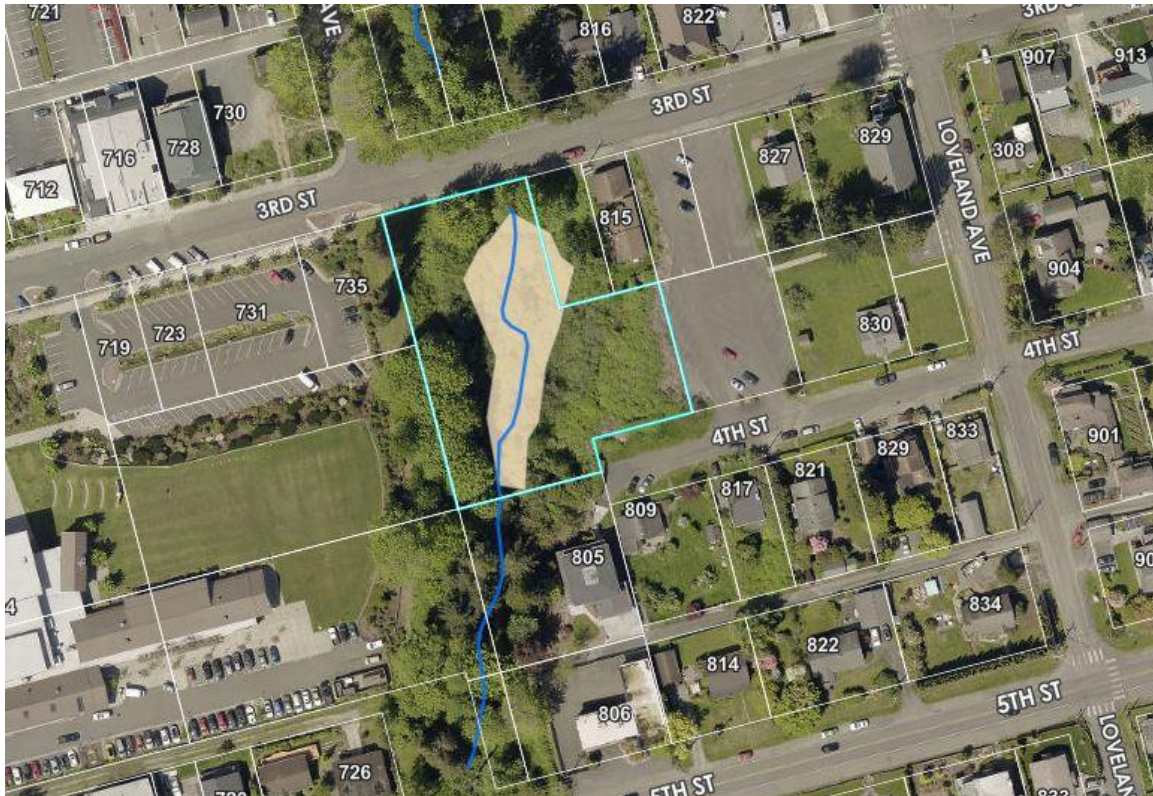


05/02/2022



SoundEarth Strategies, Inc.
2811 Fairview Avenue East, Suite 2000
Seattle, Washington 98102

WETLAND AND STREAM DELINEATION REPORT



Property:

4th Street and Park Avenue
Snohomish County Parcel No. 00596901100100
Mukilteo, Washington

Prepared for:

Washington Timber Company LLC
9910 Marine View Drive
Mukilteo, Washington 98275

Report Date:

March 7, 2022

Wetland and Stream Delineation Report

Property:

4th Street and Park Avenue
Snohomish County Parcel No. 00596901100100
Mukilteo, Washington

Prepared for:

Washington Timber Company LLC
9910 Marine View Drive
Mukilteo, Washington 98275

Project No.: 1552-001

Prepared by:

Mark Heckert
Principal, Beaver Creek Environmental Services

Reviewed by:



Thomas Cammarata, LG
Principal, SoundEarth Strategies, Inc.

March 7, 2022



TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS	II
1.0 INTRODUCTION	1
1.1 PROJECT PURPOSE AND GOALS	1
2.0 LANDSCAPE SETTING.....	1
3.0 METHODS AND METHODOLOGIES.....	1
4.0 EXISTING CONDITIONS	2
4.1 POTENTIAL WETLANDS.....	2
4.1.1 Site and Adjacent Property Overview.....	2
4.1.2 Soils.....	2
4.1.3 Vegetation	3
4.1.4 Hydrology.....	3
4.1.5 Soil Test Pit Locations and Summaries	3
4.2 SENSITIVE PLANTS, FISH, AND WILDLIFE.....	3
4.3 RARE PLANTS AND SENSITIVE ECOSYSTEMS	4
5.0 WETLAND AND STREAM DETERMINATION	4
5.1.1 Wetland Functional Value Categories	4
5.1.2 Score and Category Based on Functions	4
5.2 SITE WETLAND VALUATION.....	4
5.2.1 Wetland A	5
5.2.2 Stream A	5
6.0 PREPARER'S CREDENTIALS	5
7.0 LIMITATIONS	6
8.0 BIBLIOGRAPHY.....	6

FIGURES

1	Vicinity Map
2	Mapped Wetlands & Streams Map
3	NRCS Soils Map
4	Wetland & Stream Delineation Map
5	Wetland Rating Figures

APPENDICES

A	Wetland Delineation Data Forms
B	Wetland Rating Summary Form
C	WA DOE 303 D Map
D	WA DFW Priority Habitats and Species Map

ACRONYMS AND ABBREVIATIONS

cfs	cubic feet per second
DNR	Washington State Department of Natural Resources
Ecology	Washington State Department of Ecology
NRCS	Natural Resources Conservation Service
PHS	Priority Habitats and Species
the Property	4th Street and Park Avenue in Mukilteo, Washington
SoundEarth	SoundEarth Strategies, Inc.
TES	threatened, endangered, or sensitive species
USACE	US Army Corps of Engineers
USFWS	US Fish and Wildlife Service
WDFW	Washington State Department of Fish and Wildlife
WRIA	Water Resource Inventory Area
WSDOT	Washington State Department of Transportation

1.0 INTRODUCTION

SoundEarth Strategies, Inc. (SoundEarth) conducted a wetland review and delineation of the property located at 4th Street and Park Avenue in Mukilteo, Washington (the Property; Figure 1) for Washington Timber Company LLC, in accordance with the Proposal for Wetland Review dated December 13, 2021. A certified wetland biologist performed the wetland review and delineation as required by the City of Mukilteo for the proposed residential development at the Property. Washington Timber Company LLC proposes to develop a 1.04-acre parcel of land into a single-family residence. The Property is associated with Snohomish County Parcel No. 00596901100100, which is located in the City of Mukilteo (legally, THOMAS ADD TO MUKILTEO BLK 011 D-00 - LOTS 1 & 2 & 5-6-7-8 TGW TH PTN VAC ALLEY, 4TH ST & PARK AVE PER CITY OF MUK ORD #1055 REC AFN 200209171215). Currently, the parcel is vacant.

1.1 PROJECT PURPOSE AND GOALS

This Wetland Verification Report has been prepared to meet requirements for a wetland delineation outlined by the City of Mukilteo, pursuant to an application for wetland verification, to support the reasonable use of the Property. It contains a general description of the project area natural resources, including wetlands and streams; wildlife species and habitat conservation areas; and threatened, endangered, or sensitive (TES) species information. This report documents the Property owner's efforts to (1) avoid and/or minimize impacts to critical wetlands and fish and wildlife habitat areas during the project design proposal process and (2) document wetland/non-wetland conditions for potential review by regulatory authorities. This report could support City of Mukilteo permits, including the Conditional Use Permit, Clearing and Grading Permit, Site Development Permit, and Commercial Building Permit.

2.0 LANDSCAPE SETTING

The Property is located in the City of Mukilteo within Water Resource Inventory Area (WRIA) No. 7 Snohomish Watershed. It is situated in a drainage corridor of Brewery Creek.

Existing drainage and topographic data available on the Snohomish County Planning & Development Services' PDS Map Portal and Washington State Department of Natural Resources (DNR) Forest Practices Application Review System databases indicate that a Type F stream transects the Property.

Precipitation is typically measured at between 30 and 40 inches per year, and groundwater in area soil is generally encountered at a depth of 22 inches or deeper (Natural Resources Conservation Service [NRCS] 2018).

3.0 METHODS AND METHODOLOGIES

The wetland methods used for wetland delineation for this project are summarized in this section and comply with federal, state, and local guidance for this level of project. Specific guidance used consists of the US Army Corps of Engineers (USACE) Interim Regional Supplement to the *Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (USACE Manual; USACE 1987). Appendix A consists of wetland delineation data forms. Appendix B consists of the Wetland Rating Summary form required by the Washington State Department of Ecology (Ecology). Appendix C consists of the WA DOE 303 D Map.

Wetlands were determined by using the routine approach described in the *Washington State Wetlands Identification and Delineation Manual* (Ecology 1997). The boundaries of wetlands occurring within the

Property were delineated by sequentially numbered flags and subsequently mapped. Wetlands and other natural habitats near or within the Property were then assessed using the observable vegetation, hydrology, and soils in conjunction with data from the National Wetland Inventory maps of the US Fish and Wildlife Service (USFWS; USFWS 2019), Snohomish County Critical Areas data, and aerial photos via Google Earth.

Equipment used during the wetland delineation included a Munsell Soil Color Chart, a 16-inch Razorback shovel, red and white field flags, and a Garmin 64st GPS. Field notes were recorded in a Rite in the Rain field book.

4.0 EXISTING CONDITIONS

Mark Heckert, a certified wetland biologist representing SoundEarth, visited the Property on January 8, 2022. The purpose of the visit was to assess the Property for potential wetland conditions and to perform a wetland delineation.

