well drained soils that formed in old, mixed alluvium. Hesson soils are on high terraces and terrace escarpments and have slopes of 0 to 55 percent.

The Hillsboro series consists of deep, well drained soils that formed in mixed alluvium. Hillsboro soils are on terraces and have slopes of 0 to 20 percent.

Outside of the wetland areas, soils appear to be well drained across the project area. Soil sampling throughout project area confirmed the mapped soil series. Shallow excavated ditches were observed along the north side of the main gravel driveway which intercepts surface stormwater from the hillslopes in the north part of the site. Drainage from the ditches passes through a culvert into ditch/swale in the south-central portion of the site.

Soil sampling locations are shown on Appendix Sheet C1. Wetland determination data forms are included in Appendix C.

Vegetation

Most of the project area consists of sloping grassland fields which are mowed for hay during the growing season. No livestock are present on-site. Areas of ornamental shrubs and trees in addition to native species are located around the three single-family residences. The wetlands are forested and dominated by native shrubs, trees, and herbaceous vegetation.

Vegetative cover on the site is near 100 percent and no significant areas of invasive plant species were observed.

See Appendix B for a list of dominant plant species observed in the upland and wetland areas on-site during the site visit.

Hydrology

A query of the website Weather Underground on January 10, 2018 showed that the area had received 2.73 inches of measurable precipitation in the week leading up to the site visit (Figure

3). In general, the wetlands were saturated within twelve inches of the ground surface. The streams contained relatively high seasonal flow but were within the banks during the site visit. Some small areas of shallow standing surface water were observed in the adjacent floodplain wetlands.

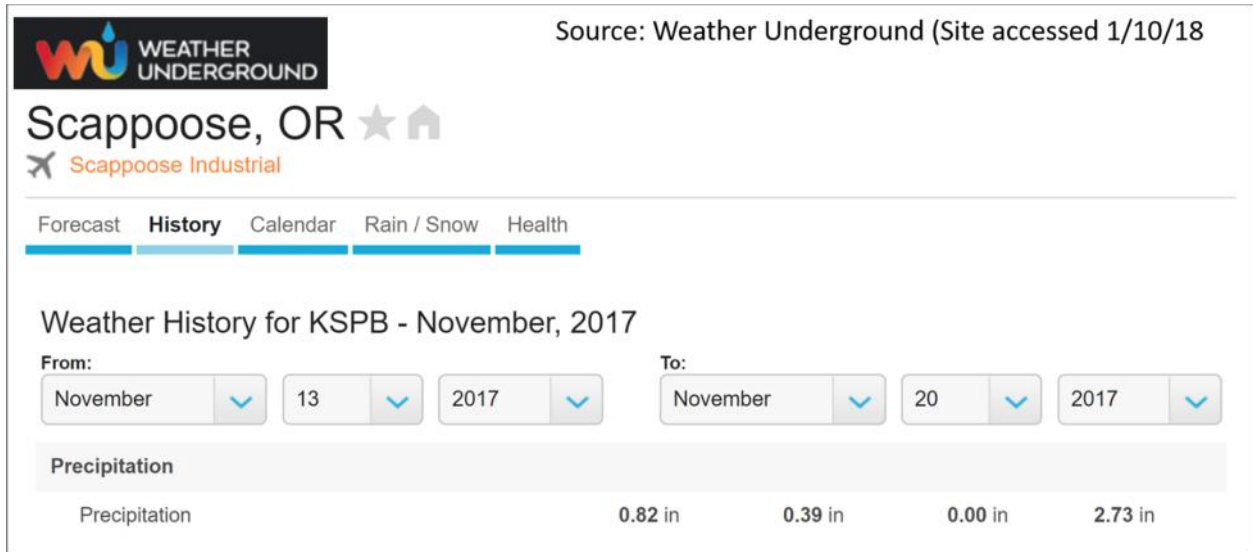


Figure 3. Weather data during period prior to site visit.

4.2.2 Wetland and Buffer Functions

Wetland functions were evaluated using the *Washington State Wetland Rating System for Western Washington: 2014 Update* (Hruby, 2014). The delineated wetlands provide water quality, hydrologic, and low habitat functions as shown in Table 3 and detailed in the wetland rating forms (Appendix E). In general, the wetland buffers on-site contain an herbaceous and woody shrub plant community with a overstory dominated by a mature upland hardwood overstory which provides shading to the stream and wildlife habitat.

Table 2. Functions and Values of the Existing Wetlands.

Function/Value ^a	Wetland
	1
Water Quality Functions	
Sediment Removal	+
Nutrient and Toxicant Removal	+
Hydrologic Functions	
Flood Flow Alteration	X
Erosion Control & Shoreline Stabilization	X
Habitat Functions	
Production & Export of Organic Matter	+
General Habitat Suitability	+
Habitat for Aquatic Invertebrates	+
Habitat for Amphibians	+
Habitat for Wetland-Associated Mammals	+
Habitat for Wetland-Associated Birds	+
General Fish Habitat	+
Native Plant Richness	+
Special Characteristics	
Educational or Scientific Value	-
Uniqueness and Heritage	-

^a: “-“ means that the function is not present; “X” means that the function is present is of lower quality; and “+” means the function is present an is of higher quality.

4.2.3 Fish and Wildlife Habitat Conservation Areas (RMC 18.280.110)

The WDFW PHS on the Web website shows riverine aquatic habitat along the south side of the project area associated with the McCormick Creek tributary stream as shown on Figure 4.

Per the DNR FPARS, McCormick Creek along the east side of the project area and a tributary stream along the south side are classified as Type F (fish-bearing) streams (Figure 5). A second Type N stream is mapped in the south-central part of the project area. This area does contain a swale that conveys intermittent stormwater runoff from ditches along the north side of the driveway to the McCormick Creek tributary stream in along the south side of the project area. However, the incised swale is acting more as a stormwater feature and does not warrant regulation as a fish and wildlife habitat conservation area. Although the drainage flows into the tributary stream, it does not contain elements of instream physical, biological, or chemical processes and conditions which interact to provide functional life history requirements for instream fish and wildlife resources.

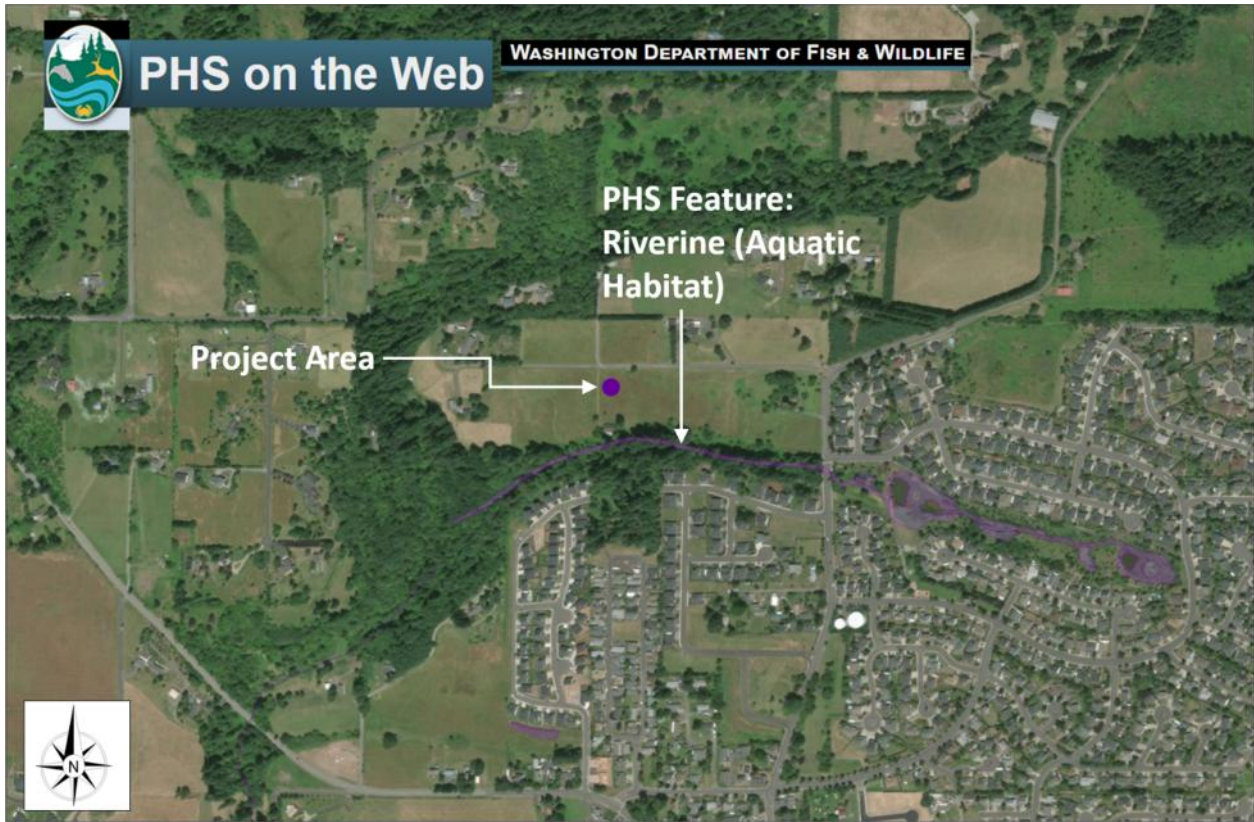


Figure 4. WDFW PHS on the Web mapping for the project area and vicinity.

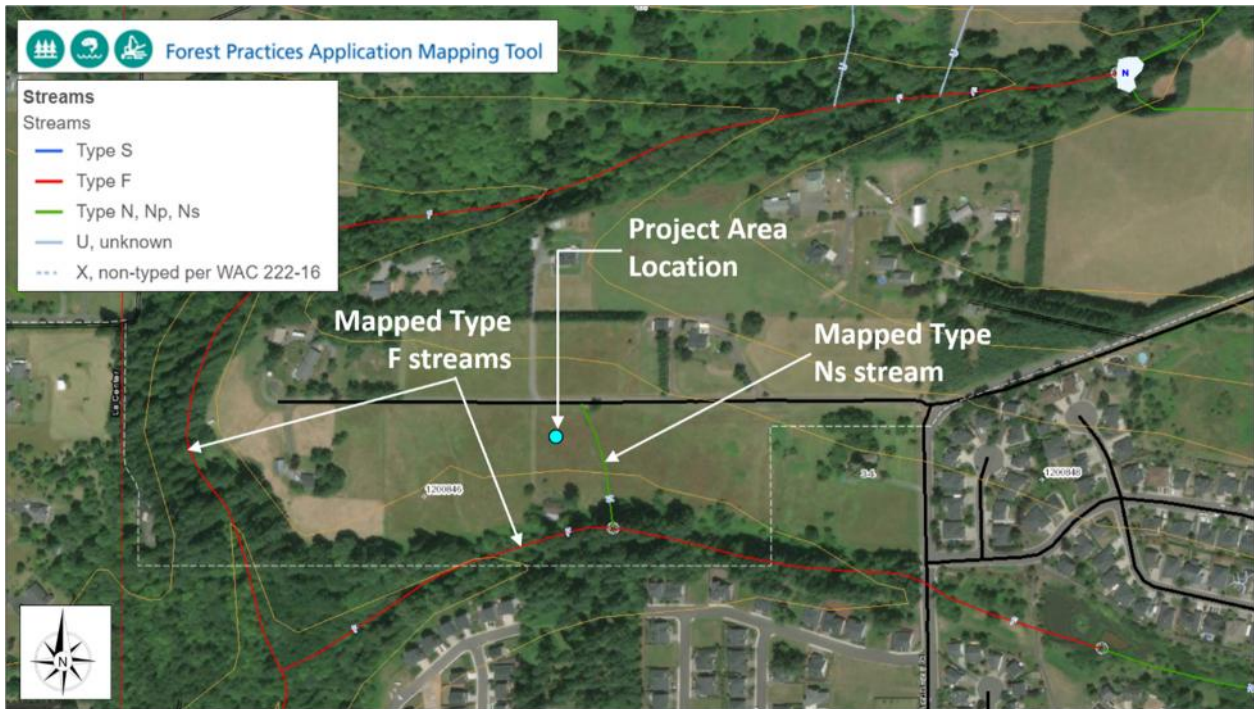


Figure 5. Mapping from the DNR FPARS website showing Type N and Type F streams within the project area.

