

Sewall Wetland Consulting, Inc.

PO Box 880
Fall City, WA 98024

Phone: 253-859-0515

March 27, 2023

Joel Hylback
West Fork Properties, LLC
PO Box 3427
Arlington, Washington 98223

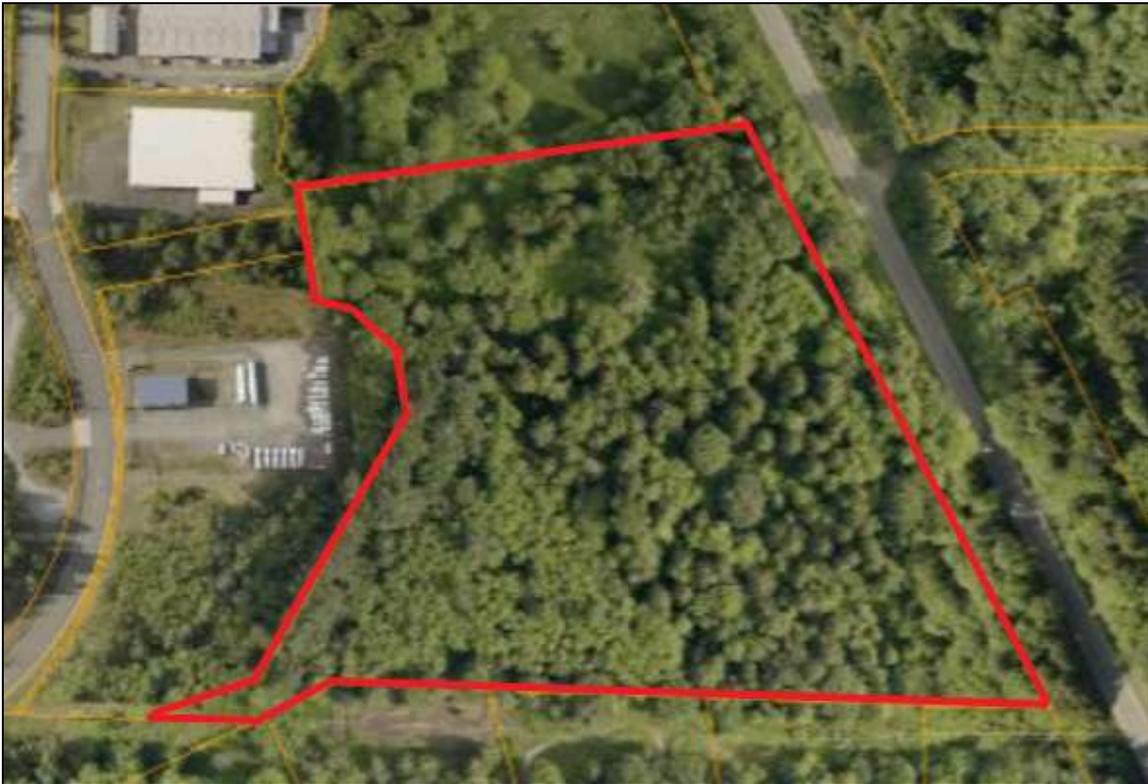
RE: Lot 19 – *Revised* Critical Areas Report
SWC Job#18-208

1.0 INTRODUCTION

This report describes our observations of any jurisdictional wetlands, streams and buffers on or within 200' of Parcel #31051400101800.



Above: Vicinity Map



Above: 2020 aerial photograph of the site.

The site is located on the west side of SR9 and is accessed off Arlington Valley Road SE, located west of the site, in the City of Arlington, Washington (the “site”).

The site consists of an irregular shaped 14.36 acre undeveloped parcel in the North ½ of Section 14 Township 31 North, Range 5 East of the W.M.

METHODOLOGY

Ed Sewall of Sewall Wetland Consulting, Inc. inspected the site several times including April 30, 2019 and November 3, 2021.

The site was reviewed using methodology described in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987), and the *Western Mountains, Valleys and Coast region Supplement* (Version 2.0) dated June 24, 2010, as required by the US Army Corps of Engineers. Soil colors were identified using the 1990 Edited and Revised

Edition of the Munsell Soil Color Charts (Kollmorgen Instruments Corp. 1990).

The wetland and stream flagging placed on the site were surveyed by Pacific Coast Surveys, Inc. (see attached map).

OBSERVATIONS

Existing Site Documentation.

Prior to visiting the site, a review of several natural resource inventory maps was conducted. Resources reviewed included the National Wetland Inventory Map and the NRCS Soil Survey online mapping and Data and the Snohomish County Mapping website.

Snohomish County Mapping website

According to the Snohomish County PDS Mapper with wetland and stream layers activated, there are two fish bearing streams crossing the site, connecting into one channel on the northwest side of the site.



Above: Snohomish County map depicting wetlands and streams.

National Wetlands Inventory (NWI)

The NWI map depicts a single stream crossing the site. In addition an emergent wetland is depicted along the north side of the site.



Above: NWI Map of the study area

Soil Survey

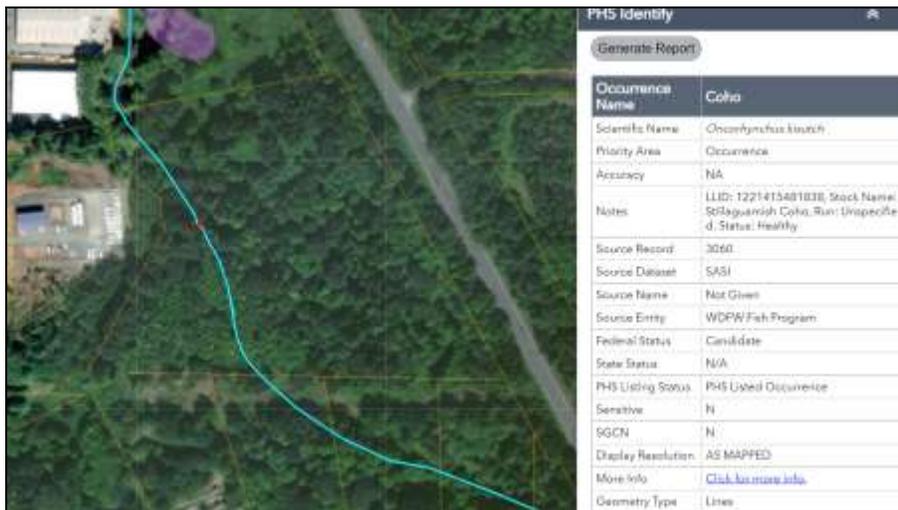
According to data on file with the NRCS Soil Survey, the site is mapped as a mix of Everett, very gravelly sandy loam and Tokul gravelly medial loam. Everett soils are well drained and Tokul soils are all moderately well drained soils formed on till plains. The north edge of the site is mapped as poorly drained Norma loam. Norma loam soils are considered hydric or wetland soils.



Above: NRCS Soil map of the study area.

WDFW Priority Habitats Maps

The WDFW Priority Habitat Website with Public access layers activated depicts the same stream and wetland shown on the NWI website. The stream is listed as containing coho salmon.



Above: WDFW Priority Habitats Map of the site

WDNR Fpars Water Type Map

According to the WDNR Fpars website which depicts known streams, depicts the same streams shown on the Snohomish County website, with both channels listed as Type F waters.



Above: WDNR Fpars Water Type Mapping of the site

Arlington Land Company Consent Decree

A Consent Decree recorded April 3, 2001 with Snohomish County.

By Case Number C99-1711C the EPA had filed in the “United States District Court Western District of Washington” a complaint against certain defendants for violation of Section 301(a) of the Clean Water Act (CWA). The Defendants denied that they engaged in any activities that violated CWA Section 301(a).

The named Consent Decree is intended to constitute a complete and final settlement of the United States’ claims.

The Settling Defendants have provided per the terms of the Consent Decree which include, in part, some restoration and the transfer of fee title of certain lands.

