

# EXTRA ROOM SELF STORAGE WETLAND DELINEATION

March 12, 2018

17\_0040



# EXTRA ROOM SELF STORAGE

## WETLAND DELINEATION

March 12, 2018

PROJECT LOCATION  
STATE HWY 303 NE  
BREMERTON, WA 98311

232501-4-022-2005  
232501-4-065-2003  
232501-4-066-2002

S 21, T 24, R 02 E, W.M.

PREPARED FOR  
EXTRA ROOM SELF STORAGE, LLC  
3242 NE MCWILLIAMS RD  
BREMERTON WA 98311

PREPARED BY  
BGE ENVIRONMENTAL <sup>LLC</sup>  
2102 BRASHEM AVE  
BREMERTON, WA 98310  
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BGE17\_0040  
[www.bgeenvironmental.com](http://www.bgeenvironmental.com)

## CERTIFICATION

The technical material and data contained in this document were prepared under the supervision and direction of the undersigned, as a professional wetland scientist licensed to practice as such, is affixed below. All field inspections, jurisdictional wetland boundary delineations, and OHWM determinations were prepared by, or under the direction of Robbyn Myers of BGE Environmental, LLC. All technical information is current to best available science and in conjunction with method and manuals outlined in the methods section. All discussions, conclusion and recommendations reflect the best professional judgment of the author(s) and are based upon information available to us at the time the study was conducted. The findings are subject to verification and agreement by the appropriate local, State and Federal regulatory authorities. No other warranty, expressed or implied, is made.



Robbyn Myers, PWS  
Wetland Biologist/Environmental Planner



12 March 2018

Date

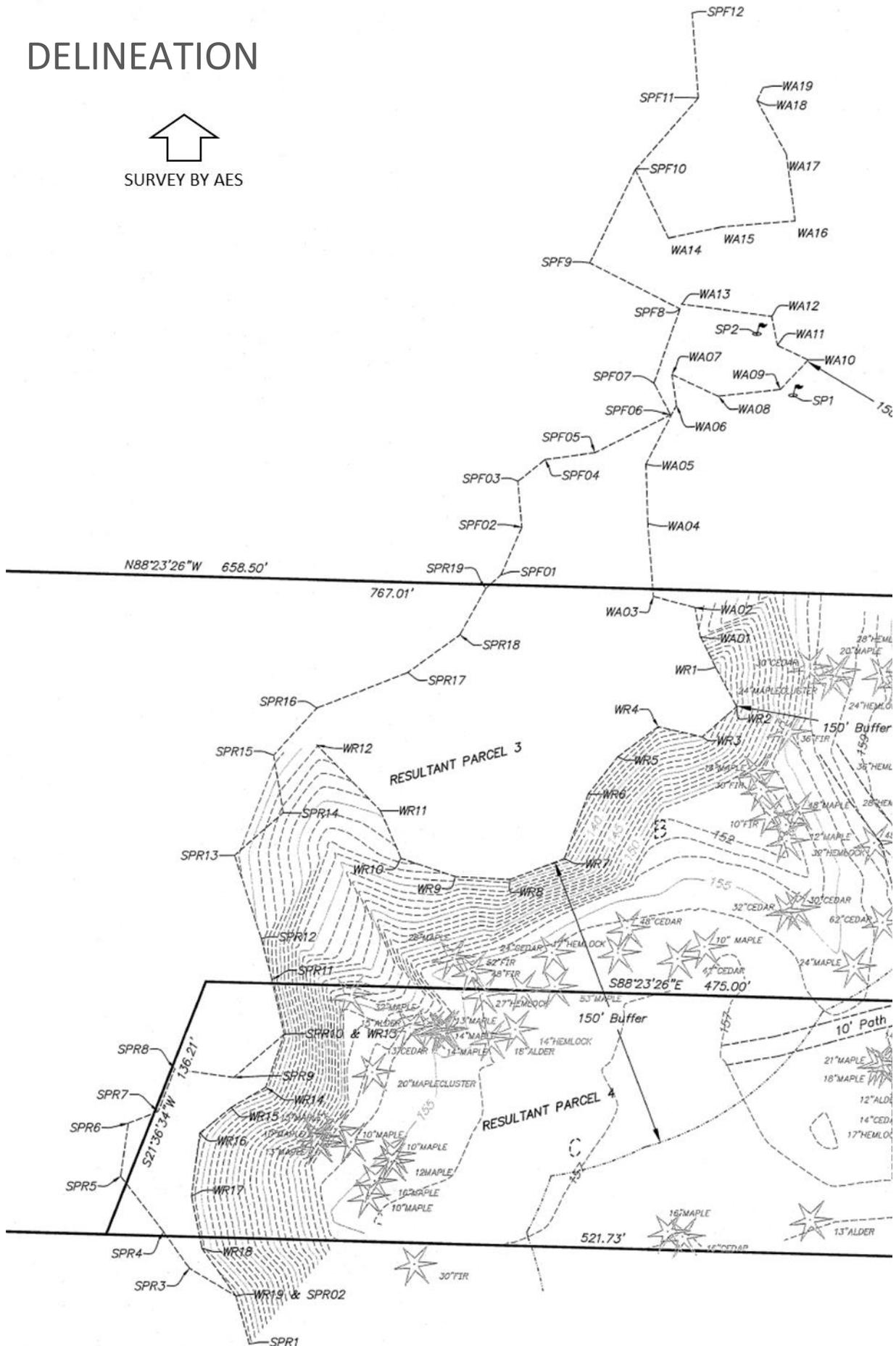
EXTRA ROOM SELF STORAGE  
WETLAND DELINEATION  
BGE17\_0040



**BGE ENVIRONMENTAL, LLC.**

WETLAND CONSULTING AND LAND USE PLANNING

# DELINEATION



# INTRODUCTION

Extra Room Self Storage (Client) requested a wetland delineation in association with three parcels aligned between State Highway 303 NE and Steele Creek, Bremerton, unincorporated Kitsap County, Washington. The properties use includes single-family residential use and undeveloped. Cumulatively the parcels total 8.54-acres. Parcels in the investigation area are identified by Kitsap County Assessor Tax Parcel Numbers: 232501-4-022-2005, 232501-4-065-2003, 232501-4-066-2002. Regional setting is Section 23, Township 25, Range 01 E, W.M.

This wetland delineation report provides confirmation via a determination of jurisdiction and establishment of wetland boundaries to identified wetlands and surface waters. This report is provided for compliance with the Kitsap County Municipal Code (KCC) Title 19 Critical Areas. This report includes the following:

- Site description and area of assessment;
- Background research and identification of potentially regulated critical areas, wetland and surface waters, near the proposed project;
- Identification, determination, and assessment of jurisdictional wetlands;
- Identification, assessment and criterion analysis for surface waters; and
- Review of regulations and standard buffer requirements for wetlands and Typed waters.

## METHODS

Resource information in the public-domain was reviewed for this delineation. Data researched included relevant mapping from U.S. Fish and Wildlife Service, Washington State Department of Fish and Wildlife (WDFW), and Washington Department of Natural Resources (WDNR) Natural Heritage Database, and the Kitsap County GIS mapping resource. Reference sources are summarized in Appendix A.

The wetlands and surface waters were assessed by a Professional Wetland Scientist (PWS) on March 20, 2017. All wetland determinations were completed using observable and documented assessments of vegetation, hydrology, and soils. Wetland boundaries were determined using the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region. Wetland Regulatory Assistance Program, Army Corps of Engineer. May 2010. Areas meeting the criteria set forth in the Regional Supplement were determined to be wetland. Soil, Vegetation, and hydrologic parameters were sampled at several locations along the wetland boundary for confirmation of jurisdiction. To mark the boundary between wetlands and uplands, orange surveyor's flagging was alpha-numerically labeled and tied to vegetation or wood lath along the wetland boundary.