4.1 POTENTIAL WETLANDS

A background review was performed to determine potential wetland presence using existing mapping and GIS, local wetland inventories, and aerial photography. The USFWS National Wetland Inventory did not indicate that a potential wetland or stream was within the Property boundary. However, Snohomish County Critical Areas data located a wetland and stream runs through the central portion of the Property and DNR located a Type F stream transects the Property. (Figure 2).

4.1.1 Site and Adjacent Property Overview

The Property is currently undeveloped. The Property consisted of a steeply sloped ravine beginning at 3rd Street and continuing south approximately 1 block. A stream transected the central portion of the Property from east to west, flowing north. At the northern boundary the stream entered a 48-inch culvert that was approximately 150 feet in length. The Property is bounded by 3rd Street to the north, by a single-family residence and a church to the east, by single-family residences to the south, and by a community center, parking lot, and vegetated/landscaped areas to the west.

4.1.2 Soils

The northern portion of the Property is composed of Kitsap silt loam, 0 to 8 percent slopes, and Everett very gravelly sandy loam, 0 to 8 percent slopes. Neither Kitsap silt loam nor Everett very gravelly sandy loam is designated as hydric.

The soils in the central portion of the site exhibited a dark (10YR2/1) surface and a depleted (10YR4/1) B horizon, which are silt loam characteristics, and were saturated to the surface at assessment. These soils are typical of wetland soils (Appendix D). The west-facing slope displayed soils indicative of fill.

The soils found or sampled on the periphery of the Property generally exhibited the documented gravelly sandy soil conditions. There were no redoximorphic features found in the soil that would suggest wetland conditions. These soils are typical of upland soils.

The soil survey map is depicted on Figure 3.

4.1.3 Vegetation

The central portion of the Property was forested and dominated by Pacific willow (*Salix lasiandra*) and red alder (*Alnus rubra*) with an understory/shrub-sapling layer of Salmonberry (*Rubus spectabilis*) and Himalayan blackberry (*Rubus armeniacus*), with Hazelnut (*Corylus cornuta*) on the periphery. An area of Japanese knotweed (*Fallopia japonica*) was present in the northwestern corner of the Property.

4.1.4 Hydrology

Drainage transected the central portion of the Property from east to west, flowing north. This drainage was flowing at a rate of 2 to 3 cubic feet per second (cfs) at time of assessment. The drainage evidenced a marked bed and banks with sorted gravels marking the passage of water. Soil saturation was present to the surface in the bottom area, with numerous seeps along the sidewalls. One seep on the west-facing sidewall evidenced discoloration indicative of septic outfall. A culvert outlet was located on the east-facing center of the slope, which was flowing at a rate of less than 1 cfs at time of assessment. Presumably, this is an outlet from the parking structure to the west.

Soil sampling plots in the bottom area, discussed further below, evidenced ponding to the surface and full saturation. Redoximorphic features and reducing conditions were also observed in the bottom area. The prevalent soil saturation and inundation indicates the presence of wetland hydrology.

4.1.5 Soil Test Pit Locations and Summaries

The locations for soil test pits (Figure 4) were strategically determined based on different vegetated conditions on the Property and distributed at reasonable distances between each other to provide a “randomized” pattern of placement. The appropriate data sheet(s) is included as Appendix A.

4.2 SENSITIVE PLANTS, FISH, AND WILDLIFE

The Washington Department of Fish and Wildlife’s (WDFW’s) Priority Habitats and Species database (WDFW 2019) was consulted for this project, and the nearest priority habitats are Puget Sound, 1,200 feet north of the Property, and Japanese Gulch natural area, 1,800 feet east of the Property (Figure 5). Japanese Gulch was identified as: “UNDEVELOPED RAVINE WITH SMALL CREEK. AREA STILL PROVIDES REFUGIA FOR DEER, COYOTE, RAPTORS AND OTHER MAMMALS AND BIRDS IMPACTED BY DEVELOPMENT OF SURROUNDING AREA. SITE IS BISECTED BY RAIL LINE SERVING BOEING CO.”

The Property is outside of known sensitive or critical habitat areas and there are no threatened and/or endangered or sensitive species known to occur on or near the Property. However, Cutthroat trout (*Oncorhynchus clarkii*) may occur in the Brewery Creek drainage.

The City of Mukilteo’s focus for redevelopment is on relative habitat value, as opposed to objective habitat value. The Property vegetated area examined herein does not have high value in comparison to a park. However, compared to the residential developments surrounding the Property, the vegetated area is considered higher value in terms of function and is used preferentially by terrestrial and avian species.

4.3 RARE PLANTS AND SENSITIVE ECOSYSTEMS

A cursory review of rare plant databases (e.g., University of Washington, DNR, USACE Regional Plant List) and other sources indicated that there are no likely TES species or sensitive or endangered ecosystems on or near the Property.

5.0 WETLAND AND STREAM DETERMINATION

Based on all the information and data collected during background research, field study, and post-field analysis, one feature meeting the criteria for definition as a “wetland” and one feature meeting the criteria for definition as a “stream” were identified on the site.

The functions that a wetland performs are characterized by answering a series of questions that note the presence, or absence, of certain indicators. Indicators are easily observed characteristics that are correlated with quantitative or qualitative observations of a function and rated using the Washington State Wetland Rating System (Hruby 2004). The questions and scoring related to wetland functions are summarized below.

5.1.1 Wetland Functional Value Categories

- **Riverine and freshwater tidal fringe wetlands**
 - Potential to improve water quality
 - Potential to reduce flooding and stream erosion
 - Opportunity to reduce flooding and stream erosion
 - Opportunity to protect resources from shoreline erosion
- **Slope wetlands**
 - Potential to improve water quality
 - Opportunity to improve water quality
 - Potential to reduce flooding and stream erosion
 - Opportunity to reduce flooding and erosion
- **Functions related to habitat for all classes of wetlands**
 - Potential to provide habitat
 - Opportunity to provide habitat

5.1.2 Score and Category Based on Functions

Wetlands need to score a total of 23 points to be considered Category I based on their functions. Total scores between 20 and 22 are Category II; scores between 16 and 19 are Category III, and scores less than 19 are Category IV.

5.2 SITE WETLAND VALUATION

The wetland area identified within the overall project area (Wetland A) was evaluated following the functional value assessment process noted above.

As identified in this assessment, **Wetland A** would be considered to have the overall functional rating of Category III.

Functional Value Categories	Score
Water Quality Functions	7 points
Hydrologic Functions	7 points
Habitat Functions	5 points
Total score for functions	19 points

Wetland determination was based on sample plots that contained hydrophytic vegetation, hydric soils, and wetland hydrology in accordance with the USACE Manual.

Wetland Identifier	Size (square feet)	City of Mukilteo Wetland Category	Washington State Wetland Rating System Score	Buffer Width (Five Habitat Points)	Adjustment By Function and Land Use	Buffer Total
A	22,012*	III	19	105 ft.	0 ft.	105 ft.

* Wetland size on site; eastern and southern boundary of wetland continues off site.

5.2.1 Wetland A

This riverine and slope wetland is located throughout the central portion of the Property and is associated with the stream transecting the Property (Stream A). Hydrology for this wetland was provided primarily by overbank flooding from Stream A with contribution from the sidewall seeps and seasonal precipitation. Wetland A is flagged at the Property by red and white flagging numbered A1 through A12.

Portions of the buffer for Wetland A have been cleared, developed, and landscaped as part of previous development.

Because this wetland scored 19 points according to the Washington State Wetland Rating System, this wetland appears to meet the criteria for designation as a City of Mukilteo Category III wetland. General buffer for a City of Mukilteo Category III wetland is 105 feet. The wetland buffer of this wetland encompasses the entire site and beyond.

5.2.2 Stream A

Stream A is identified as a stream that originates south of the project site and flows on site from the south. No evidence of potential for fish habitat was found for the portion of the stream on or near the Property. Stream A is designated as a Type 4 stream by Table 1 of Section 17B.52C.080 of the Mukilteo Municipal Code and is assigned a 50-foot buffer. Within the project site, the stream buffer is subsumed by the wetland buffer.

6.0 PREPARER'S CREDENTIALS

Mark Heckert has an Associate of Applied Science degree in fish and wildlife technology and a Bachelor of Science in wildlife science. Mark has 21 years of experience in wetland delineation, impact assessment, and mitigation planning throughout the Puget Sound region. Mark has completed the USACE wetland training, Washington State Wetland Rating System training, and numerous individual courses in wetland

function and management. He is a Preferred Consultant in King and Pierce Counties and has authored more than 500 accepted critical areas reports in 14 Puget Sound jurisdictions.

7.0 LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, expressed or implied, is made. These services were performed consistent with SoundEarth's agreement with the client. This report is solely for the use and information of the client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report are derived, in part, from data gathered by others, and from conditions evaluated when services were performed, and are intended only for the client, purposes, locations, time frames, and project parameters indicated. SoundEarth does not warrant and is not responsible for the accuracy or validity of work performed by others, nor from the impacts of changes in environmental standards, practices, or regulations subsequent to performance of services. SoundEarth does not warrant the use of segregated portions of this report.

8.0 BIBLIOGRAPHY

Brinson, M. M. (1993). *A Hydrogeomorphic Classification for Wetlands*. Technical Report WRP-DE-4.

Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe (Cowardin et al). 1979. *Classification of Wetlands and Deepwater Habitats of the United States*.

Hruby, Thomas. 2004. *Washington State Wetland Rating System for Western Washington*. Washington State Department of Ecology. Publication #14-06-029. Revised 2014.
<<https://fortress.wa.gov/ecy/publications/documents/1406029.pdf>>.

Natural Resources Conservation Service (NRCS). 2018. Web Soil Survey. Survey Area Data: Version 14. September 10. <<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>>.