Paragraph 24 NOTICE AND PERMITS FOR ACTIVITIES IN THE NORTHERN LOTS OF AVLC'S PROPERTY set boundaries for areas where notice to the EPA would be required. Stated in Line 25 and 26 "No notice to the Corps or EPA, and no permit from the Corp under the Clean Water Act Section 404, shall be required for activities in Lots 13, 16, 17, 18, 19 and 20, shown on the map in Appendix B, that are outside of the wetland boundaries shown for those Lots and not within 50-feet of the creek on those lots."

In a recent meeting with the City Planning Director and Planning manager to discuss this decree and the proposed development on Lot 19, it was agreed upon that the setback for the buffer to the Creek would be enlarged from the 50' per the Decree to 75'. This was to include the designation of an upland area outside the standard buffers between the Creeks as a Native Growth Protection Area and would not be developed for anything but Passive Use.

It should be noted that the Settling Defendants have fulfilled, in full, their obligations to the Consent Decree.

Field observations

The site is an undeveloped forested site. However, old, overgrown road beds pass through the site in several locations. A power line passes along the south edge of the site. SR 9 abuts the eastern edge, industrial properties abut the site to the west, and a single family residential property abuts the north side of the site.

As depicted on the various inventories, two stream channels pass through the site flowing from south to north. The western stream is highly manipulated and runs in a large excavated ditch. The eastern stream has a more natural configuration until the two streams meet on the northwest side of the site and are somewhat channelized. Old spoil piles from the channelization of the western stream are evident along the stream bank.

The site slopes down towards the northwest from a high point on the southeast.

The site is characterized by a conifer dominated overstory with western red cedar, Douglas fir and some Sitka spruce. The understory is sparse under the conifers consisting of clumps of sword fern, and small patches of shrubs like salmonberry, Indian plum, red huckleberry and vine maple. The south side of the site is characterized by a younger deciduous forest comprised of red alder and black cottonwood. Understory species include salmonberry, Himalayan blackberry, sword fern, hazelnut, Indian plum, vine maple and elderberry.

Soil pits excavated within the upland areas of the site revealed a dry, gravelly loam with a soil color of 10YR 3/3-3/4.

The site contains two wetland areas as well as two streams, below is a description of these critical areas;

Wetland A

Wetland A consists of a forested and emergent wetland located along the northern edge of the site. The south edge of this wetland which is on the site was flagged with flags A1-A12 and AA1-AA3. The wetland edge is well defined and located at the toe of a well defined north facing slope.

The forested portion of the wetland is located on the site, and consist of an overstory of red alder with salmonberry, skunk cabbage and lady fern in the understory. The off-site emergent portion to the north is vegetated with reed canary grass and some cattail.

Soil pits excavated within the wetland revealed a gravelly loam with a soil color of 10YR 2/2 with coarse, common distinct redoximorphic concentrations. Soils within the wetland were saturated at the surface in the early growing season.

Using the US Fish and Wildlife Wetland Classification Method (Cowardin et al. 1979), this wetland contains areas that would be classified as PFO1C and PEM1C.

Using the 2014 WADOE Wetland Rating system and rating the wetland as a depressional wetland, this wetland scored a total of 16 points with 5

for habitat. This indicates a Category III wetland. According to City of Arlington Municipal Code (AMC) Chapter 20.93, Category III wetlands with a habitat score of 5 points have a 105' buffer measured from the wetland edge.

However, as agreed with the City, the Consent Decree states that there are no buffers on the wetlands on the site so no buffer is required on this wetland.

Wetland B

Wetland B consists of a small forested wetland located on a bench around the eastern stream channel. This wetland was flagged with pink flagging labeled B1-B9.

Although the wetland surrounds the stream channel, it is located above the flood level of the channel and its hydrology source seems to be groundwater seepage and not water within the stream. However, water within the wetland does seep into and contribute to the streams flow.

This wetland contains several western red cedars with a sparse understory comprised primarily of some scattered salmonberry and lady fern.

Soil pits excavated within the wetland revealed a mucky, gravelly loam with a soil color of 10YR 2/2 with common, medium, distinct redoximorphic concentrations. Soils within the wetland were saturated to the surface.

Using the US Fish and Wildlife Wetland Classification Method (Cowardin et al. 1979), this wetland contains areas that would be classified as PFO1C.

Using the 2014 WADOE Wetland Rating system and rating the wetland as a depressional wetland, this wetland scored a total of 16 points with 5 for habitat. This indicates a Category III wetland. According to City of Arlington Municipal Code (AMC) Chapter 20.93, Category III wetlands with a habitat score of 5 points have a 105' buffer measured from the wetland edge.

However, as agreed with the City, the Consent Decree states that there are no buffers on the wetlands on the site so no buffer is required on this wetland.

Stream A

A Type F stream passes along the eastern side of the site flowing to the north. This stream enters the site from a steep sided ravine located along the west side of SR9 and south of the site.

The OHWM of this stream was flagged with blue flags labeled N1-N21 and S1-S21.

The creek is a well-defined channel approximately 6'-8' wide with a mix of cobble and gravel channel. Water was flowing up to 6" deep during our site inspection.

This stream is mapped as a salmonid bearing Type F water. All streams in the City of Arlington are now considered to contain an ESA species. Therefore, based upon AMC 20.93.700, Type F streams with ESA species have a 150' buffer measured from the OHWM of the creek.

Type	Standard Buffer
S	150 feet
F-ESA	150 feet
F	100 feet
Np	50 feet
Ns	50 feet
Non-natural	None

However, based upon an agreement with the City, the buffer of the stream is 75' on the side towards the proposed development and 150' on the south side away from the proposed development.

Stream B

A second Type F stream passes along the western side of the site flowing to the north in a well-defined dug channel.

The OHWM of this stream was flagged with blue flags labeled W1-W26 and E1-E26.

The stream channel averages 4' in width but has a water fall type feature where the underlying stream bed has eroded and it widens out to the north. Water was flowing up to 6" deep during our site inspection.

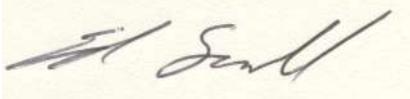
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S	150 feet
F-ESA	150 feet
F	100 feet
Np	50 feet
Ns	50 feet
Non-natural	None

However, based upon an agreement with the City, the buffer of the stream is 75' on the side towards the proposed development and 150' on the south side away from the proposed development.

If you have any questions in regards to this report or need additional information, please feel free to contact me at (253) 859-0515 or at esewall@sewallwc.com.

Sincerely,
Sewall Wetland Consulting, Inc.



Ed Sewall
Senior Wetlands Ecologist PWS #212

REFERENCES

City of Arlington Municipal Code

Consent Decree Arlington Land Company vs United States 4-3-2002

Cowardin, L., V. Carter, F. Golet, and E. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service, FWS/OBS-79-31, Washington, D. C.

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

Muller-Dombois, D. and H. Ellenberg. 1974. Aims and Methods of Vegetation Ecology. John Wiley & Sons, Inc. New York, New York.

Munsell Color. 1988. Munsell Soil Color Charts. Kollmorgen Instruments Corp., Baltimore, Maryland.

National Technical Committee for Hydric Soils. 1991. Hydric Soils of the United States. USDA Misc. Publ. No. 1491.

Reed, P., Jr. 1988. National List of Plant Species that Occur in Wetlands: Northwest (Region 9). 1988. U. S. Fish and Wildlife Service, Inland Freshwater Ecology Section, St. Petersburg, Florida.

Reed, P.B. Jr. 1993. 1993 Supplement to the list of plant species that occur in wetlands: Northwest (Region 9). USFWS supplement to Biol. Rpt. 88(26.9) May 1988.

USDA NRCS & National Technical Committee for Hydric Soils, September 1995. Field Indicators of Hydric Soils in the United States - Version 2.1

A PORTION OF SECTION 14, TOWNSHIP 31 NORTH, RANGE 5 EAST, W.M.