4.2.4 Washington Wetlands of High Conservation Value

Per a query of the Washington DNR Washington Wetlands of High Conservation Value website on January 26, 2018, the project area does not contain any wetland and riparian plant communities, rare plants, and rare nonvascular species that would be considered wetlands of high conservation value as shown on Figure 6.

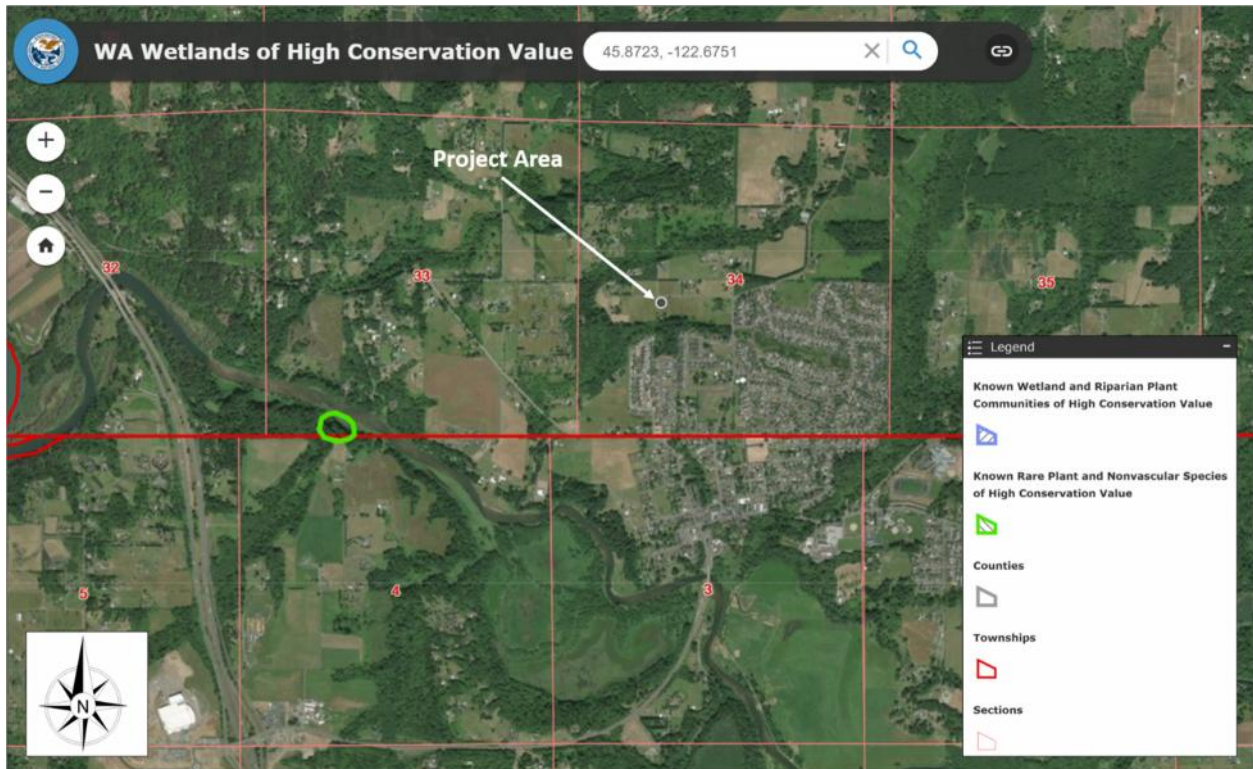


Figure 6. DNR Wetland of High Conservation Value in the vicinity of the project area.

Chapter 4. Conclusion

The 43-acre project area contains residential developed areas, open grassland, and mature forestland. Category 2 PFO riverine wetlands were identified in the south and west portions of the site. Per LMC tables 18.300.090(6)(h)(i)-3 and 18.300.090(2)(f) the City of La Center requires the following buffers:

- Wetland 1 (High Land Use Intensity/Moderate Habitat Function; 20-23 points): 120 ft.
- Type F (perennial or fish bearing) streams (High Land Use Intensity/Low Habitat Function): 200 ft.

Chapter 5. References

- Hruby, T. (2014). *Washington State Wetland Rating System for Western Washington: 2014 Update*. Olympia, WA: Washington Department of Ecology.
- McGee, D. (1972). *Soil Survey of Clark County, Washington*. Washington, DC: Soil Conservation Service.
- NRCS. (2008). *Hydrogeomorphic Wetland Classification System: An Overview and Modification to Better Meet the Needs of the Natural Resources Conservation Service*. Washington, DC: United States Department of Agriculture Natural Resources Conservation Service.
- USACE. (2010). *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)*. Vicksburg, MS: U.S. Army Corps of Engineers Engineer Research and Development Center.
- USDA. (2018, January 10). *Web Site for Official Soil Series Descriptions and Series Classification*. Retrieved from <https://soilseries.sc.egov.usda.gov/>

Appendix A — Methods and Tools

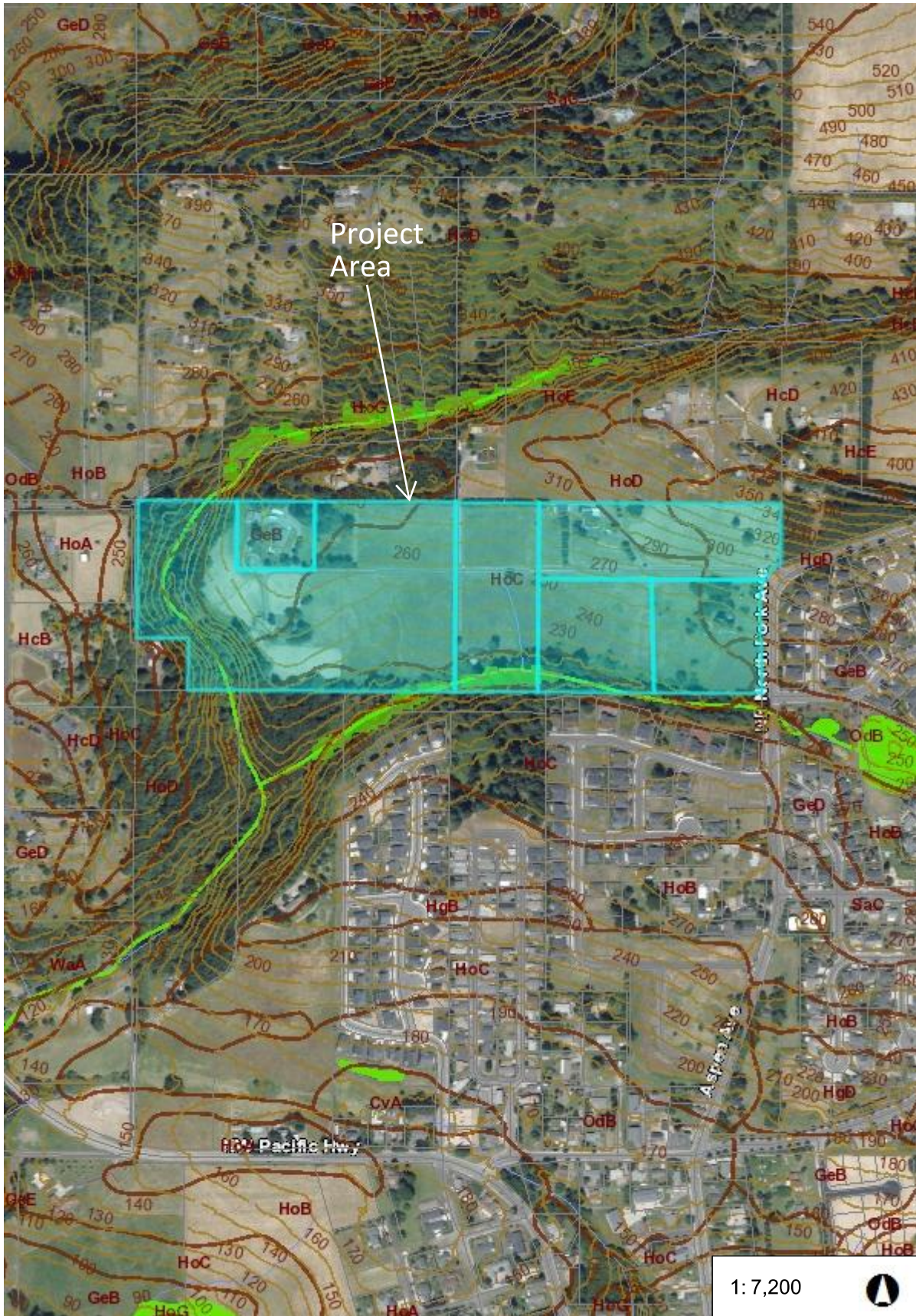
Table A-1. Methods and tools used to prepare the report.

Parameter	Method or Tool	Website	Reference
Wetland Delineation	Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)	http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/reg_supp/west_mt_finalsupp2.pdf	Website
	USFWS / Cowardin Classification System	https://www.fws.gov/wetlands/data/wetland-codes.html	Website
	National Wetlands Inventory – Wetlands Mapper V2	https://www.fws.gov/wetlands/data/mapper.HTML	Website
Wetland Classification	Washington State Wetland Rating System – 2014 Update	<u>Western Washington:</u> https://fortress.wa.gov/ecy/publications/documents/1406029.pdf	Hruby. 2014. Washington State wetland rating system for western Washington –Revised. Publication # 14-06-029.
	City of La Center Critical Areas Ordinance	https://www.codepublishing.com/WA/LaCenter/	Chapter 18.300 – Critical Areas Protection
Wetland Rating and Stream Classifications	Department of Natural Resources (DNR) Water Typing System	<u>Forest Practices Water Typing:</u> http://www.dnr.wa.gov/forest-practices-water-typing <u>WAC 222-16-030:</u> http://apps.leg.wa.gov/WAC/default.aspx?cite=222-16-030 <u>Water Type Mapping:</u> http://www.dnr.wa.gov/programs-and-services/forest-practices/forest-practices-application-review-system-fpars	Washington Administrative Code (WAC) 222-16-030. DNR Water typing system.
	City of La Center Critical Areas Ordinance	https://www.codepublishing.com/WA/LaCenter/	Chapter 18.300 – Critical Areas Protection
Soils Data	Clark County GIS	http://gis.clark.wa.gov/mapsonline/	Website
Priority Habitats and Species	Washington Priority Habitats and Species	http://apps.wdfw.wa.gov/phsontweb/	Website accessed on 1/26/18. The site does not contain and mapped areas of PHS per the Washington Department of Fish and Wildlife (WDFW).
Threatened and Endangered Species	USFWS species lists by County	<u>Western Washington:</u> https://ecos.fws.gov/ecp0/reports/species-by-current-range-county?fips=53011	Website accessed on 1/26/18. The site does not include any T&E species.