Reed, P.B. Jr. 1988. National List of Plant Species that Occur in Wetlands: Washington. Biological Report NERC-88/18.47 for National Wetlands Inventory.

_____. 1988. Northwest Supplement (Region 9) Species with a Change in Indicator Status or Added to the Northwest 1988 List, Wetland Plants of the State of Washington. US Fish and Wildlife Service WELUT - 88 (26.9).

Snohomish County Planning & Development Services. No Date. PDS Map Portal.
<<https://gismaps.snoco.org/Html5Viewer/Index.html?viewer=pdsmapportal>>.

US Army Corps of Engineers (USACE) Environmental Laboratory. 1987. *Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region*. Wetlands Research Program Technical Report Y-87-1. <<http://www.cpe.rutgers.edu/Wetlands/1987-Army-Corps-Wetlands-Delineation-Manual.pdf>>.

_____. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region*. Wetlands Regulatory Assistance Program. Publication ERDC/EL TR-10-3. May.

<https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1046494.pdf>.

US Fish and Wildlife Service (USFWS). 2019. National Wetlands Inventory: Wetlands Mapper. <<https://www.fws.gov/wetlands/Data/Mapper.html>>.

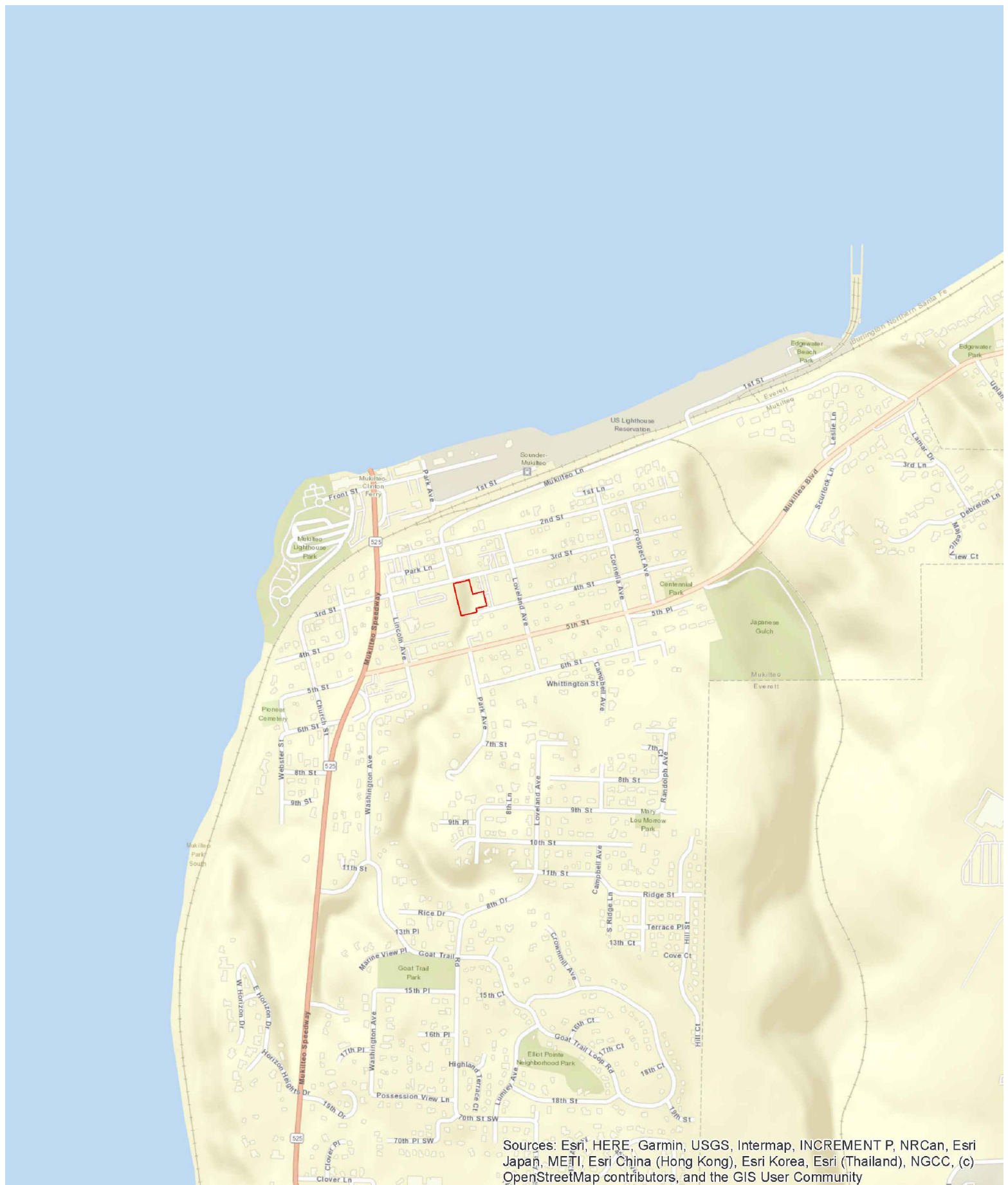
Washington State Department of Ecology (Ecology). 1997. *Washington State Wetland Identification and Delineation Manual*. Publication No. 96-94.

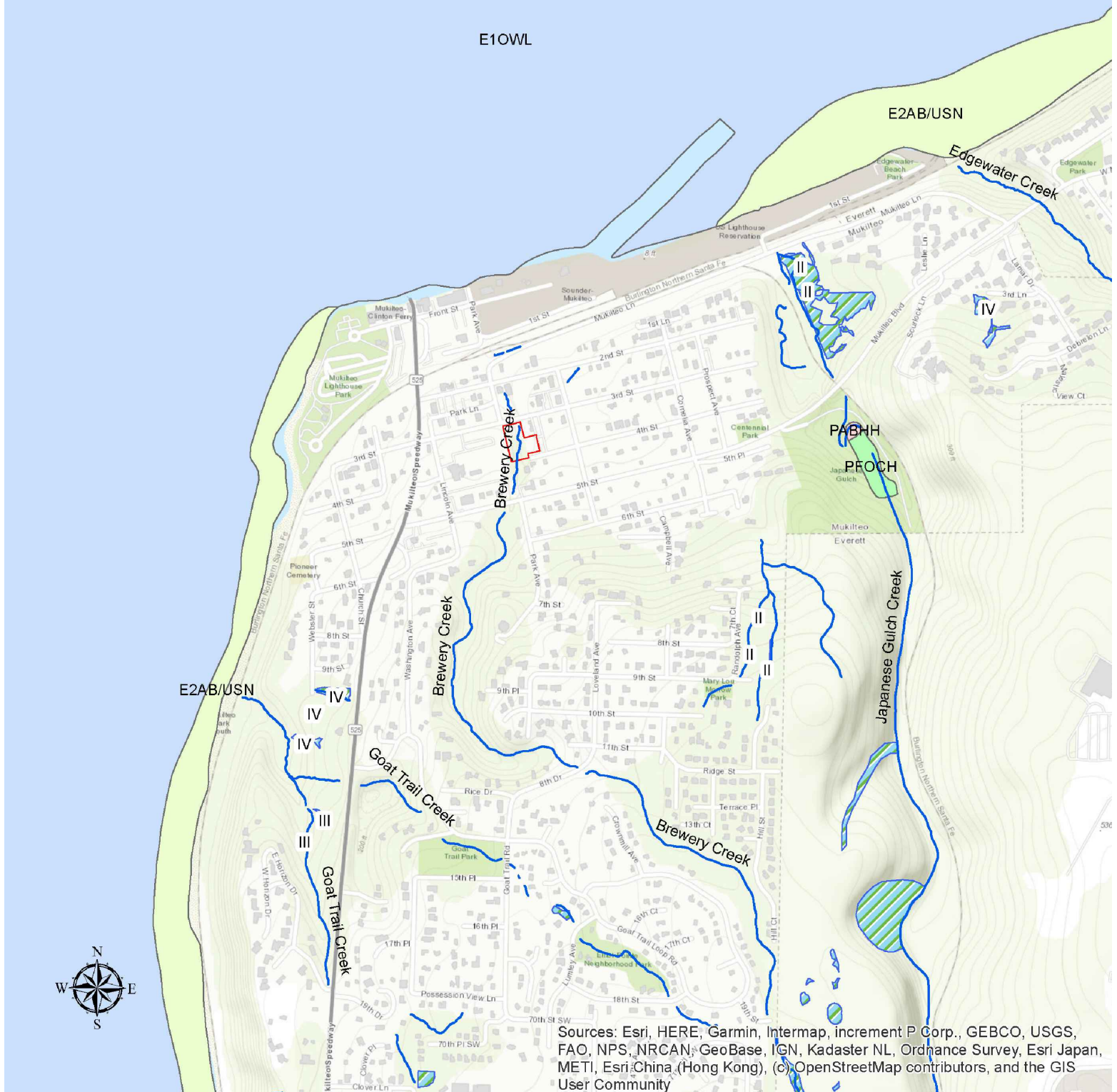
Washington Department of Fish and Wildlife (WDFW). 2019. PHS on the Web. <<http://apps.wdfw.wa.gov/phsontheweb/>>.