3/10/2024 2:21 PM
Z:\Hilcock_Joe - Arlington.Lot 19_Sheets\PL Preliminary Site Plan - Townhomes-Unit Lot Subdivision.dwg

LEGEND

- PROJECT BOUNDARY
- PROPOSED R/W LINE
- EXIST R/W LINE
- UNIT AIR SPACE FOR SFDU
- EASEMENT LINE
- EXIST. PARCEL LINE
- CONTOUR MAJOR, EXIST
- CONTOUR MINOR, EXIST
- EXIST SEWERLINE
- EXIST WATERLINE
- EXISTING BUILDING
- PROPOSED PAVED AREA
- STREAM BUFFER

Line Table

Line #	Length	Direction
L1	25.00	N61°46'12"E
L2	43.84	N85°39'19"W
L3	65.15	N41°53'55"W
L4	32.31	N62°23'51"W
L5	37.54	N03°47'31"W
L6	48.68	N12°51'11"W

310514-002-030-00
Weiss Company X, LLC
19803 74th Ave.
Arlington, WA 98223

310514-002-034-00
Hickgas, LLC
19701 74th Ave.
Arlington, WA 98223

310514-004-003-00
Robert & High Capture
6339 192nd Pl. NE
Arlington, WA 98223



LAND DISTURBING AREA

Total Site Area	625,560 sf (14.36 ac)
Impervious Area	
Private Road	9,258 sf
Drive Aisles	39,596 sf
Parking	13,131 sf
Driveways	19,124 sf
Roof Tops	66,885 sf
Total New Impervious	159,904 sf
Total Replaced Impervious	0 sf
Total New+Replaced Impervious	159,904 sf
Land Disturbing Activity	
Area of Disturbance	292,357 sf
Site Grading	
Cut	7,500 cy
Fill	20,000 cy
Total Grading	12,500 cy Fill

IMPERVIOUS AREAS

New Road Pavement Area	61,985 sf (1.42 ac)
New Sidewalk Area	11,910 sf (0.27 ac)
New Roof Area	66,885 sf (1.54 ac)
New Driveway Area	19,124 sf (0.44 ac)
New Road Pavement (offsite)	8,925 sf (0.20 ac)
New Sidewalk (offsite)	2,334 sf (0.05 ac)
Existing Road Area	0 sf (0.00 ac)
Existing Driveway Area	0 sf (0.00 ac)
Existing Roof Area	0 sf (0.00 ac)
Total Impervious Area (onsite)	159,904 sf (3.67 ac)
Total Impervious Area (offsite)	11,259 sf (0.26 ac)

SLOPE ANALYSIS
Slopes vary across the site, with the steepest slopes (up to 33%) in the NW portion of the site. Slopes typically range from 0 to 5%. Average slope is 7%. Site slopes generally downward from the Southeast to Northwest.

There are no indications of unstable slopes on the site.

Slope analysis based on T.I.N. triangle slopes of the LIDAR surface:

Range	Area (sf)
0% - 5%	409,584 sf
5% - 10%	68,272 sf
10% - 15%	41,722 sf
15% - 33%	39,540 sf
33% +	66,442 sf
Total	625,560 sf (14.36 ac)

VEGETATIVE ANALYSIS

EXISTING:			
Forested areas	625,560 sf (14.36 ac)	100.00%	
Building & Gravel areas	- sf	- ac	-%
Total	625,560 sf (14.36 ac)	100.00%	

PROPOSED:

Landscaped areas=	539,551 sf (12.39 ac)
Building & Driveway areas=	86,009 sf (1.97 ac)
Total=	625,560 sf (14.36 ac)

AQUIFER RECHARGE/ WELL HEAD PROTECTION
Low, Over 100

SOILS
Everett very Gravelly Sandy Loam:
Hydrologic Soil Group: A
Normal Loam:
Hydrologic Soil Group: B/D
Tokul Gravelly Medial Loam:
Hydrologic Soil Group: B
Tokul-Winston Gravelly Loam:
Hydrologic Soil Group: B
Compact Fill Area to 95% Modified Proctor

CALL AT LEAST 2 BUSINESS DAYS BEFORE YOU DIG
1-800-424-5555

PRELIMINARY SITE PLAN - TOWNHOMES--UNIT LOT SUBDIVISION

SITE AREA ANALYSIS

Gross Site Area	625,560 sf (14.36 ac)
Area in Road Tract	78,741 sf
Area in Unit Lots	128,422 sf
Area in Tracts (Critical Areas)	317,697 sf
Area in Tracts (Rec. OS)	41,767 sf
Area in Tracts (Open Space)	418,398 sf
Total	625,560 sf (14.36 ac)

AMC 20.72.010 - NUMBER OF PARKING SPACES REQUIRED

18' wide units = 2.25 spaces per unit (42 units)
42 x 2.25 = 94.5 95 spaces required 84 tandem spaces provided

25' wide units = 2.50 spaces per unit (42 units)
42 x 2.50 = 105 spaces required 84 spaces provided

1 additional space for every 4 units in the development.
84 / 4 = 21 guest spaces required

Base	200	Provided	168 in garages
Guest	21	Required	77 in pocket park
Total Parking	221	245	

MAXIMUM YIELD AMC 20.48.020 - RESIDENTIAL DENSITY

Maximum Yield 625,560 sf of land / 0 sf = No density maximum if other code elements are met in HRC Zone.

AMC 20.48.064 - MAXIMUM LOT COVERAGE AMC-TABLE 20.48-5: DENSITY AND DIMENSIONAL STANDARDS

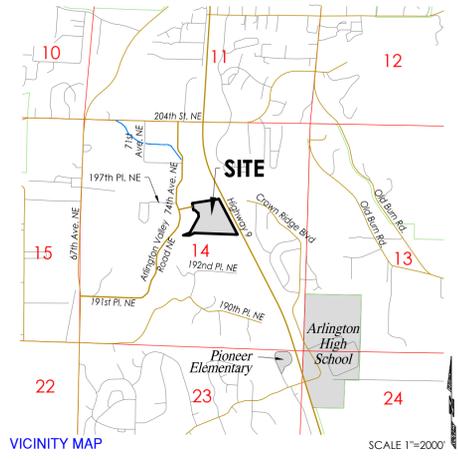
Description	Allowed	Proposed
Lot Coverage Allowed HDR	75%	26%
Lot Size 625,560	568,858 sf	162,119 sf

AMC 20.48.060 - BUILDING HEIGHT LIMITATIONS

Description	Allowed	Proposed
Building Height	45'	35'

Sheet List Table

Sheet Number	Sheet Title
Planning: P4	
P1	Preliminary Site Plan
P2	Open Space and Landscape Concept
P3	Unit Lots and Parking Plan
P4	Existing Conditions Map
Construction: C29	
C1	Civil Site Plan
C2	Construction Notes
C3	Ceiling & TESC Plan
C4	Grading Plan
C5	Grading & TESC Details
C6	Site Cross Sections (1 & 2)
C7	Site Cross Sections (3 & 4)
C8	Site Cross Sections (5 & 6)
C9	Site Cross Section (7)
C10	Site Cross Sections (Tract 997)
C11	Road A Plan and Profile
C12	Drive Aisle A Plan and Profile
C13	Drive Aisle A Plan and Profile
C14	Drive Aisle B Plan and Profile - Sta 20+00 to 25+00
C15	Drive Aisle B Plan and Profile - Sta 25+00 to 30+48.07
C16	Drive Aisle C Plan and Profile
C17	Road Details
C18	Stormwater Management Overview Plan
C19	Stormwater Management Plan and Profile
C20	Stormwater Management Details
C21	Water Plan
C22	Sanitary Sewer Plan
C23	Road A Sanitary Sewer Plan and Profile
C24	Drive Aisle A Sanitary Sewer Plan and Profile
C25	Drive Aisles A, B & C Sanitary Sewer Plan and Profile
C26	Drive Aisles A, B & C Sanitary Sewer Plan and Profile
C27	Drive Aisle A to B Sewer Connection Plan and Profile
C28	Drive Aisle B Sanitary Sewer Plan and Profile
C29	City of Arlington Standard Sewer Details



LEGAL DESCRIPTION
LOT 19, CITY OF ARLINGTON BOUNDARY LINE ADJUSTMENT RECORDED UNDER AUDITOR'S FILE NO. 962088005, RECORDS OF SNOHOMISH COUNTY, WASHINGTON, WHICH IS A REVISION OF SURVEY RECORDED UNDER AUDITOR'S FILE NO. 780310289, BEING A PORTION OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER, THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER, AND THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 14, TOWNSHIP 31 NORTH, RANGE 5 EAST, WILLAMETTE MERIDIAN, SITUATE IN THE COUNTY OF SNOHOMISH, STATE OF WASHINGTON.