Delineated wetlands were classified using the Western Washington Wetland Rating System-2014 by the Department of Ecology (Ecology). OHWM's were confirmed with Ecology method for Determining the Ordinary High Water Mark on Streams in Washington State (Olson, 2008) and definitions provided in RCW 77.55.011 (11) and WAC 220.110.020 (69). Drainages not associated with wetland conditions were driven by a consistent and observable bank which provided a conservative, yet clear demarcation of a surface water conveyance.

## EXISTING CONDITIONS

The property is located along State Highway 303 corridor between Bremerton and Silverdale. Steele Creek is aligned parallel to the west. Surrounding land use includes commercial, high-intensity residential, moderate residential, in addition to undeveloped parcels. Topography is rolling towards the east with moderate grade. Wetlands in the vicinity are mostly associated with Steele Creek.

The investigation area includes three parcels, only one of which fronts State Highway 303. The other two are adjacent and south, separated from the right-of-way both other residential properties. The character of the investigation area is a gradual decreasing slope from the right-of-way through open fields and mixed mature forests. Steele Creek is housed within a moderate ravine.

## FINDINGS

### WETLAND DELINEATION

The subject parcel was assessed on March 20, 2017. The typical ambient temperature ranged from 37° to 49° F in March. The field assessment and wetland determinations and delineations were conducted by Robbyn Myers, a Professional Wetland Scientist (#1286 Certification under the Society of Wetland Scientists). A routine wetland delineation was performed.

A summary of precipitation leading to the field review and throughout each month is provided below.

#### Precipitation Summary: March 2017

	Total Monthly Precipitation	Precipitation One Week Prior	Precipitation Two Weeks Prior	Average Monthly Precipitation	Deviation from Monthly Average
March 20	13.89 inches	4.48 inches	2.68 inches	5.95 inches	+7.94 inches

<https://www.accuweather.com/en/us/bremerton-wa/98337/march-weather/331425?monyr=3/1/2017&view=table>

The site investigation confirmed OHWM of Steele Creek (east side) and associated wetlands, off-site to the west. The limits of the critical areas were flagged and filed surveyed. The findings of the wetland determination and rating are summarized later in this report.

## WETLAND A

### CATEGORY II, RIVERINE

Wetland A is a forested riparian complex to Steele Creek. Its boundary does extend upgradient along the slope face bounding the riverine complex. Slopes are 2-5%. Observed vegetation consisted of buttercup (*Ranunculus repens*, FACW), false lily-of-the-valley (*Maianthemum dilatatum*, FAC), bleeding heart (*Dicentra formosa*, FACU), lady-fern (*Athyrium filix-femina*, FAC), red alder (*Alnus rubra*, FAC), salmonberry (*Rubus spectabilis*, FAC) skunk cabbage (*Lysichitum americanum*, OBL), stinging nettle (*Urtica dioica*, FAC), sword fern (*Polystichum munitum*, FACU), western hemlock (*Tsuga heterophylla*, FACU), western red cedar (*Thuja plicata*, FAC), youth-on-age (*Tolmiea menziesii*, FAC). Soils were silt loam, 10YR 4/3, above sandy loam, 10YR 6/2. Water table present at 12-inches indicates wetland hydrology.

The wetlands Hydrogeomorphic (HGM) classification includes multiple classes; riverine was used for the determination of Category. The Cowardin definition is PSS/PFO. Wetland A was rated as a Category II riverine wetland with a score of 21 and a habitat value of 6.

## STEELE CREEK

### TYPE F WATER

Steele Creek headwaters originate from a large wetland complex, set both west and east of State Highway 303, just south of John Carlson and NE Fairgrounds Road. The headwaters include a network of stormwater facilities within the commercial corridor. It continues northward, commonly along main arterials and through Gluds Pond. Its confluence is to a large estuarine complex along Brownsville Highway. Contributing waters from the west and northwest, include Royal Valley Creek and Crouch Creek. These waters host the occurrence and migration of coho (*Oncorhynchus kisutch*), cutthroat (*Oncorhynchus clarki*), and resident coastal cutthroat. Coho is a federal Candidate for threatened and endangered species list.

Observed conditions within the investigation area included complex riffle/pool development, limited channel braids, and areas of abundant large woody debris. Canopy closure was 100-percent to shrubs with broken deciduous forested cover. Some areas were decadently covered with Himalayan blackberry.

## UPLAND

The upland areas adjacent to the wetlands were characteristically coniferous forest with an open understory. Species include bigleaf maple (*Acer macrophyllum*, FACU), Douglas fir (*Pseudotsuga menziesii*, FACU), Oregon grape (*Mahonia nervosa*, FACU), false lily-of-the-valley (*Maianthemum dilatatum*, FAC), bleeding heart (*Dicentra formosa*, FACU), Indian plum (*Oemleria cerasiformis*, FACU), red elderberry (*Sambucus racemosa*, FACU), red huckleberry (*Vaccinium parvifolium*, UPL), stinging nettle (*Urtica dioica*, FAC), sword-fern (*Polystichum munitum*, FACU), trailing blackberry (*Rubus ursinus*, FACU), Western hemlock (*Tsuga heterophylla*, FACU), western red cedar (*Thuja plicata*, FAC), and youth-on-age (*Tolmiea menziesii*, FAC). Himalayan blackberry was present along the transitions from native forest to

cleared use areas. The uplands in the investigation area include open pasture (cleared) with intermittent mature trees.

## SAMPLE PLOT #1

SP01 is the paired plot to SP02. It is located to the slope face, landward of the wetted portion of the slope. Vegetation consisted of dominant amounts of Douglas fir, western red cedar, and sword-fern with individual salmonberry. Soils were silty loam 10YR 4/3 with mottles of 10YR 5/6 and 5YR 4/6 on top of cobble sandy loam 10YR 6/2 with distinct and diverse mottling (10YR 5/6, 10YR 4/3, 5YR 4/6, and 5YR 6/1). Water table present at 12-in.

## REGULATORY STANDARDS

Wetland buffers are based on three factors: the wetland category, the intensity of the impacts, and the function or special characteristics of the wetland that need to be protected as established through the rating system.

The wetland was rated as having a hydrogeomorphic wetland classification of Riverine with multiple HGM classes. The resulting Category is a II with a habitat score of 6. As we understand the proposed development, use intensity is high resulting in a wetland buffer of 150-ft (Table 19.200.220(D), KCC).

Steele Creek is a Type F water with a standard buffer of 150-ft (Table 19.300.315, KCC).