Appendix B — Background Information

Appendix B1 Environmental Constraints

Appendix B2 Existing Plant Species



Legend

- Taxlots
- Contour Lines - 10 ft
- Soil Type
- Wetlands Presence
- NWI Wetland
- Stream - DNR
- Lake - DNR
- Roads
- MajorRoads**
- Interstate
- Interstate Ramps
- State Route
- State Route Ramps
- Primary Arterial
- Arterial
- Forest Arterial
- ImageOrtho**
- Red: Red
- Green: Green
- Blue: Blue

Location:
 37400 NE North Fork Road, La Center,
 WA 98629

Tax Parcels: 258901-000, 258919-000,
 258922-000, 258971-000, 258972-000

Legal: A portion of the SW 1/4, S34,
 T5N, R1E of the Willamette Meridian

Lat: 45.8723 N;
 Long: -122.6751 W

County: Clark

Notes:

Mapped Soils (On-Site):
 Non-Hydric / GeB
 Non-Hydric / HgD
 Non-Hydric / HoC
 Non-Hydric / HoD
 Non-Hydric / HoG

1: 7,200



1,200.0 0 600.00 1,200.0Feet

Appendix B2 Existing Plant Species

Table B2-1. Dominant plant species occurring in wetlands on the project site.

Scientific Name	Common Name	WIS*
<i>Populus balsamifera</i>	Black cottonwood	FAC
<i>Alnus rubra</i>	Red alder	FAC
<i>Thuja plicata</i>	Western red cedar	FAC
<i>Rubus spectabilis</i>	Salmonberry	FAC
<i>Salix lasiandra</i>	Pacific willow	FACW
<i>Cornus stolonifera</i>	Red-osier dogwood	FACW
<i>Juncus effusus</i>	Soft rush	FACW
<i>Carex obnupta</i>	Slough sedge	OBL
<i>Ranunculus repens</i>	Creeping buttercup	FACW
<i>Urtica dioica</i>	Stinging nettle	FAC
<i>Phalaris arundinacea</i>	Reed canarygrass	FACW
<i>Rubus armeniacus</i>	Himalayan blackberry	FAC

* Wetland Indicator Status (WIS):

OBL	=	occurs in wetlands > 99% of time
FACW	=	occurs in wetlands 67-99% of time
FAC	=	occurs in wetlands 34-66% of time
FACU	=	occurs in wetlands 1-33% of time
UPL	=	occurs in uplands > 99% of time
NI	=	indicator status not known in this region
~	=	unsure as to FAC or FACU

Table B2-2. Dominant plant species occurring in uplands on the project site.

Scientific Name	Common Name	WIS*
<i>Pseudotsuga menziesii</i>	Douglas fir	FACU
<i>Alnus rubra</i>	Red alder	FAC
<i>Polystichum munitum</i>	Swordfern	FACU
<i>Oemleria cerasiformis</i>	Indian plum	FACU
<i>Gaultheria shallon</i>	Salal	FACU
<i>Dactylis glomerata</i>	Orchardgrass	FACU
<i>Taraxacum officinale</i>	Common dandelion	FACU
<i>Hypochaeris radicata</i>	Cat's ear	FACU
<i>Trifolium pratense</i>	Red clover	FACU
<i>Daucus carota</i>	Queen Anne's lace	FACU
<i>Geranium mole</i>	Dovesfoot geranium	FACU
<i>Leucanthemum vulgare</i>	Oxeye daisy	FACU
<i>Festuca arundinacea</i>	Tall fescue	FAC
<i>Plantago lanceolata</i>	Lanceleaf plantain	FACU
<i>Dactylis glomerata</i>	Orchardgrass	FACU

* Wetland Indicator Status (WIS):

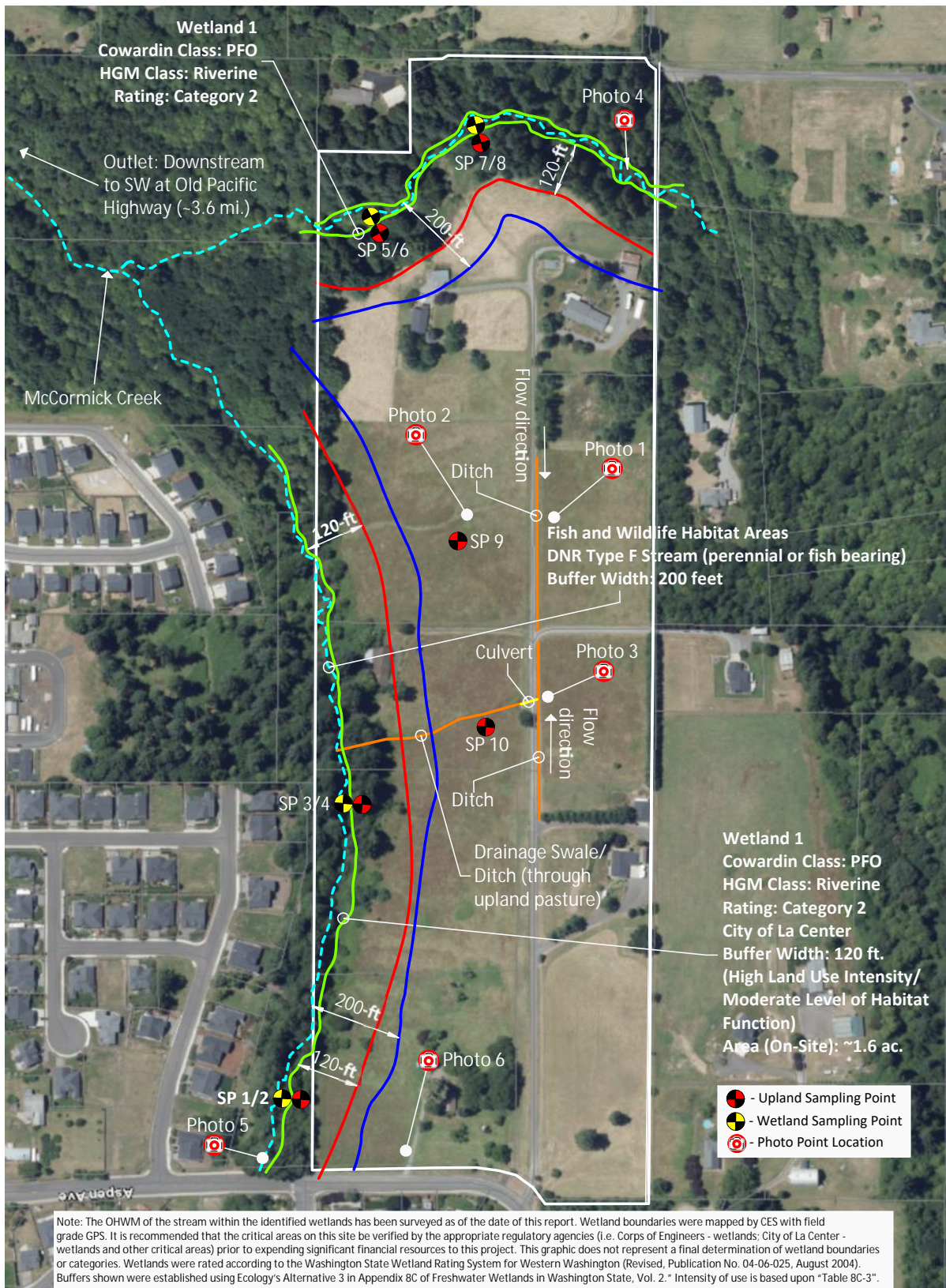
- OBL = occurs in wetlands > 99% of time
- FACW = occurs in wetlands 67-99% of time
- FAC = occurs in wetlands 34-66% of time
- FACU = occurs in wetlands 1-33% of time
- UPL = occurs in uplands > 99% of time
- NI = indicator status not known in this region
- ~ = unsure as to FAC or FACU

Appendix C — Plan Sheets

Appendix Sheet C1 Location of Delineated Wetlands and Critical Areas

Appendix Sheets C2 to C4 Photo Plates

Appendix Sheet C5 GPS Field Accuracy



Drawn by: J. Barnes



Appendix Sheet C1 Critical Areas Report - Locations of Delineated Wetlands and Critical Areas

Project: Stephens Hillside Farm
 Location: 37400 NE North Fork Road, La Center, WA 98629
 Tax Parcel: 258901-000, 258919-000, 258922-000, 258971-000, 258972-000
 Legal: SW 1/4, S34, T5N, R1E of the Willamette Meridian
 45.8723 N. lat. /-122.6751 W long.
 County: Clark

Cascadia Ecological Services, Inc.
 14205 NW 56th Avenue, Vancouver, WA 98685
 (360) 601-8631
 www.cascadia-inc.com

Date: 1/29/18

CLIENT:
 Carleen Stephens
 24600 NE 98th Court
 Battle Ground, WA 98604
 (360) 606-2408

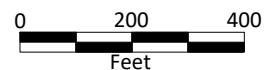




Photo 1 - Drainage ditch along the north side of the driveway accessing the project area from NE North Fork Avenue.



Photo 2 - Pasture area to the south of the driveway leading towards the riparian corridor of the Type F stream along the south boundary of the project area.



Appendix Sheet C2 - Photo Plate 1

Project: Stephens Hillside Farm
 Location: 37400 NE North Fork Road, La Center, WA 98629
 Tax Parcel: 258901-000, 258919-000, 258922-000, 258971-000, 258972-000
 Legal: SW 1/4, S34, T5N, R1E of the Willamette Meridian
 45.8723 N. lat. /-122.6751 W long.
 County: Clark

CLIENT:
 Carleen Stephens
 24600 NE 98th Court
 Battle Ground, WA 98604
 (360) 606-2408

Cascadia Ecological Services, Inc.
 14205 NW 56th Avenue, Vancouver, WA 98685
 (360) 601-8631
 www.cascadia-inc.com

Date: 1/29/18



Photo 3 - Drainage ditch along the north side entering culvert to drainage swale/ditch in south pasture of the project area.



Photo 4 - Type F stream in the west portion of the project area.



Appendix Sheet C3 - Photo Plate 2

Project: Stephens Hillside Farm
 Location: 37400 NE North Fork Road, La Center, WA 98629
 Tax Parcel: 258901-000, 258919-000, 258922-000, 258971-000, 258972-000
 Legal: SW 1/4, S34, T5N, R1E of the Willamette Meridian
 45.8723 N. lat. /-122.6751 W long.
 County: Clark

CLIENT:
 Carleen Stephens
 24600 NE 98th Court
 Battle Ground, WA 98604
 (360) 606-2408

Cascadia Ecological Services, Inc.
 14205 NW 56th Avenue, Vancouver, WA 98685
 (360) 601-8631
 www.cascadia-inc.com

Date: 1/29/18



Photo 5 - Type F stream in east part of the project area.



Photo 6 - Photo of project area taken from NE North Fork Road facing west.