DATUM & BENCHMARK
DATUM: NAVD 88 (NGVD 29 = NAVD 88-3.71)
BENCHMARK: FOUND REBAR W/CAP STAMPED "12716" AT THE NORTHEAST PROPERTY CORNER
ELEV: 159.79
PER GPS OBSERVATIONS

BASIS OF BEARING: THE MONUMENTED EAST PROPERTY LINE, AS THE BEARING OF N 28°13'48" W.

SURVEY NOTES / REFERENCES

- Site boundary and existing topography per survey performed by Pacific Coast Surveys, Inc. dated January 28, 2022.
- BOUNDARY LINE ADJUSTMENT - A.F.#9605088005
- BOUNDARY LINE ADJUSTMENT - A.F.#200506245003

PROJECT INFORMATION

Tax Parcel Numbers	310514-001-018-00
Total Area	625,560 sf (14.36 ac)
GIP Designation	RHC (Residential High Capacity)
Existing Zoning	Vacant (Single-Family)
Existing Land Use	Vacant (Single-Family)
Proposed Land Use	Townhomes-Unit Lot Subdivision

LOCAL SERVICES

Sewage Disposal: City of Arlington
Water District: City of Arlington
School District: Arlington #14
Fire District: Arlington #47
Post Office: City of Arlington
Electric: snohomish county pud
Phone: Ziply
Cable: Ziply

CONTACT PERSON Land Technologies Inc. Merle Ash, 18820 3rd Ave. NE, Arlington, WA 98223, 360.652.9727, merle@landtechway.com

SITE ADDRESS Unknown, Arlington, WA 98223

ENGINEER Land Technologies, Inc. Tyler S. Foster, PE, 18820 3rd Ave. NE, Arlington, WA 98223, 360.652.9727, tyler@landtechway.com

OWNER Lot 19, LLC, 16720 Smokey Point Blvd. Ste A, Arlington, WA 98223

SURVEYOR Pacific Coast Surveys, Inc. Darren J. Rickle, PLS, P.O. Box 13619, Mill Creek, WA 98082, 425.512.7099

CERTIFIED EROSION CONTROL SPECIALIST

LAND TECHNOLOGIES
18820 Third Avenue, N.E.
Arlington, WA 98223
360-652-9727

Lot 19, LLC
16720 Smokey Point Blvd. Ste A, Arlington, WA 98223

PRELIMINARY SITE PLAN - TOWNHOMES--UNIT LOT SUBDIVISION

A PORTION OF SECTION 14, TOWNSHIP 31 NORTH, RANGE 5 EAST, W.M.

PROJECT LEAD: Merle Ash
CHECKED BY: Tyler S. Foster
DRAWN BY: Alex Tyler
DATE: December 5, 2022
REVISION 1: -
REVISION 2: -
REVISION 3: -
REVISION 4: -
AS-BUILT: -

SHEET P1 of P4
24x36
PLN #1018

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MAKING A WAY OUT OF NO WAY

weta

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

Project/Site: Lot 19 City/County: Arlington Sampling Date: 4-30-19
Applicant/Owner: El Sewall State: WA Sampling Point: DP#1
Investigator(s): El Sewall Section, Township, Range:
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR): Lat: Long: Datum:
Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes [checked] No
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 [checked] No
Hydric Soil Present? Yes [checked] No
Wetland Hydrology Present? Yes [checked] No
Is the Sampled Area within a Wetland? Yes [checked] No
Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size:) Absolute % Cover Dominant Species? Indicator Status
1. Alnus rubra 60 FAC
2.
3.
4.
= Total Cover
Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
Sapling/Shrub Stratum (Plot size:) Absolute % Cover Dominant Species? Indicator Status
1. Rubus spectabilis 80 FAC
2.
3.
4.
5.
= Total Cover
Prevalence Index worksheet:
Total % Cover of: Multiply by:
OBL species x 1 =
FACW species x 2 =
FAC species x 3 =
FACU species x 4 =
UPL species x 5 =
Column Totals: (A) (B)
Prevalence Index = B/A =
Herb Stratum (Plot size:) Absolute % Cover Dominant Species? Indicator Status
1. Atriplex Fertifolia 20 FAC
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.
= Total Cover
Hydrophytic Vegetation Indicators:
[checked] Dominance Test is >50%
Prevalence Index is <= 3.0^1
Morphological Adaptations^1 (Provide supporting data in Remarks or on a separate sheet)
Wetland Non-Vascular Plants^1
Problematic Hydrophytic Vegetation^1 (Explain)
^1Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:) Absolute % Cover Dominant Species? Indicator Status
1.
2.
= Total Cover
Hydrophytic Vegetation Present? Yes [checked] No
% Bare Ground in Herb Stratum
Remarks:

updated on unit A

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

Project/Site: lot 19 City/County: Arizona Sampling Date: 4-30-19
 Applicant/Owner: _____ State: WA Sampling Point: DP#2
 Investigator(s): Ed Scovell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Alnus incana</u>	<u>60</u>		<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60</u> (A/B)
4. _____				
= Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:
1. <u>Rubus spectabilis</u>	<u>20</u>		<u>FAC</u>	Total % Cover of: _____ Multiply by: _____
2. <u>Rubus discolor</u>	<u>30</u>		<u>FAC</u>	OBL species _____ x 1 = _____
3. <u>Sambucus racemosa</u>	<u>20</u>		<u>FACU</u>	FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
= Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators:
1. <u>Tofieldia nutans</u>	<u>20</u>		<u>UPL</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
2. _____				<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
3. _____				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. _____				<input type="checkbox"/> Wetland Non-Vascular Plants ¹
5. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
6. _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
= Total Cover				
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present?
1. _____				Yes <input checked="" type="checkbox"/> No _____
2. _____				
= Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				

SOIL

Sampling Point: DPT

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		
16	10Y 3/3						gal	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> 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 Mucky 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: *no indicators*

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, 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 along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____

Water Table Present? Yes _____ No Depth (inches): _____

Saturation Present? Yes _____ No Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No

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

Remarks: *no indicators*

upland east side of site

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

Project/Site: lot 19 City/County: Arizona Sampling Date: 4-30-19
 Applicant/Owner: _____ State: WA Sampling Point: DPF 3
 Investigator(s): Ed Sewall Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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 _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: _____	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u><i>Pseudotsuga mucronata</i></u>	<u>30</u>		<u>UPL</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. <u><i>Araucarioxylum</i></u>	<u>30</u>		<u>FACW</u>	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>20</u> (A/B)
4. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				Prevalence index worksheet:
1. <u><i>Rubus spectabilis</i></u>	<u>40</u>		<u>FAC</u>	Total % Cover of: _____ Multiply by: _____
2. <u><i>Oenothera caesiifolia</i></u>	<u>30</u>		<u>FACW</u>	OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators:
1. <u><i>Polygonum maritimum</i></u>	<u>30</u>		<u>UPL</u>	___ Dominance Test is >50%
2. _____				___ Prevalence Index is ≤3.0 ¹
3. _____				___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. _____				___ Wetland Non-Vascular Plants ¹
5. _____				___ Problematic Hydrophytic Vegetation ¹ (Explain)
6. _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present?
1. _____				Yes _____ No <input checked="" type="checkbox"/>
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks: _____				

SOIL

Sampling Point: D143

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		
2"	<u>dark</u>	<u>DF</u>						
16	<u>10YR 3/3</u>						<u>Sandy loam</u>	

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 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)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, 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 along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____

Water Table Present? Yes _____ No Depth (inches): _____

Saturation Present? Yes _____ No Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No

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

Remarks:

Soil 511

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

Project/Site: Lot 19 City/County: Arlington Sampling Date: 4-30-19

Applicant/Owner: Ed Sewall State: WA Sampling Point: DP #4

Investigator(s): Ed Sewall Section, Township, Range:

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%):

Subregion (LRR): Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes [checked] 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.