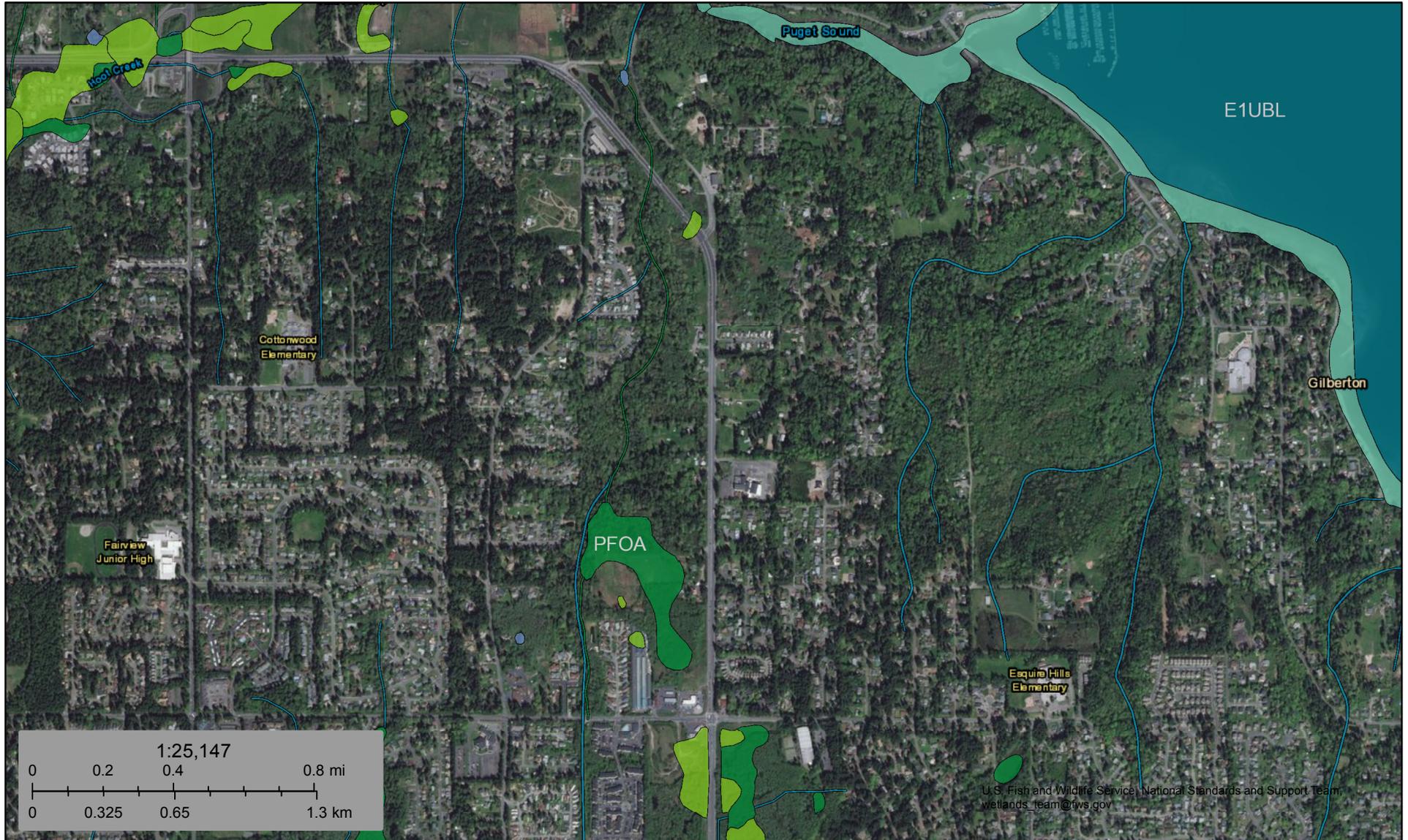
All buffers shall be measured horizontally from a perpendicular line established at the wetland edge or stream bank-full width. A 15-ft building or impervious surface setback is required from the edge of any critical area buffer. The setback shall be identified on a site plan.

WETLAND SUMMARY		
	Rating	II
	Wetland Size	>5 acres
	Cowardin	PFO/PSS
	Wetland Data	SP02
	Nonwetland Data	SP01
WETLAND DETERMINATION		
VEGETATION	Dominance test is greater than 50%	
SOILS	Depleted Below Dark Surface (A11)	
HYDROLOGY	Saturation (A3)	
DELINEATION RATIONALE	Boundary was defined prominently by following topography, vegetation and hydrology.	
WETLAND RATING		
HGM CLASS	Riverine	
MAPPING TOOL	Google	
WETLAND CATEGORY	II	
IMPROVING WATER QUALITY	9	
HYDROLOGIC	6	
HABITAT	6	



## APPENDIX A-REFERENCE SOURCES

WETLAND DELINEATION		
USACE 1987 Wetland Delineation Manual	<a href="http://el.erdc.usace.army.mil/elpubs/pdf/wlman87.pdf">http://el.erdc.usace.army.mil/elpubs/pdf/wlman87.pdf</a>	Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, US Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.
Western Mountains, Valleys, and Coast Region Interim Regional Supplement	<a href="http://www.usace.army.mil/CECW/Documents/cecw/reg/west_mt_finalsupp.pdf">http://www.usace.army.mil/CECW/Documents/cecw/reg/west_mt_finalsupp.pdf</a>	U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-3. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
WETLAND CLASSIFICATION		
USFWS / Cowardin Classification System	<a href="http://www.fws.gov/nwi/Publications/Reports/Class_Manual/class_titlepg.htm">http://www.fws.gov/nwi/Publications/Reports/Class_Manual/class_titlepg.htm</a>	Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. Government Printing Office, Washington, D.C.
Hydrogeomorphic Classification (HGM) System	<a href="http://el.erdc.usace.army.mil/wetlands/pdfs/wrpde4.pdf">http://el.erdc.usace.army.mil/wetlands/pdfs/wrpde4.pdf</a>	Brinson, M. M. (1993). "A hydrogeomorphic classification for wetlands," Technical Report WRP-DE-4, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
WETLAND RATING		
Washington State Wetland Rating System	<a href="https://fortress.wa.gov/ecy/publications/SummaryPages/1406029.html">https://fortress.wa.gov/ecy/publications/SummaryPages/1406029.html</a>	Hruby. 2014 Update. Washington State wetland rating system for western Washington –Revised. Publication #14-06-029.
WETLAND INDICATOR STATUS		
Northwest (Region 9) (Reed, 1988) and Northwest (Region 9) Supplement (Reed et al., 1993)	<a href="http://www.fws.gov/nwi/bha/list88.html">http://www.fws.gov/nwi/bha/list88.html</a>	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, Washington, D.C. Reed, P.B. Jr. 1993. 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 1988. U.S. Department of Interior Fish and Wildlife Service WELUT - 88 (26.9), Washington, D.C.
SOILS DATA		
NRCS Soil Survey	<a href="http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx">http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx</a>	Website GIS data based upon: McMurphy, Carl J. 1980. Soil Survey of King County, Washington. United States Department of Agriculture, Soil Conservation Service in cooperation with Washington State Department of Natural Resources.
THREATENED AND ENDANGERED SPECIES		
Washington Natural Heritage Program	<a href="http://www.dnr.wa.gov/nhp/">http://www.dnr.wa.gov/nhp/</a> and <a href="http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf">http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</a>	Washington Natural Heritage Program (Data published 10/15/08). Endangered, threatened, and sensitive plants of Washington. Washington State Department of Natural Resources, Washington Natural Heritage Program, Olympia, WA
Washington Priority Habitats and Species	<a href="http://wdfw.wa.gov/hab/p/hspage.htm">http://wdfw.wa.gov/hab/p/hspage.htm</a>	Priority Habitats and Species (PHS) Program Washington Department of Fish and Wildlife (WDFW).