Appendix Sheet C4 - Photo Plate 3

Project: Stephens Hillside Farm
 Location: 37400 NE North Fork Road, La Center, WA 98629
 Tax Parcel: 258901-000, 258919-000, 258922-000, 258971-000, 258972-000
 Legal: SW 1/4, S34, T5N, R1E of the Willamette Meridian
 45.8723 N. lat. /-122.6751 W long.
 County: Clark

CLIENT:
 Carleen Stephens
 24600 NE 98th Court
 Battle Ground, WA 98604
 (360) 606-2408

Cascadia Ecological Services, Inc.
 14205 NW 56th Avenue, Vancouver, WA 98685
 (360) 601-8631
 www.cascadia-inc.com

Date: 1/29/18

Appendix D — Wetland Determination Data Sheets

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

Project/Site: Hillside Farm Subdivision City/County: La Center/Clark Sampling Date: 20-Nov-17
 Applicant/Owner: Carleen Stephens State: WA Sampling Point: 01
 Investigator(s): Jim Barnes Section, Township, Range: S 34 T 5N R 1E
 Landform (hillslope, terrace, etc.): Footslope Local relief (concave, convex, none): sloping Slope: 2.0 % / 1.1 °
 Subregion (LRR): LRR A Lat.: 45.8711 Long.: -122.6707 Datum: _____
 Soil Map Unit Name: Hillsboro silt loam, 30 to 65 percent slopes (HoG) NWI classification: N/A

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

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

Remarks:
 Upland slope adjacent to floodplain wetlands of McCormick Creek tributary stream. The riparian corridor in this area is approximately 25 feet wide and forested. Steep forested slopes lead out of the floodplain.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	Dominance Test worksheet:
1. <u>Pseudotsuga menziesii</u>	60	<input checked="" type="checkbox"/> 60.0%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: <u>1</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>20.0%</u> (A/B)
2. <u>Populus balsamifera</u>	40	<input checked="" type="checkbox"/> 40.0%	FAC	
3. _____	0	<input type="checkbox"/> 0.0%	_____	
4. _____	0	<input type="checkbox"/> 0.0%	_____	
100 = Total Cover				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>40</u> x 3 = <u>120</u> FACU species <u>260</u> x 4 = <u>1040</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>300</u> (A) <u>1160</u> (B) Prevalence Index = B/A = <u>3.867</u>
Sapling/Shrub Stratum (Plot size: <u>5'</u>)				
1. <u>Corylus cornuta</u>	80	<input checked="" type="checkbox"/> 100.0%	FACU	
2. _____	0	<input type="checkbox"/> 0.0%	_____	
3. _____	0	<input type="checkbox"/> 0.0%	_____	
80 = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Polystichum munitum</u>	100	<input checked="" type="checkbox"/> 100.0%	FACU	
2. _____	0	<input type="checkbox"/> 0.0%	_____	
3. _____	0	<input type="checkbox"/> 0.0%	_____	
4. _____	0	<input type="checkbox"/> 0.0%	_____	
5. _____	0	<input type="checkbox"/> 0.0%	_____	
6. _____	0	<input type="checkbox"/> 0.0%	_____	
7. _____	0	<input type="checkbox"/> 0.0%	_____	
8. _____	0	<input type="checkbox"/> 0.0%	_____	
9. _____	0	<input type="checkbox"/> 0.0%	_____	
10. _____	0	<input type="checkbox"/> 0.0%	_____	
11. _____	0	<input type="checkbox"/> 0.0%	_____	
100 = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>Rubus ursinus</u>	20	<input type="checkbox"/> 100.0%	FACU	
2. _____	0	<input type="checkbox"/> 0.0%	_____	
20 = Total Cover				
% Bare Ground in Herb Stratum: <u>0</u>				

Remarks:
 The plant community is dominated by upland plant species.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

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		
0-17	10YR	3/3	100				Silt Loam	

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

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

<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 in MLRA 1)	<input type="checkbox"/> Other (Explain in Remarks)
<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 Muck Mineral (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, unless disturbed or problematic.

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

Hydric Soil Present? Yes No

Remarks:
 The mapped soils appear to match the description of the mapped Hillsboro series.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 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 on 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 (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	<input type="text" value="0"/>	
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	<input type="text" value="0"/>	
Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	<input type="text" value="0"/>	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:
 In the week prior to the site visit, the area had received 2.73 inches of precipitation.

Remarks:
 There were no indicators of wetland hydrology at this sampling location.

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

Project/Site: Hillside Farm Subdivision City/County: La Center/Clark Sampling Date: 20-Nov-17
 Applicant/Owner: Carleen Stephens State: WA Sampling Point: 02
 Investigator(s): Jim Barnes Section, Township, Range: S 34 T 5N R 1E
 Landform (hillslope, terrace, etc.): Ravine Local relief (concave, convex, none): flat Slope: 0.0 % / 0.0 °
 Subregion (LRR): LRR A Lat.: 45.8711 Long.: -122.6707 Datum: _____
 Soil Map Unit Name: Hillsboro silt loam, 30 to 65 percent slopes (HoG) NWI classification: N/A

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

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

Remarks:
 Upland slope adjacent to floodplain wetlands of McCormick Creek tributary stream. The riparian corridor in this area is approximately 25 feet wide and forested. The floodplain areas adjacent to the stream are relatively flat. Signs of overbank flooding are present.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	Dominance Test worksheet:
1. <u>Populus balsamifera</u>	80	<input checked="" type="checkbox"/> 100.0%	FAC	Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	0	<input type="checkbox"/> 0.0%		Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
80 = Total Cover				
Sapling/Shrub Stratum (Plot size: 5')				Prevalence Index worksheet:
1. <u>Rubus spectabilis</u>	100	<input checked="" type="checkbox"/> 100.0%	FAC	Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>260</u> x 3 = <u>780</u> FACU species <u>20</u> x 4 = <u>80</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>280</u> (A) <u>860</u> (B) Prevalence Index = B/A = <u>3.071</u>
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
100 = Total Cover				
Herb Stratum (Plot size: 5')				
1. <u>Polystichum munitum</u>	20	<input checked="" type="checkbox"/> 20.0%	FACU	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrologic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is > 50% <input type="checkbox"/> 3 - Prevalence Index is <u>3.0</u> ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Ranunculus repens</u>	80	<input checked="" type="checkbox"/> 80.0%	FAC	
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
11. _____	0	<input type="checkbox"/> 0.0%		
100 = Total Cover				
Woody Vine Stratum (Plot size: 30')				
1. _____	0	<input type="checkbox"/> 0.0%		Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
2. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
% Bare Ground in Herb Stratum: <u>0</u>				

Remarks:

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

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	10YR	4/1	85	10YR	3/4	15	RM	M	Silty Clay	

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)	<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 in MLRA 1)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<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 Muck Mineral (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, unless disturbed or problematic.

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____
 Hydric Soil Present? Yes No

Remarks:
 Redox features in soils sampled at this location.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 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 checked="" 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 checked="" 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 on 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 (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	<input type="text" value="0"/>	
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	<input type="text" value="0"/>	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches):	<input type="text" value="1"/>	Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:
 In the week prior to the site visit, the area had received 2.73 inches of precipitation.

Remarks:
 Sampling location was in floodplain wetlands adjacent to tributary stream to McCormick Creek.

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

Project/Site: Hillside Farm Subdivision City/County: La Center/Clark Sampling Date: 20-Nov-17
 Applicant/Owner: Carleen Stephens State: WA Sampling Point: 03
 Investigator(s): Jim Barnes Section, Township, Range: S 34 T 5N R 1E
 Landform (hillslope, terrace, etc.): Footslope Local relief (concave, convex, none): sloping Slope: 2.0 % / 1.1 °
 Subregion (LRR): LRR A Lat.: 45.8713 Long.: -122.6741 Datum: _____
 Soil Map Unit Name: Hillsboro silt loam, 30 to 65 percent slopes (HoG) NWI classification: N/A

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

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

Remarks:
 Upland slope adjacent to floodplain wetlands of McCormick Creek tributary stream. The riparian corridor in this area is approximately 15 feet wide and forested. Steep forested slopes lead out of the floodplain.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	Dominance Test worksheet:
1. <u>Pseudotsuga menziesii</u>	100	<input checked="" type="checkbox"/> 100.0%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: <u>1</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>20.0%</u> (A/B)
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
100 = Total Cover				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>20</u> x 3 = <u>60</u> FACU species <u>300</u> x 4 = <u>1200</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>320</u> (A) <u>1260</u> (B) Prevalence Index = B/A = <u>3.938</u>
Sapling/Shrub Stratum (Plot size: <u>5'</u>)				
1. <u>Corylus cornuta</u>	80	<input checked="" type="checkbox"/> 80.0%	FACU	
2. <u>Acer circinatum</u>	20	<input checked="" type="checkbox"/> 20.0%	FAC	
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
100 = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Polystichum munitum</u>	100	<input checked="" type="checkbox"/> 100.0%	FACU	
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
11. _____	0	<input type="checkbox"/> 0.0%		
100 = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>Rubus ursinus</u>	20	<input type="checkbox"/> 100.0%	FACU	
2. _____	0	<input type="checkbox"/> 0.0%		
20 = Total Cover				
% Bare Ground in Herb Stratum: <u>0</u>				

Remarks:
 The plant community is dominated by upland plant species.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

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		
0-17	10YR	3/3	100				Silt Loam	

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

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

<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 in MLRA 1)	<input type="checkbox"/> Other (Explain in Remarks)
<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 Muck Mineral (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, unless disturbed or problematic.

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

Hydric Soil Present? Yes No

Remarks:
 The mapped soils appear to match the description of the mapped Hillsboro series.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 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 on 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 (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	<input type="text" value="0"/>	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	<input type="text" value="0"/>	
Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	<input type="text" value="0"/>	

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:
 In the week prior to the site visit, the area had received 2.73 inches of precipitation.

Remarks:
 There were no indicators of wetland hydrology at this sampling location.

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

Project/Site: Hillside Farm Subdivision City/County: La Center/Clark Sampling Date: 20-Nov-17
 Applicant/Owner: Carleen Stephens State: WA Sampling Point: 04
 Investigator(s): Jim Barnes Section, Township, Range: S 34 T 5N R 1E
 Landform (hillslope, terrace, etc.): Ravine Local relief (concave, convex, none): flat Slope: 0.0 % / 0.0 °
 Subregion (LRR): LRR A Lat.: 45.8713 Long.: -122.6741 Datum: _____
 Soil Map Unit Name: Hillsboro silt loam, 30 to 65 percent slopes (HoG) NWI classification: N/A

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

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

Remarks:
 Upland slope adjacent to floodplain wetlands of McCormick Creek tributary stream. The riparian corridor in this area is approximately 25 feet wide and forested. The floodplain areas adjacent to the stream are relatively flat. Signs of overbank flooding are present.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	Dominance Test worksheet:
1. <u>Populus balsamifera</u>	20	<input checked="" type="checkbox"/> 100.0%	FAC	Number of Dominant Species That are OBL, FACW, or FAC: <u>5</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>100.0%</u> (A/B)
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
20 = Total Cover				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>210</u> x 3 = <u>630</u> FACU species <u>10</u> x 4 = <u>40</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>220</u> (A) <u>670</u> (B) Prevalence Index = B/A = <u>3.045</u>
Sapling/Shrub Stratum (Plot size: <u>5'</u>)				
1. <u>Rubus spectabilis</u>	100	<input checked="" type="checkbox"/> 100.0%	FAC	
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
100 = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Polystichum munitum</u>	10	<input type="checkbox"/> 10.0%	FACU	
2. <u>Ranunculus repens</u>	30	<input checked="" type="checkbox"/> 30.0%	FAC	
3. <u>Urtica dioica</u>	30	<input checked="" type="checkbox"/> 30.0%	FAC	
4. <u>Athyrium filix-femina</u>	30	<input checked="" type="checkbox"/> 30.0%	FAC	
5. _____	0	<input type="checkbox"/> 0.0%		
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
11. _____	0	<input type="checkbox"/> 0.0%		
100 = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
% Bare Ground in Herb Stratum: <u>0</u>				
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrologic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is > 50% <input type="checkbox"/> 3 - Prevalence Index is <u>3.0</u> ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>				

Remarks:

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

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			
0-18	10YR	4/1	90	10YR	3/6	10	RM	M	Silty Clay	

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)	<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 in MLRA 1)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<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 Muck Mineral (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, unless disturbed or problematic.