Summary of Findings table with checkboxes for Hydrophytic Vegetation Present, Hydric Soil Present, Wetland Hydrology Present, and Is the Sampled Area within a Wetland? (checked).

VEGETATION - Use scientific names of plants.

Vegetation data table with columns for Tree Stratum, Sapling/Shrub Stratum, Herb Stratum, and Woody Vine Stratum. Includes dominance test worksheet, prevalence index worksheet, and hydrophytic vegetation indicators.

SOIL

Sampling Point: DPEL

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		
1"	<i>Light</i>							
16	<i>10Y 3/4</i>						<i>subly m</i>	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> 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)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, 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 along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____

Water Table Present? Yes _____ No Depth (inches): _____

Saturation Present? Yes _____ No Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No

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

Remarks:

wet B

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

Project/Site: Lot 19 City/County: Arley WA Sampling Date: 11-3-21
Applicant/Owner: SA Smith State: WA Sampling Point: DP#5
Investigator(s): SA Smith Section, Township, Range:
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR): Lat: Long: Datum:
Soil Map Unit Name: NWI classification:

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 No
Hydric Soil Present? Yes No
Wetland Hydrology Present? Yes No
Is the Sampled Area within a Wetland? Yes No
Remarks: above normal rainfall

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size:) Absolute % Cover Dominant Species? Indicator Status
1. Thuja plicata 80 FAC
2.
3.
4. = Total Cover
Sapling/Shrub Stratum (Plot size:)
1.
2.
3.
4.
5. = Total Cover
Herb Stratum (Plot size:)
1. Athyrium filix-femina 30 FAC
2.
3.
4.
5.
6.
7.
8.
9.
10.
11. = Total Cover
Woody Vine Stratum (Plot size:)
1.
2. = Total Cover
% Bare Ground in Herb Stratum
Remarks:

UPL near wet 15

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

Project/Site: Lot 19 City/County: Anityka Sampling Date: 11-3-21
 Applicant/Owner: _____ State: WA Sampling Point: DP#6
 Investigator(s): Ed Savel Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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 _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: <u>above normal rainfall</u>	

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Thuja plants</u>	<u>60</u>		<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33</u> (A/B)
4. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Ostrya cerasifolia</u>	<u>20</u>		<u>FAC</u>	Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
				Hydrophytic Vegetation Indicators:
				___ Dominance Test is >50%
				___ Prevalence Index is ≤3.0 ¹
				___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
				___ 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.
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____				Yes _____ No <input checked="" type="checkbox"/>
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum _____ = Total Cover				
Remarks: _____				

SOIL

Sampling Point: DP #6

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		
2	2L2F							
14	10YR3/3						gsl	

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 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)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, 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 along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

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

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

Remarks:

105

Wetland name or number _____

Lot 19

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland A Date of site visit: 10-21
 Rated by Ed Smith Trained by Ecology? Yes ___ No ___ Date of training _____
 HGM Class used for rating Depressional 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 _____

OVERALL WETLAND CATEGORY IV (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			
	Circle the appropriate ratings									
Site Potential	H	M	L	H	M	L	H	M	L	
Landscape Potential	H	M	L	H	M	L	H	M	L	
Value	H	M	L	H	M	L	H	M	L	TOTAL
Score Based on Ratings	5			6			5			16

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY			
	I	II	III	IV
Estuarine				
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				

Wetland name or number A

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

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

Wetland name or number A

HGM Classification of Wetlands in Western Washington

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

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

NO - go to 2

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

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

NO - Saltwater Tidal Fringe (Estuarine)

YES - Freshwater Tidal Fringe

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

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

NO - go to 3

YES - The wetland class is **Flats**

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

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

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

NO - go to 4

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

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

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

NO - go to 5

YES - The wetland class is **Slope**

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

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

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

Wetland name or number A

NO - go to 6

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

YES - The wetland class is **Riverine**

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

NO - go to 7

YES - The wetland class is **Depressional**

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

NO - go to 8

YES - The wetland class is **Depressional**

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

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

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

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

Wetland name or number A

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

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

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

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

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

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

Wetland name or number A

DEPRESSIONAL AND FLATS WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation	
D 4.0. Does the site have the potential to reduce flooding and erosion?	
D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet points = 2 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch points = 1 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	2
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part. Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 The wetland is a "headwater" wetland points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in) points = 0	0
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire wetland is in the Flats class points = 5	3
Total for D 4	5

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

D 5.0. Does the landscape have the potential to support hydrologic functions of the site?	
D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	1
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	1
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0	1
Total for D 5	3

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

D 6.0. Are the hydrologic functions provided by the site valuable to society?	
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met. The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): • Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 • Surface flooding problems are in a sub-basin farther down-gradient. points = 1 Flooding from groundwater is an issue in the sub-basin. points = 1 The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why _____ points = 0 There are no problems with flooding downstream of the wetland. points = 0	1

D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for D 6	1

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

Wetland name or number A

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

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

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

Aquatic bed 4 structures or more: points = 4

Emergent 3 structures: points = 2

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

Forested (areas where trees have > 30% cover) 1 structure: points = 0

If the unit has a Forested class, check if:

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

H 1.2. Hydroperiods

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

Permanently flooded or inundated 4 or more types present: points = 3

Seasonally flooded or inundated 3 types present: points = 2

Occasionally flooded or inundated 2 types present: points = 1

Saturated only 1 type present: points = 0

Permanently flowing stream or river in, or adjacent to, the wetland

Seasonally flowing stream in, or adjacent to, the wetland

Lake Fringe wetland 2 points

Freshwater tidal wetland 2 points

H 1.3. Richness of plant species

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

If you counted: > 19 species points = 2

5 - 19 species points = 1

< 5 species points = 0

H 1.4. Interspersion of habitats

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

None = 0 points

Low = 1 point

Moderate = 2 points

All three diagrams in this row are HIGH = 3 points

Wetland name or number A

H 1.5. Special habitat features:

Check the habitat features that are present in the wetland. The number of checks is the number of points.

Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).

Standing snags (dbh > 4 in) within the wetland

Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)

Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed)

At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians)

Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata)

Total for H 1 Add the points in the boxes above 4

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

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

H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).

Calculate: $\frac{4}{16} \times 100 = 25\%$ % undisturbed habitat 16 ((% moderate and low intensity land uses)/2) $\frac{8}{8} = 100\%$

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

H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.

Calculate: $\frac{30}{90} \times 100 = 33\%$ % undisturbed habitat 30 + ((% moderate and low intensity land uses)/2) $\frac{5}{5} = 100\%$

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

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

Total for H 2 Add the points in the boxes above 0

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

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

H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score that applies to the wetland being rated.