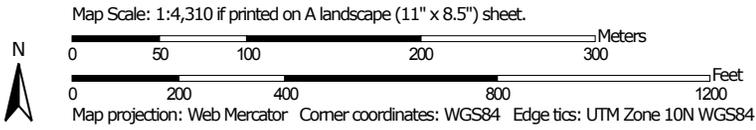
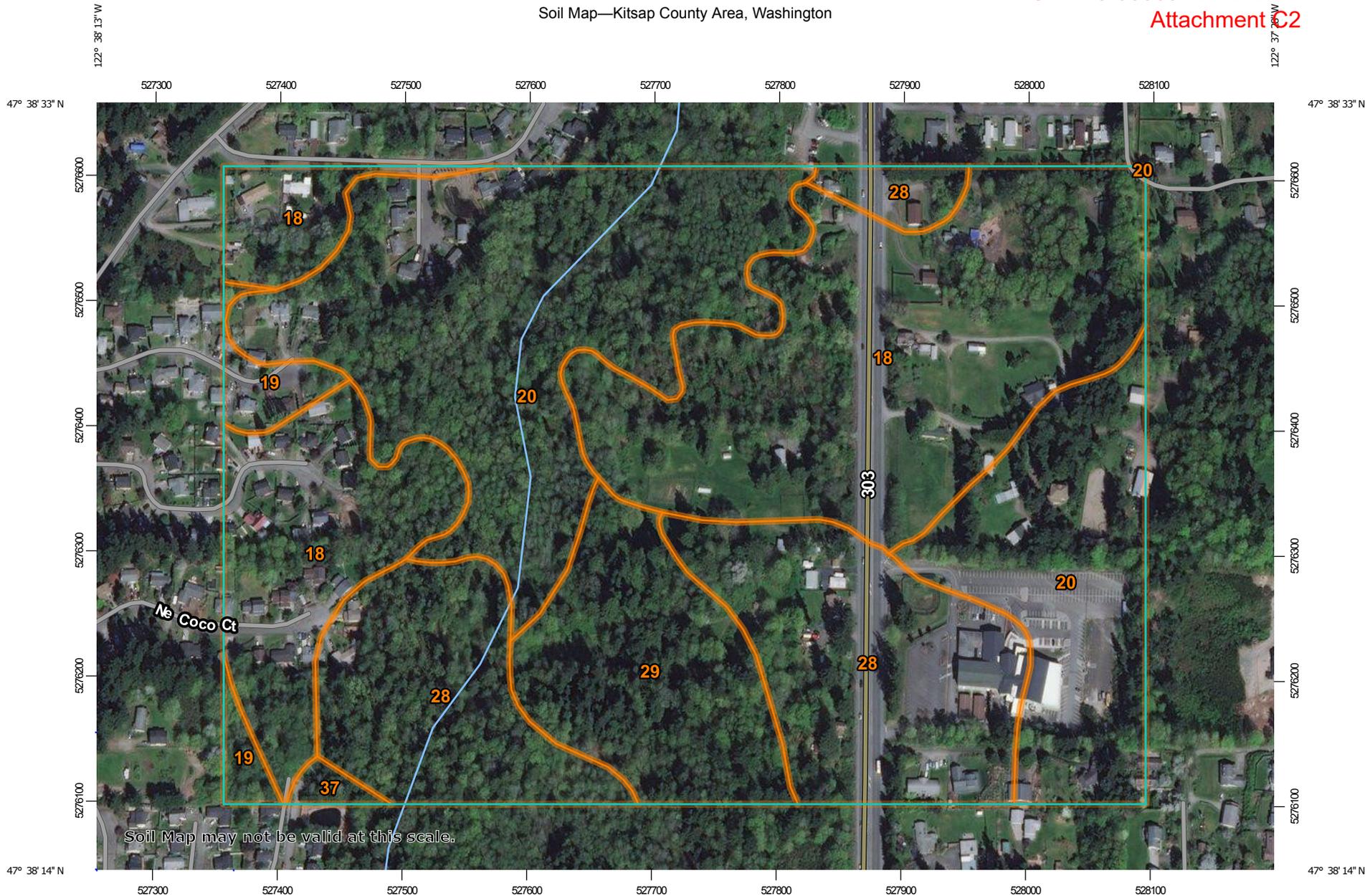
February 19, 2018

**Wetlands**

- |   |                                |   |                                   |   |          |
|---|--------------------------------|---|-----------------------------------|---|----------|
|  | Estuarine and Marine Deepwater |  | Freshwater Emergent Wetland       |  | Lake     |
|  | Estuarine and Marine Wetland   |  | Freshwater Forested/Shrub Wetland |  | Other    |
|   |                                |  | Freshwater Pond                   |  | Riverine |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Soil Map—Kitsap County Area, Washington



### MAP LEGEND

**Area of Interest (AOI)**

 Area of Interest (AOI)

**Soils**

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

**Special Point Features**

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

**Water Features**

 Streams and Canals

**Transportation**

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

**Background**

 Aerial Photography

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

**Warning:** Soil Map may not be valid at this scale.  
Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Kitsap County Area, Washington  
Survey Area Data: Version 13, Sep 7, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 29, 2016—Sep 27, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
18	Indianola loamy sand, 0 to 5 percent slopes	31.9	34.1%
19	Indianola loamy sand, 5 to 15 percent slopes	1.8	1.9%
20	Indianola loamy sand, 15 to 30 percent slopes	30.7	32.8%
28	Kitsap silt loam, 2 to 8 percent slopes	19.9	21.3%
29	Kitsap silt loam, 8 to 15 percent slopes	8.8	9.4%
37	Norma fine sandy loam	0.4	0.5%
<b>Totals for Area of Interest</b>		<b>93.5</b>	<b>100.0%</b>