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____
 Hydric Soil Present? Yes No

Remarks:
 Redox features in soils sampled at this location.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 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 checked="" 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 checked="" 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 on 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 (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches):	<input type="text" value="1"/>	
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	<input type="text" value="0"/>	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches):	<input type="text" value="1"/>	Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:
 In the week prior to the site visit, the area had received 2.73 inches of precipitation.

Remarks:
 Sampling location was in floodplain wetlands adjacent to tributary stream to McCormick Creek.

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

Project/Site: Hillside Farm Subdivision City/County: La Center/Clark Sampling Date: 20-Nov-17
 Applicant/Owner: Carleen Stephens State: WA Sampling Point: 05
 Investigator(s): Jim Barnes Section, Township, Range: S 34 T 5N R 1E
 Landform (hillslope, terrace, etc.): Ravine Local relief (concave, convex, none): undulating Slope: 1.0 % / 0.6 °
 Subregion (LRR): LRR A Lat.: 45.8722 Long.: -122.6800 Datum: _____
 Soil Map Unit Name: Hillsboro silt loam, 30 to 65 percent slopes (HoG) NWI classification: N/A

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

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

Remarks:
 Uplands adjacent to floodplain wetlands of McCormick Creek in west portion of project area. The riparian corridor in this area is approximately 30 feet wide and forested. Steep forested slopes lead out of the floodplain.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	Dominance Test worksheet:
1. <u>Pseudotsuga menziesii</u>	80	<input checked="" type="checkbox"/> 80.0%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: <u>1</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>16.7%</u> (A/B)
2. <u>Acer macrophyllum</u>	20	<input checked="" type="checkbox"/> 20.0%	FACU	
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
100 = Total Cover				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>20</u> x 3 = <u>60</u> FACU species <u>300</u> x 4 = <u>1200</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>320</u> (A) <u>1260</u> (B) Prevalence Index = B/A = <u>3.938</u>
Sapling/Shrub Stratum (Plot size: <u>5'</u>)				
1. <u>Corylus cornuta</u>	80	<input checked="" type="checkbox"/> 80.0%	FACU	
2. <u>Acer circinatum</u>	20	<input checked="" type="checkbox"/> 20.0%	FAC	
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
100 = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Polystichum munitum</u>	100	<input checked="" type="checkbox"/> 100.0%	FACU	
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
11. _____	0	<input type="checkbox"/> 0.0%		
100 = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>Rubus ursinus</u>	20	<input type="checkbox"/> 100.0%	FACU	
2. _____	0	<input type="checkbox"/> 0.0%		
20 = Total Cover				
% Bare Ground in Herb Stratum: <u>0</u>				

Remarks:
 The plant community is dominated by upland plant species.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

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		
0-17	10YR	3/3	100				Silt Loam	

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

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

<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 in MLRA 1)	<input type="checkbox"/> Other (Explain in Remarks)
<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 Muck Mineral (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, unless disturbed or problematic.

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

Hydric Soil Present? Yes No

Remarks:
 The mapped soils appear to match the description of the mapped Hillsboro series.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 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 on 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 (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	<input type="text" value="0"/>	
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	<input type="text" value="0"/>	
Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	<input type="text" value="0"/>	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:
 In the week prior to the site visit, the area had received 2.73 inches of precipitation.

Remarks:
 There were no indicators of wetland hydrology at this sampling location.

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

Project/Site: Hillside Farm Subdivision City/County: La Center/Clark Sampling Date: 20-Nov-17
 Applicant/Owner: Carleen Stephens State: WA Sampling Point: 06
 Investigator(s): Jim Barnes Section, Township, Range: S 34 T 5N R 1E
 Landform (hillslope, terrace, etc.): Ravine Local relief (concave, convex, none): flat Slope: 0.0 % / 0.0 °
 Subregion (LRR): LRR A Lat.: 45.8722 Long.: -122.6800 Datum: _____
 Soil Map Unit Name: Hillsboro silt loam, 30 to 65 percent slopes (HoG) NWI classification: N/A

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

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

Remarks:
 Upland slope adjacent to floodplain wetlands of McCormick Creek tributary stream. The riparian corridor in this area is approximately 25 feet wide and forested. The floodplain areas adjacent to the stream are relatively flat. Signs of overbank flooding are present.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	Dominance Test worksheet:
1. <u>Alnus rubra</u>	100	<input checked="" type="checkbox"/> 100.0%	FAC	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>100.0%</u> (A/B)
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
100 = Total Cover				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>300</u> x 3 = <u>900</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>300</u> (A) <u>900</u> (B) Prevalence Index = B/A = <u>3.000</u>
Sapling/Shrub Stratum (Plot size: <u>5'</u>)				
1. <u>Acer circinatum</u>	90	<input checked="" type="checkbox"/> 90.0%	FAC	
2. <u>Rubus spectabilis</u>	10	<input type="checkbox"/> 10.0%	FAC	
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
100 = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Ranunculus repens</u>	80	<input checked="" type="checkbox"/> 80.0%	FAC	
2. <u>Athyrium filix-femina</u>	10	<input type="checkbox"/> 10.0%	FAC	
3. <u>Urtica dioica</u>	10	<input type="checkbox"/> 10.0%	FAC	
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
11. _____	0	<input type="checkbox"/> 0.0%		
100 = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
% Bare Ground in Herb Stratum: <u>0</u>				
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrologic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is > 50% <input checked="" type="checkbox"/> 3 - Prevalence Index is <u>3.0</u> ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>				

Remarks:

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

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			
0-18	10YR	4/1	80	10YR	3/4	20	RM	M	Silty Clay	

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)	<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 in MLRA 1)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<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 Muck Mineral (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, unless disturbed or problematic.

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

Hydric Soil Present? Yes No

Remarks:
 Redox features in soils sampled at this location.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 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 checked="" 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 checked="" 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 on 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 (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches):	<input type="text" value="1"/>	
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	<input type="text" value="0"/>	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches):	<input type="text" value="1"/>	Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:
 In the week prior to the site visit, the area had received 2.73 inches of precipitation.

Remarks:
 Sampling location was in floodplain wetlands adjacent to McCormick Creek.

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

Project/Site: Hillside Farm Subdivision City/County: La Center/Clark Sampling Date: 20-Nov-17
 Applicant/Owner: Carleen Stephens State: WA Sampling Point: 07
 Investigator(s): Jim Barnes Section, Township, Range: S 34 T 5N R 1E
 Landform (hillslope, terrace, etc.): Ravine Local relief (concave, convex, none): undulating Slope: 1.0 % / 0.6 °
 Subregion (LRR): LRR A Lat.: 45.8722 Long.: -122.6801 Datum: _____
 Soil Map Unit Name: Hillsboro silt loam, 30 to 65 percent slopes (HoG) NWI classification: N/A

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Uplands adjacent to floodplain wetlands of McCormick Creek in west portion of project area. The riparian corridor in this area is approximately 30 feet wide and forested. Steep forested slopes lead out of the floodplain.	

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	Dominance Test worksheet:
1. <u>Pseudotsuga menziesii</u>	10	<input type="checkbox"/> 10.0%	FACU	Number of Dominant Species That are OBL, FACW, or FAC: <u>1</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>25.0%</u> (A/B)
2. <u>Acer macrophyllum</u>	80	<input checked="" type="checkbox"/> 80.0%	FACU	
3. <u>Alnus rubra</u>	10	<input type="checkbox"/> 10.0%	FAC	
4. _____	0	<input type="checkbox"/> 0.0%	_____	
100 = Total Cover				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>110</u> x 3 = <u>330</u> FACU species <u>210</u> x 4 = <u>840</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>320</u> (A) <u>1170</u> (B) Prevalence Index = B/A = <u>3.656</u>
Sapling/Shrub Stratum (Plot size: 5')				
1. <u>Acer circinatum</u>	100	<input checked="" type="checkbox"/> 100.0%	FAC	
2. _____	0	<input type="checkbox"/> 0.0%	_____	
3. _____	0	<input type="checkbox"/> 0.0%	_____	
Herb Stratum (Plot size: 5')				
1. <u>Polystichum munitum</u>	100	<input checked="" type="checkbox"/> 100.0%	FACU	
2. _____	0	<input type="checkbox"/> 0.0%	_____	
3. _____	0	<input type="checkbox"/> 0.0%	_____	
4. _____	0	<input type="checkbox"/> 0.0%	_____	
5. _____	0	<input type="checkbox"/> 0.0%	_____	
6. _____	0	<input type="checkbox"/> 0.0%	_____	
7. _____	0	<input type="checkbox"/> 0.0%	_____	
8. _____	0	<input type="checkbox"/> 0.0%	_____	
9. _____	0	<input type="checkbox"/> 0.0%	_____	
10. _____	0	<input type="checkbox"/> 0.0%	_____	
11. _____	0	<input type="checkbox"/> 0.0%	_____	
100 = Total Cover				
Woody Vine Stratum (Plot size: 30')				
1. <u>Rubus ursinus</u>	20	<input type="checkbox"/> 100.0%	FACU	
2. _____	0	<input type="checkbox"/> 0.0%	_____	
20 = Total Cover				
% Bare Ground in Herb Stratum: <u>0</u>				

Remarks:
 The plant community is dominated by upland plant species.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

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		
0-18	10YR	3/2	100				Silt Loam	

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

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

<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 in MLRA 1)	<input type="checkbox"/> Other (Explain in Remarks)
<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 Muck Mineral (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, unless disturbed or problematic.

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

Hydric Soil Present? Yes No

Remarks:
 The mapped soils appear to match the description of the mapped Hillsboro series.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 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 on 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 (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	<input type="text" value="0"/>	
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	<input type="text" value="0"/>	
Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	<input type="text" value="0"/>	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:
 In the week prior to the site visit, the area had received 2.73 inches of precipitation.

Remarks:
 There were no indicators of wetland hydrology at this sampling location.