Site meets ANY of the following criteria: points = 2

It has 3 or more priority habitats within 100 m (see next page)

It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)

It is mapped as a location for an individual WDFW priority species

It is a Wetland of High Conservation Value as determined by the Department of Natural Resources

It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan

Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1

Site does not meet any of the criteria above points = 0

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

Wetland name or number 1

WDFW Priority Habitats

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

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

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

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

Wetland name or number A

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, Yes – Go to SC 1.1 — Vegetated, and No = Not an estuarine wetland — With a salinity greater than 0.5 ppt	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I No - Go to SC 1.2	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i> , see page 25) — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = Category I No = Category II	Cat. I Cat. II
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? Yes – Go to SC 2.2 No – Go to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = Category I No = Not a WHCV http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf Yes – Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? Yes = Category I No = Not a WHCV	Cat. I
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? Yes – Go to SC 3.3 No – Go to SC 3.2 SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 18 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to SC 3.3 No = Is not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = Is a Category I bog No – Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = Is a Category I bog No = Is not a bog	Cat. I

Wetland name or number A

<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>Yes = Category I No = <u>Not a forested wetland for this section</u></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>Yes – Go to SC 5.1 No = <u>Not a wetland in a coastal lagoon</u></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 ¼ 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>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-Copalls: Lands west of SR 115 and SR 109 <p>Yes – Go to SC 6.1 No = <u>not an interdunal wetland for rating</u></p> <p>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = Category I No – Go to SC 6.2</p> <p>SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = Category II No – Go to SC 6.3</p> <p>SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? Yes = Category III No = Category IV</p>	<p>Cat I</p> <p>Cat. II</p> <p>Cat. III</p> <p>Cat. IV</p>
<p>Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form</p>	<p><u>N/A</u></p>

Wetland name or number _____

105

Lot 19

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland B Date of site visit: 10-20
 Rated by Ed Smith Trained by Ecology? Yes No Date of training _____
 HGM Class used for rating _____ 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 _____

OVERALL WETLAND CATEGORY III (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 <u>M</u> L	H <u>M</u> L	H M <u>L</u>	
Landscape Potential	H <u>M</u> L	H <u>M</u> L	H M <u>L</u>	
Value	H M <u>L</u>	H <u>M</u> L	<u>M</u> M L	TOTAL
Score Based on Ratings	<u>5</u>	<u>6</u>	<u>5</u>	<u>16</u>

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 <u>IV</u>
None of the above	

Wetland name or number B

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

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

Wetland name or number _____

HGM Classification of Wetlands in Western Washington

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

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

NO - go to 2

YES - the wetland class is Tidal Fringe - go to 1.1

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

NO - Saltwater Tidal Fringe (Estuarine)

YES - Freshwater Tidal Fringe

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

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

NO - go to 3

YES - The wetland class is Flats

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

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

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

NO - go to 4

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

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

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

NO - go to 5

YES - The wetland class is Slope

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

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

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

Wetland name or number B

NO - go to 6

YES - The wetland class is Riverine

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

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

NO - go to 7

YES - The wetland class is Depressional

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

NO - go to 8

YES - The wetland class is Depressional

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

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

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

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

Wetland name or number B

DEPRESSIONAL AND FLATS WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland:	
Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2	2
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1	
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes):	
Wetland has persistent, ungrazed, plants > 95% of area points = 5	
Wetland has persistent, ungrazed, plants > 1/4 of area points = 3	
Wetland has persistent, ungrazed plants > 1/10 of area points = 1	5
Wetland has persistent, ungrazed plants < 1/10 of area points = 0	
D 1.4. Characteristics of seasonal ponding or inundation:	
This is the area that is ponded for at least 2 months. See description in manual.	
Area seasonally ponded is > 1/2 total area of wetland points = 4	
Area seasonally ponded is > 1/4 total area of wetland points = 2	4
Area seasonally ponded is < 1/4 total area of wetland points = 0	
Total for D 1	11

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

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

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

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

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

Wetland name or number B

DEPRESSIONAL AND FLATS WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation	
D 4.0. Does the site have the potential to reduce flooding and erosion?	
D 4.1. Characteristics of surface water outflows from the wetland:	
Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet points = 2	2
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch points = 1	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.	
Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7	
Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5	
Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3	
The wetland is a "headwater" wetland points = 3	
Wetland is flat but has small depressions on the surface that trap water points = 1	1
Marks of ponding less than 0.5 ft (6 in) points = 0	
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.	
The area of the basin is less than 10 times the area of the unit points < 5	
The area of the basin is 10 to 100 times the area of the unit points = 2	3
The area of the basin is more than 100 times the area of the unit points = 0	
Entire wetland is in the Flats class points = 5	
Total for D 4	6

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

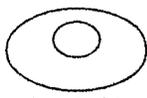
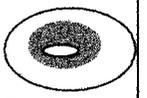
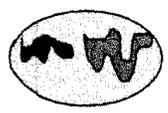
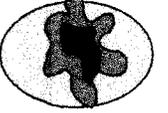
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?	
D 5.1. Does the wetland receive stormwater discharges?	Yes = 1 No = 0
D 5.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	Yes = 1 No = 0
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at > 1 residence/ac, urban, commercial, agriculture, etc.)?	Yes = 1 No = 0
Total for D 5	2

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

D 6.0. Are the hydrologic functions provided by the site valuable to society?	
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met. The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):	
• Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2	
• Surface flooding problems are in a sub-basin farther down-gradient. points = 1	
Flooding from groundwater is an issue in the sub-basin. points = 1	
The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why _____ points = 0	1
There are no problems with flooding downstream of the wetland. points = 0	
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	
Yes = 2 No = 0	2
Total for D 6	1

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

Wetland name or number B

These questions apply to wetlands of all HGM classes.	
HABITAT FUNCTIONS - Indicators that site functions to provide important habitat	
H 1.0. Does the site have the potential to provide habitat?	
H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of 1/4 ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.	
<input type="checkbox"/> Aquatic bed <input type="checkbox"/> Emergent <input checked="" type="checkbox"/> Scrub-shrub (areas where shrubs have > 30% cover) <input type="checkbox"/> Forested (areas where trees have > 30% cover) If the unit has a Forested class, check if: <input type="checkbox"/> The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon	4 structures or more: points = 4 3 structures: points = 2 2 structures: points = 1 1 structure: points = 0
H 1.2. Hydroperiods	
Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 ac to count (see text for descriptions of hydroperiods).	
<input type="checkbox"/> Permanently flooded or inundated <input checked="" type="checkbox"/> Seasonally flooded or inundated <input type="checkbox"/> Occasionally flooded or inundated <input checked="" type="checkbox"/> Saturated only <input checked="" type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland <input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland <input type="checkbox"/> Lake Fringe wetland <input type="checkbox"/> Freshwater tidal wetland	4 or more types present: points = 3 3 types present: points = 2 2 types present: points = 1 1 type present: points = 0 2 points 2 points
H 1.3. Richness of plant species	
Count the number of plant species in the wetland that cover at least 10 ft ² . Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle	
If you counted: > 19 species 5 - 19 species < 5 species	points = 2 points = 1 points = 0
H 1.4. Interspersion of habitats	
Decide from the diagrams below whether Interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high.	
   	
All three diagrams in this row are HIGH = 3 points	
  	

Wetland name or number B

H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. The number of checks is the number of points.	
<input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). <input type="checkbox"/> Standing snags (dbh > 4 in) within the wetland <input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) <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 (cut shrubs or trees that have not yet weathered where wood is exposed) <input type="checkbox"/> At least 1/4 ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians) <input checked="" type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata)	2
Total for H 1	Add the points in the boxes above
Rating of Site Potential If score is: <u>15-18 = H</u> <u>7-14 = M</u> <u>0-6 = L</u> Record the rating on the first page	
H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).	
Calculate: <u>6</u> % undisturbed habitat \div [(% moderate and low intensity land uses)/2] = <u>10</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
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	
Calculate: <u>18</u> % undisturbed habitat \div [(% moderate and low intensity land uses)/2] = <u>3.6</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
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
Total for H 2	Add the points in the boxes above
Rating of Landscape Potential If score is: <u>4-6 = H</u> <u>1-3 = M</u> <u>< 1 = L</u> Record the rating on the first page	
H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score that applies to the wetland being rated.	
Site meets ANY of the following criteria:	points = 2
<input checked="" type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page) <input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) <input type="checkbox"/> It is mapped as a location for an individual WDFW priority species <input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources <input type="checkbox"/> It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan 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
Total for H 3	Add the points in the boxes above
Rating of Value If score is: <u>2 = H</u> <u>1 = M</u> <u>0 = L</u> Record the rating on the first page	

Wetland name or number 5

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 6 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 5