# WASHINGTON DEPARTMENT OF FISH AND WILDLIFE PRIORITY HABITATS AND SPECIES REPORT

CPA 18-00369 Richardson  
Attachment C2

SOURCE DATASET: PHSPublic  
REPORT DATE: 02/19/2018 1.45

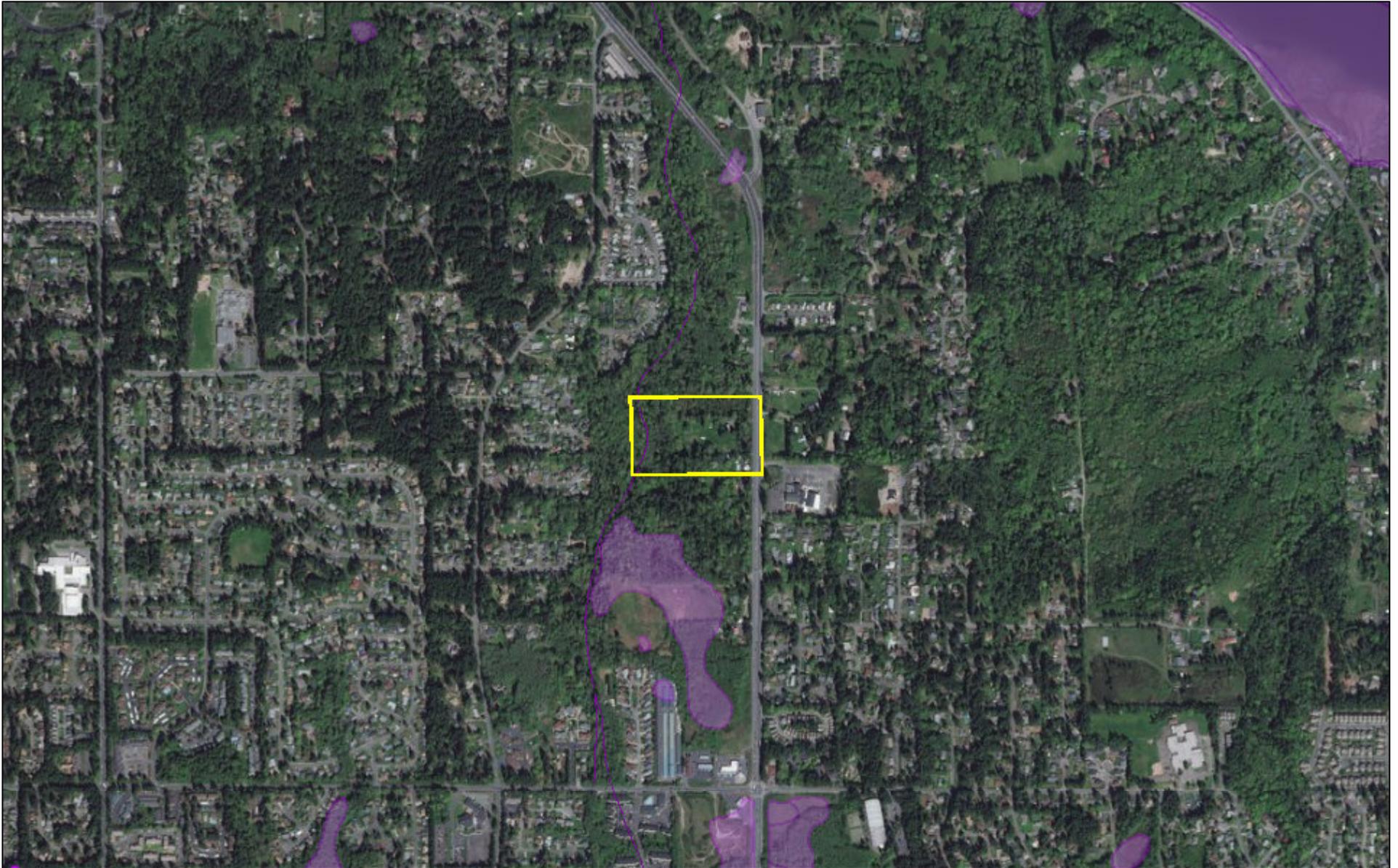
Query ID: P180219134514

Common Name	Site Name	Priority Area	Accuracy	Federal Status	Sensitive Data	Source Entity
Scientific Name	Source Dataset	Occurrence Type		State Status	Resolution	Geometry Type
Notes	Source Record	More Information (URL)		PHS Listing Status		
	Source Date	Mgmt Recommendations				
Coho	SWIFD	Occurrence/Migration	NA	N/A	N	
Oncorhynchus kisutch	50422	Occurrence/migration <a href="http://wdfw.wa.gov/wlm/diversty/soc/soc.htm">http://wdfw.wa.gov/wlm/diversty/soc/soc.htm</a> <a href="http://wdfw.wa.gov/publications/pub.php?">http://wdfw.wa.gov/publications/pub.php?</a>		N/A	AS MAPPED	Lines
				PHS LISTED		
Coho	SASI	Occurrence	NA	Candidate	N	WDFW Fish Program
Oncorhynchus kisutch	3203	Occurrence <a href="http://wdfw.wa.gov/wlm/diversty/soc/soc.htm">http://wdfw.wa.gov/wlm/diversty/soc/soc.htm</a> <a href="http://wdfw.wa.gov/publications/pub.php?">http://wdfw.wa.gov/publications/pub.php?</a>		N/A	AS MAPPED	Lines
				PHS Listed		
Cutthroat	SASI	Occurrence	NA	Not Warranted	N	WDFW Fish Program
Oncorhynchus clarki	7020	Occurrence <a href="http://wdfw.wa.gov/wlm/diversty/soc/soc.htm">http://wdfw.wa.gov/wlm/diversty/soc/soc.htm</a> <a href="http://wdfw.wa.gov/publications/pub.php?">http://wdfw.wa.gov/publications/pub.php?</a>		N/A	AS MAPPED	Lines
				PHS Listed		
Resident Coastal Cutthroat	SWIFD	Occurrence/Migration	NA	N/A	N	
Oncorhynchus clarki	50419	Occurrence/migration <a href="http://wdfw.wa.gov/wlm/diversty/soc/soc.htm">http://wdfw.wa.gov/wlm/diversty/soc/soc.htm</a> <a href="http://wdfw.wa.gov/publications/pub.php?">http://wdfw.wa.gov/publications/pub.php?</a>		N/A	AS MAPPED	Lines
				PHS LISTED		

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.

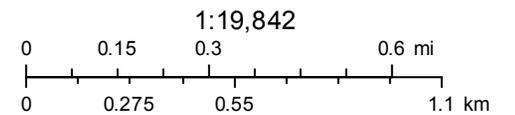
# WDFW Test Map

CPA 18-00369 Richardson  
Attachment C2



February 19, 2018

- |   |                      |   |   |   |          |
|---|----------------------|---|---|---|----------|
|  | PHS Report Clip Area | <b>POLY</b>   |  | QTR-TWP   |          |
|  | PT                   |  | AS MAPPED   |  | TOWNSHIP |
|  | LN                   |  | SECTION   |   |          |



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

## APPENDIX B

# DATA FORMS WETLAND DETERMINATION

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

Project Site: 303 SELF STORAGE City/County: BREMERTON/KITSAP Sampling Date: 03.20.2017  
 Applicant/Owner: REINOUT VAN BEYNUM State: WA Sampling Point: SP01  
 Investigator(s): R. MYERS; BGE ENVIRONMENTAL, LLC Section, Township, Range: S23 T25 R01E  
 Landform (hillslope, terrace, etc.): SLOPEFACE Local relief (concave, convex, none): convex Slope (%): 3  
 Subregion (LRR): LRR A Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: INDIANOLA LOAMY SAND NWI classification: UPL  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology , significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology , naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="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"/>		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: <b>Slope face just landward (away) from wetted surface. Located just outside of a narrow draw.</b>			

**VEGETATION – Use scientific names of plants**

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b>	
1. <i>Pseudotsuga menziesii</i>	<u>40</u>	<u>yes</u>	<u>FACU</u>		Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. <i>Thuja plicata</i>	<u>20</u>	<u>yes</u>	<u>FAC</u>	Total Number of Dominant Species Across All Strata: <u>4</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)	
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
50% = _____, 20% = _____	<u>60</u>	= Total Cover			<b>Total % Cover of:</b>
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30</u> )				<b>Multiply by:</b>	
1. <i>Rubus spectabilis</i>	<u>5</u>	<u>yes</u>	<u>FAC</u>	OBL species _____ x1 = _____	
2. _____	_____	_____	_____	FACW species _____ x2 = _____	
3. _____	_____	_____	_____	FAC species _____ x3 = _____	
4. _____	_____	_____	_____	FACU species _____ x4 = _____	
5. _____	_____	_____	_____	UPL species _____ x5 = _____	
50% = _____, 20% = _____	<u>5</u>	= Total Cover		Column Totals: _____ (A) _____ (B)	
<u>Herb Stratum</u> (Plot size: <u>30</u> )				Prevalence Index = B/A = _____	
1. <i>Polystichum munitum</i>	<u>100</u>	<u>yes</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b>	
2. _____	_____	_____	_____		<input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation
3. _____	_____	_____	_____		<input type="checkbox"/> 2 - Dominance Test is >50%
4. _____	_____	_____	_____		<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>
5. _____	_____	_____	_____		<input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
6. _____	_____	_____	_____		<input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup>
7. _____	_____	_____	_____		<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
8. _____	_____	_____	_____		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
9. _____	_____	_____	_____		<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
50% = _____, 20% = _____	<u>100</u>	= Total Cover			
<u>Woody Vine Stratum</u> (Plot size: <u>30</u> )					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>					

Remarks:

Project Site: 303 SELF STORAGE

**SOIL**

Sampling Point: SP01

**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 <sup>1</sup>	Loc <sup>2</sup>		
0-10	10YR 4/3	70	10YR 5/6	15	C	M	SILT LOAM	
			5YR 4/6	10	C	M	SILT LOAM	
>10	10YR 6/2	50	10YR 5/6	20	RM	M		COURSE SANDY LOAM
			10YR 5/3	10	RM	M		COURSE SANDY LOAM
			5YR 4/6	10	C	M		COURSE SANDY LOAM
			5YR 6/1	5	RM	M		COURSE SANDY LOAM

<sup>1</sup>Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: 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"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)                            |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1) <b>(except MLRA 1)</b> |
| <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)                          |

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- |   |
|---|
| <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)       |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soils Present?**      Yes       No

Remarks: Depleted soils but low chroma 2 is not greater than 60%.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

- |  |   |
|--|---|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Water-Stained Leaves (B9)                      |
| <input type="checkbox"/> High Water Table (A2)                     | <b>(except MLRA 1, 2, 4A, and 4B)</b>                                   |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Salt Crust (B11)                               |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Aquatic Invertebrates (B13)                    |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                     |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)  |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Presence of Reduced Iron (C4)                  |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)     |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Stunted or Stresses Plants (D1) <b>(LRR A)</b> |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                     |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |   |

Secondary Indicators (2 or more required)

- |  |
|--|
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |
| <b>(MLRA 1, 2, 4A, and 4B)</b>                                     |
| <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) <b>(LRR A)</b>     |
| <input type="checkbox"/> Frost-Heave Hummocks (D7)                 |

**Field Observations:**

Surface Water Present?    Yes     No     Depth (inches): \_\_\_\_\_  
 Water Table Present?    Yes     No     Depth (inches): \_\_\_\_\_  
 Saturation Present?  
 (includes capillary fringe)    Yes     No     Depth (inches): \_\_\_\_\_