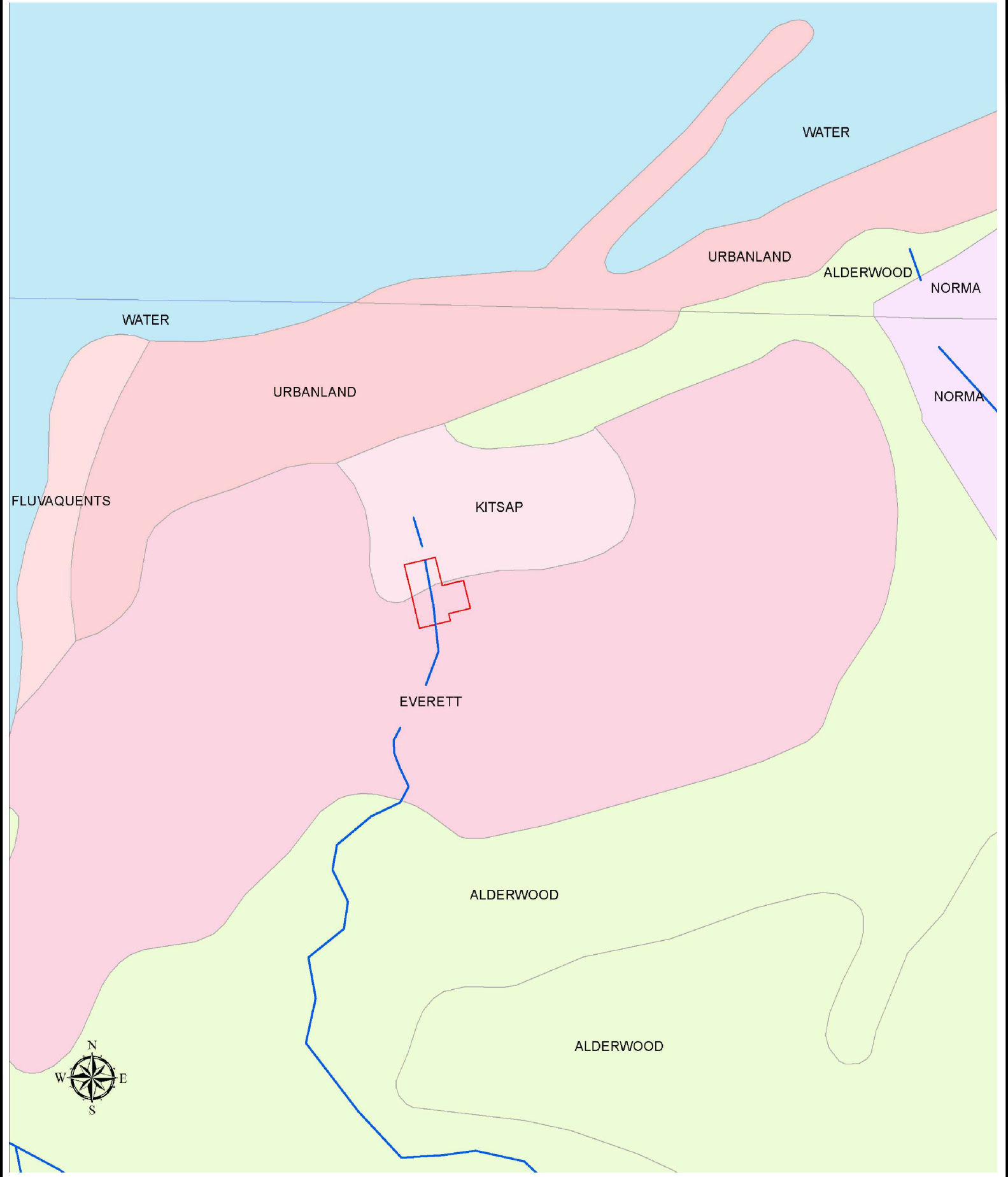
Washington State Department of Natural Resources. 2007. Forest Practices Application Review System. <<https://fortress.wa.gov/dnr/protection/fparssearch/>>.

Washington State Department of Transportation (WSDOT). 2007. Wetland Report Template. Washington State Department of Transportation, Environmental Affairs Office. Olympia, Washington. <<https://www.wsdot.wa.gov/sites/default/files/2017/07/24/Env-Wet-AssessRptTemplate.doc>>.

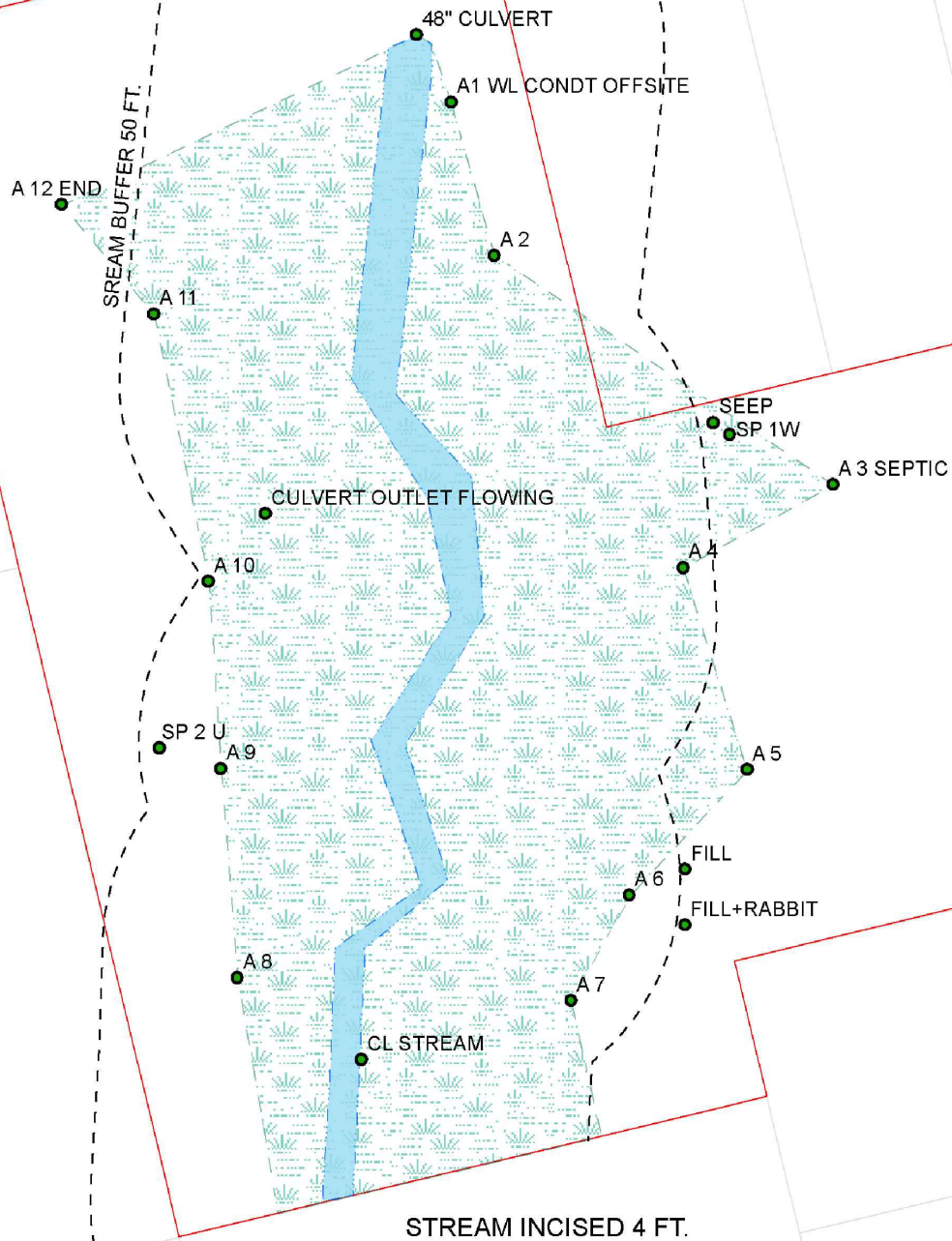
FIGURES







CAT. 3 WETLAND - 5PTS.
105 FT. BUFFER



STREAM Type 4 (L) 50 FT. BUFFER

Figure 5
Western Washington Rating Figures

4th Street and Park Avenue
Snohomish County Parcel No. 00596901100100
Mukilteo, Washington
Project No.: 1552-001