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt Yes - Go to SC 1.1 No = Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I No - Go to SC 1.2	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i> , see page 25) — At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = Category I No = Category II	Cat. I Cat. II
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? Yes - Go to SC 2.2 No - Go to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = Category I No = Not a WHCV SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhp/wetlands.pdf Yes - Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? Yes = Category I No = Not a WHCV	Cat. I
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below. If you answer YES you will still need to rate the wetland based on its functions. SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? Yes - Go to SC 3.3 No - Go to SC 3.2 SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 10 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes - Go to SC 3.3 No = Is not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = Is a Category I bog No - Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = Is a Category I bog No = Is not a bog	Cat. I

Wetland name or number B

<p>SC 4.0. Forested Wetlands</p> <p>Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i></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>Yes = Category I No = Not a forested wetland for this section</p>	<p>Cat. I</p>
<p>SC 5.0. Wetlands in Coastal Lagoons</p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <ul style="list-style-type: none"> — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be measured near the bottom</i>) <p>Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon</p> <p>SC 5.1. Does the wetland meet all of the following three conditions?</p> <ul style="list-style-type: none"> — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100). — At least ¼ 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>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>Yes – Go to SC 6.1 No = not an interdunal wetland for rating</p> <p>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?</p> <p>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?</p> <p>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?</p> <p>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>NA</p>

Plot Coordinates **Distance** Area **Line**

Coordinates Measure

Feet (ft) Feet² (ft²)