**Wetland Hydrology Present?**      Yes       No

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

Remarks:

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

Project Site: 303 SELF STORAGE City/County: BREMERTON/KITSAP Sampling Date: 03.20.2017  
 Applicant/Owner: REINOUT VAN BEYNUM State: WA Sampling Point: SP02  
 Investigator(s): R. MYERS; BGE ENVIRONMENTAL, LLC Section, Township, Range: S23 T25 R01E  
 Landform (hillslope, terrace, etc.): SLOPE Local relief (concave, convex, none): none Slope (%): 2-5  
 Subregion (LRR): LRR A Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: INDIANOLA LOAMY SAND NWI classification: PSS  
 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"/>	Is the Sampled Area within a Wetland?	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"/>		
Remarks: <b>Just adjacent to OHWM of water. Limited riparian and not representative to 90% observed wetland area</b>			

**VEGETATION – Use scientific names of plants**

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b>	
1. <u><i>Alnus rubra</i></u>	<u>90</u>	<u>yes</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>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u> (A/B)
4. _____	_____	_____	_____		
50% = _____, 20% = _____	<u>90</u>	= Total Cover			
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Prevalence Index worksheet:</b>	
1. <u><i>Rubus spectabilis</i></u>	<u>40</u>	<u>yes</u>	<u>FAC</u>	<u>Total % Cover of:</u>	<u>Multiply by:</u>
2. _____	_____	_____	_____	OBL species _____	x1 = _____
3. _____	_____	_____	_____	FACW species _____	x2 = _____
4. _____	_____	_____	_____	FAC species _____	x3 = _____
5. _____	_____	_____	_____	FACU species _____	x4 = _____
50% = _____, 20% = _____	<u>40</u>	= Total Cover		UPL species _____	x5 = _____
<u>Herb Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Column Totals: _____ (A)	_____ (B)
1. <u><i>Tolmiea menziesii</i></u>	<u>25</u>	<u>yes</u>	<u>FAC</u>	Prevalence Index = B/A = _____	
2. <u><i>Athyrium filix-femina</i></u>	<u>5</u>	<u>no</u>	<u>FAC</u>		
3. <u><i>Lysichitum americanum</i></u>	<u>10</u>	<u>no</u>	<u>OBL</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
50% = _____, 20% = _____	<u>40</u>	= Total Cover			
<u>Woody Vine Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
% Bare Ground in Herb Stratum _____					

**Hydrophytic Vegetation Indicators:**

1 – Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

5 - Wetland Non-Vascular Plants<sup>1</sup>

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes  No

Remarks:



APPENDIX C  
WETLAND RATING FORM

# RATING SUMMARY – Western Washington

Name of wetland (or ID #): EXTRA ROOM STORAGE - SR303 Date of site visit: 3/20/2017

Rated by RMYERS, BGE ENVIRONME Trained by Ecology?  Yes  No Date of training 2017

HGM 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 GOOGLE/KCGIS

**OVERALL WETLAND CATEGORY** II (based on functions  or special characteristics )

## 1. Category of wetland based on FUNCTIONS

- Category I - Total score = 23 - 27
- X   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>List appropriate rating (H, M, L)</i>				
Site Potential	H	M	M	
Landscape Potential	H	M	L	
Value	H	M	H	<b>Total</b>
<b>Score Based on Ratings</b>	9	6	6	<b>21</b>

**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	<b>X</b>

## Maps and Figures required to answer questions correctly for Western Washington

### Depressional Wetlands

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

### Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	1
Hydroperiods	H 1.2	1
Ponded depressions	R 1.1	1
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	R 2.4	1
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	1
Width of unit vs. width of stream ( <i>can be added to another figure</i> )	R 4.1	1
Map of the contributing basin	R 2.2, R 2.3, R 5.2	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	2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	2
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	2

### 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 <b>dense</b> trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of <b>dense, rigid</b> 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	



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:

<b>RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS</b>		
<b>Water Quality Functions - Indicators that the site functions to improve water quality</b>		
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	8
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, <b>not</b> 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	
<b>Total for R 1</b>	Add the points in the boxes above	<b>16</b>

**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	0
R 2.5. Are there other sources of pollutants coming into the wetland that are not listed in questions R 2.1 - R 2.4?		0
Other Sources	Yes = 1    No = 0	
<b>Total for R 2</b>	Add the points in the boxes above	<b>3</b>

**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	2
<b>Total for R 3</b>	Add the points in the boxes above	<b>3</b>

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

<b>RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS</b>		
<b>Hydrologic Functions - Indicators that site functions to reduce flooding and stream erosion</b>		
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: <i>Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of wetland)/(average width of stream between banks).</i>		
If the ratio is more than 20	points = 9	4
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: <i>Treat large woody debris as forest or shrub. Choose the points appropriate for the best description (polygons need to have &gt;90% cover at person height. These are NOT Cowardin classes).</i>		
Forest or shrub for > 1/3 area OR emergent plants > 2/3 area	points = 7	7
Forest or shrub for > 1/10 area OR emergent plants > 1/3 area	points = 4	
Plants do not meet above criteria	points = 0	
<b>Total for R 4</b>	<b>Add the points in the boxes above</b>	<b>11</b>

**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	0
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	1
<b>Total for R 5</b>	<b>Add the points in the boxes above</b>	<b>2</b>

**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? <i>Choose the description that best fits the site.</i>		
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
<b>Total for R 6</b>	<b>Add the points in the boxes above</b>	<b>1</b>

**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.*

- 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

1

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 types 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**

2

H 1.3. Richness of plant species

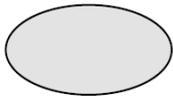
Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. *Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle*

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

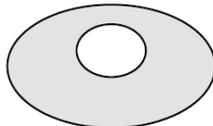
2

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.*



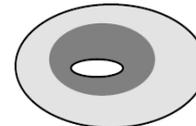
**None = 0 points**



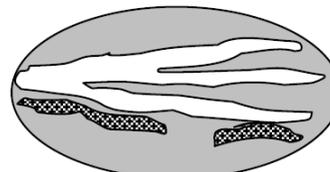
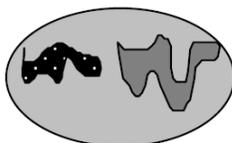
**Low = 1 point**



**Moderate = 2 points**



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



3

<p><b>H 1.5. Special habitat features:</b>                  Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (&gt; 4 in diameter and 6 ft long)</li> <li><input checked="" type="checkbox"/> Standing snags (dbh &gt; 4 in) within the wetland</li> <li><input checked="" type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) <b>and/or</b> 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)</li> <li><input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (&gt; 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>)</li> <li><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>)</li> <li><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)</li> </ul>		4
<p><b>Total for H 1</b> Add the points in the boxes above</p>		<b>12</b>

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

<p><b>H 2.0. Does the landscape have the potential to support the habitat function of the site?</b></p>		
<p><b>H 2.1 Accessible habitat (include only habitat that directly abuts wetland unit).</b>                  Calculate:                  5 % undisturbed habitat + ( 20 % moderate &amp; low intensity land uses / 2 ) = 15%</p> <p>If total accessible habitat is:                  &gt; 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                  &lt; 10 % of 1 km Polygon points = 0</p>		1
<p><b>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</b>                  Calculate:                  20 % undisturbed habitat + ( 20 % moderate &amp; low intensity land uses / 2 ) = 30%</p> <p>Undisturbed habitat &gt; 50% of Polygon points = 3                  Undisturbed habitat 10 - 50% and in 1-3 patches points = 2                  Undisturbed habitat 10 - 50% and &gt; 3 patches points = 1                  Undisturbed habitat &lt; 10% of 1 km Polygon points = 0</p>		1
<p><b>H 2.3 Land use intensity in 1 km Polygon: If</b>                  &gt; 50% of 1 km Polygon is high intensity land use points = (-2)                  ≤ 50% of 1km Polygon is high intensity points = 0</p>		-2
<p><b>Total for H 2</b> Add the points in the boxes above</p>		<b>0</b>