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

Project/Site: Hillside Farm Subdivision City/County: La Center/Clark Sampling Date: 20-Nov-17
 Applicant/Owner: Carleen Stephens State: WA Sampling Point: 08
 Investigator(s): Jim Barnes Section, Township, Range: S 34 T 5N R 1E
 Landform (hillslope, terrace, etc.): Ravine Local relief (concave, convex, none): flat Slope: 0.0 % / 0.0 °
 Subregion (LRR): LRR A Lat.: 45.8722 Long.: -122.6800 Datum: _____
 Soil Map Unit Name: Hillsboro silt loam, 30 to 65 percent slopes (HoG) NWI classification: N/A

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

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

Remarks:
 Upland slope adjacent to floodplain wetlands of McCormick Creek . The riparian corridor in this area is approximately 30 feet wide and forested. The floodplain areas adjacent to the stream are relatively flat. Signs of overbank flooding are present.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	Dominance Test worksheet:
1. <u>Alnus rubra</u>	80	<input checked="" type="checkbox"/> 80.0%	FAC	Number of Dominant Species That are OBL, FACW, or FAC: <u>6</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>100.0%</u> (A/B)
2. <u>Pseudotsuga menziesii</u>	10	<input type="checkbox"/> 10.0%	FACU	
3. <u>Acer macrophyllum</u>	10	<input type="checkbox"/> 10.0%	FACU	
4. _____	0	<input type="checkbox"/> 0.0%		
100 = Total Cover				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>30</u> x 2 = <u>60</u> FAC species <u>260</u> x 3 = <u>780</u> FACU species <u>20</u> x 4 = <u>80</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>310</u> (A) <u>920</u> (B) Prevalence Index = B/A = <u>2.968</u>
Sapling/Shrub Stratum (Plot size: <u>5'</u>)				
1. <u>Acer circinatum</u>	60	<input checked="" type="checkbox"/> 60.0%	FAC	
2. <u>Rubus spectabilis</u>	40	<input checked="" type="checkbox"/> 40.0%	FAC	
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
100 = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Ranunculus repens</u>	50	<input checked="" type="checkbox"/> 50.0%	FAC	
2. <u>Athyrium filix-femina</u>	10	<input type="checkbox"/> 10.0%	FAC	
3. <u>Urtica dioica</u>	10	<input type="checkbox"/> 10.0%	FAC	
4. <u>Phalaris arundinacea</u>	30	<input checked="" type="checkbox"/> 30.0%	FACW	
5. _____	0	<input type="checkbox"/> 0.0%		
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
11. _____	0	<input type="checkbox"/> 0.0%		
100 = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. <u>Rubus armeniacus</u>	10	<input type="checkbox"/> 100.0%	FAC	
2. _____	0	<input type="checkbox"/> 0.0%		
10 = Total Cover				
% Bare Ground in Herb Stratum: <u>0</u>				

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrologic Vegetation
 2 - Dominance Test is > 50%
 3 - Prevalence Index is 3.0¹
 4 - Morphological Adaptations ¹(Provide supporting data in Remarks or on a separate sheet)
 5 - Wetland Non-Vascular Plants ¹
 Problematic Hydrophytic Vegetation ¹(Explain)
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No

Remarks:

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

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			
0-18	10YR	4/1	90	10YR	3/6	10	RM	M	Silt Loam	

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

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

<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 in MLRA 1)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<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 Muck Mineral (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, unless disturbed or problematic.

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

Hydric Soil Present? Yes No

Remarks:
 Redox features in soils sampled at this location.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 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 checked="" 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 checked="" 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 on 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 (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches):	<input type="text" value="1"/>	
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	<input type="text" value="0"/>	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches):	<input type="text" value="1"/>	Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:
 In the week prior to the site visit, the area had received 2.73 inches of precipitation.

Remarks:
 Sampling location was in floodplain wetlands adjacent to McCormick Creek.

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

Project/Site: Hillside Farm Subdivision City/County: La Center/Clark Sampling Date: 20-Nov-17
 Applicant/Owner: Carleen Stephens State: WA Sampling Point: 09
 Investigator(s): Jim Barnes Section, Township, Range: S 34 T 5N R 1E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): sloping Slope: 10.0 % / 5.7 °
 Subregion (LRR): LRR A Lat.: 45.8724 Long.: -122.6766 Datum: _____
 Soil Map Unit Name: Hillsboro silt loam, 8 to 15 percent slopes (HoC) NWI classification: N/A

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

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

Remarks:
 Grassland pasture in west portion of the project area, south of the driveway. Steep forested slopes lead out of the floodplain.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	Dominance Test worksheet:
1. _____	0	<input type="checkbox"/> 0.0%		Number of Dominant Species That are OBL, FACW, or FAC: <u>1</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>33.3%</u> (A/B)
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>40</u> x 3 = <u>120</u> FACU species <u>60</u> x 4 = <u>240</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>100</u> (A) <u>360</u> (B) Prevalence Index = B/A = <u>3.600</u>
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
Herb Stratum (Plot size: 5')				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrologic Vegetation <input type="checkbox"/> 2 - Dominance Test is > 50% <input type="checkbox"/> 3 - Prevalence Index is $\geq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Festuca arundinacea	40	<input checked="" type="checkbox"/> 40.0%	FAC	
2. Hypochaeris radicata	10	<input type="checkbox"/> 10.0%	FACU	
3. Trifolium pratense	10	<input type="checkbox"/> 10.0%	FACU	
4. Daucus carota	20	<input checked="" type="checkbox"/> 20.0%	FACU	
5. Dactylis glomerata	20	<input checked="" type="checkbox"/> 20.0%	FACU	
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
11. _____	0	<input type="checkbox"/> 0.0%		
	100	= Total Cover		
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		
% Bare Ground in Herb Stratum: <u>0</u>				

Remarks:
 The plant community is dominated by upland plant species.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

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		
0-18	10YR	3/3	100				Silt Loam	

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

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

<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 in MLRA 1)	<input type="checkbox"/> Other (Explain in Remarks)
<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 Muck Mineral (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, unless disturbed or problematic.

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

Hydric Soil Present? Yes No

Remarks:
 The mapped soils appear to match the description of the mapped Hillsboro series.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 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 on 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 (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): <input type="text" value="0"/>	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): <input type="text" value="0"/>	
Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): <input type="text" value="0"/>	

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:
 In the week prior to the site visit, the area had received 2.73 inches of precipitation.

Remarks:
 There were no indicators of wetland hydrology at this sampling location.

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

Project/Site: Hillside Farm Subdivision City/County: La Center/Clark Sampling Date: 20-Nov-17
 Applicant/Owner: Carleen Stephens State: WA Sampling Point: 10
 Investigator(s): Jim Barnes Section, Township, Range: S 34 T 5N R 1E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): sloping Slope: 10.0 % / 5.7 °
 Subregion (LRR): LRR A Lat.: 45.8723 Long.: -122.6745 Datum: _____
 Soil Map Unit Name: Hillsboro silt loam, 8 to 15 percent slopes (HoC) NWI classification: N/A

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Grassland pasture in west portion of the project area, south of the driveway and east of swale.	

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	Dominance Test worksheet:
1. _____	0	<input type="checkbox"/> 0.0%		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>50.0%</u> (A/B)
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>50</u> x 3 = <u>150</u> FACU species <u>50</u> x 4 = <u>200</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>100</u> (A) <u>350</u> (B) Prevalence Index = B/A = <u>3.500</u>
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Festuca arundinacea</u>	50	<input checked="" type="checkbox"/> 50.0%	FAC	
2. <u>Hypochaeris radicata</u>	5	<input type="checkbox"/> 5.0%	FACU	
3. <u>Trifolium pratense</u>	15	<input type="checkbox"/> 15.0%	FACU	
4. <u>Daucus carota</u>	10	<input type="checkbox"/> 10.0%	FACU	
5. <u>Dactylis glomerata</u>	20	<input checked="" type="checkbox"/> 20.0%	FACU	
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
11. _____	0	<input type="checkbox"/> 0.0%		
	100	= Total Cover		
Woody Vine Stratum (Plot size: _____)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		
% Bare Ground in Herb Stratum: <u>0</u>				
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrologic Vegetation <input type="checkbox"/> 2 - Dominance Test is > 50% <input type="checkbox"/> 3 - Prevalence Index is <u>3.0</u> ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>				

Remarks:
 The plant community is dominated by upland plant species.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

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		
0-18	10YR	3/3	100				Silt Loam	

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

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

<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 in MLRA 1)	<input type="checkbox"/> Other (Explain in Remarks)
<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 Muck Mineral (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, unless disturbed or problematic.

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

Hydric Soil Present? Yes No

Remarks:
 The mapped soils appear to match the description of the mapped Hillsboro series.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 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 on 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 (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	<input type="text" value="0"/>	
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	<input type="text" value="0"/>	
Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	<input type="text" value="0"/>	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:
 In the week prior to the site visit, the area had received 2.73 inches of precipitation.

Remarks:
 There were no indicators of wetland hydrology at this sampling location.

Appendix E — Wetland Rating Form

Wetland name or number 1 (37400 NE North Fork Road, La Center, WA 98629 Hillside Farm Subdivision)

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 1 Date of site visit: 6/14/17
 Rated by Jim Barnes (Cascadia) Trained by Ecology? Yes ___ No Date of training 11/12/13
 HGM Class used for rating Riverine Wetland has multiple HGM classes? ___Y N

NOTE: Form is not complete without the figures requested (*figures can be combined*).
 Source of base aerial photo/map Clark County GIS

OVERALL WETLAND CATEGORY II (based on functions 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
 ___ Category IV – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>Circle the appropriate ratings</i>				
Site Potential	H <input checked="" type="radio"/> M L	H <input checked="" type="radio"/> M L	H <input checked="" type="radio"/> M L	
Landscape Potential	<input checked="" type="radio"/> H M L	H <input checked="" type="radio"/> M L	<input checked="" type="radio"/> H M L	
Value	<input checked="" type="radio"/> H M L	H <input checked="" type="radio"/> M L	H <input checked="" type="radio"/> M L	TOTAL
Score Based on Ratings	8	6	7	21

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 1 (37400 NE North Fork Road, La Center, WA 98629)

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	WR-1
Hydroperiods	H 1.2	WR-1
Ponded depressions	R 1.1	WR-1
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	R 2.4	WR-1
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	WR-1
Width of unit vs. width of stream (<i>can be added to another figure</i>)	R 4.1	WR-1
Map of the contributing basin	R 2.2, R 2.3, R 5.2	WR-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	WR-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 1 (37400 NE North Fork Road, La Center, WA 98629)

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 1 (37400 NE North Fork Road, La Center, WA 98629)

RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS

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

R 1.0. Does the site have the potential to improve water quality?		
R 1.1. Area of surface depressions within the Riverine wetland that can trap sediments during a flooding event: Depressions cover $> \frac{3}{4}$ area of wetland points = 8 Depressions cover $> \frac{1}{2}$ area of wetland points = 4 Depressions present but cover $< \frac{1}{2}$ area of wetland points = <u>2</u> No depressions present points = 0	2	
R 1.2. Structure of plants in the wetland (areas with >90% cover at person height, not Cowardin classes) Trees or shrubs $> \frac{2}{3}$ area of the wetland points = <u>8</u> Trees or shrubs $> \frac{1}{3}$ area of the wetland points = 6 Herbaceous plants (> 6 in high) $> \frac{2}{3}$ area of the wetland points = 6 Herbaceous plants (> 6 in high) $> \frac{1}{3}$ area of the wetland points = 3 Trees, shrubs, and ungrazed herbaceous $< \frac{1}{3}$ area of the wetland points = 0	8	
Total for R 1 Add the points in the boxes above		10