Enable Snapping Select Snapping Layers

Point Text Line Freehand Ellipse Circle Polygon Rectangle

Draw Tools

Styles Edit Export Drawings Erase Clear

Edit Drawings

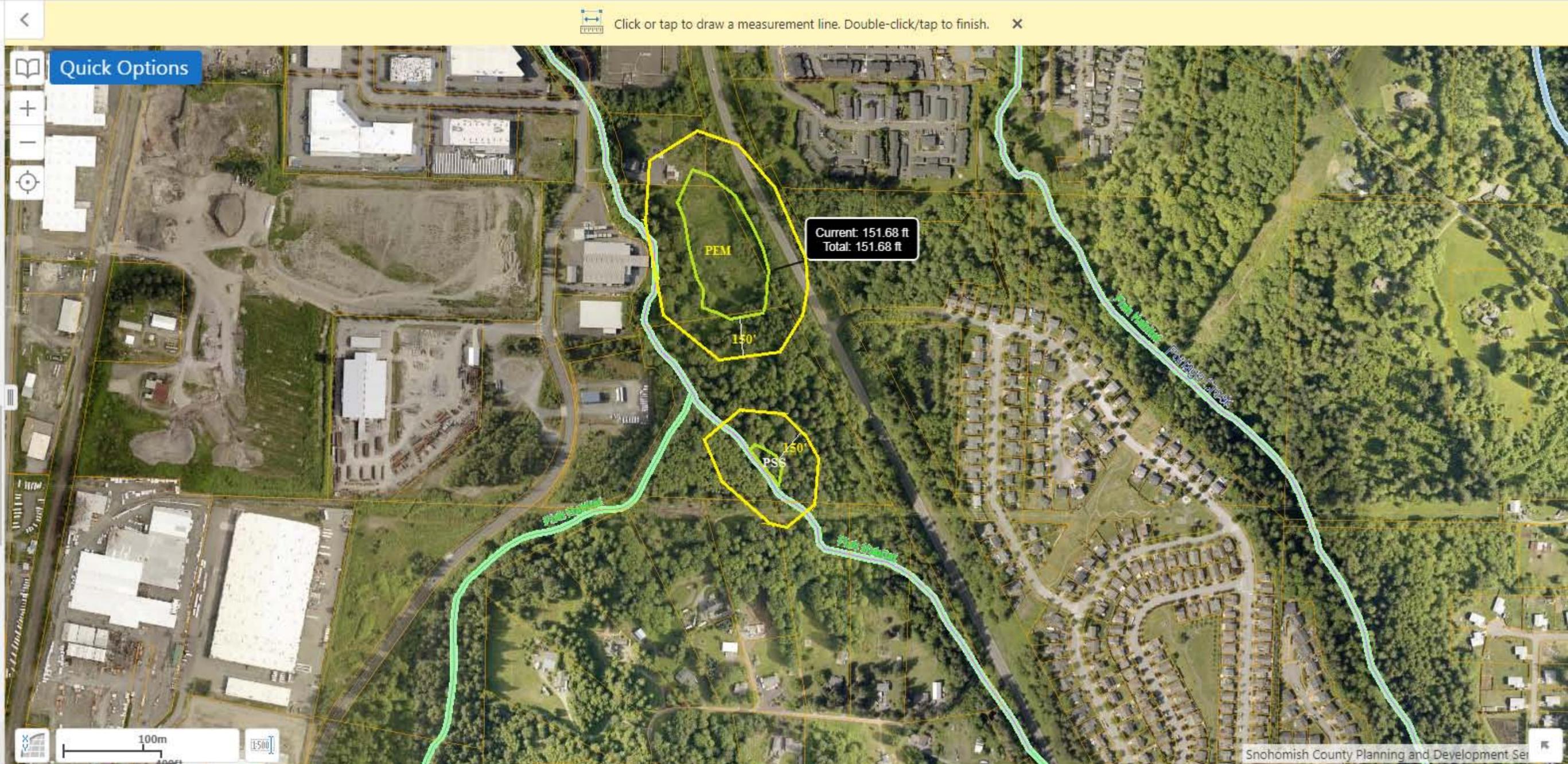
Layers

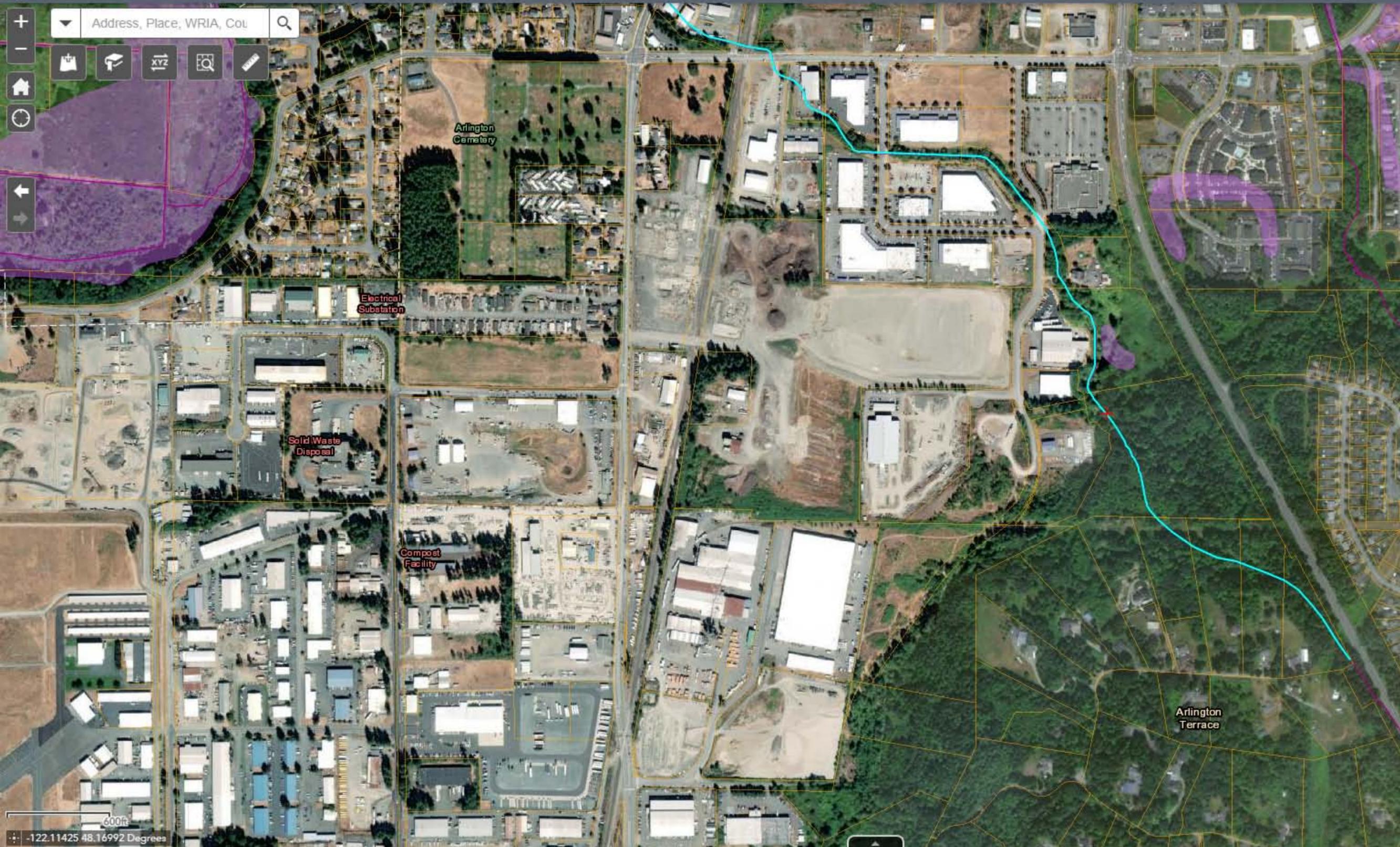
Critical Areas

Filter Layers... Filter

- Historical 2005 FEMA Flood Hazard
- Data
- Landslide Hazard Areas
- Mine Hazard Areas
- Mineral Hazards Areas
- Seismic Hazard Areas
- Streams, Water Types, and Fish Distribution
 - Tsunami Inundation - WA DNR
- Volcanic Hazards
- Wetlands and Hydric Soils
- Water Basins
- Aerial Imagery
 - 2020 Aerial Photos
 - 2019 Aerial Photos
 - 2018 Aerial Photos
 - 2017 Aerial Photos

Map Information Layers





PHS Identify

Generate Report

Occurrence Name	Coho
Scientific Name	<i>Oncorhynchus kisutch</i>
Priority Area	Occurrence
Accuracy	NA
Notes	LLID: 1221415481838, Stock Name: Stillaguamish Coho, Run: Unspecified, Status: Healthy
Source Record	3060
Source Dataset	SASI
Source Name	Not Given
Source Entity	WDFW Fish Program
Federal Status	Candidate
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
More Info	Click for more info.
Geometry Type	Lines

Occurrence Name	Coho
Scientific Name	<i>Oncorhynchus kisutch</i>
Priority Area	Breeding Area
Accuracy	NA
Notes	LLID: 1221415481838, Fish Name: Coho Salmon, Run Time: Unknown or not Applicable, Life History: Anadromous
Source Record	31971
Source Dataset	SWIFD
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N



Water Quality Atlas Map

Legend Filter Zoom Tools

Home Add/Remove Map Data

My Maps Print Share About

- Basic
- Drawing
- Other

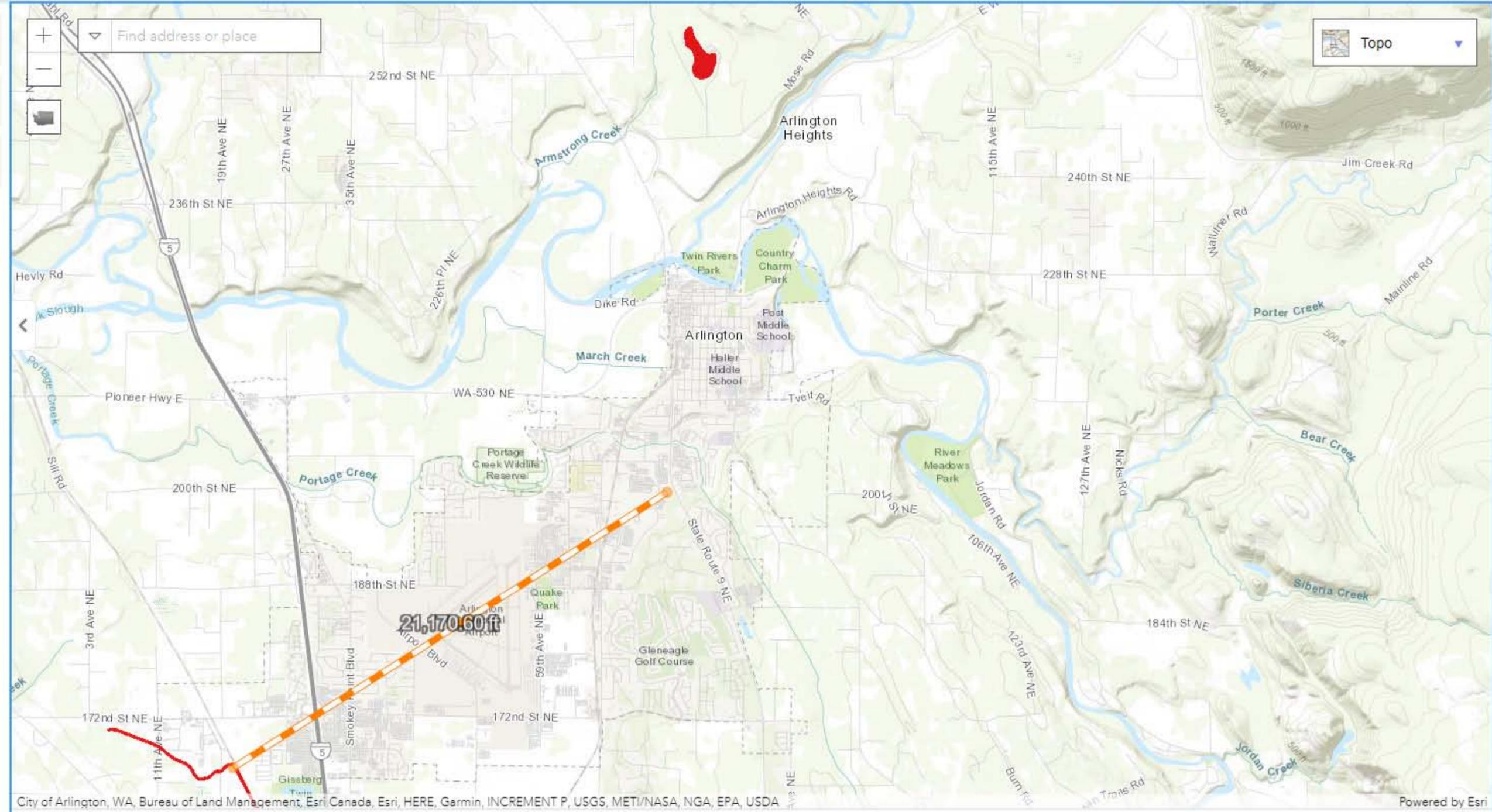


Usage: Click on map to add measure points. Double-click to finish.

Unit: Feet

Distance: 21,170.60 ft

New measurement



Assessed Water/Sediment

Plot Coordinates Distance Area Line Kilometers (ki) Feet² (ft²) Enable Snapping Select Snapping Layers

Point Text Line Freehand Ellipse Circle Polygon Rectangle Styles Edit Export Drawings Erase Clear

Coordinates Measure Draw Tools Edit Drawings

Layers

Home

Filter Layers... Filter

- Address Points
- Administrative Boundaries
- Administrative Districts
- Parcel Labels
- Road Labels for Aerial Imagery
- Critical Area Site Plans
- Topographic Contour Lines
- Public Land Survey System Data
- Parcels
- Aerial Imagery
 - 2020 Aerial Photos
 - 2019 Aerial Photos
 - 2018 Aerial Photos
 - 2017 Aerial Photos
 - 2016 Aerial Photos
 - 2015 Aerial Photos

Map Information Layers

Quick Options

Click or tap to draw a measurement line. Double-click/tap to finish.

Current: 0.99 km
Total: 0.99 km

0.6km

Snohomish County Planning and Development Services