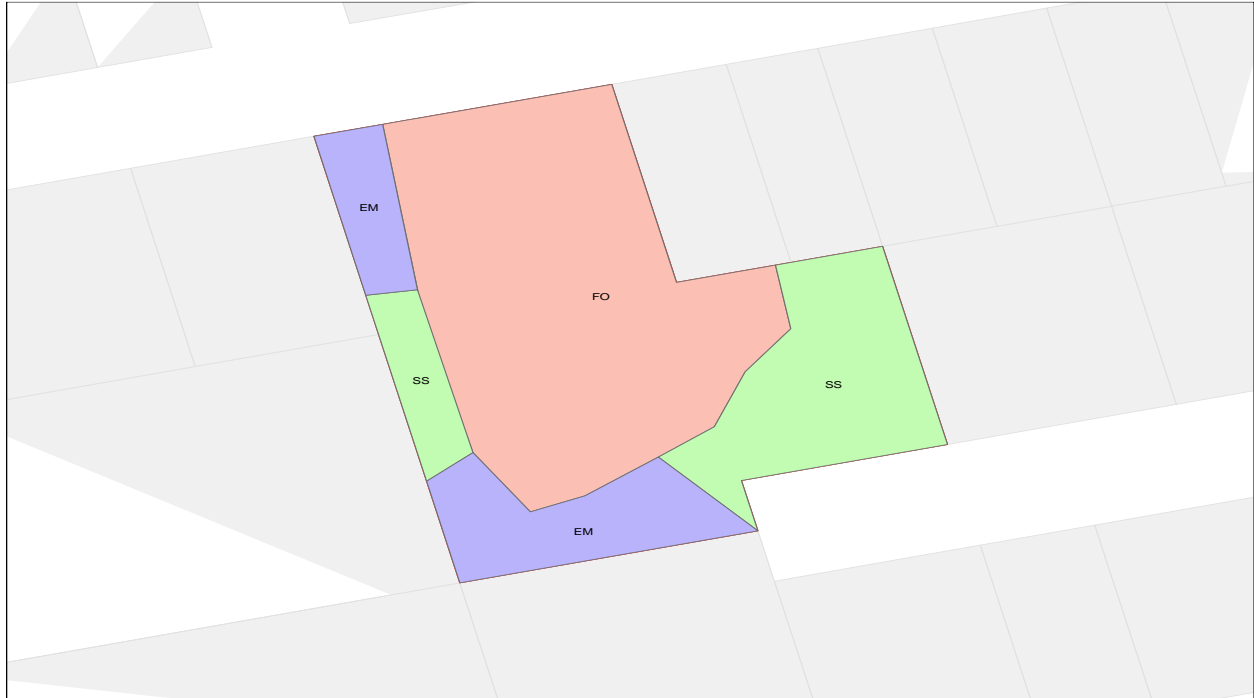


Figure 5a. Cowardin Plant Class



Figure 5b. Hydroperiod

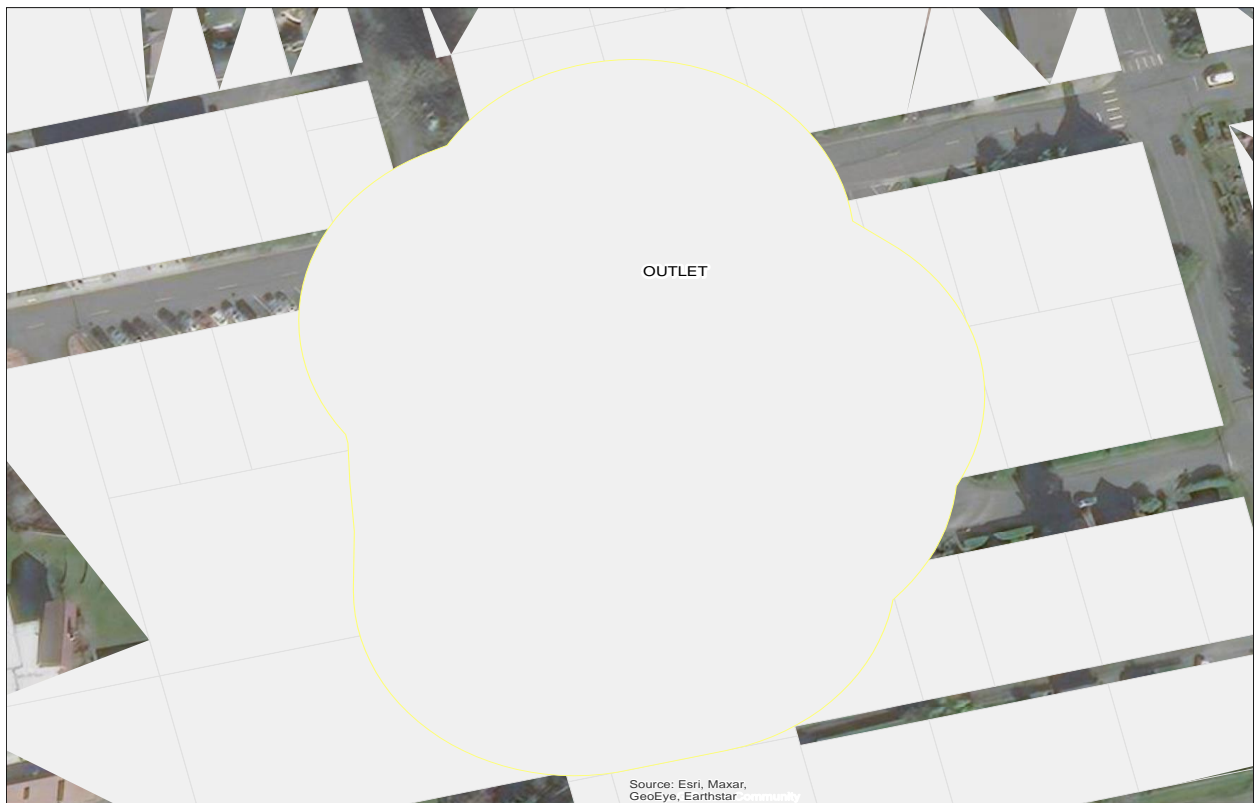


Figure 5c. 150-foot Buffer and Outlet

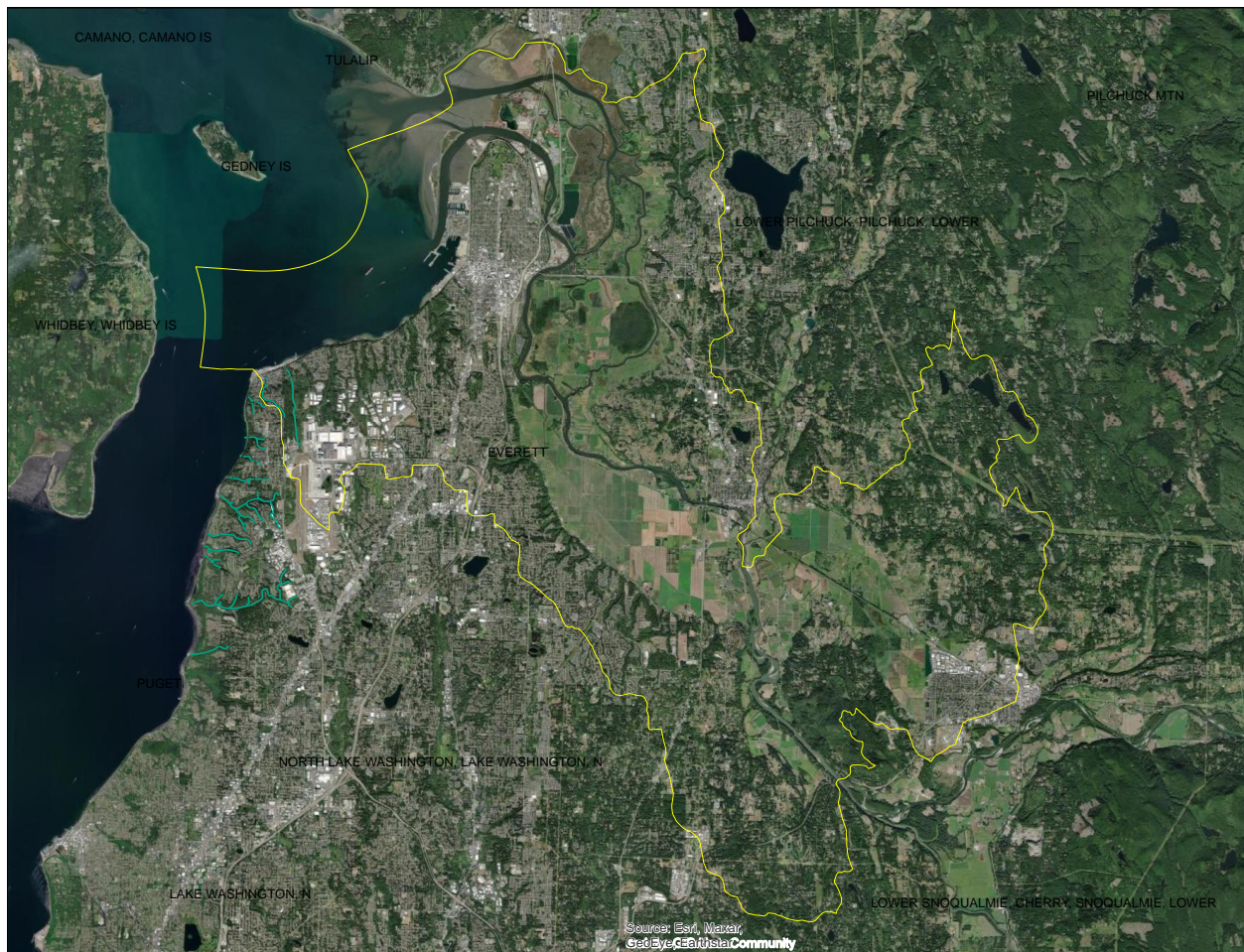


Figure 5d. Watershed

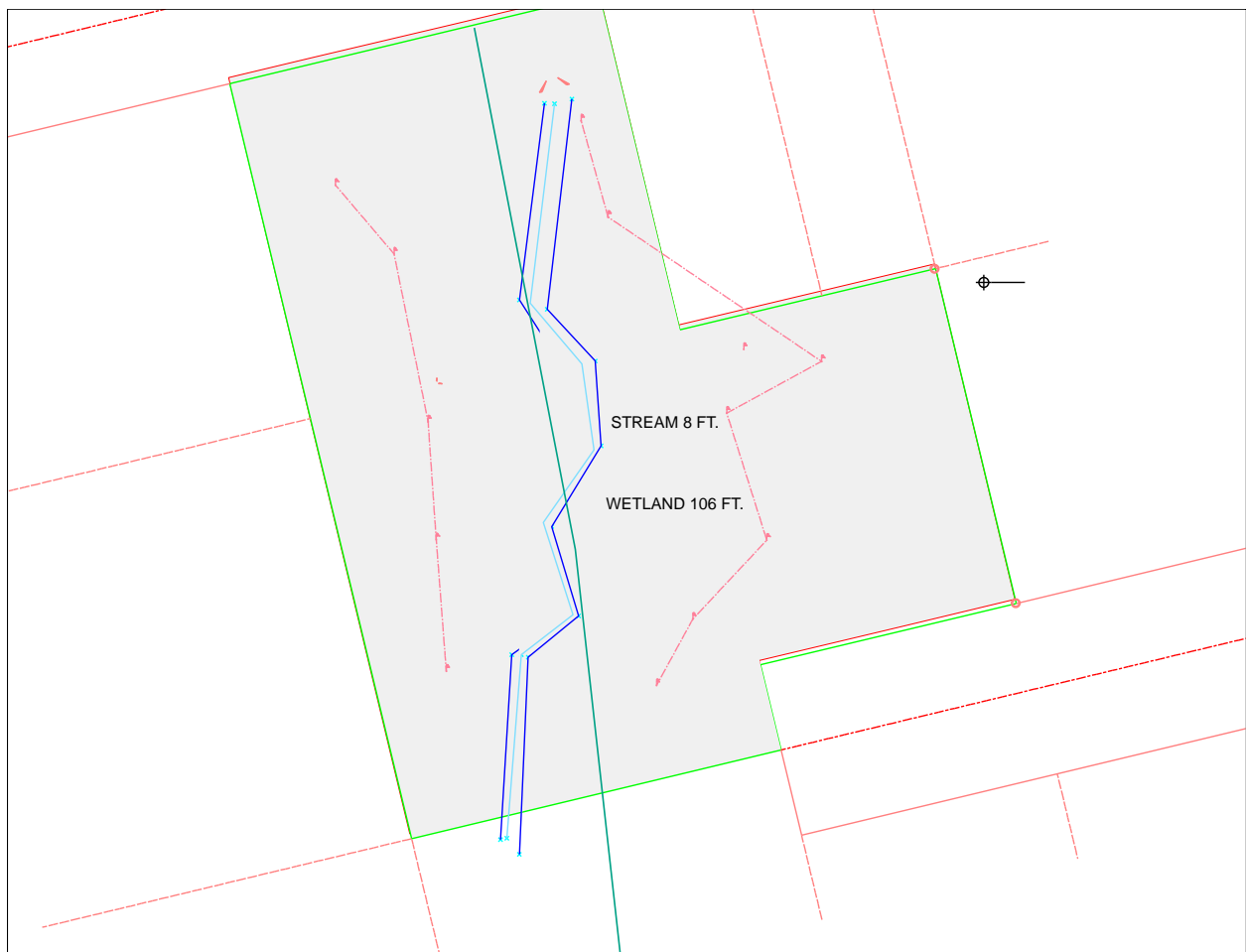


Figure 1e. Stream width vs. Wetland Width



Figure 5f. 1-kilometer Poly with Accessible and Undisturbed

Search Results - 139 Matched Listings								
ListingID	AU ID	Medium	Parameter	Category	Waterbody Name	WRIA	WQ Improvement Project	WQ Atlas Map Link
View 10275	47122I4H8	Water	Dissolved Oxygen	2	PUGET SOUND (NORTH-CENTRAL)	15 - Kitsap		10275
View 10277	47122I4H8	Water	Temperature	1	PUGET SOUND (NORTH-CENTRAL)	15 - Kitsap		10277
View 15736	47122I4H8	Water	Bacteria	1	PUGET SOUND (NORTH-CENTRAL)	15 - Kitsap		15736
View 21700	47122H5J0	Habitat	Fish And Shellfish Habitat	4C	PUGET SOUND (NORTH-CENTRAL)	15 - Kitsap		21700
View 36159	47122I3A9	Habitat	Fish And Shellfish Habitat	4C	PUGET SOUND (NORTH-CENTRAL)	8 - Cedar-Sammamish		36159
View 36190	47122H4J9	Habitat	Fish And Shellfish Habitat	4C	PUGET SOUND (NORTH-CENTRAL)	15 - Kitsap		36190
View 38769	47122J5B3	Water	Dissolved Oxygen	2	PUGET SOUND (NORTH-CENTRAL)	15 - Kitsap		38769
View 38772	47122J5B3	Water	Temperature	1	PUGET SOUND (NORTH-CENTRAL)	15 - Kitsap		38772
View 38773	47122I5G1	Water	Dissolved Oxygen	2	PUGET SOUND (NORTH-CENTRAL)	15 - Kitsap		38773
View 38819	47122I5G1	Water	Temperature	1	PUGET SOUND (NORTH-CENTRAL)	15 - Kitsap		38819
View 38820	47122H4J9	Water	Dissolved Oxygen	2	PUGET SOUND (NORTH-CENTRAL)	15 - Kitsap		38820
View 38821	47122H4J9	Water	Bacteria	2	PUGET SOUND (NORTH-CENTRAL)	15 - Kitsap		38821
View 38823	47122H4J9	Water	Temperature	1	PUGET SOUND (NORTH-CENTRAL)	15 - Kitsap		38823
View 38824	47122H4J7	Water	Dissolved Oxygen	2	PUGET SOUND (NORTH-CENTRAL)	15 - Kitsap		38824
View 38825	47122H4J7	Water	Bacteria	1	PUGET SOUND (NORTH-CENTRAL)	15 - Kitsap		38825
View 38827	47122H4J7	Water	Temperature	1	PUGET SOUND (NORTH-CENTRAL)	15 - Kitsap		38827
View 42476	47122I3A9	Water	Ammonia-N	2	PUGET SOUND (NORTH-CENTRAL)	8 - Cedar-Sammamish		42476
View 42486	47122H4I0	Water	Dissolved Oxygen	2	PUGET SOUND (NORTH-CENTRAL)	8 - Cedar-Sammamish		42486
View 42487	47122I3B8	Water	Bacteria	5	PUGET SOUND (NORTH-CENTRAL)	8 - Cedar-Sammamish		42487
View 42488	47122I3A9	Water	Bacteria	5	PUGET SOUND (NORTH-CENTRAL)	8 - Cedar-Sammamish		42488
View 45273	47122H5J0	Water	Bacteria	2	PUGET SOUND (NORTH-CENTRAL)	15 - Kitsap		45273
View 45594	47122H4H1	Water	Bacteria	1	PUGET SOUND (NORTH-CENTRAL)	8 - Cedar-Sammamish		45594
View 45634	47122J3A8	Water	Bacteria	1	PUGET SOUND (NORTH-CENTRAL)	6 - Island		45634
View 45635	47122J4D4	Water	Bacteria	1	PUGET SOUND (NORTH-CENTRAL)	6 - Island		45635
View 45658	47122J5H2	Water	Bacteria	1	PUGET SOUND (NORTH-CENTRAL)	6 - Island		45658
123456								

Figure 5g. TMDLs for Watershed

APPENDIX A
WETLAND DELINEATION DATA FORMS

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

Project/Site: Sound Mukilteo City/County: MUKILTEO/Snohomish Sampling Date: 1/8/22
 Applicant/Owner: _____ State: WA Sampling Point: SP 1W
 Investigator(s): M Heckert Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 50
 Subregion (LRR): A - Northwest Forests and Coasts Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: PFOC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation N, Soil N, or Hydrology N 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: <u>Drainage basin</u>	

VEGETATION – Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30 ft radius</u>)					
1. <u>Salix lasiandra</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80</u> (A/B)	
2. <u>Alnus rubra</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
		<u>80</u> = Total Cover		Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species <u>30</u> x 2 = <u>60</u> FAC species <u>90</u> x 3 = <u>270</u> FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = <u>2.8</u>	
Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u>)					
1. <u>Rubus armeniacus</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>		
2. <u>Rubus spectabilis</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
		<u>40</u> = Total Cover			
Herb Stratum (Plot size: <u>5 ft radius</u>)					
1. <u>Equisetum arvense</u>	<u>20</u>	<u>N</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
		<u>0</u> = Total Cover			
Woody Vine Stratum (Plot size: <u>30' radius</u>)					
1. <u>Hedera helix</u>	<u>30</u>	<u>Y</u>	<u>ni</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