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

<p><b>H 3.0. Is the habitat provided by the site valuable to society?</b></p>		
<p><b>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.</b>                  Site meets ANY of the following criteria: points = 2</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page)</li> <li><input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</li> <li><input checked="" type="checkbox"/> It is mapped as a location for an individual WDFW priority species</li> <li><input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</li> <li><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</li> </ul> <p>Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1                  Site does not meet any of the criteria above points = 0</p>		2

**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 addressed elsewhere.

**CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

Wetland Type	Category
<p><i>Check off any criteria that apply to the wetland. List the category when the appropriate criteria are met.</i></p>	
<p><b>SC 1.0. Estuarine Wetlands</b>                  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 <b>SC 1.1</b>      <input type="checkbox"/> No = <b>Not an estuarine wetland</b></p>	
<p>SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?  <input type="checkbox"/> Yes = <b>Category I</b>      <input type="checkbox"/> No - Go to <b>SC 1.2</b></p>	
<p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?  <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 un-grazed 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 = <b>Category I</b>      <input type="checkbox"/> No = <b>Category II</b></p>	
<p><b>SC 2.0. Wetlands of High Conservation Value (WHCV)</b>                  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 <b>SC 2.2</b>      <input type="checkbox"/> No - Go to <b>SC 2.3</b>                  SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?  <input type="checkbox"/> Yes = <b>Category I</b>      <input type="checkbox"/> No = <b>Not WHCV</b>                  SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?  <a href="http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf">http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</a>  <input type="checkbox"/> Yes - <b>Contact WNHP/WDNR and to SC 2.4</b>      <input type="checkbox"/> No = <b>Not WHCV</b>                  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 = <b>Category I</b>      <input type="checkbox"/> No = <b>Not WHCV</b></p>	
<p><b>SC 3.0. Bogs</b>                  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 <b>SC 3.3</b>      <input type="checkbox"/> No - Go to <b>SC 3.2</b>                  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 <b>SC 3.3</b>      <input type="checkbox"/> No = <b>Is not a bog</b>                  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 = <b>Is a Category I bog</b>      <input type="checkbox"/> No - Go to <b>SC 3.4</b>  <b>NOTE:</b> 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 (&gt; 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?  <input type="checkbox"/> Yes = <b>Is a Category I bog</b>      <input type="checkbox"/> No = <b>Is not a bog</b></p>	

<p><b>SC 4.0. Forested Wetlands</b></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? <b><i>If you answer YES you will still need to rate the wetland based on its functions.</i></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Old-growth forests</b> (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.</li> <li><input type="checkbox"/> <b>Mature forests</b> (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).</li> </ul> <p style="text-align: right;"><input type="checkbox"/> Yes = <b>Category I</b>    <input type="checkbox"/> No = <b>Not a forested wetland for this section</b></p>	
<p><b>SC 5.0. Wetlands in Coastal Lagoons</b></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"> <li><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</li> <li><input type="checkbox"/> The lagoon in which the wetland is located contains ponded water that is saline or brackish (&gt; 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>)</li> </ul> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to <b>SC 5.1</b>    <input type="checkbox"/> No = <b>Not a wetland in a coastal lagoon</b></p> <p><b>SC 5.1.</b> Does the wetland meet all of the following three conditions?</p> <ul style="list-style-type: none"> <li><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).</li> <li><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.</li> <li><input type="checkbox"/> The wetland is larger than 1/10 ac (4350 ft<sup>2</sup>)</li> </ul> <p style="text-align: right;"><input type="checkbox"/> Yes = <b>Category I</b>    <input type="checkbox"/> No = <b>Category II</b></p>	
<p><b>SC 6.0. Interdunal Wetlands</b></p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <b><i>If you answer yes you will still need to rate the wetland based on its habitat functions.</i></b></p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Long Beach Peninsula: Lands west of SR 103</li> <li><input type="checkbox"/> Grayland-Westport: Lands west of SR 105</li> <li><input type="checkbox"/> Ocean Shores-Copalis: Lands west of SR 115 and SR 109</li> </ul> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to <b>SC 6.1</b>    <input type="checkbox"/> No = <b>Not an interdunal wetland for rating</b></p> <p><b>SC 6.1.</b> 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 style="text-align: right;"><input type="checkbox"/> Yes = <b>Category I</b>    <input type="checkbox"/> No - Go to <b>SC 6.2</b></p> <p><b>SC 6.2.</b> Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = <b>Category II</b>    <input type="checkbox"/> No - Go to <b>SC 6.3</b></p> <p><b>SC 6.3.</b> 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 style="text-align: right;"><input type="checkbox"/> Yes = <b>Category III</b>    <input type="checkbox"/> No = <b>Category IV</b></p>	
<p><b>Category of wetland based on Special Characteristics</b></p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	



DEPRESSIONS COVER >1/2  
TREES/SHRUBS COVER >2/3  
FOREST/SHRUB COVER >1/3

FORESTED  
SCRUB/SHRUB

SATURDATED  
SEASONALLY FLOODED  
PERMANENTLY FLOWING

- Due to the larger area unit determination, vegetation cover is conservatively estimated based on limits of investigation area observed