Rating of Site Potential If score is: 12-16 = H X 6-11 = M 0-5 = L

Record the rating on the first page

R 2.0. Does the landscape have the potential to support the water quality function of the site?		
R 2.1. Is the wetland within an incorporated city or within its UGA? Yes = <u>2</u> No = 0	2	
R 2.2. Does the contributing basin to the wetland include a UGA or incorporated area? Yes = <u>1</u> No = 0	1	
R 2.3. Does at least 10% of the contributing basin contain tilled fields, pastures, or forests that have been clearcut within the last 5 years? Note: Tilled fields and pastures. Yes = <u>1</u> No = 0	1	
R 2.4. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = <u>1</u> No = 0	0	
R 2.5. Are there other sources of pollutants coming into the wetland that are not listed in questions R 2.1-R 2.4 Other sources _____ Yes = 1 No = <u>0</u>	0	
Total for R 2 Add the points in the boxes above		5

Rating of Landscape Potential If score is: X 3-6 = H 1 or 2 = M 0 = L

Record the rating on the first page

R 3.0. Is the water quality improvement provided by the site valuable to society?		
R 3.1. Is the wetland along a stream or river that is on the 303(d) list or on a tributary that drains to one within 1 mi? Note: Jenny Creek Yes = <u>1</u> No = 0	1	
R 3.2. Is the wetland along a stream or river that has TMDL limits for nutrients, toxics, or pathogens? Note: E. Fork Lewis River is on the 303(d) list. Jenny Creek is a tributary stream to E. Fk. Lewis R. Yes = <u>1</u> No = 0	1	
R 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 drainage in which the unit is found)</i> Yes = <u>2</u> No = 0	2	
Total for R 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 1 (37400 NE North Fork Road, La Center, WA 98629)

RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS

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

R 4.0. Does the site have the potential to reduce flooding and erosion?		
<p>R 4.1. Characteristics of the overbank storage the wetland provides: <i>Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of wetland)/(average width of stream between banks).</i></p> <p>If the ratio is more than 20 points = 9</p> <p>If the ratio is 10-20 points = 6</p> <p>If the ratio is 5-<10 points = 4</p> <p>If the ratio is 1-<5 points = <u>2</u></p> <p>If the ratio is < 1 points = 1</p>		2
<p>R 4.2. Characteristics of plants that slow down water velocities during floods: <i>Treat large woody debris as forest or shrub. Choose the points appropriate for the best description (polygons need to have >90% cover at person height. These are <u>NOT</u> Cowardin classes).</i></p> <p>Forest or shrub for >¹/₃ area OR emergent plants > ²/₃ area points = <u>7</u></p> <p>Forest or shrub for > ¹/₁₀ area OR emergent plants > ¹/₃ area points = 4</p> <p>Plants do not meet above criteria points = 0</p>		7
Total for R 4		9

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

R 5.0. Does the landscape have the potential to support the hydrologic functions of the site?		
R 5.1. Is the stream or river adjacent to the wetland downcut?	Yes = <u>0</u> No = 1	0
R 5.2. Does the up-gradient watershed include a UGA or incorporated area?	Yes = <u>1</u> No = 0	1
R 5.3. Is the up-gradient stream or river controlled by dams?	Yes = 0 No = <u>1</u>	1
Total for R 5		2

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

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

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

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

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

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

- Aquatic bed 4 structures or more: points = 4
 - 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

2

H 1.2. Hydroperiods

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

- 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**

1

H 1.3. Richness of plant species

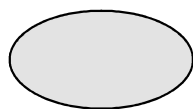
Count the number of plant species in the wetland that cover at least 10 ft². *Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle*

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

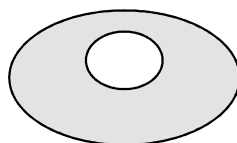
1

H 1.4. Interspersion of habitats

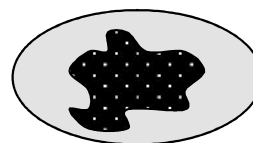
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always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



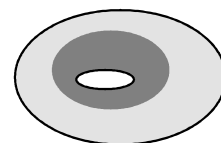
None = 0 points



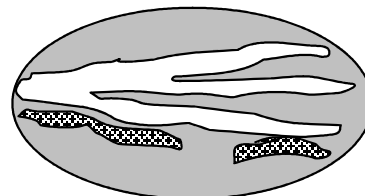
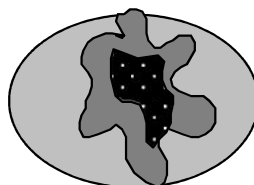
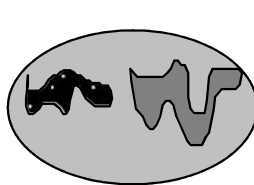
Low = 1 point



Moderate = 2 points



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



2

Wetland name or number 1 (37400 NE North Fork Road, La Center, WA 98629)

<p>H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i> <input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). <input checked="" type="checkbox"/> Standing snags (dbh > 4 in) within the wetland <input checked="" 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) <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>) <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>) <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>	2
Total for H 1	Add the points in the boxes above
10	

Rating of Site Potential If score is: 15-18 = H X 7-14 = M 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>). Calculate: % undisturbed habitat <u>13</u> + [(% moderate and low intensity land uses)/2] <u>13</u> = <u>26</u> % If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1 km Polygon points = 2 10-19% of 1 km Polygon points = 1 < 10% of 1 km Polygon points = 0</p>	2
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. Calculate: % undisturbed habitat <u>32</u> + [(% moderate and low intensity land uses)/2] <u>25</u> = <u>57</u> % Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10-50% and in 1-3 patches points = 2 Undisturbed habitat 10-50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0</p>	3
<p>H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (- 2) ≤ 50% of 1 km Polygon is high intensity points = 0</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> 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</p>	1

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

Wetland name or number 1 (37400 NE North Fork Road, La Center, WA 98629)

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.

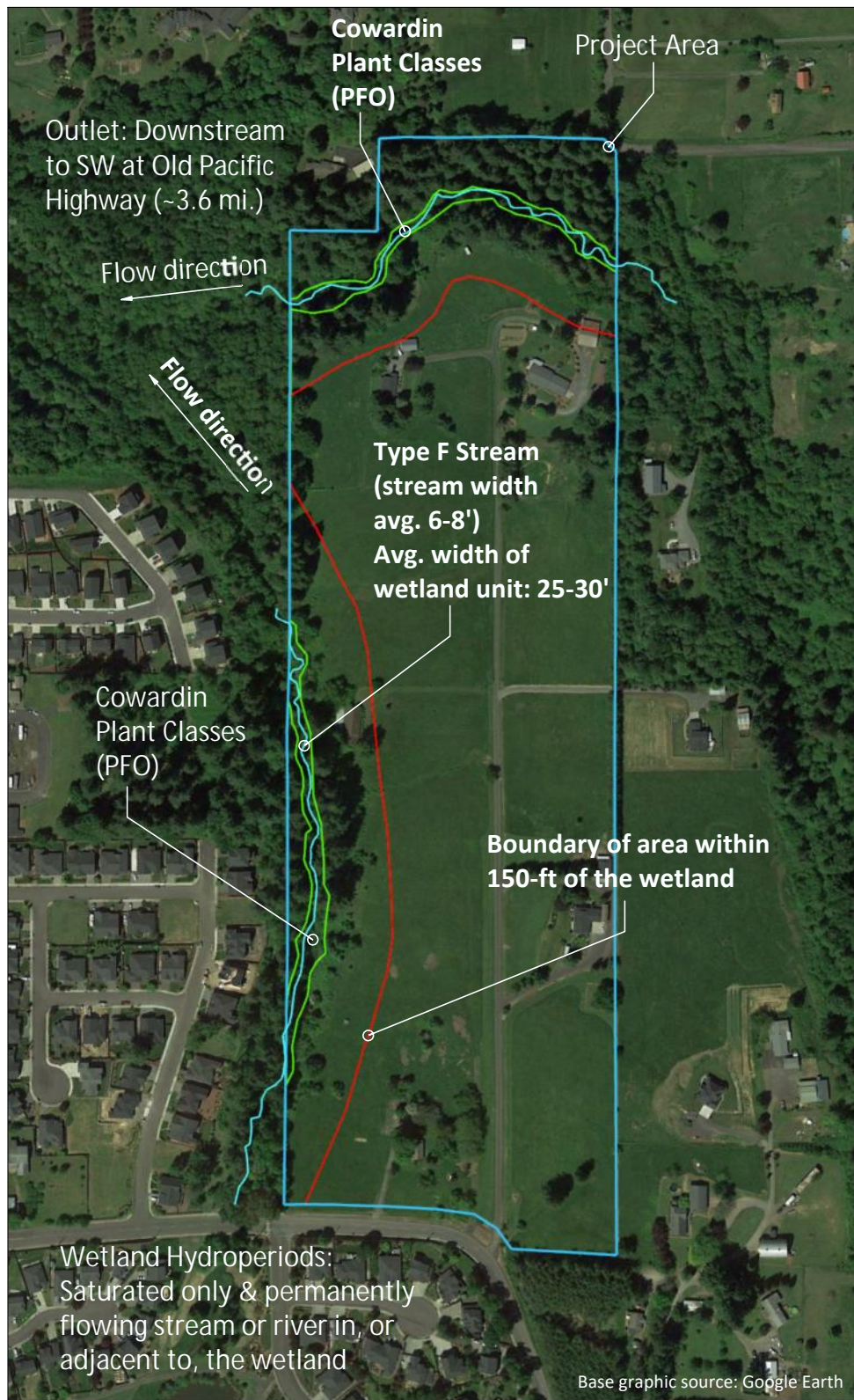
Wetland name or number 1 (37400 NE North Fork Road, La Center, WA 98629)

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>	N/A
<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 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 1 (37400 NE North Fork Road, La Center, WA 98629)

<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</p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	<p>N/A</p>



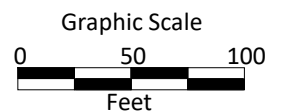
Sheet WR-1: Cowardin plant classes, hydroperiods, ponded depressions, location of outlet, boundary of area within 150-ft of wetland; plant cover of trees, shrubs, and herbaceous plants

Project: Hillside Farm Subdivision
 Location: 37400 NE North Fork Road, La Center, WA 98629
 Tax Parcel: 258901-000, 258919-000, 258922-000, 258971-000, 258972-000
 Legal: SW 1/4, S34, T5N, R1E of the Willamette Meridian
 45.8723 N. lat. /-122.6751 W long.
 County: Clark

Cascadia Ecological Services, Inc.
 14205 NW 56th Avenue, Vancouver, WA 98685
 (360) 601-8631
 www.cascadia-inc.com

Date: 1/29/18

CLIENT:
 Carleen Stephens
 24600 NE 98th Court
 Battle Ground, WA 98604
 (360) 606-2408





Base graphic source: Google Earth

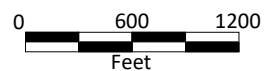
Sheet WR-2: Map of the contributing basin

Project: Hillside Farm Subdivision
 Location: 37400 NE North Fork Road, La Center, WA 98629
 Tax Parcel: 258901-000, 258919-000, 258922-000, 258971-000, 258972-000
 Legal: SW 1/4, S34, T5N, R1E of the Willamette Meridian
 45.8723 N. lat. /-122.6751 W long.
 County: Clark

CLIENT:
 Carleen Stephens
 24600 NE 98th Court
 Battle Ground, WA 98604
 (360) 606-2408