2. _____	_____	_____	_____		
		<u>30</u> = Total Cover			
% Bare Ground in Herb Stratum <u>100</u> Remarks: _____					

SOIL

Sampling Point: SP 1W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-10	10YR 2/1	100					silt loam	
10-18	10YR 4/1	100					clay loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
---	--

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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 checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D7)	
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: toe of sidewall MEETS wetland criteria			

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

Project/Site: Sound Mukilteo City/County: MUKILTEO/Snohomish Sampling Date: 1/8/22
 Applicant/Owner: _____ State: WA Sampling Point: SP 2U
 Investigator(s): M Heckert Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 50
 Subregion (LRR): A - Northwest Forests and Coasts Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: KITSAP sandy loa. NWI classification: PFOC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: Drainage basin east facing sidewall 1/2 way upslope	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1. _____	_____	_____	_____	
2. <u>Alnus rubra</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species <u>50</u> x 3 = <u>150</u> FACU species <u>90</u> x 4 = <u>360</u> UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = <u>3.6</u>
Sapling/Shrub Stratum (Plot size: 15 ft radius) 1. <u>Rubus armeniacus</u> <u>20</u> <u>Y</u> <u>FAC</u> 2. <u>Corylus cornuta</u> <u>40</u> <u>Y</u> <u>FACU</u> 3. _____ 4. _____ 5. _____ <u>60</u> = Total Cover				
Herb Stratum (Plot size: 5 ft radius) 1. <u>Dactylis glomerata</u> <u>50</u> <u>Y</u> <u>FACU</u> 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ <u>50</u> = Total Cover				
Woody Vine Stratum (Plot size: 30' radius) 1. _____ 2. _____ _____ = Total Cover % Bare Ground in Herb Stratum <u>0</u>				
Remarks: _____				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

SOIL

Sampling Point: SP 2U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-8	10YR 3/3	100					sandy loam	
8-18	10YR 4/4	100					gravel loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
--	--

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

HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (2 or more required)</u>	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D7)	
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: sidewall of drainage MEETS wetland criteria			

APPENDIX B
WESTERN WASHINGTON WETLAND RATING FORM

RATING SUMMARY – Western Washington

Name of wetland (or ID #): WL A Date of site visit: 1/18/2022Rated by M HECKERT Trained by Ecology? ☒ Yes ☐ No Date of training 15-MayHGM Class used for rating Riverine & Fresh Water Tidal Wetland has multiple HGM classes? ☒ Yes ☐ No**NOTE: Form is not complete with out the figures requested (figures can be combined).**Source of base aerial photo/map Snohomish county, ESRI**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
 X **Category III** - Total score = 16 - 19
 Category IV - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>List appropriate rating (H, M, L)</i>				
Site Potential	M	H	M	
Landscape Potential	H	M	L	
Value	M	M	M	
Score Based on Ratings	7	7	5	19

**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	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	R1
Hydroperiods	H 1.2	R2
Ponded depressions	R 1.1	none
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	R 2.4	R3
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	R4
Width of unit vs. width of stream (<i>can be added to another figure</i>)	R 4.1	R5
Map of the contributing basin	R 2.2, R 2.3, R 5.2	R6
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	R7
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	ATTACHED
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	R8

Lake Fringe Wetlands

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

Slope Wetlands

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

HGM Classification of Wetland in Western Washington

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

☐ 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.*

NOTES and FIELD OBSERVATIONS:

City cat. 3 + 5 Habitat Pts. = 105 ft. FINAL BUFFER

Wetland name or number SOUND WL A

RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS**Water Quality Functions** - Indicators that the site functions to improve water quality

R 1.0. Does the site have the potential to improve water quality?