FOR WETLAND RATING PURPOSES ONLY

FIGURE 1:  
R1.1, R1.2, R2.4, R4.1, R4.2, H1.1,  
H1.2, H1.4

EXTRA ROOM SELF STORAGE  
HWY 303 NE  
232501-4-022-2005



**BGE Environmental, LLC**

Wetland Consulting & Land Use Planning

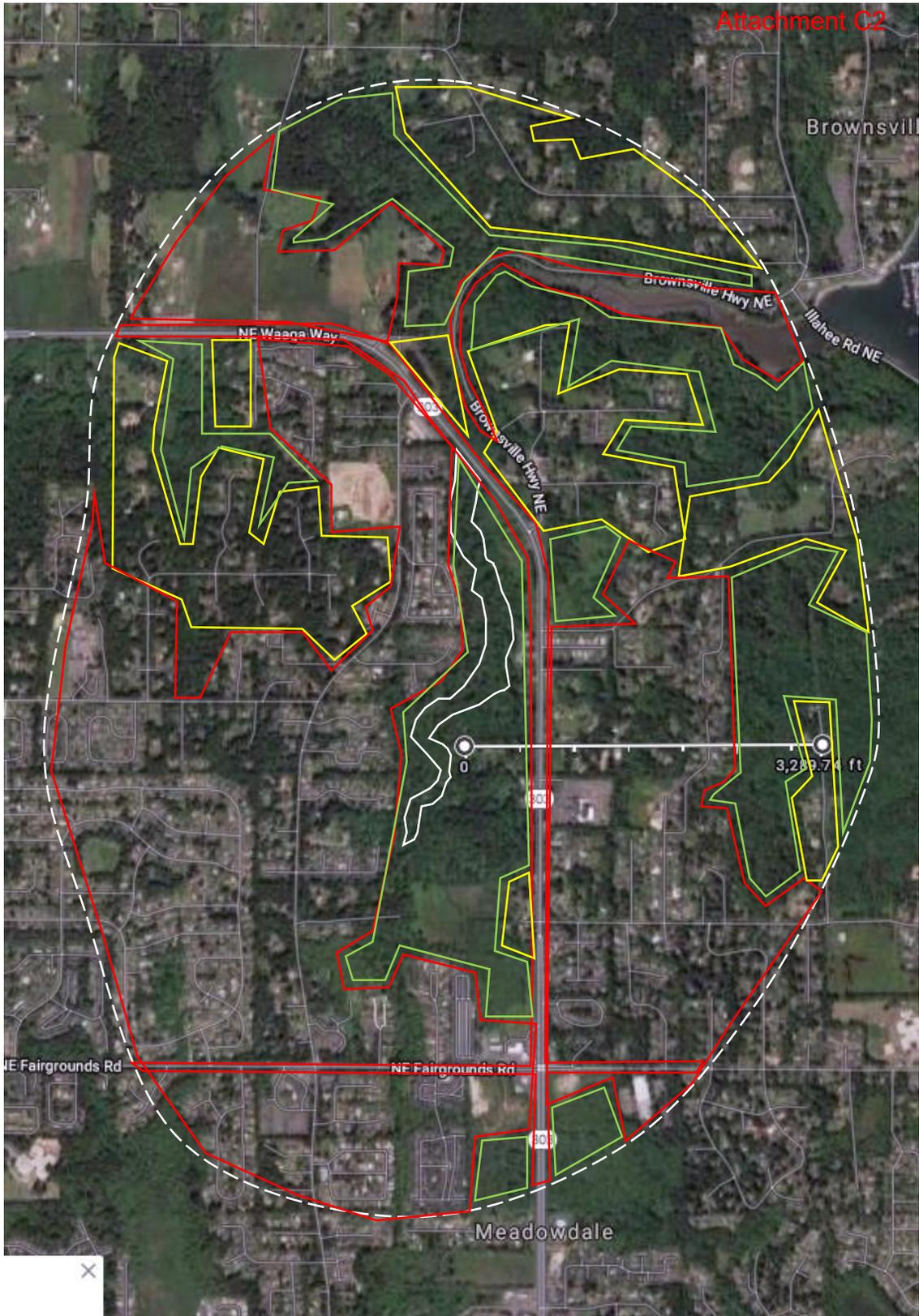


FIGURE 2:  
H2.1, H2.2, H2.3

FOR WETLAND RATING PURPOSES ONLY

EXTRA ROOM SELF STORAGE  
HWY 303 NE  
232501-4-022-2005



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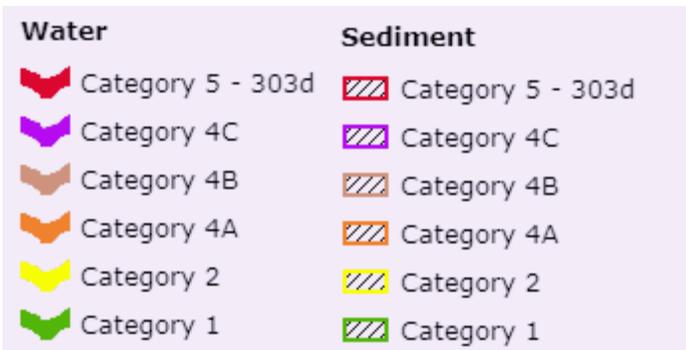
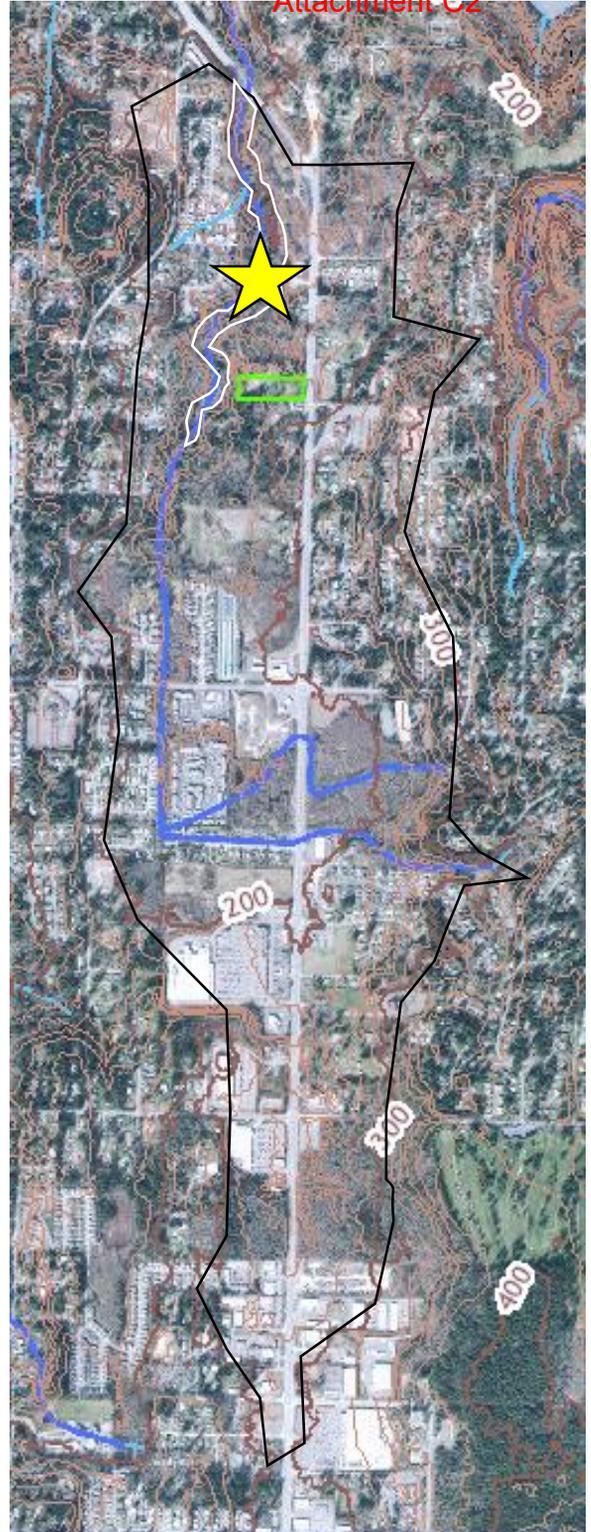
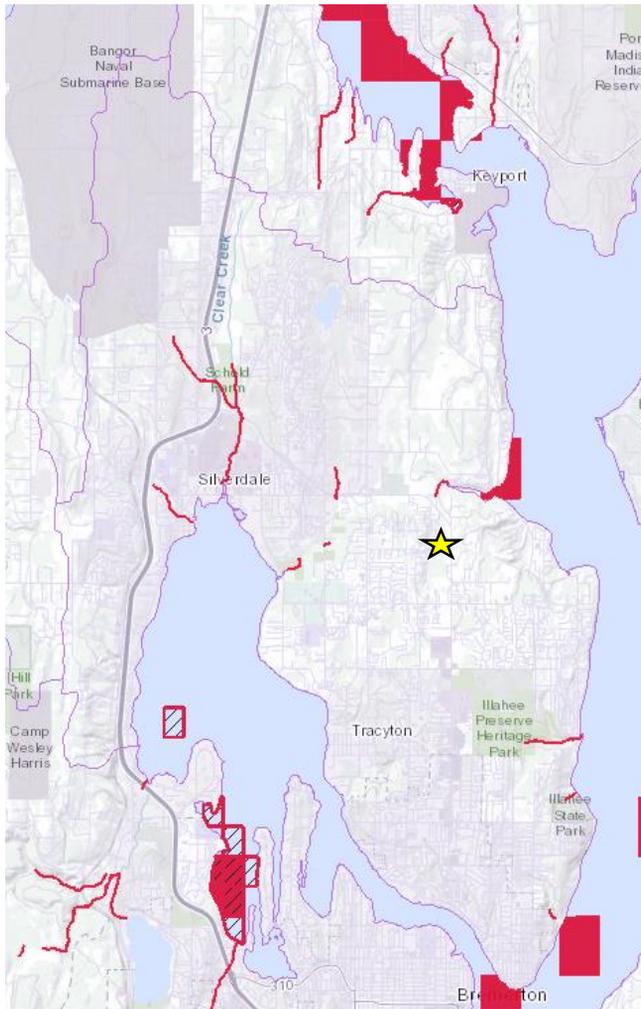


FIGURE 3:  
R2.2, R2.3, R3.1, R3.2, R3.3, R5.2  
FOR WETLAND RATING PURPOSES ONLY

EXTRA ROOM SELF STORAGE  
HWY 303 NE  
232501-4-022-2005



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