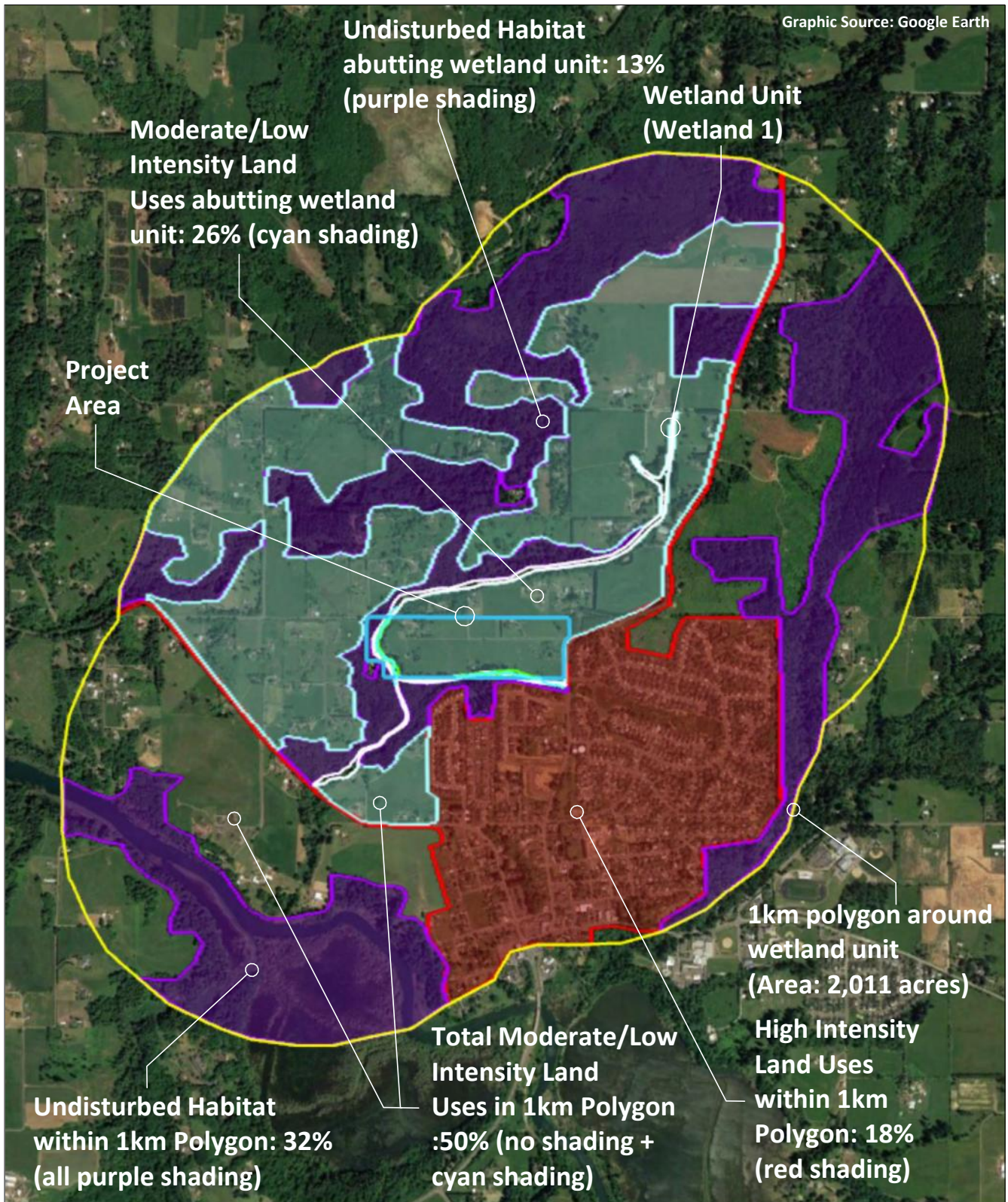


Graphic Scale



Cascadia Ecological Services, Inc.
 14205 NW 56th Avenue, Vancouver, WA 98685
 (360) 601-8631
 www.cascadia-inc.com

Date: 1/29/18



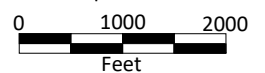
Sheet WR-3: 1km Polygon: Area that extends 1km from the entire wetland edge

Project: Hillside Farm Subdivision
 Location: 37400 NE North Fork Road, La Center, WA 98629
 Tax Parcel: 258901-000, 258919-000, 258922-000, 258971-000, 258972-000
 Legal: SW 1/4, S34, T5N, R1E of the Willamette Meridian
 45.8723 N. lat. /-122.6751 W long.
 County: Clark

CLIENT:
 Carleen Stephens
 24600 NE 98th Court
 Battle Ground, WA 98604
 (360) 606-2408

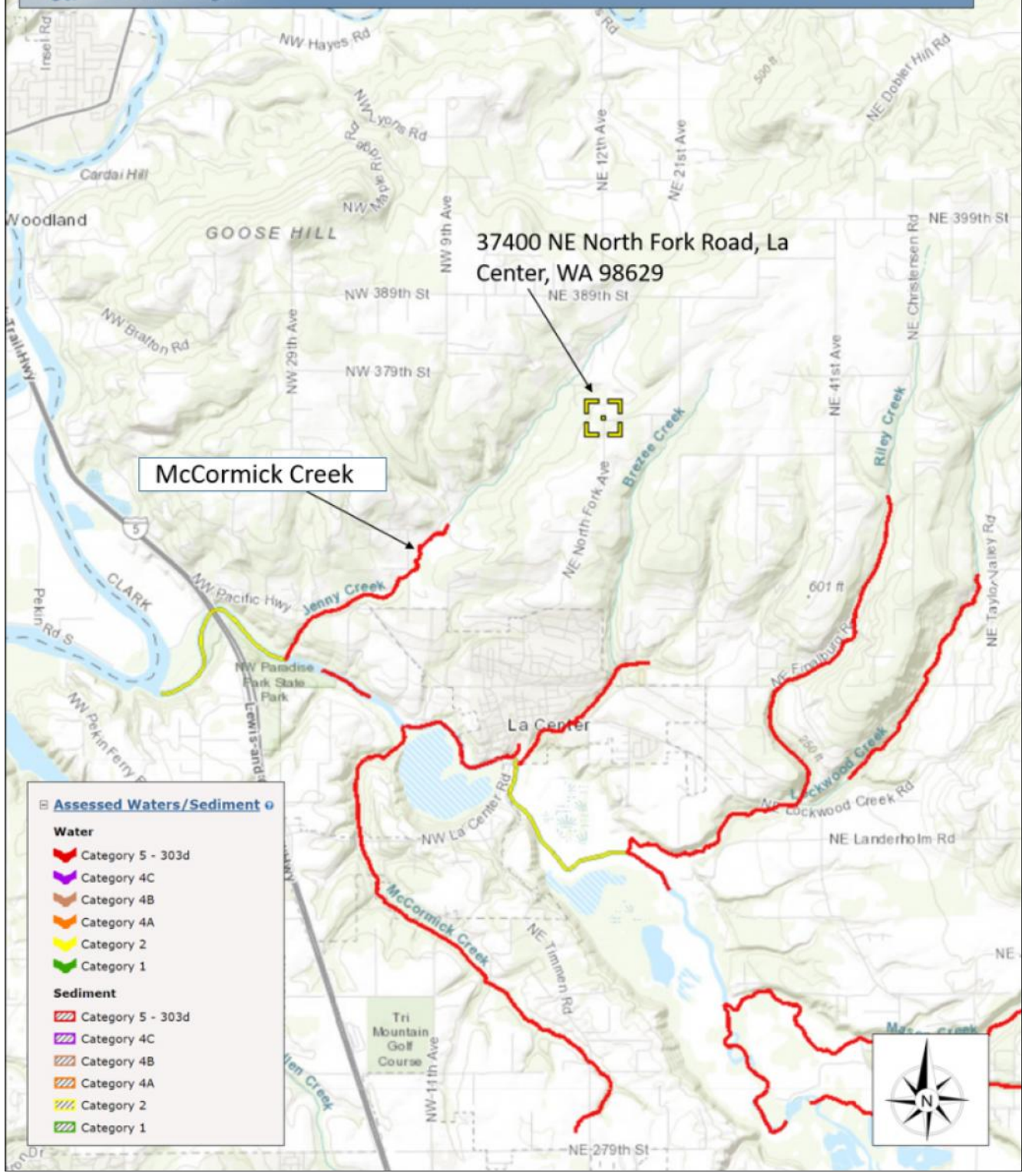


Graphic Scale



Cascadia Ecological Services, Inc.
 14205 NW 56th Avenue, Vancouver, WA 98685
 (360) 601-8631
 www.cascadia-inc.com

Date: 1/29/18



Sheet WR-4: Screen capture of map of 303(d) listed waters in basin (from Ecology website)

Project: Hillside Farm Subdivision
 Location: 37400 NE North Fork Road, La Center, WA 98629
 Tax Parcel: 258901-000, 258919-000, 258922-000, 258971-000, 258972-000
 Legal: SW 1/4, S34, T5N, R1E of the Willamette Meridian
 45.8723 N. lat. /-122.6751 W long.
 County: Clark

CLIENT:
 Carleen Stephens
 24600 NE 98th Court
 Battle Ground, WA 98604
 (360) 606-2408



Water Quality Improvement Projects (TMDLs)

[Water Quality Improvement](#) > [Water Quality Improvement Projects by County](#) > Clark County

Clark County projects

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



To get additional information about the water bodies in Clark County please use the [Water Quality Assessment Query Tool](#).

WRIAs in Clark County

- [WRIA 27](#) - Lewis
- [WRIA28](#) - Salmon-Washougal

Waterbody Name	Pollutants	Status	TMDL Lead
Burnt Bridge Creek	Multi-parameter	Under development	Brett Raunig 360-690-4660
Gibbons Creek	Fecal Coliform	EPA approved Has an implementation plan	Brett Raunig 360-690-4660
Gifford Pinchot USFS	Temperature	On hold	Tony Whiley 360-407-7241
Lacamas Creek	Dissolved Oxygen Fecal Coliform pH Temperature	Under development	Brett Raunig 360-690-4660
Lewis River, E. Fork	Fecal Coliform Temperature	Under Development	Brett Raunig 360-690-4660
Salmon Creek	Fecal Coliform Turbidity	EPA approved Has an implementation plan	Brett Raunig 360-690-4660
	Temperature	EPA approved Has an implementation plan	
Weaver Creek	Ammonia-N BOD (5-day)	EPA approved	Brett Raunig 360-690-4660

Project is located in the East Fork Lewis River Watershed.



Sheet WR-5: Screen capture of list of TMDLs for WRIA in which unit is found (from web)

Project: Hillside Farm Subdivision
 Location: 37400 NE North Fork Road, La Center, WA 98629
 Tax Parcel: 258901-000, 258919-000, 258922-000, 258971-000, 258972-000
 Legal: SW 1/4, S34, T5N, R1E of the Willamette Meridian
 45.8723 N. lat. /-122.6751 W long.
 County: Clark

Cascadia Ecological Services, Inc.
 14205 NW 56th Avenue, Vancouver, WA 98685
 (360) 601-8631
www.cascadia-inc.com

Date: 1/29/18

CLIENT:
 Carleen Stephens
 24600 NE 98th Court
 Battle Ground, WA 98604
 (360) 606-2408