R 1.1. Area of surface depressions within the Riverine wetland that can trap sediments during a flooding event:

Depressions cover $> \frac{3}{4}$ area of wetland	points = 8	2
Depressions cover $> \frac{1}{2}$ area of wetland	points = 4	
Depressions present but cover $< \frac{1}{2}$ area of wetland	points = 2	
No depressions present	points = 0	

R 1.2. Structure of plants in the wetland (areas with $>90\%$ cover at person height, **not** Cowardin classes)

Trees or shrubs $> \frac{2}{3}$ area of the wetland	points = 8	8
<input type="checkbox"/> Trees or shrubs $> \frac{1}{3}$ area of the wetland	points = 6	
<input type="checkbox"/> Herbaceous plants (> 6 in high) $> \frac{2}{3}$ area of the wetland	points = 6	
Herbaceous plants (> 6 in high) $> \frac{1}{3}$ area of the wetland	points = 3	
Trees, shrubs, and ungrazed herbaceous $< \frac{1}{3}$ area of the wetland	points = 0	

Total for R 1

Add the points in the boxes above

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

R 2.0. Does the landscape have the potential to support the water quality function of the site?

R 2.1. Is the wetland within an incorporated city or within its UGA? Yes = 2 No = 0 2

R 2.2. Does the contributing basin to the wetland include a UGA or incorporated area? Yes = 1 No = 0 1

R 2.3. Does at least 10% of the contributing basin contain tilled fields, pastures, or forests that have been clearcut within the last 5 years? Yes = 1 No = 0 0

R 2.4. Is $> 10\%$ of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0 1R 2.5. Are there other sources of pollutants coming into the wetland that are not listed in questions R 2.1 - R 2.4?
Other Sources Yes = 1 No = 0 0

Total for R 2

Add the points in the boxes above

4**Rating of Landscape Potential** If score is: ☒ 3 - 6 = H ☐ 1 or 2 = M ☐ 0 = L Record the rating on the first page

R 3.0. Is the water quality improvement provided by the site valuable to society?

R 3.1. Is the wetland along a stream or river that is on the 303(d) list or on a tributary that drains to one within 1 mi? Yes = 1 No = 0 1

R 3.2. Is the wetland along a stream or river that has TMDL limits for nutrients, toxics, or pathogens? Yes = 1 No = 0 0

R 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 drainage in which the unit is found) Yes = 2 No = 0 0

Total for R 3

Add the points in the boxes above

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

RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS**Hydrologic Functions** - Indicators that site functions to reduce flooding and stream erosion

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

R 4.1. Characteristics of the overbank storage the wetland provides:

Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of wetland)/(average width of stream between banks).

If the ratio is more than 20	points = 9	6
If the ratio is 10 - 20	points = 6	
If the ratio is 5 - < 10	points = 4	
If the ratio is 1 - < 5	points = 2	
If the ratio is < 1	points = 1	

R 4.2. Characteristics of plants that slow down water velocities during floods: *Treat large woody debris as forest or shrub. Choose the points appropriate for the best description (polygons need to have >90% cover at person height. These are NOT Cowardin classes).*

Forest or shrub for > $\frac{1}{3}$ area OR emergent plants > $\frac{2}{3}$ area	points = 7	7
Forest or shrub for > $\frac{1}{10}$ area OR emergent plants > $\frac{1}{3}$ area	points = 4	
Plants do not meet above criteria	points = 0	

Total for R 4 Add the points in the boxes above **13**

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

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

R 5.1. Is the stream or river adjacent to the wetland downcut? Yes = 0 No = 1 1

R 5.2. Does the up-gradient watershed include a UGA or incorporated area? Yes = 1 No = 0 1

R 5.3 Is the up-gradient stream or river controlled by dams? Yes = 0 No = 1 0

Total for R 5 Add the points in the boxes above **2**

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

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

R 6.1. Distance to the nearest areas downstream that have flooding problems?

Choose the description that best fits the site.

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

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

Total for R 6 Add the points in the boxes above **1**

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

These questions apply to wetlands of all HGM classes.**HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat**H 1.0. Does the site have the potential to provide habitat?**

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

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

H 1.2. Hydroperiods

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

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

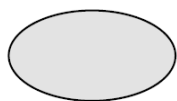
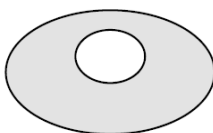
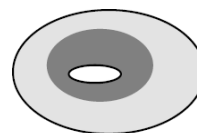
H 1.3. Richness of plant species

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

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

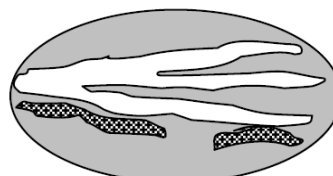
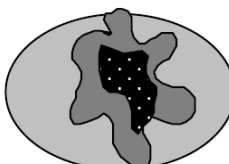
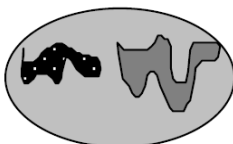
H 1.4. Interspersion of habitats

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

**None = 0 points****Low = 1 point****Moderate = 2 points**

2

All three diagrams
in this row are
HIGH = 3 points



H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i>		3
<input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) <input checked="" type="checkbox"/> Standing snags (dbh > 4 in) within the wetland <input 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 checked="" type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>) <input type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>) <input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata)		
Total for H 1		
Add the points in the boxes above		
9		
Rating of Site Potential If Score is: <input type="checkbox"/> 15 - 18 = H <input checked="" type="checkbox"/> 7 - 14 = M <input type="checkbox"/> 0 - 6 = L Record the rating on the first page		

H 2.0. Does the landscape have the potential to support the habitat function of the site?		
H 2.1 Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>). Calculate: 0 % undisturbed habitat + (5 % moderate & low intensity land uses / 2) = 2.5%		
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		0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. Calculate: 40 % undisturbed habitat + (0 % moderate & low intensity land uses / 2) = 40%		
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		2
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 1km Polygon is high intensity points = 0		-2
Total for H 2		
Add the points in the boxes above		
0		
Rating of Landscape Potential If Score is: <input type="checkbox"/> 4 - 6 = H <input type="checkbox"/> 1 - 3 = M <input checked="" type="checkbox"/> < 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 <input 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		1
Site has 1 or 2 priority habitats (listed on next page) within 100m points = 1		

Wetland name or number SOUND WL A

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

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

Wetland name or number SOUND WL A

addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. List the category when the appropriate criteria are met.</i>	
SC 1.0. Estuarine Wetlands Does the wetland meet the following criteria for Estuarine wetlands? <input type="checkbox"/> The dominant water regime is tidal, <input type="checkbox"/> Vegetated, and <input type="checkbox"/> With a salinity greater than 0.5 ppt <input type="checkbox"/> Yes - Go to SC 1.1 <input type="checkbox"/> 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? <input type="checkbox"/> Yes = Category I <input type="checkbox"/> No - Go to SC 1.2	
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? <input type="checkbox"/> 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) <input type="checkbox"/> At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or ungrazed or un-mowed grassland. <input type="checkbox"/> The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. <input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Category II	
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? <input type="checkbox"/> Yes - Go to SC 2.2 <input type="checkbox"/> No - Go to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? <input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Not WHCV SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf <input type="checkbox"/> Yes - Contact WNHP/WDNR and to SC 2.4 <input type="checkbox"/> No = Not 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? <input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Not WHCV	
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. 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? <input type="checkbox"/> Yes - Go to SC 3.3 <input type="checkbox"/> No - Go to SC 3.2 SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? <input type="checkbox"/> Yes - Go to SC 3.3 <input type="checkbox"/> 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? <input type="checkbox"/> Yes = Is a Category I bog <input type="checkbox"/> 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	

Wetland name or number SOUND WL A

in Table 4 provide more than 30% of the cover under the canopy?

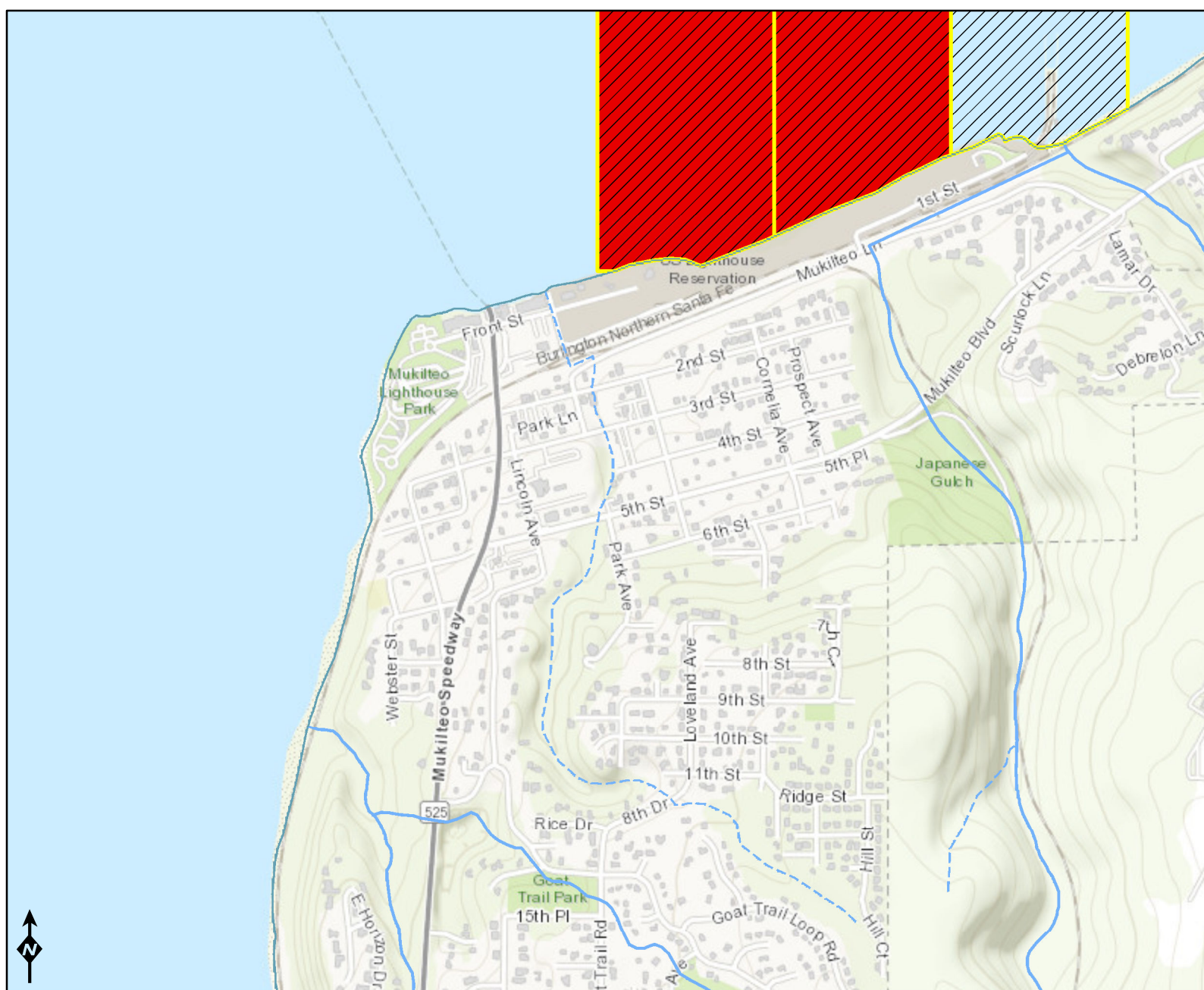
☐ Yes = **Is a Category I bog**

☐ No = **Is not a bog**

<p>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> <p><input type="checkbox"/> 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.</p> <p><input type="checkbox"/> 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> <p><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Not a forested wetland for this section</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> <p><input type="checkbox"/> 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</p> <p><input type="checkbox"/> 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> <p><input type="checkbox"/> Yes - Go to SC 5.1 <input type="checkbox"/> No = Not a wetland in a coastal lagoon</p> <p>SC 5.1. Does the wetland meet all of the following three conditions?</p> <p><input type="checkbox"/> 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).</p> <p><input type="checkbox"/> At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.</p> <p><input type="checkbox"/> The wetland is larger than 1/10 ac (4350 ft²)</p> <p><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Category 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> <p><input type="checkbox"/> Long Beach Peninsula: Lands west of SR 103</p> <p><input type="checkbox"/> Grayland-Westport: Lands west of SR 105</p> <p><input type="checkbox"/> Ocean Shores-Copalis: Lands west of SR 115 and SR 109</p> <p><input type="checkbox"/> Yes - Go to SC 6.1 <input type="checkbox"/> 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><input type="checkbox"/> Yes = Category I <input type="checkbox"/> 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><input type="checkbox"/> Yes = Category II <input type="checkbox"/> 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><input type="checkbox"/> Yes = Category III <input type="checkbox"/> No = Category 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>	

APPENDIX C
WA DOE 303 D MAP

4TH STREET AND PARK AVENUE



Assessed Water/Sediment

Water

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

Sediment

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

National Hydrography Dataset

NHD Watercourses

- Stream/river (perennial)
- Stream (intermittent)

NHD Waterbodies

- Lake/pond/reservoir
- Swamp/marsh
- Canal/ditch
- Ice mass

NHD Areas

- Large river
- Rapids
- Foreshore
- Canal/ditch

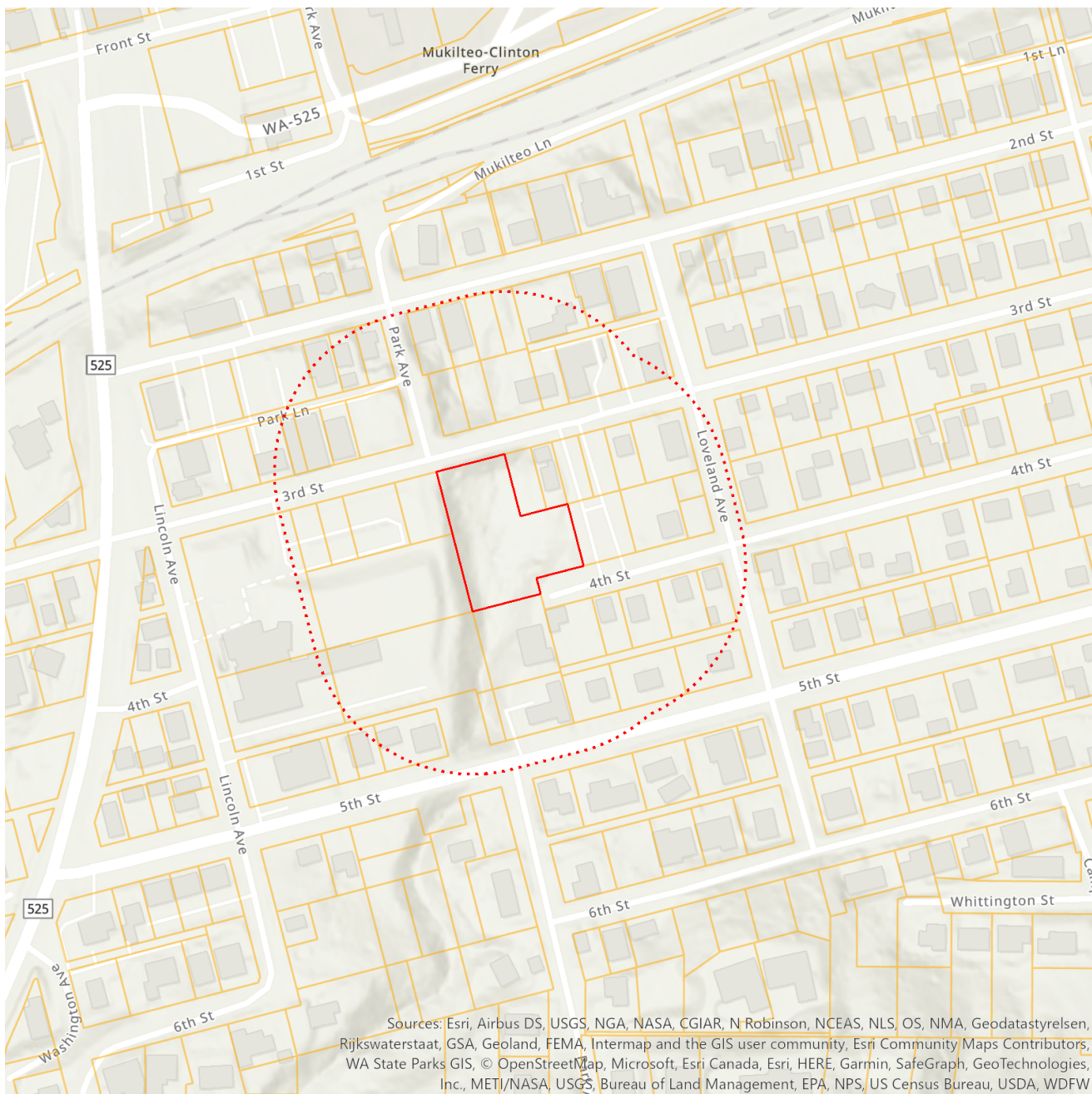
Subbasins (8 digit HUCs)

- HUC boundary

APPENDIX D
PRIORITY HABITATS AND SPECIES MAP



Priority Habitats and Species on the Web



Buffer radius: 300 Feet

Report Date: 03/01/2022, Parcel ID: [00596901100100](#)

The Priority Habitats and Species (PHS) datasets do not contain information for your project area. This does not mean that species and habitats do not occur in your project area. PHS data, points, lines and polygons are mapped only when occurrences of these species or habitats have been observed in the field. Unfortunately, we have not been able to comprehensively survey all sections in the state and therefore, it is important to note that priority species and habitats may occur in areas not currently known to the Department.

DISCLAIMER. This report includes information that the Washington Department of Fish and Wildlife (WDFW) maintains in a central computer database. It is not an attempt to provide you with an official agency response as to the impacts of your project on fish and wildlife. This information only documents the location of fish and wildlife resources to the best of our knowledge. It is not a complete inventory and it is important to note that fish and wildlife resources may occur in areas not currently known to WDFW biologists, or in areas for which comprehensive surveys have not been conducted. Site specific surveys are frequently necessary to rule out the presence of priority resources. Locations of fish and wildlife resources are subject to variation caused by disturbance, changes in season and weather, and other factors. WDFW does not recommend using reports more than six months old.